

Jharkhand State Electricity Regulatory Commission



Order on
True-up for FY 2016-17 & FY 2017-18,
Annual Performance Review for FY 2018-19 and
ARR & Tariff for FY 2019-20
for
Jharkhand Bijli Vitran Nigam Limited (JBVNL)

Ranchi
February 28, 2019



CONTENTS

| | |
|--|-----------|
| A 1: INTRODUCTION..... | 14 |
| Jharkhand State Electricity Regulatory Commission..... | 14 |
| The Petitioner - Jharkhand Bijli Vitran Nigam Limited | 16 |
| The Petitioner's Prayers | 17 |
| Scope of the Present Order..... | 17 |
| A 2: PROCEDURAL HISTORY | 19 |
| Background | 19 |
| Information Gaps in the Petition | 19 |
| Inviting Public Comments/Suggestions | 19 |
| Meeting of the State Advisory Committee..... | 20 |
| Submission of Comments/Suggestions and Conduct of Public Hearing | 20 |
| A 3: BRIEF FACTS OF THE PETITION..... | 22 |
| A. True-up for FY 2016-17 and FY 2017-18..... | 22 |
| B. Annual Performance Review for FY 2018-19 | 24 |
| C. ARR and Tariff for FY 2019-20 | 26 |
| A 4: PUBLIC CONSULTATION PROCESS | 30 |
| Advertisement of Public Hearing..... | 30 |
| Consumer Representative in CGRF Committee | 30 |
| Toll Free Number | 31 |
| Allowing Other Licensee to operate in JBVNL Area | 31 |
| Sales | 32 |
| Power Purchase Cost..... | 34 |
| Intra-State Transmission Loss..... | 36 |
| T&D Loss levels of JBVNL/ Dis-incentive for the non-achievement of T&D Loss..... | 37 |
| Capital Expenditure & Gross Fixed Assets..... | 38 |
| O&M expenses..... | 39 |
| Provision of Bad & Doubtful Debts..... | 40 |
| Revenue from tariff, Govt. Subsidy, RGF | 41 |
| Treatment of Revenue Gap | 43 |
| Removal of Clause 13 of HT Agreement..... | 45 |
| Compliance of Directive | 47 |



| | |
|--|-----------|
| Voltage Wise Cost of Supply | 47 |
| Load Factor Rebate | 48 |
| Removal of Installation based tariff for LTIS consumer | 49 |
| Miscellaneous Charges..... | 49 |
| Interest on Consumer Security Deposit..... | 50 |
| Disbursement of Subsidy Amount | 51 |
| Quality of supply/Hours of Supply | 52 |
| Issue related to prolonged Legal Cases | 53 |
| Feeder Segregation..... | 54 |
| Issues related to HTSS Category..... | 54 |
| Violation of Accounting Standards/Reliability of Audited Accounts..... | 55 |
| Issue related to Categorization of Consumer | 56 |
| Issues Related to Disconnection & FIR | 57 |
| A 5: TRUE-UP FOR FY 2016-17 AND FY 2017-18 | 59 |
| Energy Sales..... | 59 |
| Power Purchase Quantum and Cost | 60 |
| Energy Requirement and Energy Availability | 64 |
| Transmission Charges | 67 |
| Capital Expenditure and Capitalisation..... | 68 |
| Consumer Contribution, Grants and Subsidies | 70 |
| Operation & Maintenance Expenses | 72 |
| Depreciation | 73 |
| Interest on Loan..... | 74 |
| Interest on Consumer Security Deposit..... | 76 |
| Interest on Working Capital (IoWC)..... | 77 |
| Return on Equity | 78 |
| Non-Tariff Income (NTI)..... | 79 |
| Disallowances on account of Excessive AT&C Losses..... | 81 |
| Resource Gap Funding (RGF)..... | 84 |
| Summary of ARR for FY 2016-17 and FY 2017-18 | 85 |
| A 6: ANNUAL PERFORMANCE REVIEW FOR FY 2018-19 | 88 |
| Energy Sales..... | 88 |
| Power Purchase Quantum and Cost | 91 |
| Energy Requirement and Energy Availability | 96 |



| | |
|--|------------|
| Transmission Charges | 98 |
| Capital Expenditure and Capitalisation..... | 99 |
| Consumer Contribution, Grants and Subsidies | 102 |
| Operation & Maintenance Expenses | 103 |
| Depreciation | 106 |
| Interest on Loan..... | 107 |
| Interest on Consumer Security Deposit..... | 108 |
| Interest on Working Capital (IoWC)..... | 109 |
| Return on Equity | 110 |
| Non-Tariff Income (NTI) | 111 |
| Disallowances on account of Excess AT&C Losses..... | 112 |
| Penalty for Non-Compliance of Directives..... | 115 |
| Summary of ARR for FY 2018-19..... | 115 |
| A 7: ARR & TARIFF FOR FY 2019-20..... | 117 |
| Energy Sales..... | 117 |
| Power Purchase Quantum and Cost | 120 |
| Energy Requirement and Energy Availability | 125 |
| Transmission Charges | 127 |
| Capital Expenditure and Capitalisation..... | 128 |
| Consumer Contribution, Grants and Subsidies | 130 |
| Operation & Maintenance Expenses | 132 |
| Depreciation | 134 |
| Interest and Finance Charges | 135 |
| Interest on Consumer Security Deposit..... | 137 |
| Interest on Working Capital (IoWC)..... | 138 |
| Return on Equity | 139 |
| Non-Tariff Income (NTI) | 140 |
| Disallowances on account of Excessive AT&C Losses..... | 141 |
| Summary of ARR for FY 2019-20..... | 143 |
| Revenue at Existing Tariff | 144 |
| A 8: REVENUE GAP AND ITS TREATMENT..... | 146 |
| Revenue Gap till FY 2018-19 | 146 |
| Treatment of Revenue gap and Creation of Regulatory Asset..... | 149 |



| | |
|--|------------|
| A 9: DETERMINATION OF WHEELING CHARGE, WHEELING LOSSES AND CROSS SUBSIDY SURCHARGE FOR FY 2019-20 | 154 |
| Wheeling Charges | 154 |
| Voltage-wise Cost of Supply | 164 |
| Cross Subsidy Surcharge..... | 169 |
| A 10: TARIFF PHILOSOPHY | 173 |
| Simplification and Rationalisation of Tariff | 173 |
| Removal of Installation Based Tariff for LTIS Consumers | 174 |
| Migration from kWh based billing to kVAh based billing | 174 |
| Abolishment of Unmetered Category | 175 |
| kW based Demand Charges | 175 |
| Power Factor Penalty/Rebate | 176 |
| Voltage Rebate | 176 |
| Load Factor Rebate | 176 |
| A 11: APPROVED RETAIL TARIFF FOR FY 2019-20..... | 177 |
| A 12: SCHEDULE OF CHARGES | 179 |
| A 13: TARIFF SCHEDULE FOR FY 2019-20..... | 182 |
| I. Domestic Service- Rural and Urban | 182 |
| II. Domestic Service- HT | 183 |
| III. Irrigation & Agriculture Service (IAS) | 184 |
| IV. Commercial Services..... | 185 |
| V. Low Tension Industrial Services | 187 |
| VI. HT Services | 188 |
| VII. Street Light..... | 189 |
| VIII. Temporary Connections | 190 |
| IX. Tariff for Gross/Net Metering of rooftop Solar PV projects..... | 191 |
| Schedule for Miscellaneous Charges | 192 |
| A 14: TERMS AND CONDITIONS OF SUPPLY | 194 |
| A 15: STATUS OF EARLIER DIRECTIVES | 200 |
| A 16: DIRECTIVES..... | 212 |
| Abolishment of Un-metered Category | 212 |
| Power Purchase Cell..... | 212 |
| RPO Obligation..... | 212 |
| Quality of power/ Reliability Indices and Standard of Performance (SOP) | 212 |



| | |
|--|------------|
| Strengthening of Distribution Network..... | 213 |
| Energy Audit & T&D Loss Reduction Plan | 213 |
| Interest on Consumer Security Deposit..... | 213 |
| Segregation into Retail & wheeling supply of business..... | 213 |
| Actual Supply Hours in Rural Areas..... | 214 |
| Voltage Wise-Cost of Supply..... | 214 |
| Wheeling Charges | 214 |
| Theft of Electricity | 214 |
| Employee Performance Appraisal..... | 214 |
| Capacity Building of Employees..... | 215 |
| Monitoring of Compliance to Directives | 215 |
| Investment in Cyber Security Solutions..... | 215 |
| Quarterly forecast of the Quantum of Short Term Power to be purchased..... | 215 |
| Submission of PPA | 215 |
| Conversion of UDAY Loan into Grant/Equity | 215 |
| Consumer Awareness Programmes..... | 216 |
| ANNEXURES..... | 217 |
| Annexure-1: List of participating members of public in the public hearing..... | 217 |
| Annexure-2: Minutes of Meeting (MOM) of the SAC Meeting..... | 230 |



List of Abbreviations

| Abbreviation | Description |
|-----------------|---|
| A&G | Administrative and General |
| ACS/ACoS | Average Cost of Supply |
| AMG/MMG | Annual Minimum Guarantee |
| APNRL | Adhunik Power and Natural Resources Limited |
| APR | Annual Performance Review |
| APTEL | Appellate Tribunal for Electricity |
| ARR | Aggregate Revenue Requirement |
| AT&C | Aggregate Technical & Commercial |
| BSEB | Bihar State Electricity Board |
| CAG | Comptroller and Auditor General |
| CAGR | Compound Average Growth Rate |
| CCG | Consumer Contribution and Grants |
| CGRF | Consumer Grievance Redressal Forum |
| COD | Commercial Operation Date |
| CSD | Consumer Security Deposit |
| CWIP | Capital Works In Progress |
| DDUGJY | Deen Dayal Upadhyaya Gram Jyoti Yojana |
| DPS | Delayed Payment Surcharge |
| DT | Distribution Transformer |
| DVC | Damodar Valley Corporation |
| EA | Electricity Act, 2003 |
| FPA | Fuel Purchase Adjustment |
| FY | Financial Year |
| GFA | Gross Fixed Assets |
| GoJ | Government of Jharkhand |
| HP | Horse Power |
| HTS | High Tension Services (Industrial) |
| HTSS | High Tension Special Services (Industrial) |
| IAS | Irrigation and Agriculture Services |
| IEX | Indian Energy Exchange |
| IoWC | Interest on Working Capital |
| IPDS | Integrated Power Development Scheme |
| IPP | Independent Power Producer |
| JBVNL | Jharkhand Bijli Vitran Nigam Limited |
| JREDA | Jharkhand Renewable Energy Development Agency |
| JSBAY | Jharkhand Sampurna Bijli Achchadan Yojna |
| JSEB | Jharkhand State Electricity Board |
| JSERC | Jharkhand State Electricity Regulatory Commission |
| JUSNL | Jharkhand Urja Sancharan Nigam Limited |
| JUUNL | Jharkhand Urja Utpadan Nigam Limited |
| JUVNL | Jharkhand Urja Vikas Nigam Limited |
| kW(h) | kilo Watt (hour) |



| | |
|----------------|--|
| kVA(h) | kilo Volt-Ampere (hour) |
| LTIS | Low Tension Industrial Services |
| MD | Maximum Demand |
| MDI | Maximum Demand Indicator |
| MES | Military and Engineering Services |
| MOD | Merit Order Despatch |
| MoP | Ministry of Power |
| MoU | Memorandum of Understanding |
| MU | Million Units |
| MW | Megawatt |
| MYT | Multi Year Tariff |
| NFA | Net Fixed Assets |
| NTI | Non-Tariff Income |
| O&M | Operations and Maintenance |
| PAF | Plant Availability Factor |
| PPA | Power Purchase Agreement |
| PSS | Power Sub-Station |
| PTPS | Patratu Thermal Power Station |
| R&M | Repair and Maintenance |
| RAPDRP | Restructured Accelerated Power Development and Reforms Programme |
| RGF | Resource Gap Funding |
| RGVY | Rajiv Gandhi Grameen Vidyutikaran Yojana |
| RE | Renewable Energy |
| REC | Renewable Energy Certificates |
| RoE | Return on Equity |
| RPO | Renewable Purchase Obligation |
| RTS | Railway Traction Services |
| SAC | State Advisory Committee |
| SBD | Standard Bid Documents |
| SBI | State Bank of India |
| SECI | Solar Energy Corporation of India |
| SERC | State Electricity Regulatory Commission |
| SHPS | Sikidri Hydro Power Station |
| SS | Streetlight Services |
| T&D | Transmission & Distribution |
| TVNL | Tenughat Vidyut Nigam Limited |
| TVS | Technical Validation Session |
| UDAY | Ujwal Discom Assurance Yojana |
| USO | Universal Supply Obligation |
| WBSEB | West Bengal State Electricity Board |



List of Tables

| | |
|---|----|
| Table 1: List of newspapers and dates of publication of public notice by JBVNL..... | 20 |
| Table 2: List of newspapers and dates of publication of public notice by the Commission..... | 20 |
| Table 3: Locations and Dates for Public Hearing..... | 21 |
| Table 4: Sales as submitted by the Petitioner for FY 2016-17 and FY 2017-18 (MU)..... | 22 |
| Table 5: Energy Balance as submitted by the Petitioner for FY 2016-17 and FY 2017-18 (MU)..... | 22 |
| Table 6: ARR as submitted by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore)..... | 23 |
| Table 7: Gap/Surplus as submitted by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore)..... | 23 |
| Table 8: Sales submitted for FY 2018-19 (MU)..... | 24 |
| Table 9: Energy Balance as submitted by the Petitioner for FY 2018-19 (MU)..... | 24 |
| Table 10: ARR as submitted by the Petitioner for FY 2018-19 (Rs. Crore)..... | 25 |
| Table 11: Gap/Surplus as submitted by the Petitioner for FY 2018-19 (Rs. Crore)..... | 25 |
| Table 12: Sales submitted for FY 2019-20 (MU)..... | 26 |
| Table 13: Energy Balance as submitted by the Petitioner for FY 2019-20 (MU)..... | 26 |
| Table 14: ARR as submitted by the Petitioner for FY 2019-20 (Rs. Crore)..... | 27 |
| Table 15: Gap/Surplus as submitted by the Petitioner for FY 2019-20 (Rs. Crore)..... | 27 |
| Table 16: Cumulative Revenue Gap till FY 2018-19 as submitted by the Petitioner (Rs. Crore)..... | 28 |
| Table 17: Tariff Schedule for FY 2019-20 as proposed by the Petitioner (Rs.)..... | 29 |
| Table 18: Sales submitted by the Petitioner for FY 2016-17 and FY 2017-18 (MU)..... | 59 |
| Table 19: Sales approved FY 2016-17 and FY 2017-18 (MU)..... | 60 |
| Table 20: Power Purchase Cost submitted by the Petitioner for FY 2016-17 and FY 2017-18..... | 60 |
| Table 21: Power Purchase Cost approved for FY 2016-17 and FY 2017-18..... | 63 |
| Table 22: Energy Balance submitted by the Petitioner for FY 2016-17 and FY 2017-18 (MU)..... | 65 |
| Table 23: Energy Requirement approved for FY 2016-17 and FY 2017-18..... | 66 |
| Table 24: Energy Balance approved for FY 2016-17 and FY 2017-18..... | 66 |
| Table 25: Transmission Charges submitted by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore)..... | 67 |
| Table 26: Transmission Charges approved for FY 2016-17 and FY 2017-18 (Rs. Crore)..... | 68 |
| Table 27: Capital Expenditure submitted by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore)..... | 68 |
| Table 28: Capitalisation submitted by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore)..... | 69 |
| Table 29: Capital Expenditure approved for FY 2016-17 and FY 2017-18 (Rs. Crore)..... | 69 |
| Table 30: Capitalisation approved for FY 2016-17 and FY 2017-18 (Rs. Crore)..... | 70 |
| Table 31: Consumer Contribution and Grants (CCG) submitted by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore)..... | 70 |
| Table 32: Consumer Contribution and Grants (CCG) approved for FY 2016-17 and FY 2017-18 (Rs. Crore)..... | 71 |
| Table 33: Source of Funding of GFA approved for FY 2016-17 and FY 2017-18 (Rs. Crore)..... | 71 |
| Table 34: Employee Expenses submitted by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore)..... | 72 |
| Table 35: A&G Expenses submitted by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore)..... | 72 |
| Table 36: R&M Expenses submitted by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore)..... | 73 |
| Table 37: O&M Expenses approved for FY 2016-17 and FY 2017-18 (Rs. Crore)..... | 73 |
| Table 38: Depreciation submitted by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore)..... | 74 |
| Table 39: Depreciation approved for FY 2016-17 and FY 2017-18 (Rs. Crore)..... | 74 |
| Table 40: Interest on Loan submitted by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore)..... | 75 |
| Table 41: Interest on Loan approved for FY 2016-17 and FY 2017-18 (Rs. Crore)..... | 76 |
| Table 42: Interest on CSD submitted by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore)..... | 76 |
| Table 43: Interest on CSD approved for FY 2016-17 and FY 2017-18 (Rs. Crore)..... | 76 |
| Table 44: IoWC submitted by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore)..... | 77 |
| Table 45: IoWC approved for FY 2016-17 and FY 2017-18 (Rs. Crore)..... | 77 |



| | |
|---|-----|
| Table 46: RoE submitted by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore) | 78 |
| Table 47: RoE approved for FY 2016-17 and FY 2017-18 (Rs. Crore) | 78 |
| Table 48: NTI submitted by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore)..... | 79 |
| Table 49: NTI approved for FY 2016-17 and FY 2017-18 (Rs. Crore)..... | 80 |
| Table 50: Disallowance due to Collection Efficiency submitted by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore) | 82 |
| Table 51: Disallowance due to Distribution Loss submitted by the Petitioner for FY 2016-17 and FY 2017-18 | 82 |
| Table 52: Disallowance due to Distribution Loss approved for FY 2016-17 and FY 2017-18 | 84 |
| Table 53: RGF submitted by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore) | 84 |
| Table 54: RGF approved for FY 2016-17 and FY 2017-18 (Rs. Crore)..... | 85 |
| Table 55: ARR submitted by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore)..... | 86 |
| Table 56: ARR approved for FY 2016-17 and FY 2017-18 (Rs. Crore) | 86 |
| Table 57: Category-wise consumers submitted by the Petitioner for FY 2018-19 (No.) | 89 |
| Table 58: Category-wise Connected Load submitted by the Petitioner for FY 2018-19 (kW) | 89 |
| Table 59: Category-wise Sales submitted by the Petitioner for FY 2018-19 (MU) | 90 |
| Table 60: Category-wise Sales approved for FY 2018-19 (MU)..... | 90 |
| Table 61: Power Purchase Cost submitted by the Petitioner for FY 2018-19 | 91 |
| Table 62: Provision for REC Purchase approved for FY 2018-19 | 94 |
| Table 63: Power Purchase Cost approved for FY 2018-19..... | 95 |
| Table 64: Energy Balance submitted by the Petitioner for FY 2018-19 (MU)..... | 97 |
| Table 65: Energy Requirement approved for FY 2018-19 | 97 |
| Table 66: Energy Balance approved for FY 2018-19 | 98 |
| Table 67: Transmission Charges submitted by the Petitioner for FY 2018-19 (Rs. Crore)..... | 99 |
| Table 68: Transmission Charges approved for FY 2018-19 (Rs. Crore)..... | 99 |
| Table 69: Capital Expenditure submitted by the Petitioner for FY 2018-19 (Rs. Crore) | 100 |
| Table 70: Capitalisation submitted by the Petitioner for FY 2018-19 (Rs. Crore) | 100 |
| Table 71: Capital Expenditure approved for FY 2018-19 (Rs. Crore)..... | 101 |
| Table 72: GFA approved for FY 2018-19 (Rs. Crore)..... | 102 |
| Table 73: Capitalisation approved for FY 2018-19 (Rs. Crore) | 102 |
| Table 74: Consumer Contribution and Grants (CCG) submitted by the Petitioner for FY 2018-19 (Rs. Crore)..... | 102 |
| Table 75: Consumer Contribution and Grants (CCG) approved for FY 2018-19 (Rs. Crore)..... | 102 |
| Table 76: Source of Funding of GFA approved for FY 2018-19 (Rs. Crore)..... | 103 |
| Table 77: Employee Expenses submitted by the Petitioner for FY 2018-19 (Rs. Crore) | 103 |
| Table 78: A&G Expenses submitted by the Petitioner for FY 2018-19 (Rs. Crore) | 104 |
| Table 79: R&M Expenses submitted by the Petitioner for FY 2018-19 (Rs. Crore)..... | 104 |
| Table 80: O&M Expenses approved for FY 2018-19 (Rs. Crore)..... | 105 |
| Table 81: Depreciation submitted by the Petitioner for FY 2018-19 (Rs. Crore)..... | 106 |
| Table 82: Depreciation approved for FY 2018-19 (Rs. Crore)..... | 107 |
| Table 83: Interest on Loan submitted by the Petitioner for FY 2018-19 (Rs. Crore) | 107 |
| Table 84: Interest on Loan approved for FY 2018-19 (Rs. Crore) | 108 |
| Table 85: Interest on CSD submitted by the Petitioner for FY 2018-19 (Rs. Crore)..... | 109 |
| Table 86: Interest on CSD approved for FY 2018-19 (Rs. Crore)..... | 109 |
| Table 87: Interest on Working Capital submitted by the Petitioner for FY 2018-19 (Rs. Crore)..... | 109 |
| Table 88: Interest on Working Capital approved for FY 2018-19 (Rs. Crore)..... | 110 |
| Table 89: RoE submitted by the Petitioner for FY 2018-19 (Rs. Crore) | 110 |
| Table 90: RoE approved for FY 2018-19 (Rs. Crore) | 111 |
| Table 91: NTI submitted by the Petitioner for FY 2018-19 (Rs. Crore)..... | 111 |
| Table 92: NTI approved for FY 2018-19 (Rs. Crore)..... | 112 |



| | |
|--|-----|
| Table 93: Provision for Bad & Doubtful Debt submitted by the Petitioner for FY 2018-19 (Rs. Crore) | 113 |
| Table 94: Penalty imposed for Non-Compliance of Directives for FY 2018-19 (Rs. Crore) | 115 |
| Table 95: ARR submitted for FY 2018-19 (Rs. Crore) | 115 |
| Table 96: ARR approved for FY 2018-19 (Rs. Crore) | 116 |
| Table 97: Category-wise consumers submitted by the Petitioner for FY 2019-20 (No.) | 118 |
| Table 98: Category-wise Connected Load submitted by the Petitioner for FY 2019-20 (kW) | 118 |
| Table 99: Category-wise Sales submitted by the Petitioner for FY 2019-20 (MU) | 119 |
| Table 100: Category-wise Sales approved for FY 2019-20 (MU) | 119 |
| Table 101: Power Purchase Cost submitted by the Petitioner for FY 2019-20 | 121 |
| Table 102: Provision for REC Purchase approved for FY 2019-20 | 122 |
| Table 103: Power Purchase Cost approved for FY 2019-20 | 124 |
| Table 104: Energy Balance submitted by the Petitioner for FY 2019-20 (MU) | 125 |
| Table 105: Energy Requirement approved for FY 2019-20 | 126 |
| Table 106: Energy Balance approved for FY 2019-20 | 126 |
| Table 107: Transmission Charges submitted by the Petitioner for FY 2019-20 (Rs. Crore) | 127 |
| Table 108: Transmission Charges approved for FY 2019-20 (Rs. Crore) | 128 |
| Table 109: Capital Expenditure submitted by the Petitioner for FY 2019-20 (Rs. Crore) | 128 |
| Table 110: Capitalisation submitted by the Petitioner for FY 2019-20 (Rs. Crore) | 129 |
| Table 111: Capital Expenditure approved for FY 2019-20 (Rs. Crore) | 129 |
| Table 112: GFA approved for FY 2019-20 (Rs. Crore) | 130 |
| Table 113: Capitalisation approved for FY 2019-20 (Rs. Crore) | 130 |
| Table 114: Consumer Contribution and Grants (CCG) submitted by the Petitioner for FY 2019-20 (Rs. Crore) | 131 |
| Table 115: Consumer Contribution and Grants (CCG) approved for FY 2019-20 (Rs. Crore) | 131 |
| Table 116: Source of Funding of GFA approved for FY 2019-20 (Rs. Crore) | 132 |
| Table 117: Employee Expenses submitted by the Petitioner for FY 2019-20 (Rs. Crore) | 132 |
| Table 118: A&G Expenses submitted by the Petitioner for FY 2019-20 (Rs. Crore) | 132 |
| Table 119: R&M Expenses submitted by the Petitioner for FY 2019-20 (Rs. Crore) | 133 |
| Table 120: O&M Expenses approved for FY 2019-20 (Rs. Crore) | 134 |
| Table 121: Depreciation submitted by the Petitioner for FY 2019-20 (Rs. Crore) | 135 |
| Table 122: Depreciation approved for FY 2019-20 (Rs. Crore) | 135 |
| Table 123: Interest on Loan submitted by the Petitioner for FY 2019-20 (Rs. Crore) | 136 |
| Table 124: Interest on Loan approved for FY 2019-20 (Rs. Crore) | 136 |
| Table 125: Interest on CSD submitted by the Petitioner for FY 2019-20 (Rs. Crore) | 137 |
| Table 126: Interest on CSD approved for FY 2019-20 (Rs. Crore) | 137 |
| Table 127: Interest on Working Capital submitted by the Petitioner for FY 2019-20 (Rs. Crore) | 138 |
| Table 128: Interest on Working Capital approved for FY 2019-20 (Rs. Crore) | 138 |
| Table 129: RoE submitted by the Petitioner for FY 2019-20 (Rs. Crore) | 139 |
| Table 130: RoE approved for FY 2019-20 (Rs. Crore) | 139 |
| Table 131: NTI submitted by the Petitioner for FY 2019-20 (Rs. Crore) | 140 |
| Table 132: NTI approved for FY 2019-20 (Rs. Crore) | 141 |
| Table 133: Provision for Bad & Doubtful Debt submitted by the Petitioner for FY 2019-20 (Rs. Crore) | 141 |
| Table 134: ARR submitted by the Petitioner for FY 2019-20 (Rs. Crore) | 143 |
| Table 135: ARR approved for FY 2019-20 (Rs. Crore) | 143 |
| Table 136: Revenue at the Existing Tariff as submitted by the Petitioner (Rs. Crore) | 144 |
| Table 137: Category wise Revenue at Existing Tariff approved for FY 2019-20 (Rs. Crore) | 145 |
| Table 138: Estimated revenue gap by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore) | 146 |
| Table 139: Revenue Gap Approved by the Commission in its earlier Orders (Rs. Crore) | 147 |
| Table 140: Revenue Gap submitted by the Petitioner till FY 2018-19 (Rs. Crore) | 148 |



| | |
|--|-----|
| Table 141: Cumulative Revenue Gap Approved by the Commission till FY 2018-19 (Rs. Crore) | 149 |
| Table 142: Treatment of Revenue Gap submitted by the Petitioner for FY 2019-20 (Rs. Crore) | 152 |
| Table 143: Revenue Gap approved till FY 2019-20 (Rs. Crore) | 152 |
| Table 144: Segregation of ARR submitted by the Petitioner for FY 2019-20 (Rs. Crore)..... | 155 |
| Table 145: Estimated Cost of PSS submitted by the Petitioner for FY 2019-20 (Rs. Lakh)..... | 156 |
| Table 146: Estimated Cost of Lines submitted by the Petitioner for FY 2019-20 (Rs. Lakh)..... | 156 |
| Table 147: Estimated Cost of DTRs submitted by the Petitioner for FY 2019-20 (Rs. Lakh) | 157 |
| Table 148: Voltage-wise Asset Ratio submitted by the Petitioner for FY 2019-20 (Rs. Lakh) | 157 |
| Table 149: Voltage-wise Allocation of ARR of wire business submitted by the Petitioner for FY 2019-20 (Rs. Crore)..... | 157 |
| Table 150: Voltage-wise Sales submitted by the Petitioner for FY 2019-20..... | 158 |
| Table 151: Voltage-wise Sales Ratio submitted by the Petitioner for FY 2019-20 | 159 |
| Table 152: Cost Stacking submitted by the Petitioner for FY 2019-20 (Rs. Crore) | 159 |
| Table 153: Wheeling Cost submitted by the Petitioner for FY 2019-20 | 159 |
| Table 154: Segregation of ARR approved for FY 2019-20 (Rs. Crore)..... | 160 |
| Table 155: Estimated Cost of PSS approved for FY 2019-20 (Rs. Lakh) | 161 |
| Table 156: Estimated Cost of 33 kV, 11 kV and LT Lines as approved for FY 2019-20 (Rs. Lakh) | 162 |
| Table 157: Estimated Cost of DTRs approved for FY 2019-20 (Rs. Lakh) | 162 |
| Table 158: Voltage-wise Asset Ratio approved for FY 2019-20 (Rs. Lakh)..... | 162 |
| Table 159: Voltage-wise ARR of wire business approved for FY 2019-20 (Rs. Crore) | 162 |
| Table 160: Voltage-wise Sales approved for FY 2019-20 (Rs. Crore)..... | 163 |
| Table 161: Sales Ratio approved for FY 2019-20 (Rs. Crore) | 163 |
| Table 162: Cost Stacking approved for FY 2019-20 (Rs. Crore) | 163 |
| Table 163: Wheeling Tariff approved by the Commission for FY 2019-20..... | 164 |
| Table 164: Voltage-wise Sales approved for FY 2019-20 (Rs. Crore)..... | 166 |
| Table 165: Voltage-wise loss approved by the Commission for FY 2019-20..... | 167 |
| Table 166: Voltage-wise Power Purchase approved by the Commission for FY 2019-20..... | 167 |
| Table 167: Voltage-wise Power Purchase Cost approved by the Commission for FY 2019-20 | 168 |
| Table 168: Network Cost approved by the Commission for FY 2019-20 | 168 |
| Table 169: VCoS approved by the Commission for FY 2019-20..... | 169 |
| Table 170: Voltage-wise losses submitted for FY 2019-20..... | 170 |
| Table 171: Cross Subsidy Surcharge submitted by the Petitioner for FY 2019-20 (Rs./kWh) | 170 |
| Table 172: Cross Subsidy Surcharge approved for FY 2019-20 (Rs./kWh)..... | 172 |
| Table 173: Summary of Proposed Tariff submitted for FY 2019-20..... | 177 |
| Table 174: Summary of Approved Tariff for FY 2019-20 | 178 |
| Table 175: Miscellaneous Charges proposed for FY 2019-20 (Rs.)..... | 181 |



BEFORE

Jharkhand State Electricity Regulatory Commission, Ranchi

Case (Tariff) No.: 08 of 2018

In the matter of:

**Petition for
True-up for FY 2016-17 & FY 2017-18,
Annual Performance Review for FY 2018-19
And
ARR and Tariff for FY 2019-20**

In the matter:

Jharkhand Bijli Vitran Nigam Limited (JBVNL),
Dhurwa, HEC, Ranchi **Petitioner**

PRESENT

Hon'ble Dr. Arbind Prasad

Chairperson

Hon'ble Mr. R.N. Singh

Member (T)

Order dated February 28, 2019

In this Petition, Jharkhand Bijli Vitran Nigam Limited (hereinafter referred to as "JBVNL" or "the Petitioner") has prayed for Truing up for FY 2016-17 & FY 2017-18, Annual Performance Review for FY 2018-19 and ARR & Tariff for FY 2019-20.



A 1: INTRODUCTION

Jharkhand State Electricity Regulatory Commission

- 1.1 The Jharkhand State Electricity Regulatory Commission (hereinafter referred to as the “JSERC” or “the Commission”) was established by the Government of Jharkhand under Section 17 of the Electricity Regulatory Commission Act, 1998 on August 22, 2002. The Commission became operational with effect from April 24, 2003.
- 1.2 The Government of Jharkhand vide its notification dated August 22, 2002 had defined the functions of JSERC as per Section 22 of the Electricity Regulatory Commission Act, 1998 to be the following, namely:
 - (a) to determine the tariff for electricity, wholesale, bulk, grid or retail, as the case may be, in the manner provided in section 29;
 - (b) to determine the tariff payable for the use of the transmission facilities in the manner provided in section 29;
 - (c) to regulate power purchase and procurement process of the transmission utilities and distribution utilities including the price at which the power shall be procured from the generating companies, generating stations or from other sources for transmission, sale, distribution and supply in the State;
 - (d) to promote competition, efficiency and economy in the activities of the electricity industry to achieve the objects and purposes of this Act.
- 1.3 After the Electricity Act, 2003 came into force, the earlier Electricity Regulatory Commission Act of 1998 stands repealed and the functions of SERCs are now defined under Section 86 of the Act.
- 1.4 In accordance with Section 86 (1) of the Act, the JSERC discharges the following functions:
 - (a) determine the tariff for generation, supply, transmission and wheeling of electricity, wholesale, bulk or retail, as the case may be, within the State:
Provided that where open access has been permitted to a category of consumers under section 42, the State Commission shall determine only the wheeling charges and surcharge thereon, if any, for the said category of consumers;
 - (b) regulate electricity purchase and procurement process of distribution licensees including the price at which electricity shall be procured from the generating companies



-
- or licensees or from other sources through agreements for purchase of power for distribution and supply within the State;
- (c) facilitate intra-state transmission and wheeling of electricity;
 - (d) issue licences to persons seeking to act as transmission licensees, distribution licensees and electricity traders with respect to their operations within the State;
 - (e) promote cogeneration and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person, and also specify, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution licensee;
 - (f) adjudicate upon the disputes between the licensees and generating companies; and to refer any dispute for arbitration;
 - (g) levy fee for the purposes of this Act;
 - (h) specify State Grid Code consistent with the Grid Code specified under Clause (h) of sub-section (1) of Section 79;
 - (i) specify or enforce standards with respect to quality, continuity and reliability of service by licensees;
 - (j) fix the trading margin in the intra-state trading of electricity, if considered, necessary;
 - (k) discharge such other functions as may be assigned to it under this Act.
- 1.5 The Commission has to also advise the State Government as per sub section 2 of Section 86 of the Act, on all or any of the following matters, namely:
- (a) promotion of competition, efficiency and economy in activities of the electricity industry;
 - (b) promotion of investment in electricity industry;
 - (c) reorganisation and restructuring of electricity industry in the State;
 - (d) matters concerning generation, transmission, distribution and trading of electricity or any other matter referred to the State Commission by that Government.
- 1.6 The State Commission ensures transparency while exercising its powers and discharging its functions.
- 1.7 In discharge of its functions, the State Commission is also guided by the National Tariff Policy as brought out by GoI in compliance to Section 3 of the Act. The objectives of the National Tariff Policy are to:
- (a) ensure availability of electricity to consumers at reasonable and competitive rates;
 - (b) ensure financial viability of the sector and attract investments;



- (c) promote transparency, consistency and predictability in regulatory approaches across jurisdictions and minimize perceptions of regulatory risks;
- (d) promote competition, efficiency in operations and improvement in quality of supply.

The Petitioner - Jharkhand Bijli Vitran Nigam Limited

- 1.8 The erstwhile Jharkhand State Electricity Board (JSEB) was constituted on March 10, 2001 under the Electricity (Supply) Act, 1948 as a result of the bifurcation of the erstwhile State of Bihar. Before that, the Bihar State Electricity Board (BSEB) was the predominant entity entrusted with the task of generating, transmitting and supplying power in the State.
- 1.9 The Energy Department, Government of Jharkhand, vide its Letter No. 1/Board-01-Urja-26/13-1745 dated June 28, 2013 unbundled the erstwhile JSEB into following companies:
 - a) Jharkhand Urja Vikas Nigam Ltd. (JUVNL) being the holding company;
 - b) Jharkhand Urja Utpadan Nigam Ltd. (JUUNL) undertaking the generation function of the erstwhile JSEB;
 - c) Jharkhand Bijli Vitran Nigam Ltd. (JBVNL) undertaking the distribution function of the erstwhile JSEB;
 - d) Jharkhand Urja Sancharan Nigam Ltd. (JUSNL) undertaking the transmission function of the erstwhile JSEB.
- 1.10 Jharkhand Bijli Vitran Nigam Ltd. (herein after to be referred to as “JBVNL” or “the Petitioner”) has been incorporated under Indian Companies Act, 1956 pursuant to decision of Government of Jharkhand to reorganize erstwhile JSEB.
- 1.11 Reorganization of the JSEB has been done by Government of Jharkhand pursuant to “Part XIII – Reorganization of Board” read with section 131 of The Electricity Act 2003. The Petitioner is a Company constituted under the provisions of Government of Jharkhand, General Resolution as notified by transfer scheme vide notification no. 8, dated January 6, 2014, and is duly registered with the Registrar of Companies, Ranchi.
- 1.12 Jharkhand Bijli Vitran Nigam Ltd was incorporated on October 23, 2013 with the Registrar of Companies, Jharkhand, Ranchi and obtained Certificate of Commencement of Business on November 28, 2013.
- 1.13 The Petitioner is a Distribution Licensee under the provisions of the Electricity Act, 2003 (EA, 2003) having license to supply electricity in the State of Jharkhand.



1.14 The Petitioner is functioning in accordance with the provisions envisaged in the Electricity Act, 2003 and is engaged in the business of Distribution of Electricity to its consumers situated over the entire State of Jharkhand.

The Petitioner's Prayers

1.15 The Petitioner in this Petition has prayed before the Commission:

- To admit the True-up Petition of JBVNL for FY 16-17 in accordance with Regulation 5 of the JSERC (Terms and Conditions for Determination of Distribution Tariff) Regulations, 2015
- To admit the True-up Petition of JBVNL for FY 17-18 in accordance with Regulation 5 of the JSERC (Terms and Conditions for Determination of Distribution Tariff) Regulations, 2015
- To admit the APR Petition of JBVNL for FY 18-19 in accordance with Regulation 5 of the JSERC (Terms and Conditions for Determination of Distribution Tariff) Regulations, 2015
- To admit the ARR Petition of JBVNL for FY 19-20 in accordance with Regulation 6 of the JSERC (Terms and Conditions for Determination of Distribution Tariff) Regulations, 2015
- To convert the accumulated revenue gap of JBVNL till FY 19-20 into regulatory asset and allow the realization of the same over the period of next 5 years.
- To approve the proposed tariff to meet the revenue gap and to minimise the gap between ARR and ACS
- To approve revised schedule of charges.
- To approve the terms and conditions of tariff as proposed by the Petitioner
- To allow the Petitioner to submit supplementary/additional submissions, if any.
- To pass any other order as the Hon'ble Commission may deem fit and appropriate under the circumstances of the case and in the interest of justice.
- To condone any error/omission and to give opportunity to rectify the same.

Scope of the Present Order

1.16 The Commission in this Order has approved the True-up for FY 2016-17& FY 2017-18, Annual Performance Review for FY 2018-19 and ARR & Tariff for FY 2019-20.



- 1.17 While approving this Order, the Commission has taken into consideration:
- a) Material placed on record by the Petitioner
 - b) Provisions of the Electricity Act, 2003;
 - c) Principles laid down in the National Electricity Policy;
 - d) Principles laid down in the National Tariff Policy;
 - e) Provisions of the JSERC (Terms and Conditions for Determination of Distribution Tariff) Regulations, 2015 (hereinafter referred to as JSERC Distribution Tariff Regulations, 2015 or the Regulations);
- 1.18 Accordingly, the Commission has scrutinized the Petition in detail and hereby issues the Order on Truing-up for FY 2016-17 & FY 2017-18, Annual Performance Review for FY 2018-19 and ARR & Tariff for FY 2019-20 for JBVNL.



A 2: PROCEDURAL HISTORY

Background

- 2.1 The Commission issued Order on approval of Business plan and MYT for the second control period for FY 2016-17 to FY 2020-21 dated June 21, 2017.
- 2.2 The Commission had issued its last Tariff Order for JBVNL on April 27, 2018 on APR for FY 2016-17, Revised ARR and Tariff determination for FY 2017-18 and FY 2018-19.
- 2.3 The Petitioner has now filed the Petition for True-up for FY 2016-17 & FY 2017-18, Annual Performance Review for FY 2018-19 and ARR & Tariff for FY 2019-20.

Information Gaps in the Petition

- 2.4 As part of the Tariff determination exercise, several deficiencies/information gaps were observed in the Petition submitted by the Petitioner that were communicated to the Petitioner vide Letter No. JSERC/Case (Tariff) No. 8 of 2018/490 dated December 19, 2018.
- 2.5 The Petitioner submitted its response to the aforesaid letter and furnished additional data/information to the Commission vide letter no. 1596/File no.-C.E(C&R)/Rev/2192/18 dated December 28, 2018.
- 2.6 The Commission has scrutinized the additional data/ information and has considered the same while passing this Order. The Commission has examined the replies and supporting documents as supplied by the Petitioner on the discrepancies pointed out to it.
- 2.7 In order to provide adequate opportunities to all stakeholders and general public, as mandated under Section 64 (3) of the Electricity Act 2003 and in relevant provisions of Regulation(s) framed by the Commission and in order to ensure transparency in the process of tariff determination, the Commission decided to hold public hearing at 5 locations across the State of Jharkhand.

Inviting Public Comments/Suggestions

- 2.8 The Commission directed the Petitioner to make available copies of the Petitions to the members of general public on request, and also issue a public notice inviting comments/suggestions on the Petition for approval of True-up for FY 2016-17 & FY 2017-18, Annual Performance Review for FY 2018-19 and ARR & Tariff Determination for FY 2019-20.



2.9 The aforesaid public notice was issued by the Petitioner in various newspapers and a period of twenty one (21) days was given to the members of the general public for submitting their comments/suggestions.

Table 1: List of newspapers and dates of publication of public notice by JBVNL

| Newspaper | Date of Publication |
|----------------|-------------------------------------|
| Dainik Bhaskar | 03.01.2019 & 05.01.2019 |
| Azad Sipahi | 03.01.2019 & 04.01.2019 |
| Hindustan | 04.01.2019, 05.01.2019 & 09.01.2019 |
| Pioneer | 04.01.2019, 05.01.2019 & 09.01.2019 |

2.10 Subsequently, the Commission also issued a notice on its website www.jserc.org and various newspapers for conducting the public hearing on the Petition. The details of the newspapers publishing the notice by the Commission are as under:

Table 2: List of newspapers and dates of publication of public notice by the Commission

| Newspaper | Date of Publication |
|---------------------|-------------------------------------|
| Prabhat Khabar | 26.01.2019, 09.02.2019 & 13.02.2019 |
| Dainik Jagran | 26.01.2019 & 12.02.2019 |
| The Pioneer | 26.01.2019 & 12.02.2019 |
| Faruqi Tanzeem | 26.01.2019 & 12.02.2019 |
| Hindustan | 03.02.2019, 09.02.2019 & 12.02.2019 |
| Dainik Bhaskar | 03.02.2019 & 13.02.2019 |
| Morning India | 03.02.2019 & 13.02.2019 |
| Sokale Sokale | 03.02.2019 & 13.02.2019 |
| The Hindustan Times | 09.02.2019, 12.02.2019 & 13.02.2019 |
| The Times of India | 09.02.2019 & 13.02.2019 |
| Naya India | 12.02.2019 |
| Azad Sipahi | 13.02.2019 |

Meeting of the State Advisory Committee

2.11 The Commission convened a meeting of the State Advisory Committee (SAC) on January 31, 2019 and prominently kept an agenda for discussion on the Petitions filed by the Petitioner. The minutes of the SAC meeting is attached as **Annexure 2** to this Order.

2.12 The points discussed during the meeting and the suggestions made by the members of the SAC have been duly considered by the Commission.

Submission of Comments/Suggestions and Conduct of Public Hearing



2.13 The public hearings were held across the State of Jharkhand from February 06, 2019 to February 13, 2019 on the dates as detailed under:

Table 3: Locations and Dates for Public Hearing

| Sl. No | Location | Date |
|---------------|-----------------|-------------|
| 1 | Medininagar | 06.02.2019 |
| 2 | Hazaribagh | 08.02.2019 |
| 3 | Dumka | 09.02.2019 |
| 4 | Ranchi | 12.02.2019 |
| 5 | Chaibasa | 13.02.2019 |

2.14 Numerous objections/ comments/ suggestions on the Petitions were received. The objections/ comments/ suggestions of the Public, Petitioner's responses and Commission's views thereon are detailed in **Section A4** of this Order.



A 3: BRIEF FACTS OF THE PETITION

A. True-up for FY 2016-17 and FY 2017-18

Energy Sales

3.1 The following table summarises the energy sales approved by the Commission in its Order dated April 27, 2018 wherein the Commission carried out APR of FY 2016-17 and revised ARR of FY 2017-18 vis-à-vis actual energy sales as submitted by the Petitioner.

Table 4: Sales as submitted by the Peititoner for FY 2016-17 and FY 2017-18 (MU)

| Particulars | FY 2016-17 | | FY 2017-18 | |
|------------------------------|-----------------|-----------------|-----------------|-----------------|
| | Approved | Petition | Approved | Petition |
| Domestic | 5,037.30 | 5,037.30 | 5,501.49 | 5,746.86 |
| Commercial/Non Domestic | 569.04 | 569.04 | 647.61 | 756.14 |
| Public Lighting / SS | 239.33 | 239.33 | 243.62 | 78.51 |
| Irrigation / IAS | 148.27 | 148.27 | 149.35 | 190.40 |
| Industrial LT / LTIS | 193.83 | 193.83 | 204.23 | 208.30 |
| Industrial HT / HTS / S/ EHT | 2,470.74 | 2,470.74 | 2,357.49 | 2,540.71 |
| RTS/MES | 62.55 | 62.55 | 118.98 | 92.81 |
| Total | 8,721.07 | 8,721.07 | 9,222.77 | 9,613.73 |

Energy Balance

3.2 The energy balance details as submitted by the Petitioner for FY 2016-17 and FY 2017-18 vis-a-vis as approved earlier by the Commission in its Order dated April 27, 2018 is provided in the table below:

Table 5: Energy Balance as submitted by the Petitioner for FY 2016-17 and FY 2017-18 (MU)

| Particulars | FY 2016-17 | | FY 2017-18 | |
|---|------------------|------------------|------------------|------------------|
| | Approved | Actual | Approved | Actual |
| Power Purchase from Outside JSEB Boundary (MU) | 5,721.40 | 6,018.58 | 6,339.41 | 6,365.89 |
| Loss in External System (%) | 3.00% | 3.00% | 3.00% | 3.00% |
| Loss in External System (MU) | 171.64 | 180.56 | 190.18 | 190.98 |
| Net Outside Power Available (MU) | 5,549.76 | 5,838.03 | 6149.23 | 6,174.91 |
| Energy Input Directly to State Transmission System (MU) | 766.42 | 747.66 | 984.69 | 710.6 |
| State-owned Generation (MU) | 808.04 | 806.37 | 565.6 | 808.49 |
| Energy Available for Onward Transmission (MU) | 7,420.12 | 7,392.05 | 7,699.52 | 7,694.00 |
| Transmission Loss (%) | 2.23% | 9.64% | 2.23% | 9.71% |
| Transmission Loss (MU) | 165.47 | 712.23 | 171.7 | 746.92 |
| Net Energy Sent to Distribution System (MU) | 7,254.65 | 6,679.82 | 7527.82 | 6,947.08 |
| Direct Input of Energy to Distribution System (MU) | 4,897.60 | 4,916.73 | 4,971.40 | 4,993.17 |
| Total Energy Available for Sales (MU) | 12,152.25 | 11,596.55 | 12,499.22 | 11,940.25 |



Aggregate Revenue Requirement

3.3 The Aggregate Revenue Requirement for the FY 2016-17 and FY 2017-18 as submitted by the Petitioner vis-a-vis is as approved earlier by the Commission in its Order dated April 27, 2018 is tabulated below:

Table 6: ARR as submitted by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore)

| Particulars | FY 2016-17 | | FY 2017-18 | |
|---|-----------------|-----------------|-----------------|-----------------|
| | Approved | Petition | Approved | Petition |
| Power Purchase Cost | | 5,059.63 | | 5,595.52 |
| Inter-State Transmission Charges | 5,223.19 | 163.36 | 5,081.82 | 137.84 |
| Intra-State Transmission Charges | 185.40 | 185.40 | 160.16 | 204.07 |
| O&M Expenses | 324.08 | 324.08 | 408.31 | 346.45 |
| <i>Employee Expenses</i> | <i>213.21</i> | <i>213.21</i> | <i>221.46</i> | <i>215.97</i> |
| <i>A&G Expenses</i> | <i>56.83</i> | <i>56.83</i> | <i>59.31</i> | <i>75.87</i> |
| <i>R&M Expenses</i> | <i>54.04</i> | <i>54.04</i> | <i>127.54</i> | <i>54.61</i> |
| Depreciation | 203.03 | 195.60 | 222.57 | 185.04 |
| Interest on Long Term Loan | 144.46 | 162.28 | 144.76 | 162.15 |
| Interest on Working Capital Loan | 25.47 | 27.09 | 24.25 | 26.18 |
| Interest on Consumer Security Deposit | 49.14 | 42.12 | 44.80 | 46.05 |
| Return on Equity | 143.86 | 140.95 | 166.59 | 148.99 |
| Total Expenses | 6,298.63 | 6,300.51 | 6,253.26 | 6,852.27 |
| Less: Non-Tariff Income | 128.62 | 143.52 | 135.05 | 132.14 |
| Net ARR | 6,170.01 | 6,156.99 | 6,118.22 | 6,720.13 |
| Less: Disallowance due to excess Losses | 263.63 | 289.74* | | 497.40* |
| ARR Recoverable | 5,906.38 | 6,156.99 | 6,118.22 | 6,720.13 |

*The Petitioner has not reduced the excess losses while claiming ARR recoverable.

3.4 Based on the ARR and revenue as per the Audited Accounts, the Petitioner has estimated the revenue gap for the FY 2016-17 and FY 2017-18 after taking into consideration the impact of RGF as summarized below:

Table 7: Gap/Surplus as submitted by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore)

| Particulars | FY 2016-17 | | FY 2017-18 | |
|---------------------------|-----------------|-----------------|-----------------|-----------------|
| | Approved | Petition | Approved | Petition |
| ARR Recoverable | 5,906.38 | 6,156.99 | 6,118.22 | 6,720.13 |
| Revenue from Sales | 2,813.50 | 2,715.73 | 3,799.22 | 3,101.60 |
| RGF by State Govt. | 935.40 | 910.26 | 2,500.00 | 2,502.60 |
| Gap After Subsidy | 2,157.48 | 2,531.00 | -181.00 | 1,115.93 |



B. Annual Performance Review for FY 2018-19

Sales:

3.5 The following table summarises the energy sales approved by the Commission in its Order dated April 27, 2018 vis-à-vis as submitted by the Petitioner.

Table 8: Sales submitted for FY 2018-19 (MU)

| Particulars | FY 2018-19 | |
|------------------------------|---------------|---------------|
| | Approved | Petition |
| Domestic | 6,304 | 6,009 |
| Commercial/Non Domestic | 737 | 944 |
| Public Lighting / SS | 249 | 82 |
| Irrigation / IAS | 181 | 211 |
| Industrial LT / LTIS | 215 | 239 |
| Industrial HT / HTS / S/ EHT | 2,391 | 2,404 |
| RTS/MES | 119 | 121 |
| Total | 10,197 | 10,010 |

Energy Balance:

3.6 The energy balance details as submitted by the Petitioner for FY 2018-19 vis-a-vis that approved in the ARR Oder for FY 2018-19 dated April 27, 2018 is provided in the table below:

Table 9: Energy Balance as submitted by the Petitioner for FY 2018-19 (MU)

| Particulars | FY 2018-19 | |
|---|------------------|------------------|
| | Approved | Petition |
| Power Purchase from Outside JSEB Boundary (MU) | 6,192.22 | 6,948.14 |
| Loss in External System (%) | 3.00% | 3.00% |
| Loss in External System (MU) | 185.77 | 208.44 |
| Net Outside Power Available (MU) | 6,006.45 | 6,739.69 |
| Energy Input Directly to State Transmission System (MU) | 1,428.08 | 706.40 |
| State-owned Generation (MU) | 565.60 | 695.54 |
| Energy Available for Onward Transmission (MU) | 8,312.13 | 8,174.32 |
| Transmission Loss (%) | 2.23% | 5.00% |
| Transmission Loss (MU) | 185.36 | 408.72 |
| Net Energy Sent to Distribution System (MU) | 8,126.77 | 7,765.60 |
| Direct Input of Energy to Distribution System (MU) | 4,971.40 | 4,970.99 |
| Total Energy Available for Sales (MU) | 13,098.17 | 12,736.60 |



Aggregate Revenue Requirement

- 3.7 The Aggregate Revenue Requirement for the FY 2018-19 as submitted by the Petitioner vis-a-vis that approved in the ARR Oder for FY 2018-19 dated April 27, 2018 is tabulated below:

Table 10: ARR as submitted by the Petitioner for FY 2018-19 (Rs. Crore)

| Particulars | FY 2018-19 | |
|---|-----------------|-----------------|
| | Approved | Petition |
| Power Purchase Cost | 4,833.48 | 5,595.45 |
| Inter-State Transmission Charges | | 144.73 |
| Intra-State Transmission Charges | 207.80 | 216.95 |
| O&M Expenses | 465.14 | 465.01 |
| <i>Employee Expenses</i> | 230.07 | 246.70 |
| <i>A&G Expenses</i> | 61.89 | 78.79 |
| <i>R&M Expenses</i> | 173.18 | 139.51 |
| Depreciation | 294.22 | 316.72 |
| Interest on Long Term Loan | 169.39 | 205.82 |
| Interest on Working Capital Loan | 12.12 | 33.87 |
| Interest on Consumer Security Deposit | 52.74 | 46.22 |
| Return on Equity | 202.28 | 196.40 |
| Total Expenses | 6,237.17 | 7,221.17 |
| Less: Non-Tariff Income | 141.80 | 122.48 |
| Add: Provision for Doubtful Debt | | 478.84 |
| Net ARR | 6,097.90 | 7,577.52 |
| Less: Disallowance due to excess Losses | | |
| Less: Penalties | 124.44 | |
| ARR Recoverable | 5,973.46 | 7,577.52 |

- 3.8 Based on the ARR and revenue projected as per the existing Tariff, the Petitioner has estimated the revenue gap for the FY 2018-19 after taking into consideration the impact of RGF as summarized below:

Table 11: Gap/Surplus as submitted by the Petitioner for FY 2018-19 (Rs. Crore)

| Particulars | FY 2018-19 | |
|------------------------------------|-----------------|-----------------|
| | Approved | Petition |
| ARR Recoverable | 5,973.46 | 7,577.52 |
| Revenue from Sales | 6,000.37 | 4,788.36 |
| RGF by State Govt. | NIL | NIL |
| Gap/(Surplus) After Subsidy | -26.91 | 2,789.17 |



C. ARR and Tariff for FY 2019-20

Energy Sales:

3.9 The following table summarised the energy sales as approved by the Commission in its MYT Order dated June 21, 2017 vis-a-vis that estimated now by the Petitioner for FY 2019-20 is provided in the table below:

Table 12: Sales submitted for FY 2019-20 (MU)

| Particulars | Approved in MYT Order | Petition |
|------------------------------|-----------------------|---------------|
| Domestic | 10,322 | 6,140 |
| Commercial/Non Domestic | 591 | 1,014 |
| Public Lighting / SS | 157 | 82 |
| Irrigation / IAS | 596 | 222 |
| Industrial LT / LTIS | 193 | 266 |
| Industrial HT / HTS / S/ EHT | 2,460 | 2,542 |
| RTS/MES | 238 | 121 |
| Total | 14556 | 10,388 |

Energy Balance:

3.10 The energy balance as approved by the Commission in its MYT Order dated June 21, 2017 vis-a-vis that estimated now by the Petitioner for FY 2019-20 is provided in the table below:

Table 13: Energy Balance as submitted by the Petitioner for FY 2019-20 (MU)

| Particulars | Approved in MYT Order | Petition |
|---|-----------------------|------------------|
| Power Purchase from Outside JSEB Boundary (MU) | 8860.80 | 7,247.14 |
| Loss in External System (%) | 3.00% | 3.00% |
| Loss in External System (MU) | 265.82 | 217.41 |
| Net Outside Power Available (MU) | 8,594.98 | 7,029.73 |
| Energy Input Directly to State Transmission System (MU) | 1,428.05 | 770.15 |
| State-owned Generation (MU) | 2,720.51 | 730.32 |
| Energy Available for Onward Transmission (MU) | 14,968.13 | 8,634.78 |
| Transmission Loss (%) | 4.50% | 5.00% |
| Transmission Loss (MU) | 673.57 | 431.74 |
| Net Energy Sent to Distribution System (MU) | 14,294.56 | 8,203.05 |
| Direct Input of Energy to Distribution System (MU) | 4,841.53 | 4,971.96 |
| Total Energy Available for Sales (MU) | 19,136.09 | 13,175.00 |



Aggregate Revenue Requirement

- 3.11 The Aggregate Revenue Requirement for the FY 2019-20 as approved by the Commission in its MYT Order dated June 21, 2017 vis-a-vis that estimated now by the Petitioner is tabulated below:

Table 14: ARR as submitted by the Petitioner for FY 2019-20 (Rs. Crore)

| Particulars | Approved in MYT Order | Petition |
|---------------------------------------|-----------------------|-----------------|
| Power Purchase Cost | 10,131.14 | 6,020.43 |
| Inter-State Transmission Charges | | 151.96 |
| Intra-State Transmission Charges | 330.1 | 229.10 |
| O&M Expenses | 695.3 | 594.02 |
| <i>Employee Expenses</i> | <i>433.0</i> | <i>256.20</i> |
| <i>A&G Expenses</i> | <i>65.6</i> | <i>81.82</i> |
| <i>R&M Expenses</i> | <i>196.8</i> | <i>256.00</i> |
| Depreciation | 404.4 | 462.85 |
| Interest on Long Term Loan | 1,086.3 | 339.26 |
| Interest on Working Capital Loan | 169.9 | 50.55 |
| Interest on Consumer Security Deposit | - | 48.53 |
| Return on Equity | 724.0 | 305.13 |
| Total Expenses | 13,541.2 | 8,201.83 |
| Less: Non-Tariff Income | (15.2) | 123.02 |
| Add: Provision for Doubtful Debt | - | 296.43 |
| Net ARR | 13,526.04 | 8,375.24 |
| ARR Recoverable | 13,526.04 | 8,375.24 |

- 3.12 Based on the ARR and revenue projected as per the existing Tariff, the Petitioner has estimated the revenue gap for the FY 2019-20 after taking into consideration the impact of RGF as summarized below:

Table 15: Gap/Surplus as submitted by the Petitioner for FY 2019-20 (Rs. Crore)

| Particulars | FY 2019-20 |
|---------------------------|-----------------|
| ARR Recoverable | 8,375.24 |
| Revenue from Sales | 5,928.52 |
| RGF by State Govt. | NIL |
| Gap After Subsidy | 2,446.72 |

- 3.13 Based on the above and earlier submissions of revenue gap, the Petitioner has estimated the cumulative revenue gap till FY 2018-19 as summarized below:



Table 16: Cumulative Revenue Gap till FY 2018-19 as submitted by the Petitioner (Rs. Crore)

| Particulars | FY 2015-16 | FY 2016-17 | FY 2017-18 | FY 2018-19 |
|---|------------|------------|------------|------------|
| Opening Revenue Gap | 724.41 | 2,573.11 | 5,757.43 | 7,739.41 |
| Revenue Gap / (Surplus) created during the Year | 1,517.95 | 2,531.00 | 1,115.93 | 2,789.17 |
| Closing Gap at end of the Year | 2,242.36 | 5,104.11 | 6,873.36 | 10,528.57 |
| Rate of Interest (As per Regulations) | 14.75% | 12.80% | 12.60% | 12.20% |
| Carrying Cost on Opening Balance | 106.85 | 329.36 | 725.44 | 944.21 |
| Carrying cost on Additional Gap Created during the Year | 223.90 | 323.97 | 140.61 | 340.28 |
| Total Gap including carrying cost | 2,573.11 | 5,757.43 | 7,739.41 | 11,813.06 |

3.14 The Petitioner has submitted that given the significant amount of revenue gap, the whole impact may be not be possible to be passed on to consumers, by way of revision in retail tariffs, as it may lead to an inexorable tariff shock. Therefore, the Petitioner has proposed creation of Regulatory asset of Rs 11813.06 Crore with a 5 year amortisation period, with passage to consumers in equal tranches. The Petitioner further requested the Commission to provide return on such regulatory asset to the tune of weighted average cost of capital i.e. 12.50%.

3.15 In order to cover the projected revenue gap for the Control Period, the Petitioner has proposed revision in retail tariff for FY 2019-20 for various categories. The tariff schedule proposed by the Petitioner is summarised below:



Table 17: Tariff Schedule for FY 2019-20 as proposed by the Petitioner (Rs.)

| Category/Sub-category | Existing Tariff | | Proposed Tariff | |
|----------------------------------|---------------------|--------------------|---------------------|--------------------|
| | Energy Charge (Rs.) | Fixed Charge (Rs.) | Energy Charge (Rs.) | Fixed Charge (Rs.) |
| Domestic Kutir Jyoti (Metered) | 4.40/kWh | 20/Conn./Month | 6.00/kWh | 75/Conn./Month |
| Domestic Kutir Jyoti (Unmetered) | - | 250/Conn./Month | - | NA |
| Domestic Rural (Metered) | 4.75/kWh | 35/Conn./Month | 6.00/kWh | 75/Conn./Month |
| Domestic Rural (Unmetered) | - | 250/Conn./Month | - | NA |
| Domestic Urban (Metered) | 5.50/kWh | 75/Conn./Month | 6.00/kWh | 75/Conn./Month |
| Domestic HT | 5.25/kWh | 200/kVA/Month | 6.00/kWh | 200/kVA/Month |
| Commercial (Rural-Metered) | 5.25/kWh | 60/Conn./Month | 7.00/kWh | 225/Conn./Month |
| Commercial (Rural-Unmetered) | - | 300/kW/Month | - | NA |
| Commercial (Urban) | 6.00/kWh | 225/Conn./Month | 7.00/kWh | 225/Conn./Month |
| IAS (Metered) | 5.00/kWh | 20/HP/Month | 5.00/kWh | 20/HP/Month |
| IAS (Unmetered) | - | 400/HP/Month | - | NA |
| LTIS- Demand Based | 5.50/kWh | 160/kVA/Month | 6.00/kVAh | 300/kVA/Month |
| LTIS- Installation Based | 6.50/kWh | 160/HP/Month | NA | NA |
| HTS | 5.75/kVAh | 300/kVA/Month | 6.00/kVAh | 400/kVA/Month |
| HTSS | 4.00/kVAh | 500/kVA/Month | 6.00/kVAh | 400/kVA/Month |
| SS (Metered) | 6.00/kWh | 100/Conn./Month | 6.50/kWh | 100/Conn./Month |
| SS (Unmetered) | - | 500/100 W/Month | - | NA |
| RTS/MES | 4.60/kVAh | 350/kVA/Month | 5.00/kVAh | 350/kVA/Month |

3.16 The Petitioner has submitted that the proposed tariff schedule would yield revenue of Rs. 7261.91 Crore as against Rs. 5928.52 Crore at the existing tariff and has proposed that the unrecovered gap to be considered as Regulatory Asset.



A 4: PUBLIC CONSULTATION PROCESS

- 4.1 The Petition filed by the Petitioner evoked response from several stakeholders. The Public Hearings were held at various locations across the State of Jharkhand to ensure the maximum public participation and transparency wherein stakeholders put forth their comments and suggestions before the Commission in the presence of the Petitioner. The list of the attendees is attached as **Annexure-1** to this Order.
- 4.2 In course of public hearings, the Commission also allowed persons/representatives of entities who had not submitted prior written representations but attended the public hearings to express their views, in person, regarding the Petition filed by the Petitioner and also about ways and means to improve the services rendered by the Petitioner.
- 4.3 The comments and suggestion of the members of the public along with the response thereon of the Petitioner and the views of the Commission are detailed hereunder:

Advertisement of Public Hearing

Public Comments/ Suggestions

- 4.4 The Objector pointed out that there was no information given to the consumers regarding public hearing. The Commission should take strict action against the Petitioner on such negligence.
- 4.5 The Objector also suggested that such public hearing should be scheduled on Sunday or holiday and content/proceeding should be in local language so that the local people can understand to ensure maximum participation.

Views of the Commission

- 4.6 The Commission has gone through the submissions of the stakeholder. The Commission has advertised the schedule of public hearing in both Hindi and English newspapers well in advance.

Consumer Representative in CGRF Committee

Public Comments/ Suggestions

- 4.7 The Objector suggested that CGRF cell should be created at each corner of licence area so that consumer complaints can be addressed in time. A mechanism should be developed to improve consumer interaction and speedy resolution of issues.



4.8 The Objector also proposed to introduce Consumer Representative Member in CGRF Committee.

Views of the Commission

4.9 The Commission has noted the submissions made by the Stakeholder.

Toll Free Number

Public Comments/ Suggestions

4.10 The Objector raised the concern that the toll free number issued by the Petitioner is not working properly.

Petitioner's Response

4.11 The Petitioner in its reply said that toll number is already active and the same is communicated to consumers. The Petitioner has the Universal Supply Obligation for supplying power in the State of Jharkhand and will ensure the round the clock working of toll free number.

Views of the Commission

4.12 The Commission directs the Petitioner to ensure that the toll free number is available round the clock. It is the duty of the Petitioner to deploy adequate and qualified manpower in shift to attend consumers' complaints.

Allowing Other Licensee to operate in JBVNL Area

Public Comments/ Suggestions

4.13 The Objector pointed out that if the Petitioner is not able to work efficiently and manage its duties properly in the Licensee area, then other Licensee of the Jharkhand may be allowed to provide power supply in the common area. This may increase competition and consumer may have the option to choose from any licensee. The consumers should not be burdened with the inefficiency of the Petitioner.

Views of the Commission

4.14 The Commission has notified JSERC (Operation of Parallel Licensees) Regulation 2019, which shall enable the consumers to avail electricity from any of the distribution licensees as per their choice. Consumers can also avail the benefit of open access as per JSERC Open



Access Regulations, 2016 notified by the Commission. The Commission shall also consider if other Licensees would want to extend its area of supply.

Sales

Public Comments/ Suggestions

4.15 The Objector pointed out that there is sharp reduction in sales estimates as submitted by the Petitioner. It clearly indicates that the Petitioner's intention of loading cost on upfront basis in its previous MYT Petition. This also leads to stagnation of capital infrastructure and unnecessary loading on consumers.

Petitioner's Response

4.16 The Petitioner agrees with the submission of the Objector that the actual sales of the Petitioner have been at a lower level than that projected and approved by the Commission in the MYT petition. The Petitioner submitted that the projection of sales in MYT period was based on the targets of electrifying 30 Lakhs unconnected domestic consumers under 24*7 Power for All (PFA) Program and expected additional new households to be constructed during the MYT period. Further, the aim was to ensure 24 hours supply to all consumers, which had led to significant increase in consumer base and sales projections in the MYT period. However, the un-electrified households identified during the electrification of unconnected households from FY 2016-17 to FY 2018-19, were significantly lower than the estimate which has resulted in lower energy sales. Also, it is imperative to mention that the impact of LED distribution in the State is one of the potential reasons for reduction in overall energy consumption.

4.17 The Petitioner further submitted that the Objector's contention that the estimated sales are vague is completely biased statement as the Petitioner has submitted the actual sales in True up of FY 2016-17 and FY 2017-18. For APR of FY 2018-19 the sales has been projected based on actual addition of consumers in the billing database and in FY 2019-20 based on the consumption pattern, past trend of consumption growth rate and other socio-economic factors instead of merely considering the consumer growth rate. Also, actual numbers of households estimated under various schemes have been considered while projecting the domestic projections of sales and consumers for FY 19-20.

4.18 The Petitioner has pointed out that the other cost of ARR and capex projected in the MYT period based on the higher sales/ load would result in unsustainable tariff. The above statement of the Objector lacks merit as the capex incurred by the Discom is broadly



utilized to provide electricity access, build robust distribution infrastructure and to provide reliable and affordable power to all consumers in the State. The Petitioner further submitted that the Capex planned under various schemes are the investment to lay down new distribution infrastructure to provide last mile electricity access and to support the demand requirements. The Petitioner further submitted that the Objector must appreciate that in FY 2018-19, JBVNL has achieved 100% electrification in the State by adding new PSS, 33kV/ 11kV/ LT lines, DTRs, etc. Also, a significant capex is being incurred for system augmentation and strengthening including renovation and modernization to maintain the performance of the existing system which includes replacement of DTRs, augmentation of PSS, etc.

- 4.19 Moreover, it is imperative to mention that the Petitioner's submissions are based on closest estimates of past trend and closest to the actual recent developments, which shall anyways be subject to true up and the impact of any change in revenue shall be passed on during the true up exercise.

Views of the Commission

- 4.20 The Petitioner had made ambitious plans to undertake rural electrification at a greater pace and accordingly made its submissions in its Petition for the approval of Business plan for the second control period. The Commission after prudence check approved the sales in line with the submissions made by the Petitioner.
- 4.21 However, it is pertinent to mention that sales is an uncontrollable parameter and the Petitioner has provided proper justification in its submission for such downward revision of sales. The Commission now considers the submissions made by the Petitioner, but directs the Petitioner to optimise their sales estimation. The Commission with regards to additional capitalisation notes that the Petitioner though has been incurring considerable capital expenditure however, the amount of assets capitalised and put to use is fraction of what was approved in the MYT Period for FY 2017-18. The Commission would like to clarify that asset capitalisation and not capital expenditure is considered while determining tariff and therefore there is no loading of capital expenditure on the tariff until the same is capitalised and assets are put to use.



Power Purchase Cost

Public Comments/ Suggestions

- 4.22 The Objector highlighted that Petitioner has procured power from open market at Rs. 4.69/kWh which is higher than the average power procurement cost.
- 4.23 The Objector submitted that the Petitioner has claimed delayed payment charge to the tune of Rs. 353 Crore payable to DVC on account of power purchase.
- 4.24 The Objector pointed out that the Petitioner had not fulfilled the earlier commitment of procurement of solar & wind power to meet the RPO. The Commission should take in account such negligence on part of the Petitioner.

Petitioner's Response

- 4.25 The Petitioner submitted that there has been no agreement with any generator or trader for purchase of short term power. The purchase of power from IEX through PTC (as a client member) is the Spot Power procured on day-ahead basis or term-ahead basis to meet the immediate requirement arising out of demand and supply imbalances such as shut down of any generating unit. Hence, as such the Petitioner has not been seeking approval of purchase of spot power, as the same demand was estimated to be met through other tied up sources. Since the spot power is purchased on emergent basis and as per demand–supply imbalance. Going forward, quarterly intimation will be given to the Commission regarding the power purchased through spot market.
- 4.26 The Petitioner submitted that due to disallowance of actual Power Purchase Cost and inadequate tariff hike, the Petitioner was not able to pay its power purchase liabilities, thus resulting in Delayed Payment Surcharge (DPS) of Rs. 352.85 Crore to DVC. At present, the Petitioner is also in the process of reconciling the past electricity dues, DPS and payments made from October 1, 2015 till date. It is further submitted that inadequate tariff hikes in past, delay in receipt of support from the Govt. and cash flow mismatches have resulted in levying of DPS by DVC, which is to be paid in line with the Regulations stipulated by the Commission. Even during the present FY 2018-19, the Petitioner has not been in position to liquidate DVC dues as the subsidy that can be drawn based on the inadequately approved tariff rates is only up to Rs. 600 Crore. In such a situation, the DPS gets accumulated and any payments made by the Petitioner are first adjusted towards DPS, as per the Tariff Regulations. Hence, it is submitted that the Petitioner has been compelled to pay DPS charges to DVC.



- 4.27 The Petitioner with regard to RPO submitted that it has undertaken every possible measure to not only meet but to significantly exceed the RPO targets. The petitioner reiterated that the primary reason for the non-compliance was that the Renewable Energy Certificates (REC) was not in motion during last year due to which it was not able to purchase the REC's. The Petitioner also submitted that the State had completed the bidding process for commissioning of 1,100 MW of solar power for purchase of power from solar plant, but the PPA's were not signed and the process was put on hold, due to higher tariffs as compared to recently discovered solar tariffs in the competitive bidding for solar parks at that time.
- 4.28 The Petitioner submitted that it has signed a PPA with SECI for 300 MW of wind power to meet the non-solar RPO, which shall be available in the following financial year. Additionally, the Petitioner had approached SECI for allocation of 200 MW of wind power from the upcoming bids. The Petitioner had also submitted that it had also approached SECI and NTPC for purchase of solar power from upcoming solar parks to comply with RPO for the FY 2017-18, against which 700MW of Solar Power and 500MW of wind power PPA has been already signed with SECI. However, due to reason beyond the control of the licensee, such as delay in commissioning of power plants has led to non-fulfilment of RPO obligation in FY 2016-17 and FY 2017-18.

Views of the Commission

- 4.29 The Commission has scrutinized the submission made by the Petitioner. The Commission is of the view that even though the Petitioner has the Universal Service Obligation, it is also the prime responsibility to provide the affordable power to the consumer. The Commission also directs the Petitioner to submit the rolling plan for procurement of short term power for approval before the Commission as per JSERC Distribution Tariff Regulations, 2015.
- 4.30 The Commission with regard to reply submitted by the Petitioner that inadequate tariff hike by the Commission due to which the Petitioner was not able to pay its power purchase liabilities has resulted into levying of delayed payment surcharge (DPS) is of the view that the same is devoid of merit. The Commission in the past has been allowing all legitimate power purchase expenses as per the accounts of the Petitioner which should have been utilised by the Petitioner to pay for power purchase made. Further, the Commission also observes that there has been huge variation in the tariff approved by the Commission and actual revenue collected by the Petitioner from various categories of consumers. It is expected from the Petitioner to bill and realize the tariff as per the approved rate to meet its



financial needs. The Petitioner has submitted the actual realization of Rs. 4.78/kWh against the approved tariff of Rs. 5.98/kWh for FY 2018-19. The realization for agriculture and allied category services is as low as Rs. 1.06 per unit against the approved tariff of Rs. 5.00 per unit. The Petitioner is required to concentrate its efforts on billing and collection activities to improve its financial position.

- 4.31 The Commission observes that the Average Billing rate approved by the Commission for FY 2018-19 was Rs. 5.98/kWh and actual average billing rate at which the Petitioner has been able to bill the consumers is Rs. 4.78/kWh. There has been considerable gap in the recoveries made by the Petitioner. Further, it is to be noted that the actual collection efficiency for FY 2016-17 and FY 2017-18 has been 90.69% and 84.86% respectively. Therefore, the reasons for impact on Petitioner's cash flow is on account of inefficiency on the part of the Petitioner and therefore the cost has not been considered.
- 4.32 With regard to RPO, the Commission found that the Petitioner has not been able to comply with the Renewable Purchase Obligation (RPO) for the FY 2016-17 & FY 2017-18. The Commission directs the Petitioner to comply with the RPO Norms set by the Commission and submits RPO compliance report for period till FY 2018-19 by April 2019. Further, the Petitioner is required to submit the quarterly report on RPO compliance for FY 2019-20.

Intra-State Transmission Loss

Public Comments/ Suggestions

- 4.33 The Objector submitted that the Petitioner has claimed the intra-state transmission loss at 9.64% and 9.71% in FY 2016-17 & FY 2017-18 against the approved value of 2.23% by Commission. Similarly, higher intra state transmission losses have been considered in FY 2018-19 and FY 2019-20.

Petitioner's Response

- 4.34 The Petitioner submitted that as per the Annual Audited Accounts of FY 2016-17, there has been transmission loss of 892.79 MU's, However, based on the inter-state transmission loss of 3% approved by Commission for FY 2016-17, it is estimated that 180.56 MU's is lost in the inter-state transmission system. The residual energy lost before the Discom's periphery i.e. 712.23 MU's is considered lost in intrastate transmission system and broadly translates into 9.64% of transmission loss. Similarly, as per the Annual Audited Accounts of FY 2017-18, the transmission losses are to the tune of 937.89 MU's. However, it is estimated that 190.98 MU's are lost in inter-state transmission system based on approved



3% inter-state transmission losses. The residual energy lost before the Discom's periphery i.e. 746.92 MU's is considered lost in intrastate transmission system and broadly translates into 9.71% of Transmission loss.

4.35 The Petitioner also substantiated that there are some boundary metering issues which have been taken up with JUSNL, hence it is subject to reconciliation.

Views of the Commission

4.36 The Commission after due scrutiny of the same has approved the intra-state transmission loss as discussed in detail in relevant sections of this Order.

T&D Loss levels of JBVNL/ Dis-incentive for the non-achievement of T&D Loss

Public Comments/ Suggestions

4.37 The Objector pointed out that the T&D loss levels of the Petitioner are beyond the targets set by the Commission and any inefficiency on the part of the Petitioner shall not be passed on to consumers.

4.38 The Objector further submitted that the Petitioner has claimed loss in external system and transmission loss in its Petition. The Objector pointed out that the loss in external system and transmission loss does not relate to the distribution licensee and therefore should not be allowed.

4.39 The Objector pointed out that Petitioner has not proposed any disincentive on account of non-achievement of loss reduction targets as per the methodology adopted by the Commission in its earlier Orders.

Petitioner's Response

4.40 The Petitioner submitted that it is committed to reduce T&D losses and all efforts are being made to reduce losses to normative levels and is taking various steps to meet the benchmarks given by Commission. Any disallowances shall only be made on actuals and shall be subject to true up and the impact of any disallowance shall be passed on during the true up exercise. The Petitioner submitted that in previous years, the disallowance on account of higher T&D losses was adjusted with the Resource Gap Funding provided by the State Government. In FY 2018-19 and FY 2019-20 there is no RGF support from the State government. As such, the Disallowance on account of Higher T&D losses must not be deducted from the Annual Revenue Requirement of FY 2018-19 for arriving at the Gap.



Views of the Commission

- 4.41 The Commission notes with concern that the Petitioner is not able to contain its loss levels within the levels set by the Commission. The Commission agrees with the views of the Objector that the inefficiency on the part of the Petitioner shall not be passed onto consumers. The Commission in the past has never allowed cost on account of inefficiency of the Petitioner to be passed on to the consumers and has continued with its earlier approach in this tariff order as discussed in relevant sections of this Order.
- 4.42 The Commission is of the view that loss in external system and intra-state transmission system are to be taken into consideration as per the fundamentals of the computation of energy balance which is as per the methodology approved by the Commission in its earlier Orders.
- 4.43 The Commission after due scrutiny of the same has approved the T&D loss and disincentive for the non-achievement of T&D loss in the relevant sections of this Order.

Capital Expenditure & Gross Fixed Assets

Public Comments/ Suggestions

- 4.44 The Objector submitted that actual capital expenditure and capitalization claimed during the true-up exercise for FY 2016-17 & FY 2017-18 is less than approved value. However, the Petitioner has exaggerated the projection for FY 2018-19 and FY 2019-20.

Petitioner's Response

- 4.45 The Petitioner agrees with the submission of the Objector that it has been able to incur capex of 18% and 74% of the capex approved by the Commission during FY 2016-17 and FY 2017-18, respectively. It is submitted that the delays in Capex are due to uncontrollable parameters and the work has been spilled over to FY 2018-19 and FY 2019-20, as operationalizing such large schemes sponsored by State and Central Government requires significant approvals and steps.
- 4.46 The Petitioner submitted that it has incurred an expenditure of Rs 428.60 Crore and Rs 1,076.03 Crore against the approved amount of Rs 304.10 Crore and Rs 218.85 Crore for FY 2016-17 and FY 2017-18 respectively under the ADP head due to reason which were beyond the control of the Petitioner i.e. delay in finalization of SBD by Ministry of Power (MoP) for IPDS and DDUGJY schemes, which in turn led to delay in award of work under the schemes. However, in order to expedite the electrification process, the Petitioner has



- incurred these expenses under the ADP head which is the reason behind the expense in ADP head being more than the approved capital expenditure by the Commission.
- 4.47 The Petitioner further submitted that it has envisaged an expenditure of Rs 1,000 Crore for FY 2017-18 and Rs 1,200 Crore for FY 2018-19 under the ADP head and the same was approved by the Commission vide its MYT Order dated June 21, 2017. However, the Commission vide Tariff Order dated April 27, 2018 revised the approved Capex to Rs. 218.85 Crore for FY 2016-17 and Rs 315 Crore for FY 2018-19 based on the Actual capital expenditure made under ADP head for FY 2016-17.
- 4.48 The Petitioner reiterated that the delay has been majorly on account of issues related to finalization of bidding document, selection of vendors and disbursement of sanctioned amount under various schemes. It is to be noted that Central Government schemes are guided by MoP guidelines, based on which tendering and award process is completed. The Petitioner submitted that awarding schemes of such size of capital expenditure requires detailed planning and extreme due-diligence, with minimal margin of error.
- 4.49 The Petitioner further submitted that the actual Capital Expenditure done by the Petitioner during FY 2017-18 is significantly higher than the Capital Expenditure done in FY 2016-17, which has further increased during FY 2018-19 and likely to be much higher in FY 2019-20. The ongoing schemes and works are coming towards achieving the last milestones, a significant amount of capital expenditure incurred is likely to be capitalized.
- 4.50 The Petitioner also highlighted the point that the quality supply and special focus is being made by the Petitioner to ensure timely completion of capital expenditure works. Moreover, the asset addition from consumer contribution shall be subject to true up in future, the impact of which can be passed on to the beneficiaries in future. Hence, the Petitioner requested that the Capital Expenditure as provided by the Petitioner and the capitalization proposed by the Petitioner may be approved.

Views of the Commission

- 4.51 The Commission after due scrutiny approved the capital expenditure and GFA in the relevant sections of this Order.

O&M expenses

Public Comments/ Suggestions



- 4.52 The Objector submitted that employee expenses for FY 2018-19 & FY 2019-20 have been claimed based on the escalation factor of 3.85% over the past year FY 2017-18 over the entire employee expenses against the Commission's approach to apply on employee expenses excluding terminal benefits.
- 4.53 The Objector also raised the concern that since FY 2015-16 no actuarial studies have been conducted by Petitioner for ascertaining terminal liabilities.
- 4.54 R&M expenses projected by the Petitioner is to the tune of 155% and 86% in FY 2018-19 and FY 2019-20 respectively when compared to previous year's expenses.

Petitioner's Response

- 4.55 The Petitioner submitted that it has calculated the employee cost for FY 2018-19 by escalating the employee cost of FY 2017-18 by the inflation factor of 3.85% and the methodology provided under Clause 6.6 of JSERC Distribution Tariff Regulations, 2015. To incorporate the impact of 7th pay Commission, the Petitioner has considered 10% increase in employee cost for FY 2018-19.
- 4.56 The R&M expenses for FY 2018-19 have been estimated by escalating the R&M expenses of FY 2017-18 by K-factor of 2.34% as approved by the Commission in tariff Order dated April 27, 2018.

Views of the Commission

- 4.57 The Commission has approved O&M expenses in the relevant section of this Order.

Provision of Bad & Doubtful Debts

Public Comments/ Suggestions

- 4.58 The Objector pointed out that the provision for bad & doubtful debts created by the Petitioner should not be allowed as 100% collection efficiency is mandated by the Commission. The inefficiency of the Petitioner can't be pass on to consumers.

Petitioner's Response

- 4.59 The Petitioner submits the provision for doubtful debts of Rs. 478.84 Crore in FY 2018-19 and Rs. 296.43 Crore for FY 2019-20 and prayed the Commission for approval.



Views of the Commission

4.60 The Commission in its earlier Order dated June 21, 2017 had already set targets for the second control period based on the GoI, UDAY scheme. The Commission notes with concern that the actual level of AT&C submitted by the Petitioner are still higher as compared to the targets set by the Commission. The Commission is of the view that such high loss levels due to Petitioner's inefficiency should not be passed on to the consumers.

Revenue from tariff, Govt. Subsidy, RGF

Public Comments/ Suggestions

4.61 The Objector raised the concern over the deteriorating condition of collection efficiency from 90.69% in FY 2016-17 to 84.86% in FY 2017-18.

4.62 The Objector pointed out that the Petitioner has not submitted the details of revenue billed till date for FY 2018-19. The Petitioner has not furnished any details of subsidy that has been received from the State Government to reduce the overall tariff of certain category of consumers. The Objector pointed out that though RGF support has been withdrawn from the State Government; the Government is still supporting the domestic consumers (with a certain monthly consumption limit) through direct subsidy and an amount of Rs. 2000 Crore had been earmarked for the same in the FY 2018-19 budget by Government. The above amount of Rs. 2000 Crore is also provided for in the revised budget estimates for FY 2019-20. Further, an amount of Rs. 750 Crore has been budgeted for tariff subsidy for FY 2019-20. Besides the above tariff subsidy, the State government has also budgeted Rs. 750 Crore and Rs. 300 Crore during FY 2018-19 and FY 2019-20 respectively to repay the dues of DVC.

Petitioner's Response

4.63 The Objector has pointed out that the collection efficiency of JBVNL has deteriorated from 90.69% in 2016-17 to 84.86% in FY 2017-18. In this regard it is submitted that the decline in collection efficiency of JBVNL has been majorly on account of the following:

- During the FY 2017-18, the Petitioner has carried out rural electrification works at massive scale, owing to which there has been a significant increase in the consumer base by more than 6.8 Lakh consumers. Such an increase in consumers has led to increase in energy sales and assessment from the rural areas but couldn't be converted into collection.



- The Petitioner has been committed to improve its billing and collection efficiency and accordingly it had undertaken significant reform in the billing system by migrating from legacy system of outsourcing to centralized billing system with complete control of JBVNL. The Petitioner also submitted that a significant number of consumers are included in the billing network. However, as these consumers have been out of the billing net for past period there has been large accumulation of electricity dues, against which collection could not be realized. Further, JBVNL has been undertaking close monitoring of consumer billing and collection under the present “Urja Mitra” program to reduce the AT&C losses by bringing more and more consumers in the billing and collection network.
 - The Petitioner also submitted that during FY 17-18, a major power consumer i.e. Railway having monthly assessment & collection of Rs.3.5 Crore per month and other major HT consumers have been migrated to other network resulting in adverse impact on consumer mix, affecting the overall collection efficiency.
- 4.64 The Objector has submitted that in the earlier Orders the Commission depicted that the resource gap funding provided by the State Government has always been used as grants-in-aid to meet the revenue obligations of the Petitioner irrespective of the disallowances by the Commission. The above statement of the Objector is completely misplaced as the Commission has itself adjusted the disallowances in the previous Tariff Order dated June 2017 and April 2018.
- 4.65 The Objector has also mentioned that communication from the Energy department, Government of Jharkhand vide letter dated July 14, 2014 stating that “*Amount released towards resource gap may be utilized to meet the slashes/disallowances worked out by the Hon’ble commission while fixing the tariff*” is only pertains to the year FY 2014-15. However, the Petitioner would like to bring to kind notice of the Objector that the aforementioned letter provides the methodology to be adopted while treating the Resource Gap Funding in determination of Tariff.
- 4.66 In line with the above, the Commission in its earlier Tariff Order has also considered the adjustment of disallowed cost from Resource Gap Funding for meeting the revenue gap in Tariff Order for “Review of ARR for FY 2013-14 & FY 2014-15; ARR & Tariff Determination for FY 2015-16” dated December 14, 2015. The same has been pronounced below-
- “6.101 However, as the Commission disallows power purchase cost on account of high T&D losses, in order to provide support to the Petitioner and to meet the obligations arising from power generators, the resource gap funding provided by the State*



Government is allowed to be utilised for meeting such disallowance. On analysis of the submissions made by the Petitioner, the Commission observed that the quantum of resource gap budgeted for FY 2015-16 was higher than the amount disallowed against power purchase cost due to non-achievement of normative distribution loss trajectory in the approved ARR.

6.102 The Commission is of the opinion that the remaining resource gap funding available to the Petitioner after accounting for the aforesaid disallowance should be considered for meeting the approved revenue gap. Thus, the resource gap funding available to meet revenue gap has been summarised as follows.”

- 4.67 The Petitioner also submitted that the distribution utility is prone to difficulties of T&D losses and collection inefficiencies due to difficult terrains, large rural consumers in overall consumer mix and significant legacy issues.
- 4.68 Considering the above submissions, adjustment of disallowance while deducting RGF from ARR, taking cognizance of difficulties and ground realities faced by the Petitioner is inevitable. Hence, the submissions of the Objector may be rejected by the Commission.
- 4.69 The Objector has also pointed out that the Government is still supporting the domestic consumers through direct subsidy and an amount of Rs. 2,000 Crore had been earmarked for the same in the FY 2018-19 budget by Government and has also provided the snapshots from the media report. It is to bring to the kind notice that with the tariff approved for FY 2018-19, the Petitioner shall be able to draw a maximum subsidy of Rs.594 Crore only, which has been provided by the State Government.

Views of the Commission

- 4.70 The Commission after security has approved the revenue from tariff, Govt. subsidy/RGF in the relevant section of this Order.

Treatment of Revenue Gap

Public Comments/ Suggestions

- 4.71 The Objector pointed out that the Petitioner has claimed cumulative revenue gap of Rs. 7739.41 Crore upto FY 2017-18 and requested the Commission to create a regulatory asset



for realisation of the same. The Objector highlighted the point that Commission in the earlier tariff Order dated April 27, 2018, directed the Petitioner to liquidate the cumulative gap of Rs. 5514.11 Crore till FY 2017-18 as such gap shall be taken care of by the grant to be received from the State Government. The Commission also directed the Petitioner to expedite the conversion of State Government loan into grant/equity as per the agreed UDAY MoU. In light of the above, the claim of Petitioner towards revenue gap lack merit and ought to be rejected.

Petitioner's Response

- 4.72 The Contention of the Objector that revenue gap of the Petitioner ought to be rejected on the basis of adjustment of revenue gap with UDAY grant not only misconceived but devoid of any merit and based on completely wrong premise. It is submitted that the major portion of grant provisioned under UDAY pertains to the JSEB period, a detailed justification is provided below.
- 4.73 It is submitted that under the UDAY scheme, a tripartite MoU dated January 5, 2016 was signed between Jharkhand Bijli Vitran Nigam Ltd. (JBVNL), State Govt. of Jharkhand and Ministry of Power (MoP), as per which it was agreed that the State Govt. of Jharkhand would take over the 100% of outstanding dues of JBVNL towards CPSU's as on September 30, 2015. It is submitted that JBVNL received an amount of Rs. 6,136.37 Crore under UDAY Scheme as loan from State Government during FY 2015-16. The same is being pursued to be converted into Grant (75%) and Equity (25%) as per the MOU signed between MoP, Government of India, Government of Jharkhand and Jharkhand Bijli Vitran Nigam Limited on September 25, 2015. The Petitioner would like to mention that out of Rs. 6136.37 Crore given by the State Government as loan during FY 2015-16, only Rs 552 Crore pertains to dues of power purchase of JBVNL and the remaining amount of Rs. 5,584 Crore is towards the payments of liability of CCL, P.T.P.S and power purchase liabilities of DVC accumulated during the JSEB period.
- 4.74 However, as mentioned earlier, the Commission has mistakenly adjusted the cumulative revenue gap of JBVNL of Rs. 5,514.11 Crore recognised from FY 2013-14 (company period) to FY 2017-18 with the grant to be received from the State Government which includes the outstanding dues of erstwhile JSEB, P.T.P.S and debts. The approach adopted by the Commission seeks to settle the past liabilities of JSEB against present revenue gap of JBVNL is an undue adjustment to the disadvantage of the Petitioner, which is again going to create fresh liabilities in the books on account of non-payment of power purchase dues.



4.75 Therefore, considering the above submission and facts on amount received under UDAY scheme, the Petitioner requested to the Commission to not consider the amount received under UDAY scheme pertaining to JSEB period while approving the revenue of JBVNL. Thus, it is prayed to the Commission to consider the adjustment of only Rs. 552 Crore from the cumulative revenue gap of Rs. 5,514.11 Crore from the grant of Rs. 6,136.37 Crore received by JBVNL from State Govt. of Jharkhand under UDAY Scheme, while remaining revenue gap of Rs.4,962.11 Crore may be allowed to be passed on in tariff by way of Regulatory Assets. Hence, there would be no impact on the revenue gap proposed by the Petitioner in the Tariff Petition for FY 2016-17 to FY 2018-19.

Views of the Commission

4.76 The Commission has approved the ARR and revenue gap for JBVNL as per JSERC Distribution Tariff Regulations, 2015 and the principles adopted by it in its earlier Tariff Orders as discussed in relevant sections of this Order.

Removal of Clause 13 of HT Agreement

Public Comments/ Suggestions

4.77 The Objector pointed out that the Petitioner has repeatedly raised this issue of the removal of Clause 13 in earlier petitions also, in spite of the fact that it has already been settled by the Commission in plethora of its tariff Orders.

4.78 The Objector suggested that the Commission should not accept the Petitioner proposal to remove Clause 13 of the HT Agreement in line of earlier Order passed by Commission citing the reasons that such facility should be extended to other category of consumers as well.

Petitioner's Response

4.79 The Petitioner submitted that the inclusion of this Clause in HT agreement was done in the tariff Order of Bihar, only to protect consumers who were not able to fulfil the AMG/MMG Clause due to default on the part of the JBVNL (erstwhile JSEB/BSEB) to supply sufficient power. The consumers at that time were supposed to pay JSEB/BSEB based on AMG/MMG charges irrespective of the consumption by the consumer. Thus, AMG/MMG



- charges which were not linked to the actual demand used to provide guarantee to JSEB for minimum cost recovery from the consumers. Therefore, in order to compensate consumer for non-supply of power during the billing period owing to reason mentioned in Clause 13 of the HT agreement, the AMG/MMG charges were reduced proportionately. However, the Commission vide its tariff Order for FY 2010-11 removed the clause on the AMG/MMG and introduced fixed charge, wherein the consumers were billed based on the Contract Demand or Actual Demand metered in the consumer meter.
- 4.80 The Petitioner submitted that M/s Gautam Ferro Alloys had filed a petition before the Commission for directing JBVNL to recalculate the energy bills and provide relief in fixed charges under clause 13 of the HT Agreement. The Commission passed an Order in Case No. 01 of 2014 on 17.09.2014 wherein the Commission directed the Petitioner (M/s Gautam Ferro Alloys) to approach the concerned Redressal Forum.
- 4.81 The Petitioner (M/s Gautam Ferro Alloys) aggrieved by the Order of the Commission, filed a petition before the Hon'ble Supreme Court of India in the aforementioned matter. The Hon'ble Supreme Court of India vide Order dated October 10, 2017 upheld the Order of the Commission and accordingly the Petitioner approached the learned Redressal Forum.
- 4.82 The Hon'ble VUSNF in Case No. 50/2018 dated 29.09.2018, directed that as per the Regulation of Supply Code Regulation and Tariff Order framed by Jharkhand State Electricity Regulatory Commission, the Petitioner (M/s Gautam Ferro Alloys) is not entitled to get pro-rata reduction in maximum demand charge for non-supply hours taking aid of Clause-13 of HTS/HTSS power supply agreement.
- 4.83 It was further mentioned that neither Supply Code Regulations/Tariff Order nor Clause-13 supports the claim of the Petitioner because Maximum Demand bill has been raised on maximum demand recorded by meter in accordance with tariff Order and definition of Maximum Demand mentioned in Supply Code Regulations, 2015.
- 4.84 In other states also, the general practice is that the fixed charged are not reduced proportionately on lower supply of power. As such, the existence of Clause 13 "reduction in demand charges when the consumer is unable to purchase power or when the utility is unable to supply power owing to uncontrollable events such as strikes, riots and Act of God or any other case reasonable beyond control or if the Board is prevented from supplying" is contested by the JBVNL in Hon'ble APTEL and the matter is under sub-judication.

Views of the Commission



4.85 In view of the mechanism provided for compensating the consumers for non supply of electricity under Section A14 of this Order Clause 13 from HT agreement will no longer be applicable.

Compliance of Directive

Public Comments/ Suggestions

4.86 The Objector said that the Petitioner had not complied any of the directives of the Commission in its earlier Orders.

Petitioner's Response

4.87 The Petitioner pointed out that it has submitted detail status on directives issued by the Commission in its earlier Orders. The Petitioner has ensured that the compliance of Directives is being periodically reviewed & monitored by the Top Management. There have been regular review meetings, held at the highest management level (i.e. at the level of CMD and MD) to review the overall progress, which directly and indirectly covers the compliance of directives.

4.88 The Petitioner also proposed a quarterly meeting with the Commission covering the status of directives, key issues and challenges, to ensure timely information and compliance of Directives.

Views of the Commission

4.89 The Commission is of the view that the Petitioner has not been prompt in complying with the directives issued by the Commission. The Petitioner needs to take the directions seriously and comply fully and in true spirit of the directives given.

Voltage Wise Cost of Supply

Public Comments/ Suggestions

4.90 The Objector pointed out that the Petitioner has not conducted any study to determine the voltage wise cost of supply as directed by the Commission. The Objector further submitted that the Petitioner has even failed to depict that it made any efforts to undertake such loss estimation study based on which voltage wise cost of service can be determined.

Petitioner's Response



4.91 The Petitioner submitted that such study takes substantial amount of effort and time as it includes various surveys, analytics, designing load flow diagram, etc. The Petitioner has now concluded the process of selection of agency for carrying out the voltage wise losses of distribution network. As per the terms and conditions, the agency shall complete the study within a period of 3 months, hence the Petitioner is likely to submit the study by the end of FY 2018-19.

Views of the Commission

4.92 The Commission in its earlier Order dated June 21, 2017 & April 27, 2018 had directed the Petitioner to conduct detailed technical study to determine voltage wise cost of supply. However, the Petitioner has not submitted any report to the Commission. The compliance submitted by the Petitioner along with the Commission view on the issue is detailed in Section 15 of this Order.

Load Factor Rebate

Public Comments/ Suggestions

4.93 The Objector requested the Commission to allow load factor rebate to consumers with arrears. The rebates should be allowed as such rebate boost industrial consumption leading to growth of the industries in the State.

4.94 The Objector suggested that load factor rebate, voltage rebate, power factor, prompt payment rebate should be alike in all the Discom operating in state of Jharkhand.

Petitioner's Response

4.95 The Petitioner submitted that the load factor rebate is given to each and every consumer who are eligible for rebate i.e. Consumer having average monthly load factor of more than 60% and as per the terms and conditions provided in Tariff Order for FY 2017-18 and FY 2018-19, the aforementioned rebate shall be available only on monthly basis and consumer with arrears shall not be eligible for the LF rebate. The Petitioner emphasises that, cases where there is an outstanding amount and such dues haven't been stayed by appropriate Authority/Court, the LF rebate is not given to consumers.



4.96 It is submitted that provision of load factor results in double counting of benefits of higher consumption to the Consumer whereas, the lower load factor on the other hand is not being penalized. Hence it is prayed to the Commission to remove the load factor rebate for all consumer categories as it increases billing disputes while adversely impacting the financial position of the Petitioner

Views of the Commission

4.97 The Commission has dealt the issues in detail in the Section 14 of this Order.

Removal of Installation based tariff for LTIS consumer

Public Comments/ Suggestions

4.98 The Petitioner has proposed to migrate to demand based tariff for LTIS consumers. The Objector raise the concern that majority of the LTIS consumers were not having the MDI meters to record the demand.

Petitioner's Response

4.99 The Petitioner submitted that such proposal shall ensure the judicial usage of energy and prevent the need for inspecting officer to regularly inspect the consumers premise for regularization or excess load. The Petitioner further submitted that, majority of the LTIS consumers had MDI meters and committed to ensure 100% MDI in LTIS category. However, till the time meters are replaced with MDI meters, the Petitioner shall provide an option to consumers having installation based tariff to come forward and declare their own load (in kVA).

Views of the Commission

4.100 The Commission has appropriately dealt with the issue in the relevant Section 10 of this Order.

Miscellaneous Charges

Public Comments/ Suggestions

4.101 The Objector pointed out that the Petitioner has increased the schedule of charges drastically and requested the Commission for prudence check before finalization the same.



Petitioner's Response

4.102 The Petitioner submitted that Objector's claim that miscellaneous charges proposed is on higher side is not valid and further submitted that sufficient justification for increasing the miscellaneous charges has been provided in the Petition with comparison with different States.

Views of the Commission

4.103 The Commission has appropriately dealt the issue in the Section 13 of this Order.

Interest on Consumer Security Deposit

Public Comments/ Suggestions

4.104 The Objector pointed out that the Petitioner has not paid the interest on consumer security deposit amount to the consumers till date despite repeated directives by the Commission. The Objector further submitted that the Petitioner should be penalized for non-compliance of directive of the Commission.

Petitioner's Response

4.105 The Petitioner submits that the interest on CSD is already being paid to the HT consumers of JBVNL. Further, a web-portal has been created by the Petitioner, where the consumer can submit their details and claim the interest thereof. Post verification of documents and claim of consumer, the security deposit interest shall be paid to the consumer. The Petitioner has already in the process of paying interests on security deposits of those consumers whose security deposit details are available in JBVNL's database.

4.106 The Petitioner also submitted that for LT consumers, where security deposit details is not available, the Petitioner has initiated the process of updating the details from the past hard copy records available at field offices and approx. 2 lakh entries have been completed as on December 25, 2018. The Petitioner also highlighted that majority of rural consumers (~20 Lakh) have been provided electricity connections under various Central or State Government schemes such as erstwhile RGGVY and recently under SAUBHAGYA, DDUGJY etc. Under the said schemes, any security deposit hasn't been taken for providing connections and if these consumers are considered, the Petitioner shall have more than 70% compliance. It is Petitioner's commitment that the records available from field offices shall be updated in next few months and where the records are available and updated, the Petitioner has already made update in billing software to pay the interest on security deposit



for FY 2017-18 by December'18. Further, as more and more consumer records are updated, the Petitioner shall pay the interest on security deposit along with March'19 bill, in line with the Regulations. The Petitioner humbly submits that any change in billing software and devising the methodology/ tools for updating the consumer's security deposit details from field offices is a time taking exercise and requires adequate diligence.

Views of the Commission

- 4.107 The Commission in its earlier Orders had repeatedly directed the Petitioner to prepare a list of consumers who have not been paid interest on consumer security deposit as per applicable Regulations and clear the dues pending on the Petitioner with immediate effect. However, the Petitioner has not submitted any compliance report to the Commission. This shows the lackadaisical attitude of the Petitioner.
- 4.108 The Commission takes note of the steps taken by the Petitioner. However, the Petitioner is yet to ensure that the interest is paid to all the consumers on the security deposits.
- 4.109 The compliance submitted by the Petitioner along with the Commission view on the issue is detailed in Section 15 of this Order.

Disbursement of Subsidy Amount

Public Comments/ Suggestions

- 4.110 The Objector raises the point that subsidy amount announced by State Govt. is not disbursed by the Petitioner.

Petitioner's Response

- 4.111 The Petitioner submitted that the energy bill is generated after deducting the subsidy amount as announced by State Government.

Views of the Commission

- 4.112 The Commission is of the view that the Petitioner should ensure timely billing and Consumer should not be deprived of Government subsidy due to clubbing of electricity bills for more than 1 month.
- 4.113 Further, the Govt of Jharkhand while announcing the subsidy for FY 2018-19 also suggested that Subsidy through Direct Benefit Transfer (DBT) will be implemented in the State. The Ministry of Power, Govt. of India in partnership with the Department for



International Development (DFID), Government of UK had approved a Technical Assistance Programme, “Supporting Structural Reforms in the Indian Power Sector” (Power Sector Reforms Programme. The Project Team working under Power Sector Reform (PSR) is carrying out a detailed study on implementation of Direct Benefit Transfer (DBT) scheme as an alternate mechanism of subsidy disbursement for power sector in the State of Jharkhand. Once the study is completed, the subsidy disbursement through Direct Benefit Transfer (DBT) may be implemented in the State of Jharkhand.

Quality of supply/Hours of Supply

Public Comments/ Suggestions

4.114 The Objector pointed out the supply of hours especially in rural areas is poor. Frequent, power cut is observed in morning 6am-9am and in the evening 6pm-9 pm. The Objector requested the Commission to direct the Petitioner to improve the quality of supply.

4.115 The Objector pointed out that the Petitioner has proposed a huge tariff hike, but the quality of supply remains the same or even deteriorate. The service of supply remains pathetic and no corrective action have been taken till date to rectify the same.

Petitioner’s Response

4.116 The Petitioner submitted that it has proposed cost-reflective tariff in line with the National. The report on the area-wise actual number of supply hours provided in the rural areas for FY 2016-17 is already submitted to Commission.

4.117 The Petitioner has already submitted the status of electrification in un-electrified areas for the last two years to the Commission on May 29, 2018. The recent status of Electrification, as on December 26, 2018 is as below:

- Village electrification-29,376 (100%)
- Intensive electrification of villages-22,559 (77%)
- Household electrification-67.5 Lakhs (100%)

Views of the Commission

4.118 The Commission agree with the view of Objector on quality and supply hours. The Commission also in their earlier Order dated April 27, 2018 directed the Petitioner to comply with the Standard of Procedure (SOP) and submit the details. The Commission has taken note of the erratic supply to rural areas and has dealt with the issue in the relevant sections of this Order.



Billing & Collection Efficiency

Public Comments/ Suggestions

- 4.119 The Objector pointed out that the Petitioner is not billing timely. Several irregularities were observed where consumers are not receiving energy bill on time, cumulative bills for 6-9 months together etc. These irregularities of the Petitioner overburden the rural consumers to pay hefty amount in single trench.
- 4.120 The Petitioner has proposed 84% collection efficiency against the target of 100% approved by the Commission. This matter has been repeatedly dealt in earlier tariff Orders and no relaxation should be allowed for the reason already spelt and recorded in the earlier orders.

Petitioner's Response

- 4.121 The Petitioner submitted that 100% collection efficiency is on extremely higher side and even difficult to achieve for most efficient utilities. Further, the collection efficiency being approved under UDAY scheme is 97% for FY 2017-18 in comparison to 100% set by the Commission.
- 4.122 The Petitioner submitted that the collection efficiency would improve as un-metered consumers are converted to metered connections. The Petitioner further submitted that it is also facilitating its consumer through several collection avenues such as Mobile App, Online payment etc.

Views of the Commission

- 4.123 The Commission has dealt with the issue as per the JSERC Distribution Tariff Regulations, 2015 in the relevant section of this Order.

Issue related to prolonged Legal Cases

Public Comments/ Suggestions

- 4.124 The Objector point out legal cases between JBVNL and consumers, many times prolong without any result leads to consumer disappointment and also heavy on pocket. Instances were observed where a dispute of minimal amount, consumer had to pay lakh of rupee in the court proceeding seems illogical. The Petitioner as a company can hire many legal representatives while a consumer can't have the same privilege. The Commission or Discom should develop mechanism to sort out such type of issue.

Views of the Commission



4.125 The Commission directs the Petitioner to ensure the judicious use of consumer money. Further, the Commission direct the Petitioner to resolve the consumer issues in a timely manner.

Feeder Segregation

Public Comments/ Suggestions

4.126 The Objector suggested for feeder segregation of industrial category consumers for uninterrupted power supply.

Views of the Commission

4.127 The Commission agrees with the view that the feeder segregation will improve the energy accounting of the Petitioner. The Petitioner should take up the same on priority basis.

Issues related to HTSS Category

Public Comments/ Suggestions

4.128 The Objector pointed out that increase in tariff for HTSS category would be highly unviable and units cannot survive without cross subsidization.

Petitioner's Response

4.129 The Petitioner humbly agrees with the submission of the Objector that HTSS consumers have power cost as one of the most critical components and also employs a significant number of people.

4.130 The Petitioner submitted that any increase in tariff proposed for FY 2019-20 is in line with the National Tariff Policy, 2016. As per Section 8.3 (2) of the National Tariff Policy, 2016 dated January 28, 2016, “For achieving the objective that the tariff progressively reflects the cost of supply of electricity, the Appropriate Commission would notify a roadmap such that tariffs are brought within $\pm 20\%$ of the average cost of supply. The road map would also have intermediate milestones, based on the approach of a gradual reduction in cross subsidy”. Hence the Petitioner has proposed the tariff for FY 2019-20 keeping in view the Average Cost of Supply (ACS) of the Petitioner.



4.131 However, considering the submissions of Objector on market competitiveness and survival of industries, it is highlighted that the Objector may approach the State Government/ Energy Department for suitable support in Tariff.

Views of the Commission

4.132 The Commission has appropriately dealt the issue in the relevant sections of this Order.

Violation of Accounting Standards/Reliability of Audited Accounts

Public Comments/ Suggestions

4.133 The Objector pointed out that the CAG stated that revised audit report dated August 16, 2018 supersedes their earlier audit report dated January 30, 2018 for FY 2016-17. The Petitioner has not submitted the revised audited report.

4.134 The Objector also raises the concern that the audited account for FY 2017-18 submitted by the Petitioner is yet to be verified by CAG. Hence, the Objector requested the Commission not to carry out the true-up exercise for FY 207-18.

4.135 The Objector highlighted that the auditor has the opinion that Company does not have effective internal control systems for ensuring timely capitalization of fixed assets as and when the same is ready for use.

4.136 The Objector also mentioned various other violations of the Accounting Standards. These opinions/comments by auditor question the reliability of audited accounts.

Petitioner's Response

4.137 The Petitioner has submitted that C&AG issued its final report with NIL comments on August 28, 2018 vide its letter no. EG-II/JBVNL/A/cs/A-97/2016-17. Therefore, issue raised by the Objector has no importance and relevance.

4.138 The Petitioner submitted that Clause 2.1 of JSERC (Terms & Conditions for Determination of Distribution Tariff) Regulations, 2015 defined Accounting Statement that includes report from Statutory Auditor. Statutory auditor as per Companies Act, 2013 in case of a Government Company is an Individual or a firm which is independent and duly appointed as an auditor u/s 139(5) by C&AG.

4.139 True-up is prepared based on the Audited Accounts, duly audited by the Statutory auditors, appointed by C&AG.



4.140 The Petitioner submitted that out of 40 IND AS notified by the Ministry of Corporate Affairs, the violations were reported only in 9 IND AS. As such, there is over exaggeration of the state of affairs and therefore does not hold any merit. Out of the reported IND AS violations, JBVNL is already working on the resolution of issues like Preparation of Fixed Asset Register, Implementation of ERP, actuarial valuation which are all at advanced stages. These steps will resolve the issues related to IND as 1, 16, 17, 19 and 36. With respect to related party transactions, the transactions are with holding company w.r.t Fund Management which was in accordance with the resolution passed at the time of inception of companies, after the transfer scheme. Transactions with JUSNL and JUUNL are based on purchase and transmission agreement duly which takes care of IND AS 24. As far as balance confirmations are concerned, JBVNL is working on the reconciliations and expect to complete it before the end of March, 2019.

Views of the Commission

4.141 The Commission is of the view that as per the observations of the auditor the audited accounts of the Petitioner are in non-compliance to the accounting standards. The Commission observes that even though the Petitioner has made efforts towards resolving some of the issues but not all exceptions raised by the Auditor have been addressed in an appropriate manner. The Auditor has repeatedly expressed concerns on various issues in the past accounts. Even though the Petitioner has claimed that such observations are taken care of in the subsequent accounts, however, exceptions of the Auditor still persist.

4.142 Accordingly, the Commission once again directs the Petitioner to address the exceptions raised by the Auditor in an appropriate manner so that reliable data is available.

4.143 In regards to requirement of CAG audit accounts for FY 2017-18, the Commission points out that as per Definition 2.1 of JSERC Distribution Tariff Regulation, 2015, Accounting Statement needs to be duly certified by statutory auditor(s) for carrying out truing up which the Petitioner has submitted and hence the truing up is being carried out in this Order.

Issue related to Categorization of Consumer

Public Comments/ Suggestions

4.144 The Consumer (Yogoda Satsanga Society of India (YSS)) submitted that they have installed a four-color printing press in their Ranchi ashram and applied for 100 kVA Domestic LT connection to the Petitioner. The Petitioner has rejected the Consumer application for Domestic LT connection and released the Commercial HT connection. The Consumer



requested the Commission to consider thier application under Domestic LT connection as it is non-profit charitable nature and exempted from Income Tax under Section 80 (G) of the Income Tax Act, 1961

Petitioner's Response

4.145 The Petitioner submitted that the query raised by the Objector is not related to tariff petition. The Objector has raised the concern related to non-issuance of domestic LT connection for printing press working in non-profit charitable nature. The Petitioner reiterated that domestic rates shall also be applicable for supply to religious institution such as temples, Gurudwaras, Mosques, Church and Burial/Crematorium grounds and other recognized charitable institutions (including Govt. Educational Institutions), where no rental or fees is charged whatsoever,(duly certified by the Income Tax Authorities). If any fee or rentals are charged, such institution will be charges under Commercial Category. Since, the proposal has been submitted before the Commission, the Commission may consider the application of the Objector.

Views of the Commission

4.146 The Commission is of the view that the Consumer should be charged as per Tariff Category applicable to the Consumers as specified in Tariff Orders issued by the Commission from time to time.

Issues Related to Disconnection & FIR

Public Comments/ Suggestions

4.147 The Objector raised the concern, where consumer's electricity supply is disconnected in the computer system; however, the physical disconnection is not carried out in the field. During the physical inspection of JBVNL official, such connections are considered as illegal and cases are booked under theft of electricity. The Objector requested the Commission to relook into the matter.

Views of the Commission

4.148 The Commission directs the Petitioner to ensure that because of mismanagement or mis-communication between the field and office, the consumer should not suffer. Proper verification and evidence should be taken into consideration, before booking the theft case as per appropriate regulation.





A 5: TRUE-UP FOR FY 2016-17 AND FY 2017-18

- 5.1 The Petitioner submitted that the True-up for FY 2016-17 and FY 2017-18 has been prepared based on the Accounts audited by the Statutory Auditor taking into consideration the provisions of the Tariff Regulations, 2015 and the methodology adopted by the Commission in its earlier Orders.
- 5.2 The Commission based on the provision of the Tariff Regulations, 2015 has now carried out True-up for the FY 2016-17 and FY 2017-18 taking into consideration
- Audited (Statutory) accounts for the FY 2016-17 and FY 2017-18.
 - JSERC Distribution Tariff Regulations, 2015.
 - Methodology adopted by the Commission in its earlier Orders.
- 5.3 Further, the Commission has taken due cognisance of the judgement of Hon'ble APTEL in Appeal no.48 of 2016 and Appeal no.316 of 2016 & IA no.656 of 2016 dated May 31, 2017, while passing this Order.

Energy Sales

Petitioner's Submission

- 5.4 The Energy Sales as submitted by the Petitioner for FY 2016-17 and FY 2017-18 vis-a-vis approved in its Order dated April 27, 2018 are summarised below:

Table 18: Sales submitted by the Petitioner for FY 2016-17 and FY 2017-18 (MU)

| Particulars | FY 2016-17 | | FY 2017-18 | |
|------------------------------|-----------------|-----------------|-----------------|-----------------|
| | APR Order | Petition | ARR Order | Petition |
| Domestic | 5,037.30 | 5,037.30 | 5,501.49 | 5,746.86 |
| Commercial/Non Domestic | 569.04 | 569.04 | 647.61 | 756.14 |
| Public Lighting / SS | 239.33 | 239.33 | 243.62 | 78.51 |
| Irrigation / IAS | 148.27 | 148.27 | 149.35 | 190.40 |
| Industrial LT / LTIS | 193.83 | 193.83 | 204.23 | 208.30 |
| Industrial HT / HTS / S/ EHT | 2,470.74 | 2,470.74 | 2,357.49 | 2,540.71 |
| RTS/MES | 62.55 | 62.55 | 118.98 | 92.81 |
| Total | 8,721.07 | 8,721.07 | 9,222.77 | 9,613.73 |

Commission's Analysis

- 5.5 As per Clause 5.30 of the JSERC Distribution Tariff Regulations, 2015, energy sales is considered to be an uncontrollable parameter and hence actual sales needs to be considered for trueing up.



5.6 The Commission has approved the actual sales as submitted by the Petitioner for FY 2016-17 and FY 2017-18 as summarised below:

Table 19: Sales approved FY 2016-17 and FY 2017-18 (MU)

| Particulars | FY 2016-17 | | | FY 2017-18 | | |
|-----------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | APR | Petition | Approved | ARR | Petition | Approved |
| Domestic | 5,037.30 | 5,037.30 | 5,037.30 | 5,501.49 | 5,746.86 | 5,746.86 |
| Commercial/Non Domestic | 569.04 | 569.04 | 569.04 | 647.61 | 756.14 | 756.14 |
| Public Lighting / SS | 239.33 | 239.33 | 239.33 | 243.62 | 78.51 | 78.51 |
| Irrigation / IAS | 148.27 | 148.27 | 148.27 | 149.35 | 190.40 | 190.40 |
| Industrial LT / LTIS | 193.83 | 193.83 | 193.83 | 204.23 | 208.30 | 208.30 |
| Industrial HT / HTS / S/EHT | 2,470.74 | 2,470.74 | 2,470.74 | 2,357.49 | 2,540.71 | 2,540.71 |
| RTS/MES | 62.55 | 62.55 | 62.55 | 118.98 | 92.81 | 92.81 |
| Total | 8,721.07 | 8,721.07 | 8,721.07 | 9,222.77 | 9,613.73 | 9,613.73 |

Power Purchase Quantum and Cost

Petitioner's Submission

5.7 The Petitioner submitted that it has firm allocations of power from central allocations like NTPC, NHPC and other sources such as DVC, TVNL, WBSEB, etc. In addition to these, JBVNL has also purchased power from private stations like APNRL, Inland Power and some quantum from renewable sources during FY 2016-17 and FY 2017-18.

5.8 The following table provides the station wise actual power purchase for FY 2016-17 and FY 2017-18 based on the respective Audited Accounts vis-a-vis that approved by the Commission in its Order dated April 27, 2018.

Table 20: Power Purchase Cost submitted by the Petitioner for FY 2016-17 and FY 2017-18

| Particulars | Power Purchase Quantum FY 2016-17 (MU) | | Power Purchase Cost FY 2016-17 (Rs. Crore) | | Power Purchase Quantum FY 2017-18 (MU) | | Power Purchase Cost FY 2017-18 (Rs. Crore) | |
|-------------------|--|-----------------|--|---------------|--|-----------------|--|-----------------|
| | APR | Petition | APR | Petition | ARR | Petition | ARR | Petition |
| Farakka | 929.24 | 929.24 | 314.5 | 314.47 | 900 | 832.44 | 326.40 | 284.41 |
| Farakka III | 252.51 | 252.51 | 100 | 99.96 | 477.6 | 431.4 | 213.91 | 189.04 |
| Kahalgaon I | 258.4 | 258.4 | 84 | 84 | 233.6 | 189.71 | 77.96 | 65.21 |
| Talcher | 524.76 | 524.76 | 136.9 | 136.89 | 646.9 | 532.49 | 161.49 | 136.83 |
| Kahalgaon II | 334.14 | 334.14 | 97.9 | 97.85 | 302.7 | 227.8 | 100.4 | 75.09 |
| Barh | 541.32 | 541.32 | 263.7 | 263.69 | 560.1 | 581.7 | 265.07 | 269.75 |
| Korba | | | | | 252 | 302.35 | 66.55 | 80.73 |
| Total NTPC | 2,840.37 | 2,840.37 | 997 | 996.88 | 3,372.90 | 3,097.89 | 1,211.77 | 1,101.06 |
| Rangit | 43.51 | 43.51 | 16.27 | 16.27 | 45.8 | 43.86 | 16.17 | 16.86 |
| Teesta | 330.5 | 330.5 | 78.41 | 78.41 | 329.7 | 333.68 | 70.64 | 79.93 |
| Total NHPC | 374.01 | 374.01 | 94.68 | 94.68 | 375.50 | 377.54 | 86.81 | 96.79 |
| Chukha | 220.72 | 220.72 | 46.1 | 46.13 | 203.8 | 186.59 | 46.67 | 44.81 |



| Particulars | Power Purchase Quantum FY 2016-17 (MU) | | Power Purchase Cost FY 2016-17 (Rs. Crore) | | Power Purchase Quantum FY 2017-18 (MU) | | Power Purchase Cost FY 2017-18 (Rs. Crore) | |
|--------------------------------------|--|------------------|--|-----------------|--|------------------|--|-----------------|
| | APR | Petition | APR | Petition | ARR | Petition | ARR | Petition |
| Tala | 379.04 | 379.04 | 76.8 | 76.79 | 405.6 | 331.15 | 87.61 | 71.53 |
| Total PTC | 599.76 | 599.76 | 122.9 | 122.91 | 609.40 | 517.74 | 134.28 | 116.34 |
| Total Central Sector | 3,814.14 | 3,814.14 | 1,214.58 | 1,214.47 | 4,357.80 | 3,993.17 | 1,432.86 | 1,314.20 |
| DVC | 4,877.90 | 4,877.90 | 2,402.63 | 2,402.63 | 4,951.70 | 4,973.69 | 2,438.98 | 2,438.72 |
| PUVNL (Existing) | 325.05 | 325.05 | 119.49 | 119.49 | - | - | - | - |
| SHPS | 31.2 | 31.2 | 3.51 | 3.51 | 55.2 | 189.85 | 6.21 | 21.45 |
| TVNL | 1,216.55 | 1,216.55 | 465.25 | 465.24 | 1,563.00 | 1,672.00 | 599.13 | 651.51 |
| Total State Sector | 1,572.80 | 1,572.79 | 588.25 | 588.25 | 1,618.20 | 1,861.85 | 605.34 | 672.97 |
| Inland Power | 364.29 | 364.29 | 133.27 | 133.27 | 422.9 | 363.51 | 156.9 | 158.59 |
| APNRL | 953.93 | 953.93 | 374.92 | 383.11 | 954 | 780.15 | 368.43 | 282 |
| APNRL Add | 330.21 | 330.21 | 120.25 | 112.05 | 330.2 | 368.48 | 120.24 | 131.75 |
| Total Private Sector | 1,648.43 | 1,648.43 | 628.44 | 628.44 | 1,707.10 | 1,512.14 | 645.56 | 572.34 |
| Solar IPPs | 19.7 | 19.66 | 35.3 | 35.31 | 19.7 | 19.47 | 35.38 | 34.97 |
| SECI | 19.1 | 19.17 | 11.4 | 11.4 | 19.1 | 19.99 | 5.2 | 11.21 |
| RE Others | | | | | 100 | - | 35.3 | - |
| Total RE | 38.8 | 38.83 | 46.7 | 46.71 | 138.8 | 39.47 | 75.88 | 46.18 |
| PGCIL | | | 162 | 161.96 | - | - | 118.94 | 136.69 |
| Posoco (ERLDC) | | | 1.4 | 1.4 | - | - | 1.47 | 1.15 |
| UI Payable | 399.5 | 399.49 | 120.8 | 120.79 | - | 320.88 | | 110.49 |
| UI Receivable | 103.6 | 103.57 | | | - | 72.64 | | 0.03 |
| Rungta Mines | 42.3 | 42.27 | 14 | 13.95 | 42.3 | 42.9 | 13.96 | 13.87 |
| ABCIL | 45.2 | 45.19 | 17.4 | 17.35 | 45.2 | 55.96 | 17.27 | 21.24 |
| NVVNL (Korba III & Farrakka III) | 153.9 | 153.88 | 57.4 | 57.36 | - | 147.81 | | 51.18 |
| ERLDC (APNRL) | | | | | - | - | | 31.27 |
| PTC (IEX) | | | | | - | 6.84 | | 3.21 |
| Banking of Power (Banked) | | | | | | 20.16 | | 0.13 |
| Banking of Power (Received) | | | | | | 16.25 | | 0.25 |
| GBI/ Rebate | | | -30.3 | -30.3 | | | | -13.22 |
| DVC DPS | | | | | | | | 352.85 |
| Revenue due to sale of Surplus power | | | | | | | | -20.11 |
| Grand Total | 12,489.37 | 12,489.34 | 5223.30 | 5223.00 | 12,861.10 | 12,878.14 | 5,453.01 | 5,733.36 |



- 5.9 The Petitioner submitted that there is an increase in power purchase cost on account of surplus power not available for sale, a substantial difference in the power purchase cost approved and actual as shown in the table above leading to increase in actual power purchase cost. The Petitioner also suggested that the average approved power purchase rate was suppressed leading to reduction in Annual Revenue Requirement for FY 2017-18.
- 5.10 The Petitioner prayed to the Commission to approve the power purchase as per the Audited Accounts of FY 2016-17 and for FY 2017-18 respectively.

Commission's Analysis

- 5.11 The Commission has analysed the submission made by the Petitioner in its Power Purchase Cost. With regard to FY 2016-17, the Commission observes that the power purchase cost claimed is the same as approved by the Commission in its Order dated April 27, 2018 and is also reflected in the books of accounts. The Commission has therefore approved the same. The Commission with regards to power purchase cost claimed for FY 2017-18 observes that an amount of Rs. 352.85 Crore has been claimed towards DPS for DVC which is ~ 6% of the overall Power Purchase Cost.
- 5.12 The Commission asked the Petitioner to provide justification for the DPS paid to DVC of Rs. 352.85 Crore as a part of ARR for FY 2017-18 vide Discrepancy Note dated December 19, 2018. The Petitioner replied that due to disallowance of actual Power Purchase Cost and inadequate tariff hike, it was not able to pay its power purchase liabilities, thus resulting into levying of delayed payment surcharge (DPS) of Rs. 352.85 over payment done to DVC during FY 2017-18. The Commission is of the view that it has been allowing the Petitioner all legitimate cost in the ARR and therefore consequences of non payment of bills leading to delayed payment surcharge is not justified and therefore the same cannot be passed on to the consumers and hence the DPS amount has been disallowed.
- 5.13 In addition, the Petitioner was also asked to submit the approval for Short Term Power Purchase from PTC (Trading Company) and IEX on short term basis for FY 2016-17 & FY 2017-18 as required under Regulation 5.20- 5.22 of the JSERC Distribution Tariff Regulations, 2015. The Petitioner submitted that it purchases spot power from IEX through PTC (as a client member). Since the spot power is purchased on emergent basis and as per demand–supply imbalance, the Petitioner has not been seeking approval. Going forward, quarterly intimation will be given to the Commission regarding the power purchased through spot market.



5.14 The Commission has also noted that the Petitioner has not submitted the rolling quarterly forecast of the quantum of short term power to be purchased by the Petitioner for the Commission's Approval. Hence, **the Commission directs the Petitioner to submit the rolling quarterly forecast of the quantum of short term power to be purchased as per Regulation 5.20 of the Distribution Tariff Regulations, 2015.**

5.15 The Commission has approved the Power Purchase Cost as per the Audited Accounts for FY 2016-17 and FY 2017-18 except the claim for DPS as summarised below:

Table 21: Power Purchase Cost approved for FY 2016-17 and FY 2017-18

| Particulars | Power Purchase Quantum FY 2016-17 (MU) | | Power Purchase Cost FY 2016-17 (Rs. Crore) | | Power Purchase Quantum FY 2017-18 (MU) | | Power Purchase Cost FY 2017-18 (Rs. Crore) | |
|-----------------------------|--|-----------------|--|-----------------|--|-----------------|--|-----------------|
| | Petition | Approved | Petition | Approved | Petition | Approved | Petition | Approved |
| Farakka | 929.24 | 929.24 | 314.47 | 314.47 | 832.44 | 832.44 | 284.41 | 284.41 |
| Farakka III | 252.51 | 252.51 | 99.96 | 99.96 | 431.4 | 431.4 | 189.04 | 189.04 |
| Kahalgaon I | 258.4 | 258.4 | 84 | 84 | 189.71 | 189.71 | 65.21 | 65.21 |
| Talcher | 524.76 | 524.76 | 136.89 | 136.89 | 532.49 | 532.49 | 136.83 | 136.83 |
| Kahalgaon II | 334.14 | 334.14 | 97.85 | 97.85 | 227.8 | 227.8 | 75.09 | 75.09 |
| Barh | 541.32 | 541.32 | 263.69 | 263.69 | 581.7 | 581.7 | 269.75 | 269.75 |
| Korba | | | | | 302.35 | 302.35 | 80.73 | 80.73 |
| Total NTPC | 2,840.37 | 2,840.37 | 996.88 | 996.88 | 3,097.89 | 3,097.89 | 1,101.06 | 1,101.06 |
| Rangit | 43.51 | 43.51 | 16.27 | 16.27 | 43.86 | 43.86 | 16.86 | 16.86 |
| Teesta | 330.5 | 330.5 | 78.41 | 78.41 | 333.68 | 333.68 | 79.93 | 79.93 |
| Total NHPC | 374.01 | 374.01 | 94.68 | 94.68 | 377.54 | 377.54 | 96.79 | 96.79 |
| Chukha | 220.72 | 220.72 | 46.13 | 46.13 | 186.59 | 186.59 | 44.81 | 44.81 |
| Tala | 379.04 | 379.04 | 76.79 | 76.79 | 331.15 | 331.15 | 71.53 | 71.53 |
| Total PTC | 599.76 | 599.76 | 122.91 | 122.91 | 517.74 | 517.74 | 116.34 | 116.34 |
| Total Central Sector | 3,814.14 | 3,814.14 | 1,214.47 | 1,214.47 | 3,993.17 | 3,993.17 | 1,314.20 | 1,314.20 |
| DVC | 4,877.90 | 4,877.90 | 2,402.63 | 2,402.63 | 4,973.69 | 4,973.69 | 2,438.72 | 2,438.72 |
| PUVNL (Existing) | 325.05 | 325.05 | 119.49 | 119.49 | | | | |
| SHPS | 31.2 | 31.2 | 3.51 | 3.51 | 189.85 | 189.85 | 21.45 | 21.45 |
| TVNL | 1,216.55 | 1,216.55 | 465.24 | 465.24 | 1,672.00 | 1,672.00 | 651.51 | 651.51 |
| Total State Sector | 1,572.79 | 1,572.79 | 588.25 | 588.25 | 1,861.85 | 1,861.85 | 672.97 | 672.97 |
| Inland Power | 364.29 | 364.29 | 133.27 | 133.27 | 363.51 | 363.51 | 158.59 | 158.59 |
| APNRL | 953.93 | 953.93 | 383.11 | 383.11 | 780.15 | 780.15 | 282 | 282 |
| APNRL Add | 330.21 | 330.21 | 112.05 | 112.05 | 368.48 | 368.48 | 131.75 | 131.75 |
| Total Private Sector | 1,648.43 | 1,648.43 | 628.44 | 628.44 | 1,512.14 | 1,512.14 | 572.34 | 572.34 |
| Solar IPPs | 19.66 | 19.66 | 35.31 | 35.31 | 19.47 | 19.47 | 34.97 | 34.97 |
| SECI | 19.17 | 19.17 | 11.4 | 11.4 | 19.99 | 19.99 | 11.21 | 11.21 |
| RE Others | | | | | - | - | - | - |
| Total RE | 38.83 | 38.83 | 46.71 | 46.71 | 39.47 | 39.47 | 46.18 | 46.18 |



| Particulars | Power Purchase Quantum FY 2016-17 (MU) | | Power Purchase Cost FY 2016-17 (Rs. Crore) | | Power Purchase Quantum FY 2017-18 (MU) | | Power Purchase Cost FY 2017-18 (Rs. Crore) | |
|--------------------------------------|--|------------------|--|----------------|--|------------------|--|-----------------|
| | Petition | Approved | Petition | Approved | Petition | Approved | Petition | Approved |
| PGCIL | | | 161.96 | 161.96 | - | - | 136.69 | 136.69 |
| Posoco (ERLDC) | | | 1.4 | 1.4 | - | - | 1.15 | 1.15 |
| UI Payable | 399.49 | 399.49 | 120.79 | 120.79 | 320.88 | 320.88 | 110.49 | 110.49 |
| UI Receivable | 103.57 | 103.57 | | | 72.64 | 72.64 | 0.03 | 0.03 |
| Rungta Mines | 42.27 | 42.27 | 13.95 | 13.95 | 42.9 | 42.9 | 13.87 | 13.87 |
| ABCIL | 45.19 | 45.19 | 17.35 | 17.35 | 55.96 | 55.96 | 21.24 | 21.24 |
| NVVNL (Korba III & Farrakka III) | 153.88 | 153.88 | 57.36 | 57.36 | 147.81 | 147.81 | 51.18 | 51.18 |
| ERLDC (APNRL) | | | | | - | - | 31.27 | 31.27 |
| PTC (IEX) | | | | | 6.84 | 6.84 | 3.21 | 3.21 |
| Banking of Power (Banked) | | | | | 20.16 | 20.16 | 0.13 | 0.13 |
| Banking of Power (Received) | | | | | 16.25 | 16.25 | 0.25 | 0.25 |
| GBI/ Rebate | | | -30.3 | -30.3 | | | -13.22 | -13.22 |
| DVC DPS | | | | | - | - | 352.85 | - |
| Revenue due to sale of Surplus power | | | | | - | - | -20.11 | -20.11 |
| Grand Total | 12,489.34 | 12,489.34 | 5223.00 | 5223.00 | 12,878.14 | 12,878.14 | 5,733.36 | 5,380.51 |

Energy Requirement and Energy Availability

Petitioner's Submission

5.16 The Petitioner submitted that energy availability for FY 2016-17 and FY 2017-18 has been computed based on the actual Power Purchase and Sales as per the Audited Accounts for FY 2016-17 and FY 2017-18 respectively.

5.17 The Petitioner further submitted the Power Purchase from various sources are segregated into different heads, while calculating the energy balance for FY 2016-17 and FY 2017-18.

- Power Purchase from Outside JSEB Boundary- NTPC, NHPC, PTC, APNRL, part of TVNL, NVVNL, SECI



- Energy Input Directly to State Transmission System- Input of power from TVNL directly to State Transmission System
- State-owned Generation- PTPS, SHPS, Rungta Mines, ABCIL, Inland Power
- Direct Input of Energy to Distribution System- DVC and Solar IPPs.

5.18 The Petitioner has computed the energy requirement based on the below mentioned formula:

$$\text{Energy requirement} = \text{sales} / (1 - \text{Distribution loss})$$

5.19 Based on the information provided above, Energy Balance of JBVNL for FY 2016-17 and FY 2017-18 as submitted by the Petitioner is summarised below:

Table 22: Energy Balance submitted by the Petitioner for FY 2016-17 and FY 2017-18 (MU)

| Particulars | FY 2016-17 | | FY 2017-18 | |
|---|------------------|------------------|------------------|------------------|
| | APR | Petition | ARR | Petition |
| Power Purchase from Outside JSEB Boundary (MU) | 5,721.40 | 6,018.58 | 6,339.41 | 6,365.89 |
| Loss in External System (%) | 3.00% | 3.00% | 3.00% | 3.00% |
| Loss in External System (MU) | 171.64 | 180.56 | 190.18 | 190.98 |
| Net Outside Power Available (MU) | 5,549.76 | 5,838.03 | 6149.23 | 6,174.91 |
| Energy Input Directly to State Transmission System (MU) | 766.42 | 747.66 | 984.69 | 710.6 |
| State-owned Generation (MU) | 808.04 | 806.37 | 565.6 | 808.49 |
| Energy Available for Onward Transmission (MU) | 7,420.12 | 7,392.05 | 7,699.52 | 7,694.00 |
| Transmission Loss (%) | 2.23% | 9.64% | 2.23% | 9.71% |
| Transmission Loss (MU) | 165.47 | 712.23 | 171.7 | 746.92 |
| Net Energy Sent to Distribution System (MU) | 7,254.65 | 6,679.82 | 7527.82 | 6,947.08 |
| Direct Input of Energy to Distribution System (MU) | 4,897.60 | 4,916.73 | 4,971.40 | 4,993.17 |
| Total Energy Available for Sales (MU) | 12,152.25 | 11,596.55 | 12,499.22 | 11,940.25 |

Commission's Analysis

5.20 The Commission in its MYT Order dated June 21, 2017 had set the distribution loss targets for JBVNL for the Second Control Period from FY 2016-17 to FY 2020-21. The Commission has considered the same distribution loss level for the FY 2016-17 and FY 2017-18 for the computation of energy balance.

5.21 The energy requirement as approved by the Commission for the FY 2016-17 and FY 2017-18 based on approved energy sales and distribution losses is summarized below:



Table 23: Energy Requirement approved for FY 2016-17 and FY 2017-18

| Particulars | FY 2016-17 | FY 2017-18 |
|--|------------------|------------------|
| Energy Sales | 8,721.07 | 9,613.73 |
| Distribution Loss (%) | 24.20% | 20.40% |
| Distribution Loss (MU) | 2,784.30 | 2,463.82 |
| Energy Required for Distribution (MU) | 11,505.37 | 12,077.55 |

5.22 It was observed that the Transmission Losses of 9.64% and 9.71% for FY 2016-17 and FY 2017-18 has been considered by the Petitioner as against the approved Transmission Loss of 2.23%. The Petitioner responded that the Intra-State Transmission Loss was calculated by subtracting the normative 3% Inter-State Transmission Loss from the overall Transmission Loss as per the Audited Accounts for the respective years. The Petitioner further requested performing joint metering at the input points for actual loss calculation.

5.23 The Commission has worked out energy availability for the FY 2016-17 and FY 2017-18 on the basis of actual generation from tied up power from Central, State-owned and other Generating Stations. Further, the loss in external system has been considered at the same level as approved by the Commission in its earlier Order, while the intra-state-transmission loss has been considered at 2.23% as per the Tariff Order for JUSNL dated February 24, 2018. The energy availability from various sources has been summarized below:

Table 24: Energy Balance approved for FY 2016-17 and FY 2017-18

| Particulars | FY 2016-17 | | | FY 2017-18 | | |
|---|------------|----------|----------|------------|----------|----------|
| | APR | Petition | Approved | ARR | Petition | Approved |
| Power Purchase from Outside JBVNL Boundary (MU) | 5,721.40 | 6,018.58 | 6,018.58 | 6,339.41 | 6,365.89 | 6,365.89 |
| Loss in External System (%) | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% |
| Loss in External System (MU) | 171.64 | 180.56 | 180.56 | 190.18 | 190.98 | 190.98 |
| Net Outside Power Available (MU) | 5,549.76 | 5,838.03 | 5,838.02 | 6149.23 | 6,174.91 | 6,174.91 |
| Energy Input Directly to State Transmission System (MU) | 766.42 | 747.66 | 747.66 | 984.69 | 710.6 | 710.6 |
| State-owned Generation (MU) | 808.04 | 806.37 | 806.37 | 565.6 | 808.49 | 808.49 |
| Energy Available for Onward Transmission (MU) | 7,420.12 | 7,392.05 | 7,392.05 | 7,699.52 | 7,694.00 | 7,694.00 |
| Transmission Loss (%) | 2.23% | 9.64% | 2.23% | 2.23% | 9.71% | 2.23% |
| Transmission Loss (MU) | 165.47 | 712.23 | 164.84 | 171.7 | 746.92 | 171.58 |



| Particulars | FY 2016-17 | | | FY 2017-18 | | |
|--|------------------|------------------|------------------|------------------|------------------|------------------|
| | APR | Petition | Approved | ARR | Petition | Approved |
| Net Energy Sent to Distribution System (MU) | 7,254.65 | 6,679.82 | 7,227.21 | 7527.82 | 6,947.08 | 7,522.43 |
| Direct Input of Energy to Distribution System (MU) | 4,897.60 | 4,916.73 | 4,916.73 | 4,971.40 | 4,993.17 | 4,993.17 |
| Total Energy Available for Sales (MU) | 12,152.25 | 11,596.55 | 12,143.94 | 12,499.22 | 11,940.25 | 12,515.60 |

Transmission Charges

Petitioner's Submission

- 5.24 The Petitioner with regard to Inter-State Transmission charges submitted that the amount claimed is as per the audited accounts.
- 5.25 With regard to Intra-State Transmission Charges, the Petitioner submitted that the energy wheeled through Intra-State transmission network as per the Energy Balance has been considered for calculating the Intra-State transmission charges payable to JUSNL and no transmission charges are applied on direct input of energy to distribution system. Transmission charges payable to JUSNL been computed based on the approved rate in Tariff Order of JUSNL dated February 24, 2018.
- 5.26 The actual Intra-State transmission charges payable to JUSNL for FY 2016-17 and FY 2017-18 as submitted by the Petitioner is provided in the table below:

Table 25: Transmission Charges submitted by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore)

| Particulars | FY 2016-17 | | FY 2017-18 | |
|-----------------------------------|------------|----------|------------|----------|
| | APR Order | Petition | ARR Order | Petition |
| Intra-State Transmission Charges | 185.40 | 185.40 | 160.16 | 204.07 |
| Inter-State Transmission Charges* | | 163.36 | | 137.84 |

* Inter-State Transmission Charges included in Power Purchase Cost Approved

Commission's Analysis

- 5.27 The Commission has observed that the Intra-State Transmission Charges claimed by the Petitioner is not as per the Tariff approved by the Commission vide its Tariff Orders for JUSNL. In addition, it was also observed that the Transmission Losses claimed by the Petitioner are very high as compared to the approved value of 2.23%. The Petitioner was asked to justify the Intra-State Transmission Charges claimed. The Petitioner responded that it has been paying the transmission charges in accordance to the invoices raised by JUSNL, which is as per the Tariff approved by the Commission. However, there is a



difference in the bill amount calculated by JSUNL and bill paid by JBVNL, which is due to lack of joint meter reading by both of the utilities.

5.28 Hence, the Commission has calculated the Transmission Charges based on the Tariffs approved during the respective years and the actual units transmitted as per the Energy Balance approved. The Commission directs the Petitioner to recover the excess transmission charges from JUSNL.

5.29 The Inter-State Transmission Charges are approved as per the claims of the Petitioner.

Table 26: Transmission Charges approved for FY 2016-17 and FY 2017-18 (Rs. Crore)

| Particulars | FY 2016-17 | | | FY 2017-18 | | |
|----------------------------------|------------|----------|----------|------------|----------|----------|
| | APR | Petition | Approved | ARR | Petition | Approved |
| Intra-State Transmission Charges | 185.40 | 185.40 | 140.45 | 160.16 | 204.07 | 150.03 |
| Inter-State Transmission Charges | 163.36 | 163.36 | 163.36 | 120.41 | 137.84 | 137.84 |

Capital Expenditure and Capitalisation

Petitioner's Submission

5.30 The Petitioner submitted the scheme-wise actual capital expenditure (capex) schedule for FY 2016-17 and FY 2017-18 as per the respective Audited Accounts as below:

Table 27: Capital Expenditure submitted by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore)

| Scheme Name | FY 2016-17 | | FY 2017-18 | |
|-------------------------|-----------------|---------------|-----------------|-----------------|
| | APR Order | Petition | ARR Order | Petition |
| DDUGJY | 1,000.00 | 78.35 | 1,960.80 | 464.07 |
| IPDS | 109.70 | - | 370.40 | 8.39 |
| RAPDRP - A | 132.40 | 4.38 | 104.30 | 9.44 |
| RAPDRP - B | 948.00 | 52.71 | 799.60 | 192.03 |
| DDUGJY 12th Plan | 540.00 | - | 990.90 | 355.84 |
| ADP + Misc. | 304.10 | 428.60 | 218.85 | 1,076.03 |
| Tilka Manjhi & AGJY | 100.00 | 4.78 | 147.60 | 26.29 |
| RE State Plan | - | 67.83 | | 43.88 |
| JSBAY - RE | | - | 1,000.00 | 7.51 |
| RGVY (10th & 11th Plan) | 394.00 | 0.20 | 196.90 | 3.24 |
| Deposit & others | | | | 417.79 |
| Total | 3,528.20 | 636.85 | 5,789.35 | 2,604.51 |

5.31 The Petitioner submitted that capex of only Rs. 636.85 Crore has been done against the Approved Capex of Rs. 3,528.20 Cr in FY 2016-17. The remaining capex not incurred in FY 2016-17 has been spilled over by the Petitioner in FY 2017-18 and FY 2018-19.



- 5.32 A new State Govt. scheme named Jharkhand Sampurna Bijli Achchadan Yojna (JSBAY) has been introduced. It is a State sponsored scheme, which aims to cover the several leftover works required to ensure 24x7 power supply to all villages/habitations and achievement of objectives of UDAY Yojana for reduction of AT&C losses.
- 5.33 The Petitioner further submitted the corresponding Capitalisation for FY 2016-17 and FY 2017-18 as per the Audited Accounts as below:

Table 28: Capitalisation submitted by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore)

| Particulars | FY 2016-17 | | FY 2017-18 | |
|---------------|------------|----------|------------|----------|
| | APR Order | Petition | ARR Order | Petition |
| Opening GFA | 5,377.21 | 5,377.21 | 5,450.60 | 5,450.61 |
| GFA Additions | 73.39 | 73.40 | 1,950.23 | 511.49 |
| Deletions | 0.00 | 0.00 | 0.00 | 0.00 |
| Closing GFA | 5,450.60 | 5,450.61 | 7,400.83 | 5,962.10 |

- 5.34 The Petitioner submitted that the difference in Capex and Capitalisation is due to delay in selection of vendors and issues related to finalization of bidding document and disbursement of sanctioned amount under various schemes.

Commission's Analysis

- 5.35 The Commission asked the Petitioner to justify the Capital Expenditure of Rs. 428.60 Crore and Rs. 1076.03 Crore incurred against the approved value of Rs. 304.10 Crore and Rs. 218.85 Crore towards ADP+Misc works for FY 2016-17 and FY 2017-18. The Petitioner replied that delay in finalization of SBD by Ministry of Power (MoP) for IPDS and DDUGJY schemes, which in turn led to delay in award of work under the schemes is the reason for increase in expenses under the said head.
- 5.36 The Commission has analysed the capital expenses incurred by the Petitioner for FY 2016-17 and FY 2017-18 as per the Audited Accounts and has observed in the break-up of the Scheme-wise capital expenditure, the expenses under schemes viz., RE State Plan and Deposit & Others were not approved in the Business Plan in its MYT Order. The Commission however, observes that these works have been entirely financed through Grants and therefore the same has been approved. The Capital Expenditure approved by the Commission for FY 2016-17 and FY 2017-18 is summarised in the table below:

Table 29: Capital Expenditure approved for FY 2016-17 and FY 2017-18 (Rs. Crore)

| Scheme Name | FY 2016-17 | | | FY 2017-18 | | |
|-------------|------------|----------|----------|------------|----------|----------|
| | APR | Petition | Approved | ARR | Petition | Approved |
| DDUGJY | 1,000.00 | 78.35 | 78.35 | 1,960.80 | 464.07 | 464.07 |



| | | | | | | |
|--------------------------|-----------------|---------------|---------------|-----------------|-----------------|-----------------|
| IPDS | 109.70 | - | - | 370.40 | 8.39 | 8.39 |
| RAPDRP - A | 132.40 | 4.38 | 4.38 | 104.30 | 9.44 | 9.44 |
| RAPDRP - B | 948.00 | 52.71 | 52.71 | 799.60 | 192.03 | 192.03 |
| DDUGJY 12th Plan | 540.00 | - | - | 990.90 | 355.84 | 355.84 |
| ADP + Misc. | 304.10 | 428.60 | 428.60 | 218.85 | 1,076.03 | 1,076.03 |
| Tilka Manjhi & AGJY | 100.00 | 4.78 | 4.78 | 147.60 | 26.29 | 26.29 |
| RE State Plan | - | 67.83 | 67.83 | | 43.88 | 43.88 |
| JSBAY - RE | | - | | 1,000.00 | 7.51 | 7.51 |
| RGGVY (10th & 11th Plan) | 394.00 | 0.20 | 0.20 | 196.90 | 3.24 | 3.24 |
| Deposit & others | | | | | 417.79 | 417.79 |
| Total | 3,528.20 | 636.85 | 636.85 | 5,789.35 | 2,604.51 | 2,604.51 |

5.37 The Commission had raised queries to the Petitioner to provide the actual Scheme-wise capitalisation for FY 2016-17 and FY 2017-18 vis-à-vis the approved capitalisation. The Petitioner has not been able to submit the same. The Commission has therefore approved the total Capitalisation as per the Audited Accounts for FY 2016-17 and FY 2017-18 as below:

Table 30: Capitalisation approved for FY 2016-17 and FY 2017-18 (Rs. Crore)

| Particulars | FY 2016-17 | | | FY 2017-18 | | |
|---------------|------------|----------|----------|------------|----------|----------|
| | APR | Petition | Approved | ARR | Petition | Approved |
| Opening GFA | 5,377.21 | 5,377.21 | 5,377.21 | 5,450.60 | 5,450.61 | 5,450.60 |
| GFA Additions | 73.39 | 73.40 | 73.39 | 1,950.23 | 511.49 | 511.49 |
| Deletions | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Closing GFA | 5,450.60 | 5,450.61 | 5,450.60 | 7,400.83 | 5,962.10 | 5,962.09 |

Consumer Contribution, Grants and Subsidies

Petitioner's Submission

5.38 The Petitioner submitted that the Consumer contribution and Grant (CCG), based on the Audited Accounts vis-à-vis as approved by the Commission is provided in the table below:

Table 31: Consumer Contribution and Grants (CCG) submitted by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore)

| Particulars | FY 2016-17 | | FY 2017-18 | |
|--------------|------------|----------|------------|----------|
| | APR Order | Petition | ARR Order | Petition |
| Opening CCG | 3,490.2 | 3,490.23 | 3,017.47 | 3,203.17 |
| Addition CCG | -472.5 | -287.06 | 3835.73 | 1,904.40 |



| Particulars | FY 2016-17 | | FY 2017-18 | |
|-------------|------------|----------|------------|----------|
| | APR Order | Petition | ARR Order | Petition |
| Closing CCG | 3,017.7 | 3,203.17 | 6,853.20 | 5,107.57 |

Commission's Analysis

5.39 The Commission has considered the values of Consumer Contribution and Grants as per the Audited Accounts for FY 2016-17 and FY 2017-18. It is observed by the Commission that the Addition in Grants for FY 2016-17 is negative due to adjustment of Rs. 1035 Crore in Audited Account for FY 2015-16.

Table 32: Consumer Contribution and Grants (CCG) approved for FY 2016-17 and FY 2017-18 (Rs. Crore)

| Particulars | FY 2016-17 | | | FY 2017-18 | | |
|----------------------------|------------|----------|----------|------------|----------|----------|
| | APR | Petition | Approved | ARR | Petition | Approved |
| Opening CCG | 3,490.2 | 3,490.23 | 3,490.23 | 3,017.47 | 3,203.17 | 3,203.17 |
| Addition in Consumer Cont. | -472.5 | -287.06 | 225.70 | 3835.73 | 1,904.40 | 134.47 |
| Addition in Grants | | | -542.76* | | | 1769.93 |
| Closing CCG | 3,017.7 | 3,203.17 | 3,203.17 | 6,853.20 | 5,107.57 | 5,107.57 |

* Note: The Negative no. is due to adjustment of Rs. 1035 Crore and Actual Grant of Rs. 674.19 Crore received in FY 2016-17.

5.40 The Commission has adopted its previous approach for calculation of Normative Loan and Equity. For estimating the sources of finance required to fund the closing GFA, the Commission had reduced the GFA by the consumer contribution, grants and subsidies available with the Petitioner.

5.41 For funding of above mentioned GFA, the Commission has considered the normative debt-equity ratio of 70:30 as provided in Distribution Tariff Regulation, 2015. Moreover, consumer contribution grants and subsidies for capital assets are first netted off from gross fixed assets and the normative debt-equity ratio is applied on the remaining gross fixed assets only.

5.42 The Commission has considered CCG on the basis of the Audited Accounts as submitted by the Petitioner. The normative net loans are estimated after deducting accumulated depreciation from the value of gross loans.

Table 33: Source of Funding of GFA approved for FY 2016-17 and FY 2017-18 (Rs. Crore)

| Particulars | FY 2016-17 | FY 2017-18 |
|-----------------|------------|------------|
| Opening CCG | 3,490.23 | 3,203.17 |
| Addition in CCG | -287.06 | 1,904.40 |



| Particulars | FY 2016-17 | FY 2017-18 |
|-----------------------------------|-----------------|-----------------|
| Closing CCG | 3,203.17 | 5,107.57 |
| CCG towards GFA | 2,157.64 | 2,846.94 |
| Closing GFA (less CCG) | 3,292.97 | 3,115.15 |
| Accumulated Depreciation | 1,741.92 | 2,163.67 |
| Acc. Dep. towards GFA | 1,052.37 | 1,130.50 |
| Normative Loan (Closing) | 1,252.70 | 1,050.10 |
| Normative Equity (Closing) | 987.89 | 934.55 |

Operation & Maintenance Expenses

Petitioner's Submission

- 5.43 The Petitioner submitted that the employee expenses comprise of salaries, dearness allowance, bonus, terminal benefits in the form of pension & gratuity, leave encashment and staff welfare expenses.
- 5.44 The employee cost for FY 2016-17 and FY 2017-18 based on the Audited Accounts for the respective years is provided in the table below:

Table 34: Employee Expenses submitted by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore)

| Particulars | FY 2016-17 | | FY 2017-18 | |
|--------------------------|------------|----------|------------|----------|
| | APR Order | Petition | ARR Order | Petition |
| Total Emp. Expenses | 213.21 | 213.21 | 221.46 | 215.97 |
| <i>Emp. Expenses</i> | | 190.82 | 197.70 | 195.81 |
| <i>Terminal benefits</i> | | 22.38 | 23.76 | 20.15 |

- 5.45 The Petitioner submitted that the revised Administrative & General (A&G) expenses for FY 2016-17 and FY 2017-18 as per the respective Audited Accounts is provided in the table below.

Table 35: A&G Expenses submitted by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore)

| Particulars | FY 2016-17 | | FY 2017-18 | |
|--------------|------------|----------|------------|----------|
| | APR Order | Petition | ARR Order | Petition |
| A&G Expenses | 56.83 | 56.83 | 59.31 | 75.87 |

- 5.46 The Petitioner also submitted that the increase in the A&G expenses for FY 2017-18 is majorly due to various steps being undertaken by the Petitioner in terms of outsourcing the tasks and utilizing consultancy services for capacity building of the entity.
- 5.47 The Petitioner submitted that the revised Repair & Maintenance (R&M) expenses for FY 2016-17 and FY 2017-18 as per the respective Audited Accounts is provided in the table below.



Table 36: R&M Expenses submitted by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore)

| Particulars | FY 2016-17 | | FY 2017-18 | |
|--------------|------------|----------|------------|----------|
| | APR Order | Petition | ARR Order | Petition |
| R&M Expenses | 54.04 | 54.04 | 127.54 | 54.61 |

Commission's Analysis

- 5.48 The Commission asked the Petitioner to justify the increase in A&G Expenses. The Petitioner replied that the increase in A&G expenses components including, Telephone charges, Legal Charges, Travelling Expenses, Electricity Charges and Computer Billing. Due to adequate provisioning for the bills received towards the end of financial year, appropriation of expenses under various heads have been done with much more diligence and accuracy. Further the expenses have increased due to increased electrification and digitalisation to provide better services to the consumers and to increase in the consumer base being billed by the billing agencies.
- 5.49 The Commission observed that for FY 2017-18, the actual employee expenses and R&M expenses are lower than the expenses approved while the A&G expenses are higher than the approved expenses. As the overall actual O&M expenses for FY 2017-18 are lower than overall approved O&M expenses, the Commission has approved the O&M Expenses as per the Audited Accounts for the respective years. The O&M Expenses approved are summarised below:

Table 37: O&M Expenses approved for FY 2016-17 and FY 2017-18 (Rs. Crore)

| Particulars | FY 2016-17 | | | FY 2017-18 | | |
|-------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | APR | Petition | Approved | ARR | Petition | Approved |
| Total Emp. Expenses | 213.21 | 213.21 | 213.21 | 221.46 | 215.97 | 215.97 |
| A&G Expenses | 213.21 | 56.83 | 56.83 | 59.31 | 75.87 | 75.87 |
| R&M | 56.83 | 54.04 | 54.04 | 127.54 | 54.61 | 54.61 |
| O&M Expenses | 324.08 | 324.08 | 324.08 | 408.31 | 346.45 | 346.45 |

Depreciation

Petitioner's Submission

- 5.50 The Petitioner submitted that since the segregation of the depreciation pertaining to GFA created out of grant and consumer contribution is not provided in the accounts of JBVNL, the Petitioner has followed the similar approach adopted by the Commission in its Tariff Orders dated April 27, 2018 and June 21, 2017.



5.51 The Petitioner has first arrived at the GFA created out of debt and equity by deducting the consumer contribution and grants portion deployed towards GFA. Based on this GFA created out of debt and equity, the Petitioner has applied the depreciation rate as approved by the Commission to arrive at the total depreciation.

Table 38: Depreciation submitted by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore)

| Particulars | FY 2016-17 | | FY 2017-18 | |
|--|---------------|---------------|---------------|---------------|
| | APR Order | Petition | ARR Order | Petition |
| GFA Considered for Depreciation – (Exc. CC and Grants) | 3,418.04 | 3,292.97 | 3747.04 | 3,115.15 |
| Depreciation Rate | 5.94% | 5.94% | 5.94% | 5.94% |
| Depreciation | 203.03 | 195.60 | 222.57 | 185.04 |

Commission's Analysis

5.52 According to Provision of Regulation 6.32 of JSERC Distribution Tariff Regulations, 2015, depreciation shall not be allowed on assets funded by consumer contribution and capital subsidies/grants. Excluding the consumer contribution deployed towards GFA approved in this Order, the Commission has determined the depreciation on the GFA created out of debt and equity for the FY 2016-17 and FY 2017-18. The rate of depreciation has been considered at 5.94% as approved in the earlier Order dated June 21, 2017. However, the Commission has calculated the Depreciation on Average GFA instead of the Closing GFA as per the JSERC Distribution Tariff Regulations, 2015.

5.53 Accordingly, the Commission approves the depreciation for the FY 2016-17 and FY 2017-18 as summarised in the following table:

Table 39: Depreciation approved for FY 2016-17 and FY 2017-18 (Rs. Crore)

| Particulars | FY 2016-17 | | | FY 2017-18 | | |
|---------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | APR | Petition | Approved | ARR | Petition | Approved |
| GFA (Exc. CC and Grants)* | 3,418.04 | 3,292.97 | 3,256.27 | 3747.04 | 3,115.15 | 2,859.41 |
| Depreciation Rate | 5.94% | 5.94% | 5.94% | 5.94% | 5.94% | 5.94% |
| Depreciation | 203.03 | 195.60 | 193.42 | 222.57 | 185.04 | 169.85 |

* GFA approved is average GFA for calculation of Depreciation

Interest on Loan

Petitioner's Submission



- 5.54 The Petitioner submitted that it has adopted the similar approach as followed by Commission in its previous Order in estimating the normative closing loan for the JBVNL by deducting the normative equity, consumer contribution and grants pertaining to GFA from the Net Fixed Assets (NFA)
- 5.55 In line with the JSERC Tariff Regulation 2015 and the Commission's approach in previous Tariff orders dated April 27, 2018 and June 21, 2017, the repayment of debt has been considered to be equal to the depreciation applicable to GFA created out of debt and equity.
- 5.56 Interest rate of 11.30 % for FY 2016-17 and 11.10% for FY 2017-18 is applied on the normative loan estimated for JBVNL. The Interest & Finance Charges claimed by the Petitioner for FY 2016-17 and FY 2017-18 are as below:

Table 40: Interest on Loan submitted by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore)

| Particulars | FY 2016-17 | | FY 2017-18 | |
|-------------------------|---------------|---------------|---------------|---------------|
| | APR Order | Petition | ARR Order | Petition |
| Opening Loan | 1,256.61 | 1,256.70 | 1,300.28 | 1,615.53 |
| Deemed Loan Addition | 246.71 | 554.43 | 230.30 | -124.47 |
| Deemed Loan Repayment | 203.03 | 195.60 | 222.57 | 185.04 |
| Closing Loan | 1,300.28 | 1,615.53 | 1,308.01 | 1,306.02 |
| Average Loan | 1,278.45 | 1,436.11 | 1,304.15 | 1,460.77 |
| Interest Rate | 11.30% | 11.30% | 11.10% | 11.10% |
| Interest on Loan | 144.46 | 162.28 | 144.76 | 162.15 |

Commission's Analysis

- 5.57 The Commission has observed calculation error by the Petitioner during calculation of closing loan by the Petitioner. The Commission has calculated loans considering the debt-equity ratio in line with Regulation 6.15 and Regulation 6.16 of the JSERC Distribution Tariff Regulations, 2015. The loan arrived in this manner is considered as gross normative loan for calculation of interest on loan.
- 5.58 The Commission has excluded interest on loan amount, normative or otherwise, to the extent of capital cost funded by Consumer Contribution, Grants or Deposit Works carried out by Distribution Licensee in line with Regulation 6.26 of the JSERC Distribution Tariff Regulations, 2015.
- 5.59 The repayment for the year of the debt has been considered as deemed to be equal to the depreciation allowed for that year. The opening values for FY 2016-17 have been considered as per the closing values of FY 2015-16 as approved in the True-up Order for



FY 2015-16. Further, the rate of interest has been considered at the Base rate of SBI as applicable on April 1 of the respective year plus 200 basis points as per JSERC Distribution Tariff Regulations, 2015. The interest on loan as approved by the Commission for FY 2016-17 and FY 2017-18 is summarised in the following table:

Table 41: Interest on Loan approved for FY 2016-17 and FY 2017-18 (Rs. Crore)

| Particulars | FY 2016-17 | | | FY 2017-18 | | |
|-------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | APR | Petition | Approved | ARR | Petition | Approved |
| Opening Loan | 1,256.61 | 1,256.70 | 1,256.61 | 1,300.28 | 1,615.53 | 1,252.70 |
| Loan Addition | 246.71 | 554.43 | 189.51 | 230.30 | -124.47 | -32.75 |
| Loan Repayment | 203.03 | 195.60 | 193.42 | 222.57 | 185.04 | 169.85 |
| Closing Loan | 1,300.28* | 1,615.53 | 1,252.70 | 1,308.01* | 1,306.02 | 1,050.10 |
| Average Loan | 1,278.45 | 1,436.11 | 1,254.66 | 1,304.15 | 1,460.77 | 1,151.40 |
| Interest Rate | 11.30% | 11.30% | 11.30% | 11.10% | 11.10% | 11.10% |
| Interest on Loan | 144.46 | 162.28 | 141.78 | 144.76 | 162.15 | 127.81 |

* Calculation Error by Petitioner

Interest on Consumer Security Deposit

Petitioner's Submission

5.60 The Petitioner submitted that the Interest on consumer security deposit for FY 2016-17 and FY 2017-18 has been computed based on the actual interest on consumer deposit as per Audited Accounts for FY 2016-17 and FY 2017-18.

Table 42: Interest on CSD submitted by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore)

| Particulars | FY 2016-17 | | FY 2017-18 | |
|--------------------|--------------|--------------|--------------|--------------|
| | APR Order | Petition | ARR Order | Petition |
| Closing CSD | | 452.86 | | 506.00 |
| Interest Rate | | 9.30% | | 9.10% |
| Int. on CSD | 49.14 | 42.12 | 44.80 | 46.05 |

Commission's Analysis

5.61 The Commission has approved the interest on consumer security deposits, based on the Consumer Security Deposit as per the Audited Accounts as submitted by the Petitioner for the FY 2016-17 and FY 2017-18. The Interest on Consumer Security Deposits as approved by the Commission for the FY 2016-17 and FY 2017-18 is tabulated below:

Table 43: Interest on CSD approved for FY 2016-17 and FY 2017-18 (Rs. Crore)

| Particulars | FY 2016-17 | | | FY 2017-18 | | |
|-------------|------------|----------|----------|------------|----------|----------|
| | APR | Petition | Approved | ARR | Petition | Approved |



| | | | | | | |
|--------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Closing CSD | | 452.86 | 452.87 | | 506.00 | 506.00 |
| Interest Rate | | 9.30% | 9.30% | | 9.10% | 9.10% |
| Int. on CSD | 49.14 | 42.12 | 42.12 | 44.80 | 46.05 | 46.05 |

Interest on Working Capital (IoWC)

Petitioner's Submission

5.62 The Petitioner submitted that it has estimated the Interest on Working Capital (IoWC) requirement in line with the Regulation 6.29 of the JSERC Distribution Tariff Regulations, 2015, as provided in the Table below.

Table 44: IoWC submitted by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore)

| Particulars | FY 2016-17 | | FY 2017-18 | |
|------------------------------------|--------------|--------------|--------------|--------------|
| | APR Order | Petition | ARR Order | Petition |
| 1 month O&M Expenses | 27.01 | 27.01 | 34.03 | 28.87 |
| Maintenance Spares (@1% GFA) | 53.77 | 32.93 | 54.51 | 31.15 |
| 2 months' Receivables | 984.40 | 1,026.17 | 1,019.70 | 1,120.02 |
| Less: 1 month Power Purchase Cost | 452.87 | 421.64 | 492.25 | 466.29 |
| Less: Consumer Security Deposit | 413.30 | 452.86 | 423.97 | 506.00 |
| Total Working Capital requirement | 199.01 | 211.61 | 192.49 | 207.75 |
| Interest rate on WC | 12.80% | 12.80% | 12.60% | 12.60% |
| Interest on Working Capital | 25.47 | 27.09 | 24.25 | 26.18 |

Commission's Analysis

- 5.63 The Commission has considered IoWC as per the norms specified in the JSERC Distribution Tariff Regulations, 2015.
- 5.64 Rate of IoWC has been considered to be equal to the Base Rate of SBI as applicable on the 1st April of the respective plus 350 Basis Points as per Regulation 6.31 of the JSERC Distribution Tariff Regulations, 2015.
- 5.65 The Interest on Working Capital as computed by the Commission for the FY 2016-17 and FY 2017-18 is summarized in the following table:

Table 45: IoWC approved for FY 2016-17 and FY 2017-18 (Rs. Crore)

| Particulars | FY 2016-17 | | | FY 2017-18 | | |
|-------------|------------|----------|----------|------------|----------|----------|
| | APR | Petition | Approved | ARR | Petition | Approved |



| | | | | | | |
|------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 1 month O&M Expenses | 27.01 | 27.01 | 27.01 | 34.03 | 28.87 | 28.87 |
| Maintenance Spares (@1% GFA) | 53.77 | 32.93 | 32.20 | 54.51 | 31.15 | 26.04 |
| 2 months' Receivables | 984.40 | 1,026.17 | 967.18 | 1,019.70 | 1,120.02 | 1,007.89 |
| Less: 1 month Power Purchase Cost | 452.87 | 421.64 | 421.64 | 492.25 | 466.29 | 436.89 |
| Less: Consumer Security Deposit | 413.30 | 452.86 | 452.87 | 423.97 | 506.00 | 506.00 |
| Total Working Capital requirement | 199.01 | 211.61 | 151.88 | 192.49 | 207.75 | 119.91 |
| Interest rate on WC | 12.80% | 12.80% | 12.80% | 12.60% | 12.60% | 12.60% |
| Interest on Working Capital | 25.47 | 27.09 | 19.44 | 24.25 | 26.18 | 15.11 |

Return on Equity

Petitioner's Submission

5.66 The Petitioner submitted that in order to estimate the equity balance, it has considered the approach adopted by the Commission in its Tariff Order dated April 27, 2018, whereby normative equity is arrived at by assuming the equity to be 30% of the GFA created out of debt and equity. The return on equity is provided in the table below:

Table 46: RoE submitted by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore)

| Particulars | FY 2016-17 | | FY 2017-18 | |
|-----------------|---------------|---------------|---------------|---------------|
| | APR Order | Petition | ARR Order | Petition |
| Opening Equity | 830.79 | 830.85 | 1,025.41 | 987.89 |
| Equity Addition | 194.62 | 157.04 | 98.70 | -53.34 |
| Deletions | 0.00 | 0.00 | 0.00 | 0.00 |
| Closing Equity | 1,025.41 | 987.89 | 1,124.11 | 934.55 |
| Rate of RoE | 15.50% | 15.50% | 15.50% | 15.50% |
| RoE | 143.86 | 140.95 | 166.59 | 148.99 |

Commission's Analysis

5.67 The Commission has approved the Return on Equity on the approved equity employed for the FY 2016-17 and FY 2017-18 as per the provisions of Regulation 6.16 and 6.17 of JSERC Distribution Tariff Regulations, 2015.

5.68 The Commission has considered the opening balance of normative equity as per the closing balance for the FY 2015-16 as approved in the True up Order for FY 2015-16. Further, the rate of RoE is considered to be 15.50%. Accordingly, the Commission computed normative RoE as follows:

Table 47: RoE approved for FY 2016-17 and FY 2017-18 (Rs. Crore)

| Particulars | FY 2016-17 | | | FY 2017-18 | | |
|-------------|------------|----------|----------|------------|----------|----------|
| | APR | Petition | Approved | ARR | Petition | Approved |
| | | | | | | |



| | | | | | | |
|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Opening Equity | 830.79 | 830.85 | 830.79 | 1,025.41 | 987.89 | 987.89 |
| Equity Addition | 194.62 | 157.04 | 157.10 | 98.70 | -53.34 | -53.34 |
| Deletions | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Closing Equity | 1,025.41 | 987.89 | 987.89 | 1,124.11 | 934.55 | 934.55 |
| Rate of RoE | 15.50% | 15.50% | 15.50% | 15.50% | 15.50% | 15.50% |
| RoE | 143.86 | 140.95 | 140.95 | 166.59 | 148.99 | 148.99 |

Non-Tariff Income (NTI)

Petitioner's Submission

- 5.69 The Petitioner submitted that the Non-Tariff Income has been calculated (Other Income) of JBVNL for FY 2016-17 and FY 2017-18, based on the Audited Accounts.
- 5.70 However, while computing the actual the Non-Tariff Income (Other Income) of JBVNL for FY 2016-17 and FY 2017-18, the financing cost for corresponding receivables has to be reduced as accrued DPS is considered as NTI. The Petitioner has already incurred power purchase costs on such outstanding receivables and DPS is levied as financing cost of such receivables, however, the Petitioner is allowed only 2 months of receivables in allowance of working capital. For the receivables beyond the period DPS is applicable and as DPS is considered to be additional income for the Petitioner financing cost of such receivables are allowed in line with the judgment of Hon'ble APTEL dated July 12, 2011 in case No. 142 & 147 of 2009.
- 5.71 The Petitioner submitted that the Commission in its MYT Tariff Order for FY 2016-17 to FY 2020-21 for JBVNL has also considered the above approach in line with the Judgment of Hon'ble APTEL in Appeal no. 48 of 2016 and Appeal no. 316 of 2016 & IA no.656 of 2016 dated May 31, 2017, while approving the Non-Tariff Income. The Non-Tariff Income submitted by the Petitioner is summarised below:

Table 48: NTI submitted by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore)

| Particulars | FY 2016-17 | | FY 2017-18 | |
|---|------------|----------|------------|----------|
| | APR Order | Petition | ARR Order | Petition |
| Interest Income from Investment in Fixed Deposits | 11.72 | 11.71 | | 1.41 |
| D.P.S from Consumer | 321.33 | 321.33 | | 306.26 |
| Interest on advance to Supplier/Contractor | 2.70 | 2.69 | | 0.00 |
| Interest from Bank (Other than FD) | 4.40 | 4.40 | | 6.05 |
| Income from Staff Welfare activities | 0.02 | 0.02 | | 0.00 |
| Supervision Charges | | 0.00 | | 1.82 |
| Miscellaneous Receipt | 3.50 | 3.50 | | 6.37 |
| Meter Rent | 13.46 | 13.46 | | 10.30 |
| Wheeling Charges / Fuel surcharge | | 4.53 | | 0.03 |



| Particulars | FY 2016-17 | | FY 2017-18 | |
|--|---------------|---------------|---------------|---------------|
| | APR Order | Petition | ARR Order | Petition |
| Receipt from Consumers for capital works | | 0.00 | | 0.00 |
| Miscellaneous Charges from Consumers | | 10.37 | | 14.29 |
| Total | 357.12 | 372.02 | | 346.52 |
| Interest rate for Receivables financing | 12.80% | 12.80% | | 12.60% |
| Corresponding Receivables against DPS | 1,785.16 | 1,785.16 | | 1,701.46 |
| Interest on Receivables against DPS | 228.50 | 228.50 | | 214.38 |
| Net NTI to be considered | 128.62 | 143.52 | 135.05 | 132.14 |

Commission's Analysis

5.72 The Commission has considered the Non-Tariff income for FY 2016-17 and FY 2017-18 based on the Audited Accounts as submitted by the Petitioner for the respective year.

5.73 Further, the Commission has adopted a similar approach as adopted in the Tariff Order dated June 21, 2017 for approving the Non-Tariff income wherein, the Non-Tariff income has been calculated after considering financing cost for corresponding receivables, as accrued DPS is considered to be form of NTI. The Commission has taken due cognizance of the Judgement of Hon'ble APTEL in Appeal no.48 of 2016 and Appeal no. 316 of 2016 & IA no. 656 of 2016 dated May 31, 2017, while approving the Non-Tariff Income.

5.74 Thus, Non-Tariff income as approved by the Commission for the FY 2016-17 and FY 2017-18 is summarized in the following table:

Table 49: NTI approved for FY 2016-17 and FY 2017-18 (Rs. Crore)

| Particulars | FY 2016-17 | | | FY 2017-18 | | |
|---|---------------|---------------|---------------|------------|---------------|---------------|
| | APR | Petition | Approved | ARR | Petition | Approved |
| Interest Income from Investment in Fixed Deposits | 11.72 | 11.71 | 11.71 | | 1.41 | 1.41 |
| D.P.S from Consumer | 321.33 | 321.33 | 321.33 | | 306.26 | 306.26 |
| Interest on advance to Supplier/Contractor | 2.70 | 2.69 | 2.70 | | 0.00 | 0.00 |
| Interest from Bank (Other than FD) | 4.40 | 4.40 | 4.40 | | 6.05 | 6.05 |
| Income from Staff Welfare activities | 0.02 | 0.02 | 0.02 | | 0.00 | 0.00 |
| Supervision Charges | | 0.00 | 0.00 | | 1.82 | 1.82 |
| Miscellaneous Receipt | 3.50 | 3.50 | 3.50 | | 6.37 | 6.37 |
| Meter Rent | 13.46 | 13.46 | 13.46 | | 10.30 | 10.30 |
| Wheeling Charges / Fuel surcharge | | 4.53 | 4.53 | | 0.03 | 0.03 |
| Receipt from Consumers for capital works | | 0.00 | 0.00 | | 0.00 | 0.00 |
| Miscellaneous Charges from Consumers | | 10.37 | 10.37 | | 14.29 | 14.29 |
| Total | 357.12 | 372.02 | 372.02 | | 346.52 | 346.52 |



| Particulars | FY 2016-17 | | | FY 2017-18 | | |
|---|---------------|---------------|---------------|---------------|---------------|---------------|
| | APR | Petition | Approved | ARR | Petition | Approved |
| Interest rate for Receivables financing | 12.80% | 12.80% | 12.80% | | 12.60% | 12.60% |
| Corresponding Receivables against DPS | 1,785.16 | 1,785.16 | 1,785.16 | | 1,701.46 | 1,701.46 |
| Interest on Receivables against DPS | 228.50 | 228.50 | 228.50 | | 214.38 | 214.38 |
| Net NTI | 128.62 | 143.52 | 143.52 | 135.05 | 132.14 | 132.14 |

Disallowances on account of Excessive AT&C Losses

Petitioner's Submission

- 5.75 The Petitioner submitted that it has undertaken several administrative measures to curb the AT&C Losses along with the technical measures such as metering of un-metered consumers, focusing on billing efficiency and collection efficiency improvement through appointment of dedicated agencies.
- 5.76 The Petitioner also submitted that the target of 100% of collection efficiency set by the Commission is highly impracticable and even the most efficient utilities in the Country are not able to achieve the 100% collection efficiency. Further, it is mentioned that collection efficiency approved under UDAY scheme is also 93% in comparison to 100% set by the Commission.
- 5.77 The Petitioner submitted that it has introduced several avenues for payment of bills by the consumers, to enhance the collections which includes:
- Payment by credit/ debit card through Mobile App (ezy-bzly),
 - Online web-based payment facility on JBVNL's website
 - Payment through Bharat Bill Payment System (BBPS)
 - POS machine and E-wallet facility through Urja Mitras
 - Tie-ups with ~4,500 Pragya Kendras
 - Collection through ~440 Post Offices
 - Collection through ~ 190 Any Time Payment (ATP) machines
- 5.78 The Petitioner submitted that one of the key reasons behind the lower collection efficiency of JBVNL than the targeted collection efficiency is the addition of large number of rural consumers during FY 2017-18 under the Central and State Govt. funded Rural Electrification Schemes, which is further likely to increase significantly during FY 2018-19 as well.



5.79 The Petitioner requested the Commission that the amount of revenue which it has not been able to collect, may be allowed to be considered against the RGF received during FY 2016-17 and FY 2017-18. The calculation for disallowance is done by considering the difference between the Commissions approved collection efficiency i.e., 100% and the actual collection efficiency of 90.69% in FY 2016-17 and 84.86% in FY 2017-18. The details of the same have been provided in the table below:

Table 50: Disallowance due to Collection Efficiency submitted by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore)

| Particulars | FY 2016-17 | | FY 2017-18 | |
|---|-------------|---------------|-------------|---------------|
| | APR Order | Petition | APR Order | Petition |
| Revenue from sale of power | 2,813.50 | 2,730.63 | 3,799.21 | 3,174.53 |
| Collection efficiency | 100% | 90.69% | 100% | 84.86% |
| Uncollected revenue – to be adjusted against RGF | 0.00 | 254.18 | 0.00 | 480.49 |

5.80 The Petitioner further submitted that the Commission has approved Distribution loss target of 24.20% for FY 2016-17 and 20.40% for FY 2017-18. The Petitioner has estimated the disincentive for non-achievement of loss targets, considering the methodology adopted by the Commission in its previous Orders. The excess cost to be disallowed is the ‘Disincentive for non-achievement of T&D loss targets’, which needs to be appropriately adjusted against the Resource Gap Funding (RGF) as per the communication from the Energy Department, Govt. of Jharkhand, is provided in Table below

Table 51: Disallowance due to Distribution Loss submitted by the Petitioner for FY 2016-17 and FY 2017-18

| Particulars | FY 2016-17 | | FY 2017-18 | |
|--|------------|-----------|------------|-----------|
| | APR Order | Petition | APR Order | Petition |
| Energy Sales to Intrastate consumers (MU) | 8,721.07 | 8,721.07 | 9,222.77 | 9,613.73 |
| T&D loss (%) for intra-state consumers | 24.20% | 24.20% | 20.40% | 20.40% |
| Energy req. for intra- state consumers (MU) | 11,505.37 | 11,505.37 | 11,586.39 | 12,077.55 |
| Energy Available for Distribution (MU) | 12152.25 | 11,596.55 | 12,499.22 | 11,940.25 |
| Disallowed Units due to Excess Loss (MU) | 646.87 | 91.18 | 912.82 | -137.30 |
| Average Power Purchase Cost (Rs./Unit) | 4.08 | 4.05 | 4.07 | 4.07 |
| Disallowed Cost due to Excess Loss (Rs. Crore) | 263.63 | 36.94 | 371.24 | -55.89 |

5.81 The Petitioner also submitted that it is prone to difficulties in reducing T&D losses and collection inefficiencies due to difficult terrains and large rural consumers in overall consumer mix. In addition, JBVNL also has Universal Supply Obligation (USO) so it cannot stop/reduce the power supply in areas with poor collection efficiencies. Therefore, the Petitioner requested the Commission to approve for provisioning of adjustment of



disallowance while deducting RGF from ARR, taking cognizance of difficulties and ground realities faced by JBVNL in improving collection.

- 5.82 Further, the Petitioner submitted that in FY 2017-18, as per the Audited Accounts, JBVNL has been able to achieve T&D loss level of 19.48% against the approved loss level of 20.40%. As a result, there has been saving of Rs. 55.89 Crore in FY 2017-18. As per the JSERC Tariff Regulations, any gains due to improvement in efficiency has to be shared between the Consumers and JBVNL in the ratio of 50:50. Therefore, an amount of Rs 27.95 Crore has been added back to the Gap of FY 2017-18.

Commission's Analysis

- 5.83 The Commission asked the Petitioner to provide justification for the reduction in collection efficiency. The Petitioner replied that the decline in collection efficiency is due to increase in consumers in rural areas due to significant rural electrification that has led to increase in energy sales and assessment from the rural areas but couldn't be converted into collection, significant metering programmes that has led to inclusion of consumers who have been out of the billing net for past period, who have large accumulation of electricity dues, against which collection could not be realized and migration of major HT consumers with good collection efficiency to other Discoms.
- 5.84 The Commission, however is of the view that it had already set the targets for the Collection efficiency in Section "Targets for Distribution Losses and Collection Efficiency" of the JSERC Distribution Tariff Regulations, 2015 and as such the submission of the Petitioner regarding sudden change seems to be out of order. The Commission thus directs the Petitioner to abide by the targets set by the Commission and any provisions for the poor collection efficiency cannot be allowed.
- 5.85 Further, with respect to the Distribution Loss Targets, the Commission in its earlier Order dated June 21, 2017 had already set targets for the second control period based on the GoI, UDAY scheme.
- 5.86 The Commission notes with concern that the actual level of Distribution losses submitted by the Petitioner are still higher as compared to the targets set by the Commission. The Commission is of the view that such high loss levels due to Petitioner's inefficiency should not be passed on to the consumers.
- 5.87 Accordingly, the power purchase cost incurred due to higher Distribution losses, beyond the targeted level, has been disallowed and is treated as 'Disincentive for non-achievement



of Distribution loss targets' for FY 2016-17 and FY 2017-18. The Commission has considered the similar approach as adopted by it in the Tariff Order dated December 14, 2015 in the computation of non-achievement of T&D loss reduction targets.

5.88 The non-achievement of Distribution loss reduction targets for the FY 2016-17 and FY 2017-18 as approved by the Commission is summarized below:

Table 52: Disallowance due to Distribution Loss approved for FY 2016-17 and FY 2017-18

| Particulars | FY 2016-17 | FY 2017-18 |
|--|---------------|---------------|
| Total Energy Available for Sales at Distribution Periphery (MU) | 12,143.94 | 12,515.60 |
| Energy Sold at Distribution Periphery (Grossed up by Normative Loss) | 11,505.37 | 12,077.55 |
| Power Purchase Disallowed at Distribution Periphery (MU) | 638.57 | 438.05 |
| Average Power Purchase Cost at Distribution Periphery (Rs./kWh) | 4.36 | 4.69 |
| Total Disallowance due to high Distribution Loss (Rs. Crore) | 278.61 | 205.28 |

Resource Gap Funding (RGF)

Petitioner's Submission

5.89 The Petitioner submitted that Resource Gap Funding (RGF) is being provided by Government of Jharkhand to meet the disallowances and slashes made by the Commission during tariff determination process for various parameters such as higher T&D Loss, normative interest computation, normative generation cost etc.

5.90 A communication from the Energy department, Government of Jharkhand (GoJ) was also submitted (annexed for reference) vide letter dated July 14, 2014 stating that:

“Amount released towards resource gap may be utilized to meet the slashes/disallowances worked out by the Hon'ble commission while fixing the tariff”.

5.91 In line with the above communication by the GoJ, the Petitioner requested the Commission to consider adjusting the complete RGF towards disallowance/slashes and remaining amount of RGF may be considered to meet the revenue gap. The resource gap funding available to meet revenue gap is provided below:

Table 53: RGF submitted by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore)

| Particulars | FY 2016-17 | | FY 2017-18 | |
|---|------------|----------|------------|----------|
| | APR Order | Petition | ARR Order | Petition |
| Resource Gap Funding Received | 1,200.00 | 1,200.00 | 2,500.00 | 2,999.99 |
| Disallowances – on account of AT&C losses and Addition in Gap due to Efficiency Gains | 263.63 | 291.12 | - | 508.44 |



| Particulars | FY 2016-17 | | FY 2017-18 | |
|--|------------|----------|------------|----------|
| | APR Order | Petition | ARR Order | Petition |
| Net Resource Gap Funding available to meet revenue gap | 935.40 | 908.88 | 2,500.00 | 2,491.56 |

Commission's Analysis

5.92 The Commission has approved RGF for the FY 2016-17 and FY 2017-18 based on the Audited Accounts as provided by the Petitioner. Further, the Petitioner submitted a letter dated July 14, 2014 from the Energy department, Government of Jharkhand which states that:

"Amount released towards resource gap may be utilized to meet the slashes/disallowances worked out by the Hon'ble commission while fixing the tariff".

5.93 In view of the above, the Commission has partially adjusted the RGF towards the disallowance of the power purchase cost (owing to higher Distribution losses) and remaining resource gap funding available to the Petitioner after accounting for the aforesaid disallowance has considered for meeting the approved revenue gap.

5.94 Thus, the resource gap funding as approved by the Commission for the FY 2016-17 and FY 2017-18 is tabulated below:

Table 54: RGF approved for FY 2016-17 and FY 2017-18 (Rs. Crore)

| Particulars | FY 2016-17 | | FY 2017-18 | |
|---|------------|----------|------------|----------|
| | Petition | Approved | Petition | Approved |
| Resource Gap Funding Received | 1,200.00 | 1,200.00 | 2,999.99 | 3,000.00 |
| Disallowances on account of increased Distribution Losses | 36.94 | 278.61 | -27.95 | 205.28 |
| Disallowances on account of reduced collection efficiency | 252.80 | - | 469.45 | - |
| Net Resource Gap Funding available to meet revenue gap * | 910.26 | 921.39 | 2,502.60 | 2,794.72 |

* Note: Calculation error in Petition corrected in the Model

Summary of ARR for FY 2016-17 and FY 2017-18

Petitioner's Submission

5.95 Based on the components of the ARR discussed in the above sections, the final ARR submitted by the Petitioner for FY 2016-17 and FY 2017-18 is as below:



Table 55: ARR submitted by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore)

| Particulars | FY 2016-17 | | FY 2017-18 | |
|---|-----------------|-----------------|-----------------|-----------------|
| | APR Order | Petition | ARR Order | Petition |
| Power Purchase Cost | 5,223.19 | 5,059.63 | 5,081.82 | 5,595.52 |
| Inter-State Transmission Charges | | 163.36 | | 137.84 |
| Intra-State Transmission Charges | 185.40 | 185.40 | 160.16 | 204.07 |
| O&M Expenses | 324.08 | 324.08 | 408.31 | 346.45 |
| Employee Expenses | 213.21 | 213.21 | 221.46 | 215.97 |
| A&G Expenses | 56.83 | 56.83 | 59.31 | 75.87 |
| R&M Expenses | 54.04 | 54.04 | 127.54 | 54.61 |
| Depreciation | 203.03 | 195.60 | 222.57 | 185.04 |
| Interest on Long Term Loan | 144.46 | 162.28 | 144.76 | 162.15 |
| Interest on Working Capital Loan | 25.47 | 27.09 | 24.25 | 26.18 |
| Interest on Consumer Security Deposit | 49.14 | 42.12 | 44.80 | 46.05 |
| Return on Equity | 143.86 | 140.95 | 166.59 | 148.99 |
| Total Expenses | 6,298.63 | 6,300.51 | 6,253.26 | 6,852.27 |
| Less: Non-Tariff Income | 128.62 | 143.52 | 135.05 | 132.14 |
| Net ARR | 6,170.01 | 6,156.99 | 6,118.22 | 6,720.13 |
| Less: Disallowance due to excess Losses | 263.63 | 289.74* | | 497.40* |
| ARR Recoverable | 5,906.38 | 6,156.99 | 6,118.22 | 6,720.13 |

*The Petitioner has not reduced the excess loss while computing ARR recoverable.

Commission's Analysis

5.96 The ARR approved for the FY 2016-17 and FY 2017-18 is summarised below.

Table 56: ARR approved for FY 2016-17 and FY 2017-18 (Rs. Crore)

| Particulars | FY 2016-17 | | | FY 2017-18 | | |
|---------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | APR | Petition | Approved | ARR | Petition | Approved |
| Power Purchase Cost | 5,059.83 | 5,059.63 | 5,059.63 | 4,961.41 | 5,595.52 | 5,242.67 |
| Inter-State Transmission Charges | 163.36 | 163.36 | 163.36 | 120.41 | 137.84 | 137.84 |
| Intra-State Transmission Charges | 185.40 | 185.40 | 140.45 | 160.16 | 204.07 | 150.03 |
| O&M Expenses | 324.08 | 324.08 | 324.08 | 408.31 | 346.45 | 346.45 |
| Employee Expenses | 213.21 | 213.21 | 213.21 | 221.46 | 215.97 | 215.97 |
| A&G Expenses | 56.83 | 56.83 | 56.83 | 59.31 | 75.87 | 75.87 |
| R&M Expenses | 54.04 | 54.04 | 54.04 | 127.54 | 54.61 | 54.61 |
| Depreciation | 203.03 | 195.60 | 193.42 | 222.57 | 185.04 | 169.85 |
| Interest on Long Term Loan | 144.46 | 162.28# | 141.78 | 144.76 | 162.15# | 127.81 |
| Interest on Working Capital Loan | 25.47 | 27.09 | 19.44 | 24.25 | 26.18 | 15.11 |
| Interest on Consumer Security Deposit | 49.14 | 42.12 | 42.12 | 44.80 | 46.05 | 46.05 |
| Return on Equity | 143.86 | 140.95 | 140.95 | 166.59 | 148.99 | 148.99 |
| Total Expenses | 6,298.63 | 6,300.51 | 6,225.23 | 6,253.26 | 6,852.27 | 6,384.78 |



| Particulars | FY 2016-17 | | | FY 2017-18 | | |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | APR | Petition | Approved | ARR | Petition | Approved |
| Less: Non-Tariff Income | 128.62 | 143.52 | 143.52 | 135.05 | 132.14 | 132.14 |
| Net ARR | 6,170.01 | 6,156.99 | 6,081.71 | 6,118.22 | 6,720.13 | 6,252.65 |
| Less: Disallowance due to excess Distribution Loss | 263.63 | 36.94* | 278.61 | | -27.95* | 205.28 |
| Less: Disallowance due to low collection efficiency | - | 252.80* | | | 469.45* | |
| ARR Recoverable | 5,906.38 | 6,156.99 | 5,803.10 | 6,118.22 | 6,720.13 | 6,047.36 |

*The Petitioner has not reduced the excess loss while computing ARR recoverable.

Calculation Error by the Petitioner



A 6: ANNUAL PERFORMANCE REVIEW FOR FY 2018-19

6.1 As per Clause 9.2 of the Distribution Tariff Regulations, 2015

“9.2 The Licensee shall submit the Annual Performance Review report as part of annual review on actual performance as per the timelines specified in the Section 11 of these Regulations to assess the performance vis-à-vis the targets approved by the Commission at the beginning of the Control Period. This shall include annual statements of its performance and accounts including audited/authenticated accounts and the tariff worked out in accordance with these Regulations;”

6.2 The Petitioner submitted that special cognizance has been taken of the approved figures in Tariff Order dated April 27, 2018 and principles adopted by the Commission in previous Tariff Orders, to arrive at the most realistic projections for the APR for FY 2018-19.

6.3 The Commission has approved the APR for FY 2018-19 taking into consideration:

a) JSERC Distribution Tariff Regulations, 2015.

b) Methodology adopted by the Commission in its previous Orders.

6.4 Further, the Commission has taken due cognisance of the judgement of Hon’ble APTEL in Appeal no.48 of 2016 and Appeal no.316 of 2016 & IA no.656 of 2016 dated May 31, 2017, while passing this Order.

Energy Sales

Petitioner’s Submission

6.5 The Petitioner submitted that sales for FY 2018-19 has been estimated based on the addition of consumers, consumption pattern and past trend of growth rate. The Petitioner has witnessed a significant growth in the total Sales across all categories in the last few years. This is majorly due to increase in the availability of power, reduced load shedding, consumer addition across all category and uninterrupted supply of power. Further, the Petitioner aims to provide 24x7 power to all consumers in the State, which shall be the key reason for increase in the energy sales in coming years.

6.6 The total consumer addition in FY 2018-19 has been estimated by adopting a practical approach, to arrive at the total sales of the Petitioner. The projection of domestic consumers has been done taking into view the large scale electrification being done under various ongoing schemes of Central and State Government.



6.7 Further, the Petitioner submitted that it has also planned to electrify 1,00,000 agriculture consumers every year over the next 3 years period under the "Tilka Manjhi" scheme, the impact of which has been considered in the present APR.

6.8 The category wise estimation of consumer of all categories for FY 2018-19 as submitted by the Petitioner vis-a-vis that approved by the Commission in its Order dated April 27, 2018 is as below.

Table 57: Category-wise consumers submitted by the Petitioner for FY 2018-19 (No.)

| Particulars | FY 2018-19 | |
|---------------------------------|------------------|------------------|
| | ARR Order | Petition |
| Domestic | 38,50,029 | 35,11,008 |
| Commercial | 2,37,536 | 2,15,090 |
| Irrigation & Agricultural / IAS | 63,420 | 57,281 |
| Industrial LT/LTIS | 15,684 | 16,247 |
| Industrial HTS/HTSS/EHT | 1,625 | 1,625 |
| IS-I: Public Lighting / SS | 530 | 403 |
| IS-II: RTS, MES | 8 | 10 |
| Total | 41,68,832 | 38,01,664 |

6.9 Based on the year on year growth of consumers and their energy sales, connected load has been estimated for FY 2018-19 by the Petitioner as detailed in the table below.

Table 58: Category-wise Connected Load submitted by the Petitioner for FY 2018-19 (kW)

| Particulars | FY 2018-19 | |
|---------------------------------|------------------|------------------|
| | ARR Order | Petition |
| Domestic | 52,38,616 | 49,76,970 |
| Commercial | 5,14,584 | 3,90,689 |
| Irrigation & Agricultural / IAS | 1,00,793 | 40,539 |
| Industrial LT/LTIS | 2,66,628 | 3,41,187 |
| Industrial HTS/HTSS/EHT | 8,28,636 | 7,86,220 |
| IS-I: Public Lighting / SS | 38,560 | 28,210 |
| IS-II: RTS, MES | 25,795 | 47,330 |
| Total | 70,13,612 | 66,11,145 |

6.10 Based on the above, the Petitioner has projected the energy sales, keeping in view the average energy consumption per consumer in past, especially for domestic and irrigation consumer categories. Whereas, a natural increase in energy sales for others has been



considered for other consumer categories. The category-wise sales for FY 2018-19 as submitted by the Petitioner vis-a-vis that approved by the Commission in its Order dated April 27, 2018 is as below.

Table 59: Category-wise Sales submitted by the Petitioner for FY 2018-19 (MU)

| Particulars | FY 2018-19 | |
|---------------------------------|------------------|------------------|
| | ARR Order | Petition |
| Domestic | 6,304.26 | 6,009.23 |
| Commercial | 737.03 | 944.33 |
| Irrigation & Agricultural / IAS | 181.24 | 210.75 |
| Industrial LT/LTIS | 215.18 | 239.10 |
| Industrial HTS/HTSS/EHT | 2,391.14 | 2,403.55 |
| IS-I: Public Lighting / SS | 248.74 | 81.55 |
| IS-II: RTS, MES | 118.98 | 121.45 |
| Total | 10,196.56 | 10,009.92 |

Commission's Analysis

6.11 The Commission had observed from the workings submitted by the Petitioner in its response to the Commission's Discrepancy Note dated December 19, 2018 that the category-wise and sub-category-wise sales, no. of consumers and connected load were not submitted by the Petitioner. Hence, the Commission had directed the Petitioner to submit the actual category-wise and sub-category-wise sales, no. of consumers and connected load for FY 2016-17 and FY 2017-18 during the Technical Validation Session (TVS) held on January 31, 2019. Since the Petitioner has not submitted the same, the Commission is of the view that the intensive metering of domestic consumers may lead to a considerate use of power by the domestic consumers in spite of increase in the no. of consumers vis-a-vis FY 2017-18. Hence, the Commission has considered a normative 8% increase in the energy sales for FY 2018-19 for the domestic consumers. For other categories, the Commission has projected the sales by applying CAGR trends based on the past data. The sales approved for FY 2018-19 as summarised below:

Table 60: Category-wise Sales approved for FY 2018-19 (MU)

| Particulars | FY 2018-19 | | |
|-------------------------|------------|----------|----------|
| | ARR | Petition | Approved |
| Domestic | 6,304.26 | 6,009.23 | 6,206.61 |
| Commercial/Non Domestic | 737.03 | 944.33 | 846.88 |
| Public Lighting / SS | 248.74 | 81.55 | 78.51 |
| Irrigation / IAS | 181.24 | 210.75 | 209.44 |



| Particulars | FY 2018-19 | | |
|------------------------------|------------------|------------------|------------------|
| | ARR | Petition | Approved |
| Industrial LT / LTIS | 215.18 | 239.10 | 218.72 |
| Industrial HT / HTS / S/ EHT | 2,391.14 | 2,403.55 | 2,623.22 |
| RTS/MES | 118.98 | 121.41 | 102.09 |
| Total | 10,196.56 | 10,009.92 | 10,285.46 |

Power Purchase Quantum and Cost

Petitioner's Submission

6.12 The Petitioner submitted that it has projected the power purchase for FY 2018-19 based on the total energy required during the respective year. The projections of power purchase have been made considering the current status of upcoming stations and present sources. The Petitioner further submitted that the following facts have been considered while calculating the Power purchase for FY 2018-19:

- Delay of expected COD of upcoming stations like NTPC Darlipalli, NTPC, Nabinagar, NTPC North Karanpura, PTPS phase-I, etc.
- Procurement of 200 MW of Wind Energy- JBVNL has entered into a PPA with PTC under the MNRE's scheme for setting up of 1000 MW ISTS- connected Wind Power projects (Tranche-II). The total Tariff at Jharkhand state periphery is discovered through competitive bidding process as Rs. 3.53 per/kWh. Out of this 200 MW, 75 MW is already made available to JBVNL and the remaining power shall be available from Dec'18
- The petitioner has further signed a PPA with SECI to purchase 100 MW of wind power at Rs. 2.72 per unit in order to be 100% compliant in RPO.
- Letter sent to SECI for allocation of solar energy from solar parks at competitive price.

6.13 The station wise provisional Power Purchase for FY 2018-19 is shown in the table below:

Table 61: Power Purchase Cost submitted by the Petitioner for FY 2018-19

| Particulars | Power Purchase Quantum | | Power Purchase Cost | |
|--------------|------------------------|----------------|----------------------|----------------------|
| | ARR Order (MU) | Estimated (MU) | ARR Order (Rs Crore) | Estimated (Rs Crore) |
| Farrakka | 825.40 | 888.41 | 301.42 | 303.54 |
| Farrakka III | 477.60 | 505.19 | 216.15 | 221.37 |



| Particulars | Power Purchase Quantum | | Power Purchase Cost | |
|----------------------------------|------------------------|------------------|----------------------|----------------------|
| | ARR Order (MU) | Estimated (MU) | ARR Order (Rs Crore) | Estimated (Rs Crore) |
| Khalagaon I | 184.90 | 205.06 | 62.17 | 70.48 |
| Talcher | 498.20 | 548.57 | 125.52 | 140.96 |
| Khalagaon II | 190.10 | 161.72 | 63.35 | 53.31 |
| Barh | 237.10 | 595.68 | 113.63 | 276.24 |
| Korba | 252.00 | 372.30 | 67.44 | 99.41 |
| Total NTPC | 2,665.30 | 3,276.93 | 949.68 | 1,165.31 |
| Rangit | 45.80 | 45.46 | 16.37 | 17.47 |
| Teesta | 329.70 | 321.20 | 71.45 | 76.94 |
| Total NHPC | 375.50 | 366.65 | 87.82 | 94.42 |
| Chukha | 203.80 | 165.72 | 47.84 | 39.80 |
| Tala | 405.60 | 294.02 | 89.80 | 63.51 |
| Total PTC | 609.40 | 459.74 | 137.64 | 103.31 |
| Total Central Sector | 3,650.20 | 4,103.32 | 1,175.14 | 1,363.03 |
| DVC | 4,951.70 | 4,951.70 | 1,980.68 | 2,427.93 |
| SHPS | 55.20 | 71.88 | 6.37 | 8.12 |
| TVNL | 2,266.80 | 1,685.58 | 878.75 | 711.61 |
| Total State Sector | 18,224.3 | 19,019.13 | 6,391.22 | 7,236.76 |
| Inland Power | 422.90 | 326.70 | 160.82 | 142.53 |
| APNRL | 954.00 | 1,090.74 | 371.51 | 394.27 |
| APNRL (Add. 66 MW) | 330.20 | 451.96 | 123.25 | 161.60 |
| Total Private Sector | 1,707.10 | 1,869.40 | 655.58 | 698.40 |
| Solar IPPs | 19.70 | 19.29 | 35.38 | 34.65 |
| Solar REC | - | - | 147.16 | - |
| JREDA | 312.00 | - | 5.20 | - |
| SECI | 19.10 | 24.37 | 141.20 | 13.66 |
| RE (Wind) | 400.00 | 32.68 | 328.94 | 11.54 |
| Total Other RE | 750.80 | 76.35 | 35.38 | 59.85 |
| PGCIL | - | - | 121.91 | 144.73 |
| Posoco (ERLDC) | - | - | 1.51 | 1.22 |
| UI Payable | - | 320.48 | - | 119.06 |
| UI Receivable | - | 42.33 | - | - |
| Rungta Mines | 42.30 | 38.62 | 14.31 | 12.73 |
| ABCIL | 45.20 | 62.92 | 17.70 | 22.61 |
| ERLDC(APNRL) | - | - | - | 35.82 |
| PTC (IEX) | - | 285.16 | - | 134.22 |
| Banking of Power (Unit Banked) | - | 48.74 | 67.64 | 0.74 |
| Banking of Power (Unit Received) | - | -20.60 | - | 0.10 |
| Grand Total | 13,469.30 | 13,353.75 | 5,247.24 | 5,740.18 |



6.14 The Petitioner submitted that the plant wise per unit cost of Power Purchase has been considered for projecting the Power Purchase cost of FY 2018-19 and has been assumed to be equivalent to per unit power purchase cost of FY 2017-18. The Petitioner submitted that it has not considered any escalation while calculating the cost of power purchase for FY 2018-19. As the per unit cost of power purchase of FY 2017-18 has been taken as plant wise per unit cost of power purchase for FY 2018-19, the Petitioner urged that there should not be any disallowance in per unit cost of power purchase for FY 2018-19.

Commission's Analysis

6.15 The Commission vide its discrepancy note dated December 19, 2018 directed the Petitioner to submit the basis for power purchase quantum proposed from different power stations and the power purchase costs submitted by the Petitioner. The Commission also directed the Petitioner to provide the fixed costs and energy cost for each power station for FY 2018-19.

6.16 The Petitioner submitted that the actual power purchase quantum has been considered for FY 2018-19 till the month of August 2018, i.e., 5 months and estimation has been done for the rest of 7 months of FY 2018-19 based on the power purchase trend of previous Fiscal Year and the upcoming power generating sources, which were not present during the first 5 months of the financial year (i.e. till August 2018)

6.17 The Petitioner also submitted the actual variable cost (including FPA) for all the thermal generators for FY 2018-19 up to September 2018.

6.18 The Commission has observed that the Petitioner has submitted the power procurement which is not meeting the RPO Targets set as per JSERC (Renewable Energy Purchase Obligation and its compliance) Regulations, 2016. The Petitioner was asked to justify the same. The Petitioner replied that it has undertaken every possible measure to not only meet but to significantly exceed the RPO targets. The State had completed the bidding process for commissioning of 1,100 MW of solar power for purchase of power from solar plant, but the PPAs were not signed and the process was put on hold, due to higher tariffs as compared to recently discovered solar tariffs in the competitive bidding for solar parks at that time.

6.19 The Petitioner also stated that it has signed a PPA with SECI for 300 MW of wind power to meet the non-solar RPO, which shall be available in the following financial year. Additionally, the Petitioner had approached SECI for allocation of 200 MW of wind power, SECI and NTPC for purchase of solar power from upcoming solar parks to comply with



RPO for the FY 2017-18, against which 700MW of Solar Power and 500MW of wind power PPA has been already signed with SECI. However, due to reason beyond the control of the licensee, such as delay in commissioning of power plants has led to non-fulfilment of RPO obligation. The Petitioner also proposed to procure solar power from the following sources in future.

- ❖ Floating solar plant of 150 MW (100 MW Getalsud Dam +50MW Dhurwa Dam) is presently under development. The approval from Board of Director, JBVNL has been obtained to sign MoU with SECI for subsequent signing of PPA.
- ❖ 2 MW canal top with JREDA is also being developed.
- ❖ JBVNL is also exploring other potential sites to set up floating solar power Plant.

6.20 The Commission has considered provision of the National Tariff Policy, 2016, for excluding the power purchased from Hydro Sources for RPO Compliance. The provision in ARR for purchase of RECs for achieving the RPO Targets as set in the JSERC (Renewable Energy Purchase Obligation and its compliance) Regulations, 2016 is summarised as below. The REC prices are approved at Rs. 1000/MWh as per the base rates applicable on date for both Solar and Non-Solar RECs.

Table 62: Provision for REC Purchase approved for FY 2018-19

| Particulars | FY 2018-19 | | | |
|--------------------------------|---------------|-----------------|----------------|------------------------|
| | % | Quantum (MU) | Rate (Rs./kWh) | Total Cost (Rs. Crore) |
| Targets | 10.00% | 1,157.90 | | |
| Solar RPO | 5.50% | 636.85 | | |
| Non Solar RPO | 4.50% | 521.06 | | |
| Total Purchase | 0.61% | 76.34 | | 59.85 |
| Solar | 0.35% | 43.66 | 11.07 | 48.32 |
| Non-Solar | 0.26% | 32.68 | 3.53 | 11.54 |
| Additional REC Purchase | 9.39% | 1,081.56 | | 108.16 |
| Solar | 5.15% | 593.19 | 1.00 | 59.32 |
| Non-Solar | 4.24% | 488.37 | 1.00 | 48.84 |

6.21 In response to a query raised by the Commission during the TVS held on January 30, 2019, on availing power from DVC Koderma in Generator Mode, the Petitioner stated that it has availed the same from January 01, 2019. However, the Petitioner has not provided the details on the same. Hence, the Commission has calculated the Tariff for the 3 months from January 2019 to March 2019 as per the CERC Tariff Order for Koderma.



- 6.22 The Commission directs the Petitioner to apply for approval of the PPA with DVC to the Commission within 1 month of the issue of this Order. The Commission has considered the power purchase from DVC (Koderma) as a Generator provisionally and shall approve the same subject to approval of the PPA.
- 6.23 The Commission has considered the normative/actual availability (PAF) of the thermal stations for estimating the normative energy availability for power purchase. The energy availability from Tala & Chuka has been considered based on the actual power purchased during the past 3 years. The design energy approved for NHPC Plants & Sikidri HPS has been considered for energy availability for the same.
- 6.24 The Commission has considered the variable costs paid by the Petitioner for FY 2017-18 escalated by 5% for FY 2018-19. The fixed charges to be paid by JBVNL for the Generating Stations is considered as per the respective Tariff Orders issued by CERC/JSERC. The summary of Power Purchase Cost Approved by the Commission is as below:

Table 63: Power Purchase Cost approved for FY 2018-19

| Particulars | Power Purchase Quantum | | Power Purchase Cost | |
|-----------------------------|------------------------|-----------------|----------------------|----------------------|
| | Estimated (MU) | Approved (MU) | Estimated (Rs Crore) | Approved (Rs. Crore) |
| NTPC | | | | |
| Farakka, Stage-I&II | 888.41 | 917.19 | 303.54 | 314.56 |
| Farakka, Stage-III | 505.19 | 594.69 | 221.37 | 231.96 |
| Kahalgaon, Stage-I | 205.06 | 187.42 | 70.48 | 67.60 |
| Talcher, Stage-I | 548.57 | 627.26 | 140.96 | 213.39 |
| Kahalgaon, Stage-II | 161.72 | 316.43 | 53.31 | 104.37 |
| Barh-II | 595.68 | 561.43 | 276.24 | 303.16 |
| Korba, Station-III | 372.3 | 350.89 | 99.41 | 92.73 |
| Total | 3,276.93 | 3,555.31 | 1,165.31 | 1,327.76 |
| NHPC | | | | |
| Rangit | 45.46 | 45.15 | 17.47 | 17.92 |
| Teesta-V | 321.2 | 316.95 | 76.94 | 79.90 |
| Total | 366.65 | 362.09 | 94.42 | 97.82 |
| PTC | | | | |
| Chukha HPS (Bhutan) | 165.72 | 175.44 | 39.8 | 44.24 |
| Tala HPS (Bhutan) | 294.02 | 311.30 | 63.51 | 70.60 |
| Total | 459.74 | 486.74 | 103.31 | 114.84 |
| Total Central Sector | 4,103.32 | 4,404.15 | 1,363.03 | 1,540.42 |
| As a Consumer of DVC | 4,951.70 | 2186.62 | 2,427.93 | 1,148.03 |
| DVC (Koderma) | - | 1058.26 | - | 454.15 |
| State Sector | | | | |
| Sikidiri HPS | 71.88 | 158.32 | 8.12 | 46.43 |
| TVNL | 1,685.58 | 2830.22 | 711.61 | 1011.42 |



| Particulars | Power Purchase Quantum | | Power Purchase Cost | |
|--|------------------------|------------------|----------------------|----------------------|
| | Estimated (MU) | Approved (MU) | Estimated (Rs Crore) | Approved (Rs. Crore) |
| Total State Sector | 1,757.46 | 2,988.54 | 719.73 | 1,057.85 |
| Private | | | | |
| Inland Power Limited (IPL) | 326.7 | 409.77 | 142.53 | 171.80 |
| APNRL-Unit-1 | 1,090.74 | 457.37 | 394.27 | 193.04 |
| APNRL-Unit-2 | | 457.37 | | 193.84 |
| APNRL (Add. 66MW) | 451.96 | 447.21 | 161.6 | 165.64 |
| Total Private Sector | 1,869.40 | 1,771.72 | 698.4 | 724.32 |
| Other RE | | | | |
| State-Solar | 19.29 | 19.29 | 34.65 | 34.64 |
| SECI | 24.37 | 24.37 | 13.66 | 13.67 |
| Wind | 32.68 | 32.68 | 11.54 | 11.54 |
| Total Other RE | 76.35 | 76.34 | 59.85 | 59.85 |
| UI Payable | 320.48 | | 119.06 | |
| UI Receivable | 42.33 | | - | |
| Rungta Mines | 38.62 | 26.81 | 12.73 | 8.83 |
| ABCIL | 62.92 | 73.72 | 22.61 | 26.78 |
| ERLDC(APNRL) | | | 35.82 | |
| PTC (IEX) | 285.16 | | 134.22 | |
| Add: Banking of Power (Unit Banked) | 48.74 | | 0.74 | |
| Less: Banking of Power (Unit Received) | -20.6 | | 0.1 | |
| Additional REC Purchase | | | | 108.16 |
| Grand Total | 13,353.75 | 12,586.15 | 5,594.24 | 5,128.40 |

6.25 The Commission has approved the power purchase quantum from each generator by applying Merit Order Despatch (MOD) as per Clause 6.39 of the JSERC Distribution Tariff Regulations, 2015:

“6.39 While approving the cost of power purchase, the Commission shall determine the quantum of power to be purchased from various sources in accordance with the principles of merit order schedule and despatch based on a ranking of all approved sources of supply in the order of their variable cost of power purchase. All power purchase costs will be considered legitimate unless it is established that the merit order principle has been violated or power has been purchased at unreasonable rates;”

Energy Requirement and Energy Availability

Petitioner’s Submission

6.26 The Petitioner submitted that energy availability for FY 2018-19 has been estimated based on the actual power purchase and sales until the month of August 2018, with projections for the remaining period of FY 2018-19.



6.27 The Petitioner also submitted that power purchase from various sources are segregated into different heads, while calculating the energy balance for the control period.

- Power Purchase from Outside JSEB Boundary- NTPC, NHPC, PTC, APNRL, part of TVNL, NNVNL, SECI and RE (Wind)
- Energy Input Directly to State Transmission System- Input of power from TVNL directly to State Transmission System
- Energy Input through Renewables sources- Input from Solar IPPs selected through JREDA
- State-owned Generation- PTPS, SHPS, Rungta Mines, ABCIL and Inland Power
- Direct Input of Energy to Distribution System- DVC and Solar IPPs.

6.28 Based on the information provided above, Energy Balance as submitted by the Petitioner for FY 2018-19 is provided in the table below.

Table 64: Energy Balance submitted by the Petitioner for FY 2018-19 (MU)

| Particulars | FY 2018-19 | |
|---|------------------|------------------|
| | ARR Order | Petition |
| Power Purchase from Outside JSEB Boundary (MU) | 6,192.22 | 6,948.14 |
| Loss in External System (%) | 3.00% | 3.00% |
| Loss in External System (MU) | 185.77 | 208.44 |
| Net Outside Power Available (MU) | 6,006.45 | 6,739.69 |
| Energy Input Directly to State Transmission System (MU) | 1,428.08 | 706.40 |
| State-owned Generation (MU) | 565.60 | 695.54 |
| Energy Available for Onward Transmission (MU) | 8,312.13 | 8,174.32 |
| Transmission Loss (%) | 2.23% | 5.00% |
| Transmission Loss (MU) | 185.36 | 408.72 |
| Net Energy Sent to Distribution System (MU) | 8,126.77 | 7,765.60 |
| Direct Input of Energy to Distribution System (MU) | 4,971.40 | 4,970.99 |
| Total Energy Available for Sales (MU) | 13,098.17 | 12,736.60 |

Commission's Analysis

6.29 The Commission in its earlier Order dated June 21, 2017 had set the distribution loss targets for JBVNL for the second control period FY 2016-17 to FY 2020-21. The Commission now has considered the same distribution loss level for FY 2018-19 for the computation of Energy Balance.

6.30 The energy requirement as approved by the Commission for FY 2018-19 based on approved energy sales and distribution losses is summarized below:

Table 65: Energy Requirement approved for FY 2018-19



| Particulars | FY 2018-19 |
|--|------------------|
| Energy Sales | 10,285.46 |
| Distribution Loss (%) | 15% |
| Distribution Loss (MU) | 1,815.08 |
| Energy Required for Distribution (MU) | 12,100.54 |

6.31 The Commission asked to Petitioner to justify the claim of 5% Transmission loss against 2.23% as approved by the Commission. The Petitioner replied that JUSNL in its MYT Tariff Order dated February 24, 2018 had itself claimed the transmission losses of 5% and that the transmission losses of CTU, i.e. PGCIL are in the range of 2.25%-3%, which has a network of majorly high voltage 765kV, 400kV and 220kV lines, whereas JUSNL has a network of mostly 132kV lines and the transmission losses are ought to be higher.

6.32 The Commission has worked out energy availability for the FY 2018-19 on the basis of actual generation from tied up power from Central, State-owned and other Generating Stations. Further, the loss in external system has been considered at the same level as approved by the Commission in its earlier Order, while the intra-state-transmission loss has been considered at 2.23% as per the Tariff Order for JUSNL dated February 24, 2018. The energy availability from various sources has been summarized below:

Table 66: Energy Balance approved for FY 2018-19

| Particulars | FY 2018-19 | | |
|---|------------------|------------------|------------------|
| | ARR | Petition | Approved |
| Power Purchase from Outside JBVNL Boundary (MU) | 6,192.22 | 6,948.14 | 8,664.45 |
| Loss in External System (%) | 3.00% | 3.00% | 3.00% |
| Loss in External System (MU) | 185.77 | 208.44 | 259.93 |
| Net Outside Power Available (MU) | 6,006.45 | 6,739.69 | 8,404.52 |
| Energy Input Directly to State Transmission System (MU) | 1,428.08 | 706.40 | 510.29 |
| State-owned Generation (MU) | 565.60 | 695.54 | 1,205.50 |
| Energy Available for Onward Transmission (MU) | 8,312.13 | 8,174.32 | 10,120.31 |
| Transmission Loss (%) | 2.23% | 5.00% | 2.23% |
| Transmission Loss (MU) | 185.36 | 408.72 | 225.68 |
| Net Energy Sent to Distribution System (MU) | 8,126.77 | 7,765.60 | 9,894.63 |
| Direct Input of Energy to Distribution System (MU) | 4,971.40 | 4,970.99 | 2205.91 |
| Total Energy Available for Sales (MU) | 13,098.17 | 12,736.60 | 12,100.54 |

Transmission Charges

Petitioner's Submission



- 6.33 The Petitioner has escalated the actual Inter-State Transmission Charges paid as per the Audited Accounts for FY 2017-18 by 5% for estimation of Inter-State Transmission Charges for FY 2018-19.
- 6.34 The Petitioner submitted that transmission charges payable to Jharkhand Urja Sanchar Nigam Limited been computed based on the approved rate in Tariff Order of JUSNL dated February 24, 2018.
- 6.35 The energy wheeled through transmission network in the above section of Energy Balance has been considered for calculating the Intra-State transmission charges payable to JUSNL and no transmission charges are applied on direct input of energy to distribution system. The estimated intra-state transmission charges payable to JUSNL for FY 2018-19 is provided in the table below.

Table 67: Transmission Charges submitted by the Petitioner for FY 2018-19 (Rs. Crore)

| Particulars | FY 2018-19 | |
|-----------------------------------|------------|----------|
| | ARR Order | Petition |
| Intra-State Transmission Charges | 207.80 | 216.95 |
| Inter-State Transmission Charges* | | 144.73 |

* Inter-State Transmission Charges included in the Power Purchase Cost Approved

Commission's Analysis

- 6.36 The Commission has observed that the Intra-State Transmission Charges claimed by the Petitioner is not as per the Tariff approved by the Commission vide its Tariff Orders for JUSNL. Hence, the Commission has calculated the Transmission Charges based on the Tariffs approved during the respective years and the units transmitted as per the Energy Balance approved.
- 6.37 The Inter-State Transmission Charges are approved as per the claims of the Petitioner.

Table 68: Transmission Charges approved for FY 2018-19 (Rs. Crore)

| Particulars | FY 2018-19 | | |
|---|------------|----------|-----------|
| | ARR | Petition | Approved |
| Energy Wheeled in Transmission Network (MU) | 8,312.13 | 8,382.76 | 10,120.31 |
| Transmission Charges (Rs./kWh) | 0.25 | 0.26 | 0.25 |
| Intra-State Transmission Charges | 207.80 | 216.95 | 253.01 |
| Inter-State Transmission Charges | 123.42 | 144.73 | 144.73 |

Capital Expenditure and Capitalisation



Petitioner's Submission

6.38 The Petitioner submitted the details of the schemes approved under JSBAY, DDUGJY, IPDS, RAPDRP, ADP+Misc. Works, Atal Gram Jyoti Yojana, Tilka Manjhi Krishi Pump Yojana, Saubhagya and IT Schemes. Considering the schemes detailed above, the Petitioner submitted that the Capex Schedule as below:

Table 69: Capital Expenditure submitted by the Petitioner for FY 2018-19 (Rs. Crore)

| Scheme Name | FY 2018-19 | |
|-------------------------------|-----------------|-----------------|
| | ARR Order | Petition |
| DDUGJY | 965.60 | 2,179.59 |
| IPDS | 279.10 | 611.61 |
| RAPDRP - A | - | - |
| RAPDRP - B | | 582.26 |
| DDUGJY 12th Plan | | 866.16 |
| ADP + Misc. | 315.55 | 670.00 |
| Tilka Manjhi & AGJY | 33.60 | 33.60 |
| RE State Plan | | - |
| JSBAY - RE | 900.00 | 375.00 |
| RGGVY (10th & 11th Plan) | | - |
| Deposit & others | | 212.94 |
| JSBAY - Urban Electrification | | |
| JSBAY - IT, SCADA & TRW | | 65.02 |
| SAUBHAGYA | | 250.00 |
| IT Schemes (WB Supported) | | 107.20 |
| Total | 2,493.85 | 5,953.37 |

6.39 Considering the above capital expenditure schedule for FY 2018-19, the Petitioner has projected revised CWIP and creation of GFA. Considering the past experience, JBVNL has proposed a capitalization period of 3 years in the ratio of 20:40:40 for all the proposed works and capital expenditure of schemes in the respective years. Further, opening CWIP has been proposed to be capitalized in the proportion of 80:20 in first and second year.

Table 70: Capitalisation submitted by the Petitioner for FY 2018-19 (Rs. Crore)

| Particulars | FY 2018-19 | |
|----------------|------------|----------|
| | ARR Order | Petition |
| Opening CWIP | 6,480.33 | 4,734.23 |
| Capex | 2,493.90 | 5,953.37 |
| Capitalisation | 3,027.94 | 4,978.06 |
| Closing CWIP | 5,946.24 | 5,709.54 |

Commission's Analysis



- 6.40 The Commission asked the Petitioner to justify the proposal to add 2 lakh farmers under Tilka Manjhi Scheme. The Petitioner submitted that though the total beneficiaries under the scheme are estimated to be 3,07,750, the Petitioner has considered an addition of only 2 lakh consumers, as the identification of beneficiaries is being done at constituency level and the final details of beneficiaries are not available with the Petitioner so far.
- 6.41 The Commission has analysed the capital expenses incurred by the Petitioner for FY 2018-19 and is of the view that the proposed capital expenses for FY 2018-19 is very high in comparison to the actual capital expenses incurred in the previous years. The Commission directed the Petitioner during the TVS held on January 30, 2019 to justify the sudden increase in capex proposed with the physical and financial progress of the same. The Petitioner was unable to justify the capital expenses proposed due to unavailability of data from the field level. Hence, the Commission is of the view to continue with the capital expenditure approved in its previous Order dated April 27, 2018 for FY 2018-19. The Capital Expenditure approved by the Commission for FY 2018-19 is summarised in the table below:

Table 71: Capital Expenditure approved for FY 2018-19 (Rs. Crore)

| Scheme Name | FY 2018-19 | | |
|-------------------------------|-----------------|-----------------|-----------------|
| | ARR Order | Projected | Approved |
| DDUGJY | 965.60 | 2,179.59 | 965.60 |
| IPDS | 279.10 | 611.61 | 279.10 |
| RAPDRP - A | - | - | - |
| RAPDRP - B | | 582.26 | - |
| DDUGJY 12th Plan | | 866.16 | - |
| ADP + Misc. | 315.55 | 670.00 | 315.55 |
| Tilka Manjhi & AGJY | 33.60 | 33.60 | 33.60 |
| RE State Plan | | - | - |
| JSBAY - RE | 900.00 | 375.00 | 900.00 |
| RGGVY (10th & 11th Plan) | | - | - |
| Deposit & others | | 212.94 | - |
| JSBAY - Urban Electrification | | | - |
| JSBAY - IT, SCADA & TRW | | 65.02 | - |
| SAUBHAGYA | | 250.00 | - |
| IT Schemes (WB Supported) | | 107.20 | - |
| Total | 2,493.85 | 5,953.37 | 2,493.85 |

- 6.42 The Commission had raised queries to the Petitioner to provide the actual Scheme-wise capitalisation for FY 2018-19 vis-à-vis the approved capitalisation. The Petitioner has not been able to submit the same. Hence, the Commission approves the GFA Addition and Capitalisation approved vide its previous Tariff Order dated April 27, 2018 for FY 2018-19:



Table 72: GFA approved for FY 2018-19 (Rs. Crore)

| Particulars | FY 2018-19 | | |
|---------------|------------|-----------|----------|
| | ARR Order | Petition | Approved |
| Opening GFA | 7,400.83 | 5,962.10 | 5,962.09 |
| GFA Additions | 3,027.94 | 4,978.06 | 3,027.94 |
| Deletions | 0.00 | 0.00 | 0.00 |
| Closing GFA | 10,428.77 | 10,940.15 | 8,990.03 |

Table 73: Capitalisation approved for FY 2018-19 (Rs. Crore)

| Particulars | FY 2018-19 | | |
|----------------|------------|----------|----------|
| | ARR Order | Petition | Approved |
| Opening CWIP | 6,480.33 | 4,734.23 | 4,734.24 |
| Capex | 2,493.90 | 5,953.37 | 2,493.85 |
| Capitalisation | 3,027.94 | 4,978.06 | 3,027.94 |
| Closing CWIP | 5,946.24 | 5,709.54 | 4,200.15 |

Consumer Contribution, Grants and Subsidies

Petitioner's Submission

6.43 The Petitioner submitted that the Consumer contribution and Grants of JBVNL for FY 2018-19, based on the closing CWIP of FY 2017-18 is provided in the table below:

Table 74: Consumer Contribution and Grants (CCG) submitted by the Petitioner for FY 2018-19 (Rs. Crore)

| Particulars | FY 2018-19 | |
|--------------|------------|----------|
| | ARR Order | Petition |
| Opening CCG | 6,853.20 | 5,107.57 |
| Addition CCG | 1,860.54 | 3,427.35 |
| Closing CCG | 8,713.67 | 8,534.92 |

Commission's Analysis

6.44 The Commission has considered the values of Consumer Contribution as submitted by the Petitioner. The Grants are approved as per the funding pattern submitted by the Petitioner and the same has been allowed as per the capital expenditure approved for by the Commission for FY 2018-19.

Table 75: Consumer Contribution and Grants (CCG) approved for FY 2018-19 (Rs. Crore)

| Particulars | FY 2018-19 | | |
|-----------------------------------|------------|----------|----------|
| | ARR | Petition | Approved |
| Opening CCG | 6,853.20 | 5,107.57 | 5,107.57 |
| Addition in Consumer Contribution | 1,860.54 | 3,427.35 | 212.94 |
| Addition in Grants | | | 1,680.42 |
| Closing CCG | 8,713.67 | 8,534.92 | 7,000.93 |



- 6.45 The Commission has adopted the approach for calculation of Normative Loan and Equity in the previous Tariff Orders. For estimating the sources of finance required to fund the closing GFA, the Commission had reduced the GFA by the CCG available with the Petitioner.
- 6.46 For funding of above mentioned GFA, the Commission has considered the normative debt-equity ratio of 70:30 as provided in Distribution Tariff Regulation, 2015. Moreover, consumer contribution grants and subsidies for capital assets are first netted off from gross fixed assets and the normative debt-equity ratio is applied on the remaining gross fixed assets only.
- 6.47 The Commission has considered CCG as approved above. The normative net loans are estimated after deducting accumulated depreciation from the value of gross loans.

Table 76: Source of Funding of GFA approved for FY 2018-19 (Rs. Crore)

| Particulars | FY 2018-19 |
|-----------------------------------|-----------------|
| Opening CCG | 5,107.57 |
| Addition in CCG | 1,893.36 |
| Closing CCG | 7,000.93 |
| CCG towards GFA | 4,771.63 |
| Closing GFA (less CCG) | 4,218.41 |
| Accumulated Depreciation | 2,324.32 |
| Acc. Dep. towards GFA | 1,090.64 |
| Normative Loan (Closing) | 1,862.24 |
| Normative Equity (Closing) | 1,265.52 |

Operation & Maintenance Expenses

Petitioner's Submission

- 6.48 The Petitioner submitted that Employee Expenses for FY 2018-19 has been calculated by escalating the Employee Expenses for FY 2017-18 by the inflation factor of 3.85 % and the methodology provided under Clause 6.6 of JSERC MYT Regulations 2015.
- 6.49 The projected employee cost for FY 2018-19 is provided in the table below:

Table 77: Employee Expenses submitted by the Petitioner for FY 2018-19 (Rs. Crore)

| Particulars | FY 2018-19 | |
|--------------------------|---------------|---------------|
| | ARR Order | Petition |
| Total Emp. Expenses | 230.07 | 246.70 |
| <i>Emp. Expenses</i> | <i>206.31</i> | <i>223.68</i> |
| <i>Terminal benefits</i> | <i>23.76</i> | <i>23.02</i> |



6.50 The Petitioner submitted that the in line with the Regulation 6.6 (b) and (c), the A&G expenses have been calculated for FY 2018-19. The A&G expense of FY 2017-18 has been escalated by the inflation factor of 3.85%.

Table 78: A&G Expenses submitted by the Petitioner for FY 2018-19 (Rs. Crore)

| Particulars | FY 2018-19 | |
|--------------|------------|----------|
| | ARR Order | Petition |
| A&G Expenses | 61.89 | 78.79 |

6.51 The Petitioner submitted that the R&M expenses for FY 2018-19 have been estimated by considering the K-factor of 2.34% as approved by the Commission in Tariff Order dated April 27, 2018.

Table 79: R&M Expenses submitted by the Petitioner for FY 2018-19 (Rs. Crore)

| Particulars | FY 2018-19 | |
|--------------|------------|----------|
| | ARR Order | Petition |
| R&M Expenses | 173.18 | 139.51 |

Commission's Analysis

6.52 The Commission has observed that the Employee Expenses have been escalated by 10% considering the effect of 7th Pay Commission, however, the Commission is of the view that the same shall be approved during true-up for FY 2018-19.

6.53 The Commission has approved the O&M Expenses as per the provisions of JSERC Distribution Tariff Regulations, 2015 as reproduced below:

“6.5 The O&M expenses permissible towards ARR of each year of the Control Period shall be approved based on the formula shown below:

$$O\&M_n = (R\&M_n + EMP_n + A\&G_n) * (1 - X_n) + Terminal Liabilities$$

Where,

R&M_n – Repair and Maintenance Costs of the Licensee for the nth year;

EMP_n – Employee Costs of the Licensee for the nth year excluding terminal liabilities;

A&G_n – Administrative and General Costs of the Licensee for the nth year;



X_n – is an efficiency factor for n th year. The value of X_n will be determined by the Commission in its first MYT order for the Control Period;

6.6 The above components shall be computed in the manner specified below:

a) $R\&M_n = K * GFA$

Where,

‘K’ is a constant (expressed in %) governing the relationship between R&M costs and Gross Fixed Assets (GFA) and will be calculated based on the % of R&M to GFA of the preceding year of the Base Year;

‘GFA’ is the opening value of the gross fixed asset of the n th year;

b) EMP_n (excluding terminal liabilities) + $A\&G_n = (EMP_{n-1} + A\&G_{n-1}) * (INDX_n / INDX_{n-1}) + G_n$

Where,

$INDX_n$ – Inflation factor to be used for indexing the employee cost and A&G cost. This will be a combination of the Consumer Price Index (CPI) and the Wholesale Price Index (WPI) for immediately preceding year before the base year;

G_n – Increase in Employee Expenses in n th year due to increase in consumer base/ load growth. Value of G for each year of the Control Period shall be determined by the Commission in the MYT Tariff order based on Licensee’s filing, benchmarking with the efficient utilities, actual cost incurred by the licensee due to increase in consumer base/load growth in past, and any other factor considered appropriate by the Commission;

c) $INDX_n = 0.55 * CPI_n + 0.45 * WPI_n$;

...”

6.54 The Inflation factor is calculated as 4.37% based on the WPI and CPI data available with the Commission till November 2018.

6.55 The Commission has considered 2.34% as k-factor as considered in the previous Tariff Order dated April 27, 2018. The O&M Expenses approved by the Commission is summarised below:

Table 80: O&M Expenses approved for FY 2018-19 (Rs. Crore)



| Particulars | FY 2018-19 | | |
|--------------------------|---------------|---------------|---------------|
| | APR | Petition | Approved |
| Total Emp. Expenses | 230.07 | 246.70 | 224.44 |
| <i>Emp. Expenses</i> | <i>206.31</i> | <i>223.68</i> | <i>202.35</i> |
| <i>Terminal benefits</i> | <i>23.76</i> | <i>23.02</i> | <i>22.10</i> |
| A&G Expenses | 61.89 | 78.79 | 79.19 |
| R&M | 173.18 | 139.51 | 139.51 |
| O&M Expenses | 465.14 | 465.01 | 443.14 |

Depreciation

Petitioner's Submission

- 6.56 The Petitioner submitted that depreciation for FY 2018-19 has been computed in line with the approach adopted by the Commission in its Tariff Orders dated April 27, 2018 and June 21, 2017.
- 6.57 The Petitioner submitted that the GFA created out of debt and equity is calculated by deducting the consumer contribution and grants portion deployed towards GFA. Based on this GFA created out of debt and equity, the Petitioner has applied the depreciation rate as approved by the Commission in its previous Order to arrive at the total depreciation as given below:

Table 81: Depreciation submitted by the Petitioner for FY 2018-19 (Rs. Crore)

| Particulars | FY 2018-19 | |
|---------------------|---------------|---------------|
| | APR Order | Petition |
| Depreciation Rate | | 5.94% |
| Depreciation | 294.22 | 316.72 |

Commission's Analysis

- 6.58 According to Provision of Regulation 6.32 of JSERC Distribution Tariff Regulations, 2015, depreciation shall not be allowed on assets funded by consumer contribution and capital subsidies/grants. Considering the consumer contribution deployed towards GFA approved in this Order, the Commission has determined the depreciation on the GFA created out of debt and equity excluding the consumer contribution, grants for the FY 2018-19. The rate of depreciation has been considered at 5.94% as approved in the earlier Order dated June 21, 2017. However, the Commission has calculated the Depreciation on Average GFA instead of the Closing GFA as per the JSERC Distribution Tariff Regulations, 2015.



6.59 Accordingly, the Commission approves the depreciation for the FY 2018-19 as summarised in the following table:

Table 82: Depreciation approved for FY 2018-19 (Rs. Crore)

| Particulars | FY 2018-19 | | |
|---------------------------------|---------------|---------------|---------------|
| | ARR | Petition | Approved |
| GFA (Average as per Commission) | 4953.17 | 5,332.04 | 2,704.44 |
| Depreciation Rate | 5.94% | 5.94% | 5.94% |
| Depreciation | 294.22 | 316.72 | 160.64 |

Interest on Loan

Petitioner's Submission

6.60 The Petitioner submitted that the interest expenses has been computed in line with the Clause 6.31 of JSERC Tariff Regulations, 2015. Therefore, the rate of interest equal to SBI base rate, which is prevailing at 8.70% as on April 1, 2018, plus 200 basis points, totalling to 10.70% is applied on the normative loan estimated.

6.61 The Petitioner has adopted the approach similar to that of the Commission in estimating the normative closing loan by deducting the normative equity, consumer contribution and grants pertaining to GFA from the Net Fixed Assets (NFA). Further, the repayment of debt has been considered to be equal to the depreciation applicable to GFA created out of debt and equity.

6.62 The total Interest and finance charges for FY 2018-19 as submitted by the Petitioner is provided in the table below:

Table 83: Interest on Loan submitted by the Petitioner for FY 2018-19 (Rs. Crore)

| Particulars | FY 2018-19 | |
|-------------------------|---------------|---------------|
| | ARR Order | Petition |
| Opening Loan | 1,308.01 | 1,306.02 |
| Loan Addition | 844.29 | 1,551.82 |
| Loan Repayment | 294.22 | 316.72 |
| Closing Loan | 1,858.08 | 2,541.12 |
| Average Loan | 1,583.04 | 1,923.57 |
| Interest Rate | 10.70% | 10.70% |
| Interest on Loan | 169.39 | 205.82 |

Commission's Analysis

6.63 The Commission has observed calculation error by the Petitioner during calculation of opening loan by the Petitioner. The Commission has calculated loans considering the debt-



- equity ratio in line with Clauses 6.15 and 6.16 of the JSERC Distribution Tariff Regulations, 2015. The loan arrived in this manner is considered as gross normative loan for calculation of interest on loan.
- 6.64 The Commission has excluded interest on loan amount, normative or otherwise, to the extent of capital cost funded by Consumer Contribution, Grants or Deposit Works carried out by Distribution Licensee in line with Regulation 6.26 of the JSERC Distribution Tariff Regulations, 2015.
- 6.65 The repayment for the year of the debt has been considered as deemed to be equal to the depreciation allowed for that year. The opening value for FY 2018-19 has been considered as per the closing value of FY 2017-18 as approved in the previous sections of this Order. Further, the rate of interest has been considered at the Base rate of SBI as applicable on April 1 of the respective year plus 200 basis points as per JSERC Distribution Tariff Regulations, 2015.
- 6.66 The interest on loan as approved by the Commission for FY 2018-19 is summarised in the following table:

Table 84: Interest on Loan approved for FY 2018-19 (Rs. Crore)

| Particulars | FY 2018-19 | | |
|-------------------------|---------------|---------------|---------------|
| | ARR | Petition | Approved |
| Opening Loan | 1,308.01 | 1,306.02 | 1,050.10 |
| Loan Addition | 844.29 | 1,551.82 | 972.78 |
| Loan Repayment | 294.22 | 316.72 | 160.64 |
| Closing Loan | 1,858.08 | 2,541.12* | 1,862.24 |
| Average Loan | 1,583.04 | 1,923.57 | 1,456.17 |
| Interest Rate | 10.70% | 10.70% | 10.70% |
| Interest on Loan | 169.39 | 205.82 | 155.81 |

* Calculation Error by the Petitioner

Interest on Consumer Security Deposit

Petitioner's Submission

- 6.67 The Petitioner submitted that in order to estimate the interest on consumer security deposit for FY 2018-19, the Petitioner has assumed an escalation of 5% over the accumulated consumer security of FY 2017-18 as per the Audited Accounts.
- 6.68 Further, the applicable interest rate as per JSERC Supply code Regulations, 2015 has been applied to estimate the Interest on consumer deposit for FY 2018-19. The interest rate considered is the SBI Base Rate prevailing on April 1, 2018, i.e., 8.70% p.a.



Table 85: Interest on CSD submitted by the Petitioner for FY 2018-19 (Rs. Crore)

| Particulars | FY 2018-19 | |
|--------------------|--------------|--------------|
| | ARR Order | Petition |
| Closing CSD | | 531.30 |
| Interest Rate | | 8.70% |
| Int. on CSD | 52.74 | 46.22 |

Commission's Analysis

6.69 The Commission has considered the average security deposit per consumer as Rs.1454 per consumer as approved in the previous Tariff Order dated April 27, 2018 and the interest rate considered is as per JSERC Supply Code Regulations, 2015 at the SBI Base Rate prevailing on April 1, 2018. The Interest on Consumer Security Deposits as approved by the Commission for the FY 2018-19 is tabulated below:

Table 86: Interest on CSD approved for FY 2018-19 (Rs. Crore)

| Particulars | FY 2018-19 | | |
|--------------------|--------------|--------------|--------------|
| | ARR | Petition | Approved |
| Closing CSD | | 531.30 | 571.50 |
| Interest Rate | | 8.70% | 8.70% |
| Int. on CSD | 52.74 | 46.22 | 49.72 |

Interest on Working Capital (IoWC)

Petitioner's Submission

6.70 The Petitioner submitted that the working capital requirement has been calculated in line with the Clause 6.29 of the JSERC Tariff Regulations, 2015. Based on the expenditure for FY 2017-18, the Petitioner has estimated the working capital requirement and interest thereof, as provided in the Table below:

Table 87: Interest on Working Capital submitted by the Petitioner for FY 2018-19 (Rs. Crore)

| Particulars | FY 2018-19 | |
|------------------------------------|--------------|--------------|
| | ARR Order | Petition |
| 1 month O&M Expenses | 38.76 | 38.75 |
| Maintenance Spares (@1% GFA) | 74.01 | 53.32 |
| 2 months' Receivables | 995.58 | 1,183.11 |
| Less: 1 month Power Purchase Cost | 606.20 | 466.29 |
| Less: Consumer Security Deposit | 402.79 | 531.30 |
| Total Working Capital requirement | 99.35 | 277.59 |
| Interest rate on WC | 12.50% | 12.20% |
| Interest on Working Capital | 12.12 | 33.87 |

Commission's Analysis



- 6.71 The Commission has considered IoWC as per the norms specified in the JSERC Distribution Tariff Regulations, 2015.
- 6.72 Rate of IoWC has been considered to be equal to the Base Rate of SBI as applicable on the 1st April of the respective plus 350 Basis Points as per Regulation 6.31 of the JSERC Distribution Tariff Regulations, 2015.
- 6.73 The Interest on Working Capital as computed by the Commission for the FY 2018-19 is summarized in the following table:

Table 88: Interest on Working Capital approved for FY 2018-19 (Rs. Crore)

| Particulars | FY 2018-19 | | |
|------------------------------------|--------------|--------------|--------------|
| | ARR | Petition | Approved |
| 1 month O&M Expenses | 38.76 | 38.75 | 36.93 |
| Maintenance Spares (@1% GFA) | 74.01 | 53.32 | 11.90 |
| 2 months' Receivables | 995.58 | 1,183.11 | 1,063.34 |
| Less: 1 month Power Purchase Cost | 606.20 | 466.29 | 418.35 |
| Less: Consumer Security Deposit | 402.79 | 531.30 | 571.51 |
| Total Working Capital requirement | 99.35 | 277.59 | 122.31 |
| Interest rate on WC | 12.50% | 12.20% | 12.20% |
| Interest on Working Capital | 12.12 | 33.87 | 14.92 |

Return on Equity

Petitioner's Submission

- 6.74 The Petitioner submitted that in order to estimate the equity balance, it has considered the approach adopted by the Commission in its Tariff Order dated April 27, 2018, whereby normative equity is arrived at by assuming the equity to be 30% of the GFA created out of debt and equity. The return on equity is provided in the table below:

Table 89: RoE submitted by the Petitioner for FY 2018-19 (Rs. Crore)

| Particulars | FY 2018-19 | |
|-----------------|---------------|---------------|
| | ARR Order | Petition |
| Opening Equity | 1,124.11 | 934.55 |
| Equity Addition | 361.84 | 665.07 |
| Deletions | 0.00 | 0.00 |
| Closing Equity | 1,485.95 | 1,599.61 |
| Rate of RoE | 15.50% | 15.50% |
| RoE | 202.28 | 196.40 |

Commission's Analysis



- 6.75 The Commission has approved the Return on Equity on the approved equity employed for the FY 2018-19 as per the provisions of Regulation 6.16 and 6.17 as specified in the JSERC Distribution Tariff Regulations, 2015.
- 6.76 The Commission has considered the opening balance of normative equity as per the closing balance for the FY 2017-18 as approved in the previous sections of this Order. Further, the rate of RoE is considered to be 15.50%. Accordingly, the Commission computed normative RoE as follows:

Table 90: RoE approved for FY 2018-19 (Rs. Crore)

| Particulars | FY 2018-19 | | |
|-----------------|---------------|---------------|---------------|
| | ARR | Petition | Approved |
| Opening Equity | 1,124.11 | 934.55 | 934.55 |
| Equity Addition | 361.84 | 665.07 | 330.98 |
| Deletions | 0.00 | 0.00 | 0.00 |
| Closing Equity | 1,485.95 | 1,599.61 | 1,265.52 |
| Rate of RoE | 15.50% | 15.50% | 15.50% |
| RoE | 202.28 | 196.40 | 170.51 |

Non-Tariff Income (NTI)

Petitioner's Submission

- 6.77 The Petitioner submitted that the Non-Tariff Income (Other Income) for FY 2018-19 has been projected based on the growth trend of historical figures as provided in the table below. The Petitioner has also submitted the rationale behind the computation of NTI is detailed in the previous sections, which is in line with the judgment of Hon'ble APTEL dated July 12, 2011 in Case No. 142 & 147 of 2009 and summarised the Non-tariff income as outlined below:

Table 91: NTI submitted by the Petitioner for FY 2018-19 (Rs. Crore)

| Particulars | FY 2018-19 | |
|---|------------|---------------|
| | ARR Order | Petition |
| D.P.S from Consumer | | 300.00 |
| Meter Rent | | 10.81 |
| Miscellaneous Charges from Consumers | | 15.00 |
| Total | | 325.81 |
| Interest rate for Receivables financing | | 12.20% |
| Corresponding Receivables against DPS | | 1,666.67 |
| Interest on Receivables against DPS | | 203.33 |



| Particulars | FY 2018-19 | |
|---------------------------------|---------------|---------------|
| | ARR Order | Petition |
| Net NTI to be considered | 141.80 | 122.48 |

Commission's Analysis

- 6.78 The Commission has considered the Non-Tariff income approved for FY 2016-17 and FY 2017-18 for approval of the NTI for FY 2018-19.
- 6.79 Further, the Commission has adopted a similar approach as adopted in the Tariff Order dated June 21, 2017 for approving the Non-Tariff income wherein, the Non-Tariff income has been calculated after considering financing cost for corresponding receivables, as accrued DPS is considered to be form of NTI. The Commission has taken due cognizance of the judgement of Hon'ble APTEL in Appeal no.48 of 2016 and Appeal no.316 of 2016 & IA no.656 of 2016 dated May 31, 2017, while approving the Non-Tariff Income.
- 6.80 Non-Tariff income as approved by the Commission for FY 2018-19 is summarized in the following table:

Table 92: NTI approved for FY 2018-19 (Rs. Crore)

| Particulars | FY 2018-19 | | |
|---|---------------|---------------|---------------|
| | ARR | Petition | Approved |
| Total NTI | | 325.81 | 344.17 |
| Interest rate for Receivables financing | | 12.20% | 12.20% |
| Corresponding Receivables against DPS | | 1,666.67 | 1,666.67 |
| Interest on Receivables against DPS | | 203.33 | 203.33 |
| Net NTI to be considered | 141.80 | 122.48 | 140.84 |

Disallowances on account of Excess AT&C Losses

Petitioner's Submission

- 6.81 The Petitioner submitted that several administrative measures have been undertaken to curb the AT&C losses along with the technical measures such as increasing the metering, focusing on billing efficiency and collection efficiency improvement. The Commission has approved 100% collection efficiency for FY 2018-19, which is on extremely higher side and even the most efficient utilities in the Country are not able to achieve the 100% collection efficiency. Further, JBVNL has migrated to a centralized Android based mobile photo spot billing (with collection facility) platform, having complete control over consumer billing database. In order to ensure 100% billing coverage, a maximum of 1200 designated consumers have been assigned to each Urja Mitra, which also acts as a JBVNL



Touch-point for billing, collection and various other consumer services. The centralized billing database and software tool has dedicated dashboards for JBVNL, agencies and UMs, for real-time progress and performance monitoring and enhancing billing and collection.

- 6.82 The Petitioner submitted that in order to reduce the losses JBVNL has already completed 100% Feeder Metering and is in process of ensuring 100% metering of DTs and Consumers to enable energy auditing. Further, Petitioner is also taking other measures like Name and Shame Campaign, preparation of MIS for performance monitoring and management, Feeder Improvement Program for network strengthening, Physical segregation of feeders, Installation of AMR meters, providing electricity access to unconnected households, Implementation of ERP systems, Installation of AB Cables, Tying up with Bank and Post Offices, Feeder Segregation, Revenue Intelligence Cell Formation, etc. Moreover, to enhance the collection efficiency, consumers are facilitated with multiple collection avenues such as Mobile App (ezy-bzly), online payment, E-wallet (through UM), ~4,500 Pragma Kendras, ~440 post offices, ~194 ATP machines etc.
- 6.83 The Petitioner submitted that though, it is committed to bring down the AT&C losses, there have been slippages to achieve the above targets beyond control due to high T&D losses in the past, to the tune of 33% in FY 2010-11. Moreover, it is prone to difficulties of T&D losses and collection inefficiencies due to difficult terrains and large rural consumers in overall consumer mix. Further, the Petitioner also has Universal Supply Obligation (USO) so it cannot stop/reduce the power supply in areas with poor collection efficiencies.
- 6.84 The Petitioner requested the Commission to consider the revised target of AT&C while approving the ARR for FY 2018-19 and that a reasonable amount of revenue which it has not been able to collect, may be allowed to be considered against RGF. The disallowance on account of high AT&C losses may be considered to be adjusted against RGF, while considering RGF for final ARR approval.
- 6.85 The calculation for disallowance is done by considering the difference between the Commissions approved collection efficiency i.e. 100% and the submission target of 90% for FY 2018-19 as provided in the table below.

Table 93: Provision for Bad & Doubtful Debt submitted by the Petitioner for FY 2018-19 (Rs. Crore)

| Particulars | FY 2018-19 |
|---------------------------|------------|
| Receivables (Rs. Crore) | 4788.36 |
| Collection efficiency (%) | 90.00% |



| Particulars | FY 2018-19 |
|---|------------|
| Total disallowance (Bad debt) (Rs. Crore) | 478.84 |

- 6.86 The Petitioner submitted that it has considered a T&D loss of 18% for FY 2018-19 while calculating the Energy availability and has estimated an energy surplus of 529.38 MU. In order to evaluate the cost of Surplus Power, the surplus units hereby calculated are multiplied with per unit cost of Power Purchase i.e. Rs 4.18 per unit in order to arrive at the total revenue from sale of Surplus Power i.e. Rs. 221.26 Crore. However, in actual there will not be any surplus power and the revenue calculated above is a notional adjustment entry for treatment of Cost of Power Purchase of additional units purchased calculated because of lower T&D losses.
- 6.87 The Petitioner also submitted that as there will not be any RGF support from the State Government for FY 2018-19, the disallowance calculated above must not be deducted from the Annual Revenue Requirement of FY 2018-19 for arriving at the Gap.

Commission's Analysis

- 6.88 The Commission had already set the targets for the Collection efficiency in Section “Targets for Distribution Losses and Collection Efficiency” of the JSERC Distribution Tariff Regulations, 2015 and as such the submission of the Petitioner regarding sudden change seems to be out of order. In addition, the Commission has also considered the MoU signed by the Petitioner under UDAY Scheme, which clearly stipulates that the AT&C Losses for FY 2018-19 should be at 15% including a collection efficiency of 100% (i.e., distribution loss of 15%). The Commission thus directs the Petitioner to abide by the targets set by the Commission and any provisions for the poor collection efficiency cannot be allowed.
- 6.89 Further, with respect to the Distribution Loss Targets, the Commission in its earlier Order dated June 21, 2017 had already set targets for the second control period based on the GoI, UDAY scheme. The Commission notes with concern that the actual level of AT&C submitted by the Petitioner are still higher as compared to the targets set by the Commission. The Commission is of the view that such high loss levels due to Petitioner's inefficiency should not be passed on to the consumers.
- 6.90 In addition, the amount of Rs. 478.84 Crore towards bad debt has no justification as it is again the inefficiency of the Petitioner that should not be passed on to the Consumers. Since no RGF is provided by the State, this amount should off-set from the 15.50% return the Commission approves on the Equity for the Petitioner.



Penalty for Non-Compliance of Directives

6.91 The Petitioner has filed for appeal before Hon'ble APTEL on this case on the previous Order dated April 27, 2018. The appeal is pending before Hon'ble APTEL and the case is sub-judice. Hence, the Commission is continuing with its approach for levying Penalty for Non-Compliance of Directives of the Commission as discussed in detail in the previous Tariff Order dated April 27, 2018 at 2% of the Aggregate Revenue Requirement (ARR) of the Petitioner for FY 2018-19. The Penalty levied is summarised below:

Table 94: Penalty imposed for Non-Compliance of Directives for FY 2018-19 (Rs. Crore)

| Particulars | FY 2018-19 |
|-----------------|------------|
| ARR Approved | 6,380.05 |
| Penalty Imposed | 2% |
| Total Penalty | 127.60 |

Summary of ARR for FY 2018-19

Petitioner's Submission

6.92 Based on the components of the ARR discussed in the above sections, the final ARR submitted by the Petitioner for FY 2018-19 is as below:

Table 95: ARR submitted for FY 2018-19 (Rs. Crore)

| Particulars | FY 2018-19 | |
|---------------------------------------|-----------------|-----------------|
| | ARR Order | Petition |
| Power Purchase Cost | 4,833.48 | 5,595.45 |
| Inter-State Transmission Charges | | 144.73 |
| Intra-State Transmission Charges | 207.80 | 216.95 |
| O&M Expenses | 465.14 | 465.01 |
| <i>Employee Expenses</i> | 230.07 | 246.70 |
| <i>A&G Expenses</i> | 61.89 | 78.79 |
| <i>R&M Expenses</i> | 173.18 | 139.51 |
| Depreciation | 294.22 | 316.72 |
| Interest on Long Term Loan | 169.39 | 205.82 |
| Interest on Working Capital Loan | 12.12 | 33.87 |
| Interest on Consumer Security Deposit | 52.74 | 46.22 |
| Return on Equity | 202.28 | 196.40 |
| Total Expenses | 6,237.17 | 7,221.17 |
| Less: Non-Tariff Income | 141.80 | 122.48 |
| Add: Provision for Doubtful Debt | | 478.84 |
| Net ARR | 6,097.90 | 7,577.52 |
| Less: Penalties | 124.44 | |



| Particulars | FY 2018-19 | |
|------------------------|-----------------|-----------------|
| | ARR Order | Petition |
| ARR Recoverable | 5,973.46 | 7,577.52 |

Commission's Analysis

6.93 The table below summarizes the ARR approved by the Commission for the FY 2018-19.

Table 96: ARR approved for FY 2018-19 (Rs. Crore)

| Particulars | FY 2018-19 | | |
|---------------------------------------|-----------------|-----------------|-----------------|
| | ARR | Petition | Approved |
| Power Purchase Cost | 4,710.06 | 5,595.45 | 5,020.25 |
| Inter-State Transmission Charges | 123.42 | 144.73 | 144.73 |
| Intra-State Transmission Charges | 207.80 | 216.95 | 253.01 |
| Additional REC Purchase to meet RPO | | | 108.16 |
| O&M Expenses | 465.14 | 465.01 | 443.14 |
| <i>Employee Expenses</i> | 230.07 | 246.70 | 224.44 |
| <i>A&G Expenses</i> | 61.89 | 78.79 | 79.19 |
| <i>R&M Expenses</i> | 173.18 | 139.51 | 139.51 |
| Depreciation | 294.22 | 316.72 | 160.64 |
| Interest on Long Term Loan | 169.39 | 205.82* | 155.81 |
| Interest on Working Capital Loan | 12.12 | 33.87 | 14.92 |
| Interest on Consumer Security Deposit | 52.74 | 46.22 | 49.72 |
| Return on Equity | 202.28 | 196.40 | 170.51 |
| Total Expenses | 6,237.17 | 7,221.17 | 6,520.88 |
| Less: Non-Tariff Income | 141.80 | 122.48 | 140.84 |
| Add: Provision for Doubtful Debt | | 478.84 | |
| Net ARR | 6,097.90 | 7,577.52 | 6,380.05 |
| Less: Penalties | 124.44 | | 127.60 |
| ARR Recoverable | 5,973.46 | 7,577.52 | 6,252.44 |

* Calculation Error by the Petitioner



A 7: ARR & TARIFF FOR FY 2019-20

- 7.1 The Petitioner submitted that the details of elements of ARR for FY 2019-20 are projected based on the provisions of JSERC (Terms and Conditions for Determination of Distribution Tariff) Regulations 2015, figures approved in previous Tariff Orders and Principles adopted by the Commission.
- 7.2 The Commission has approved the ARR and Tariff for FY 2019-20 taking into consideration:
- a) JSERC Distribution Tariff Regulations, 2015.
 - b) Methodology adopted by the Commission in its earlier Orders.

Energy Sales

Petitioner's Submission

- 7.3 The Petitioner submitted that the sales for FY 2019-20 has been projected based on the addition of consumers, consumption pattern and past trend of consumption growth rate. The Petitioner has witnessed a significant growth in the total Sales across all categories in the last few years. This is majorly due to increase in the availability of power, reduced load shedding, consumer addition across all category and uninterrupted supply of power. Further, the Petitioner aims to provide 24x7 power to all consumers in the State, which shall be the key reason for increase in the energy sales in coming years.
- 7.4 The Petitioner further submitted that the projection of domestic consumers has been done taking into view the large scale electrification being done under various ongoing schemes of Central and State Government. As per the mandate of State Government, the Petitioner is likely to provide connection to all households in the State by December 2018. The Petitioner further added that there may be marginal slippages in providing all connections, however, the same shall be covered in calendar year 2019.
- 7.5 The Petitioner also submitted that as the connections are being provided on massive scale on receipt of only basic information from consumer as there is mandate to achieve 100% electrification by December 2018. As per the Govt. Mandate, connections must be released to the consumers with minimum requirement of essential documents. However, in order to start the billing of these new consumer, the Petitioner submitted that proper verification has to be done by JBVNL. Due to which the Petitioner submitted that the pace of consumers getting added in the billing database of JBVNL is a bit slower than the pace for release of



connection. The Petitioner submitted that it has witnessed increase in new consumers from 38 Lakh consumers in FY 2018-19 to 45 Lakh consumers in FY 2019-20.

- 7.6 The Petitioner submitted that the households (consumers) approved by the Commission for FY 2019-20 were in line with the submission of Petitioner, which was primarily based upon the census estimations and projections provided under the 24x7 Power for All report published by Ministry of Power, Government of India. However, as the electrification works have been nearing completion, the Petitioner expects to have total consumer base of around 45 Lakh during FY 2019-20, which is in line with numbers approved by the Commission.
- 7.7 The category wise estimation of consumer of all categories for FY 2019-20 vis-a-vis that approved in the MYT Order are detailed below.

Table 97: Category-wise consumers submitted by the Petitioner for FY 2019-20 (No.)

| Particulars | FY 2019-20 | |
|---------------------------------|------------------|------------------|
| | MYT Order | Petition |
| Domestic | 56,39,292 | 41,90,241 |
| Commercial | 2,49,722 | 2,31,120 |
| Industrial LT/LTIS | 14,695 | 18,044 |
| Irrigation & Agricultural / IAS | 3,74,518 | 60,219 |
| Industrial HTS/HTSS/EHT | 1,748 | 1,640 |
| IS-I: Public Lighting / SS | 551 | 406 |
| IS-II: RTS, MES | 11 | 10 |
| Total | 62,80,537 | 45,01,680 |

- 7.8 Based on the year on year growth of consumers and their energy sales, connected load has been estimated for FY 2019-20 by the Petitioner as detailed in the table below.

Table 98: Category-wise Connected Load submitted by the Petitioner for FY 2019-20 (kW)

| Particulars | FY 2019-20 | |
|---------------------------------|------------------|------------------|
| | MYT Order | Petition |
| Domestic | 66,89,826 | 60,52,981 |
| Commercial | 6,62,741 | 4,19,616 |
| Industrial LT/LTIS | 3,11,467 | 3,78,924 |
| Irrigation & Agricultural / IAS | 5,89,248 | 60,685 |
| Industrial HTS/HTSS/EHT | 9,89,936 | 8,21,271 |
| IS-I: Public Lighting / SS | 15,841 | 28,420 |
| IS-II: RTS, MES | 6,822 | 47,330 |
| Total | 92,65,881 | 78,09,227 |



7.9 Based on the above, the Petitioner has projected the energy sales, keeping in view the average energy consumption per consumer in past, especially for domestic and irrigation consumer categories. Whereas, a natural increase in energy sales for others has been considered for other consumer categories. The category-wise sales for FY 2019-20 as submitted by the Petitioner vis-a-vis that approved in MYT Order has been summarized in the table below.

Table 99: Category-wise Sales submitted by the Petitioner for FY 2019-20 (MU)

| Particulars | FY 2019-20 | |
|------------------------------|------------------|-------------------|
| | MYT Order | Petition |
| Domestic | 10321.55 | 6,140.44 |
| Commercial/Non Domestic | 590.54 | 1,014.18 |
| Public Lighting / SS | 192.88 | 82.16 |
| Irrigation / IAS | 595.94 | 221.56 |
| Industrial LT / LTIS | 156.51 | 265.55 |
| Industrial HT / HTS / S/ EHT | 2,460.24 | 2,542.36 |
| RTS/MES | 238.16 | 121.41 |
| Total | 14,555.83 | 10,387.66* |

* Values as per the financial model submitted by the Petitioner.

Commission's Analysis

7.10 The Commission after going through the submissions made by the Petitioner, directed the Petitioner to submit the actual category-wise and sub-category-wise sales, no. of consumers and connected load for FY 2016-17 and FY 2017-18 during the Technical Validation Session (TVS) held on January 30, 2019. The Petitioner has failed to submit the same. The Commission is of the view that despite the increase in the number of consumers the intensive metering of domestic consumers may lead to a considerate use of power by the domestic consumers. The Commission has considered a normative 10% increase in the energy sales for FY 2019-20 for the domestic consumers.

7.11 For other categories, the Commission has projected the sales by applying CAGR trends based on the past data. The sales approved for FY 2019-20 is as summarised below:

Table 100: Category-wise Sales approved for FY 2019-20 (MU)

| Particulars | FY 2019-20 | | |
|-------------|------------|----------|----------|
| | MYT | Petition | Approved |
| Domestic | 10,321.55 | 6,140.44 | 6,703.14 |



| Particulars | FY 2019-20 | | |
|------------------------------|------------------|------------------|------------------|
| | MYT | Petition | Approved |
| Commercial/Non Domestic | 590.54 | 1,014.18 | 948.50 |
| Public Lighting / SS | 192.88 | 82.16 | 78.51 |
| Irrigation / IAS | 595.94 | 221.56 | 230.38 |
| Industrial LT / LTIS | 156.51 | 265.55 | 229.65 |
| Industrial HT / HTS / S/ EHT | 2,460.24 | 2,542.36 | 2,708.40 |
| RTS/MES | 238.16 | 121.41 | 112.30 |
| Total | 14,555.83 | 10,387.66 | 11,010.88 |

Power Purchase Quantum and Cost

Petitioner's Submission

7.12 The Petitioner submitted that it has projected the power purchase for FY 2019-20 based on the total energy required during the respective year. The projections of power purchase have been made considering the current status of upcoming stations and present sources. The Petitioner has considered following points while projecting the Power purchase for FY 2019-20:

- Delay of expected COD of upcoming stations like NTPC Darlipalli, NTPC, Nabinagar, NTPC North Karanpura, PTPS phase-I, etc.
- Procurement of 200 MW of Wind Energy- JBVNL has entered into an PPA with PTC under the MNRE's scheme for setting up of 1000 MW ISTS- connected Wind Power projects (Tranche-II). The total Tariff at Jharkhand state periphery is discovered as Rs. 3.53 per Unit under competitive bidding process. Out of this 200 MW, 75 MW is already made available to JBVNL and the remaining power shall be available from December 2018
- PPA with SECI to purchase 100 MW of wind power at Rs. 2.72 per unit including a trading margin of Rs. 0.07.
- Apart from the sources mentioned above, the Petitioner has recently signed a PPA with SECI to purchase 200 MW of wind power at Rs. 2.45 including trading margin.
- Letter sent to SECI for allocation of solar energy from solar parks at competitive price.

7.13 The station wise provisional Power Purchase for FY 2019-20 is summarised in the table below:



Table 101: Power Purchase Cost submitted by the Petitioner for FY 2019-20

| Particulars | Power Purchase Quantum | | Power Purchase Cost | |
|-----------------------------|------------------------|-----------------|-------------------------|----------------------|
| | MYT Approved (MU) | Projected (MU) | MYT Approved (Rs Crore) | Projected (Rs Crore) |
| Farrakka | 700.00 | 932.83 | 265.32 | 334.65 |
| Farrakka III | 100.00 | 530.45 | 50.69 | 244.06 |
| Khalagaon I | 184.93 | 215.31 | 66.39 | 77.71 |
| Talcher | 498.19 | 576.00 | 113.41 | 155.41 |
| Khalagaon II | 190.08 | 169.81 | 64.23 | 58.78 |
| Barh | 100.00 | 595.68 | 62.28 | 290.05 |
| NTPC Darlipalli STPS | 742.50 | - | 191.15 | - |
| NTPC Nabinagar | 367.20 | - | 95.84 | - |
| NTPC North Karanpura | 2,585.77 | - | 665.68 | - |
| KBUNL Kanti TPS | 73.44 | - | 19.44 | - |
| Korba | | 372.30 | | 104.38 |
| Total NTPC | 5,542.11 | 3,392.38 | 1,594.43 | 1,265.03 |
| Rangit | 45.79 | 47.73 | 15.21 | 19.26 |
| Teesta | 329.69 | 337.26 | 85.89 | 84.83 |
| Total NHPC | 375.48 | 384.99 | 101.10 | 104.09 |
| Chukha | 203.79 | 174.01 | 40.04 | 43.88 |
| Punatsangchhu-II HEP | 534.90 | - | 186.02 | - |
| Tala | 405.61 | 308.72 | 90.44 | 70.02 |
| Total PTC | 1,144.30 | 482.73 | 316.50 | 113.90 |
| Total Central Sector | 7,061.89 | 4,260.09 | 2,012.03 | 1,483.02 |
| DVC | 4,100.00 | 4,951.70 | 2,035.46 | 2,549.33 |
| PUVNL (Existing) | 460.37 | | 212.80 | |
| (PVUNL) Phase-I | 1,782.00 | | 465.12 | |
| SHPS | 55.19 | 75.47 | 24.37 | 8.95 |
| TVNL | 2,266.75 | 1,769.86 | 836.64 | 784.54 |
| Total State Sector | 8,664.31 | 6,797.03 | 3,574.39 | 3,342.83 |
| Inland Power | 422.94 | 343.04 | 161.18 | 157.14 |
| APNRL | 954.00 | 1,145.27 | 356.17 | 434.68 |
| APNRL (Add. 66 MW) | - | 474.56 | - | 178.16 |
| Total Private Sector | 1,376.94 | 1,962.87 | 517.35 | 769.98 |
| Solar IPPs | 16.87 | 20.26 | 30.30 | 36.39 |
| Solar REC | 13.18 | - | 4.61 | - |
| JREDA | 831.09 | - | 528.57 | - |
| SECI | | 25.59 | - | 14.35 |
| RE (Wind) | 945.49 | 104.59 | 141.82 | 36.92 |
| Total Other RE | 1,806.63 | 150.44 | 705.30 | 87.65 |
| PGCIL | - | | 124.96 | 151.96 |



| Particulars | Power Purchase Quantum | | Power Purchase Cost | |
|----------------------------------|------------------------|------------------|-------------------------|----------------------|
| | MYT Approved (MU) | Projected (MU) | MYT Approved (Rs Crore) | Projected (Rs Crore) |
| Posoco (ERLDC) | - | | 1.55 | 1.34 |
| UI Payable | - | 320.48 | - | 119.06 |
| UI Receivable | - | | - | |
| Rungta Mines | - | 40.56 | - | 13.37 |
| ABCIL | - | 66.07 | - | 23.74 |
| NVVNL(Korba III & Farrakka III) | - | - | - | - |
| DVC ERLDC | - | - | - | - |
| ERLDC(APNRL) | - | - | 132.11 | 37.61 |
| PTC (IEX) | | 299.42 | 519.47 | 140.93 |
| Banking of Power (Unit Banked) | | 51.17 | | 0.78 |
| Banking of Power (Unit Received) | | -21.63 | | 0.11 |
| Grand Total | 18,909.77 | 13,824.16 | 6,548.22 | 6,172.39 |

7.14 The Petitioner requested the Commission to approve the power purchase quantum as summarized in the table above and approve the power purchase cost accordingly.

Commission's Analysis

7.15 The Commission vide its discrepancy note dated December 19, 2018 directed the Petitioner to submit the basis for power purchase proposed from different power stations and the power purchase costs submitted by the Petitioner.

7.16 The Petitioner submitted that the power purchase rate has been projected considering 5% escalation over the estimated power purchase expenses incurred during FY 2018-19.

7.17 The Petitioner submitted that the power purchase quantum is projected based on the values estimated for FY 2018-19 and based on other factors like delay in COD of upcoming Stations, procurement of 500 MW Wind Energy, letter sent to SECI for allocation of solar energy from solar parks etc.

7.18 The Commission has considered provision of the National Tariff Policy, 2016, for excluding the power purchased from Hydro Sources for RPO Compliance. The provision in ARR for purchase of RECs for achieving the RPO Targets as set in the JSERC (Renewable Energy Purchase Obligation and its compliance) Regulations, 2016 is summarised as below. The REC prices are approved at Rs. 1000/MWh as per the base rates applicable on date for both Solar and Non-Solar RECs.

Table 102: Provision for REC Purchase approved for FY 2019-20



| Particulars | FY 2019-20 | | | |
|--------------------------------|---------------|-----------------|----------------|------------------------|
| | % | Quantum (MU) | Rate (Rs./kWh) | Total Cost (Rs. Crore) |
| Targets | 11.55% | 1,436.94 | | |
| Solar RPO | 6.55% | 814.89 | | |
| Non Solar RPO | 5.00% | 622.05 | | |
| Total Purchase | 1.12% | 150.44 | | 94.25 |
| Solar | 0.34% | 45.85 | 12.50 | 57.33 |
| Non-Solar | 0.78% | 104.59 | 3.53 | 36.92 |
| Additional REC Purchase | 10.43% | 1,286.50 | | 128.65 |
| Solar | 6.21% | 769.04 | 1.00 | 76.90 |
| Non-Solar | 4.22% | 517.46 | 1.00 | 51.75 |

- 7.19 The Commission has considered the normative/actual availability (PAF) of the thermal stations for estimating the normative energy availability for power purchase. The energy availability from Tala & Chuka has been considered based on the actual power purchased during the past 3 years. The design energy approved for NHPC Plants & Sikidri HPS has been considered for energy availability for the same.
- 7.20 The Commission has considered the variable costs paid by the Petitioner by escalating the Variable Charges approved by the Commission for FY 2018-19 with escalation rate of 5%. The fixed charges to be paid by JBVNL in FY 2019-20 for the Generating Stations is considered as per the respective Tariff Orders issued by JSERC and by escalating the Fixed Charges approved by the Commission for FY 2018-19 by 3% for Generating Stations regulated by CERC.
- 7.21 The Petitioner also informed the Commission that it has started to purchase power from DVC as a Generator (Koderma 2x500 MW for 600 MW) from January 01, 2019 and also submitted the Power Purchase Agreement (PPA) executed with DVC.
- 7.22 **The Commission directs the Petitioner to submit a separate Petition for approval of the PPA with DVC to the Commission within 1 month of the issue of this Order. The Commission has considered the power purchase from DVC (Koderma) as a Generator provisionally and shall approve the same subject to approval of the PPA.**
- 7.23 The Commission has observed that the actual distribution loss as proposed by the Petitioner is higher than the proposed distribution loss of 15%. The Petitioner has submitted that the Surplus energy proposed of ~952 MU is notional in nature and is proposed as adjustment in the Power Purchase Cost. The Commission has considered the normative distribution loss of 14% and approved the Power Purchase Cost accordingly. The Commission has not allowed any Surplus power purchase or sale of the same.



7.24 The summary of Power Purchase Cost Approved by the Commission considering all the facts mentioned above is as below:

Table 103: Power Purchase Cost approved for FY 2019-20

| Particulars | Power Purchase Quantum | | Power Purchase Cost | |
|-----------------------------|------------------------|-----------------|---------------------|----------------------|
| | Petition (MU) | Approved (MU) | Petition (Rs Crore) | Approved (Rs. Crore) |
| NTPC | | | | |
| Farakka, Stage-I&II | 932.83 | 917.19 | 334.65 | 328.68 |
| Farakka, Stage-III | 530.45 | 594.69 | 244.06 | 241.77 |
| Kahalgaon, Stage-I | 215.31 | 187.42 | 77.71 | 70.59 |
| Talcher, Stage-I | 576 | 627.26 | 155.41 | 222.85 |
| Kahalgaon, Stage-II | 169.81 | 316.43 | 58.78 | 108.89 |
| Barh-II | 595.68 | 561.01 | 290.05 | 316.90 |
| Korba, Station-III | 372.3 | 350.89 | 104.38 | 96.39 |
| Total | 3,392.38 | 3,554.89 | 1,265.03 | 1,386.06 |
| NHPC | | | | |
| Rangit | 47.73 | 45.15 | 19.26 | 18.44 |
| Teesta-V | 337.26 | 316.95 | 84.83 | 82.29 |
| Total | 384.99 | 362.09 | 104.09 | 100.74 |
| PTC | | | | |
| Chukha HPS (Bhutan) | 174.01 | 175.44 | 43.88 | 46.45 |
| Tala HPS (Bhutan) | 308.72 | 311.30 | 70.02 | 74.13 |
| Total | 482.73 | 486.74 | 113.9 | 120.59 |
| Total Central Sector | 4,260.09 | 4,403.72 | 1,483.02 | 1,607.38 |
| DVC Koderma | 4,951.70 | 4233.05 | 2,549.33 | 1789.92 |
| State Sector | | | | |
| Sikidiri HPS | 75.47 | 158.32 | 8.95 | 47.37 |
| TVNL | 1,769.86 | 2630.44 | 784.54 | 993.88 |
| Total State Sector | 6,797.03 | 2788.76 | 793.49 | 1041.25 |
| Private | | | | |
| Inland Power Limited (IPL) | 343.04 | 409.77 | 157.14 | 175.63 |
| APNRL-Unit-1 | 1,145.27 | 457.37 | 434.68 | 199.02 |
| APNRL-Unit-2 | | 457.37 | | 199.78 |
| APNRL (Add. 66MW) | 474.56 | 447.21 | 178.16 | 253.40 |
| Total Private Sector | 1,962.87 | 1,771.72 | 769.98 | 827.84 |
| Other RE | | | | |
| State-Solar | 20.26 | 25.59 | 36.39 | 45.96 |
| SECI | 25.59 | 20.26 | 14.35 | 11.37 |
| Wind | 104.59 | 104.59 | 36.92 | 36.92 |
| Total Other RE | 150.44 | 150.44 | 87.65 | 94.25 |
| UI Payable | 320.48 | | 119.06 | |
| UI Receivable | | | | |
| Rungta Mines | 40.56 | 26.81 | 13.37 | 8.83 |
| ABCIL | 66.07 | 73.72 | 23.74 | 26.78 |
| ERLDC(APNRL) | - | | 37.61 | |
| PTC (IEX) | 299.42 | | 140.93 | |



| Particulars | Power Purchase Quantum | | Power Purchase Cost | |
|----------------------------------|------------------------|------------------|---------------------|----------------------|
| | Petition (MU) | Approved (MU) | Petition (Rs Crore) | Approved (Rs. Crore) |
| Banking of Power (Unit Banked) | 51.17 | | 0.78 | |
| Banking of Power (Unit Received) | -21.63 | | 0.11 | |
| Additional REC Purchase | | | | 128.65 |
| Grand Total | 13,824.16 | 13,448.22 | 6,019.09 | 5,524.90 |

7.25 The Commission has approved the above power purchase quantum from each generator by applying Merit Order Despatch (MOD) as per Clause 6.39 of the JSERC Distribution Tariff Regulations, 2015:

“6.39 While approving the cost of power purchase, the Commission shall determine the quantum of power to be purchased from various sources in accordance with the principles of merit order schedule and despatch based on a ranking of all approved sources of supply in the order of their variable cost of power purchase. All power purchase costs will be considered legitimate unless it is established that the merit order principle has been violated or power has been purchased at unreasonable rates;”

Energy Requirement and Energy Availability

Petitioner’s Submission

7.26 The Petitioner submitted that energy availability for FY 2019-20 has been estimated based on the actual power purchase and sales.

7.27 The Petitioner also submitted that power purchase from various sources are segregated into different heads, while calculating the energy balance for the control period.

- Power Purchase from Outside JSEB Boundary- NTPC, NHPC, PTC, APNRL, part of TVNL, NVVNL, SECI and RE (Wind)
- Energy Input Directly to State Transmission System- Input of power from TVNL directly to State Transmission System
- Energy Input through Renewables sources- Input from Solar IPPs selected through JREDA
- State-owned Generation- PTPS, SHPS, Rungta Mines, ABCIL and Inland Power
- Direct Input of Energy to Distribution System- DVC and Solar IPPs.

7.28 Based on the information provided above, Energy Balance as submitted by the Petitioner for FY 2019-20 is provided in the table below.

Table 104: Energy Balance submitted by the Petitioner for FY 2019-20 (MU)



| Particulars | FY 2019-20 | |
|---|------------------|------------------|
| | MYT Order | Petition |
| Power Purchase from Outside JSEB Boundary (MU) | 8860.80 | 7,247.14 |
| Loss in External System (%) | 3.00% | 3.00% |
| Loss in External System (MU) | 265.82 | 217.41 |
| Net Outside Power Available (MU) | 8,594.98 | 7,029.73 |
| Energy Input Directly to State Transmission System (MU) | 1,428.05 | 770.15 |
| State-owned Generation (MU) | 2,720.51 | 730.32 |
| Energy Available for Onward Transmission (MU) | 14,968.13 | 8,634.78 |
| Transmission Loss (%) | 4.50% | 5.00% |
| Transmission Loss (MU) | 673.57 | 431.74 |
| Net Energy Sent to Distribution System (MU) | 14,294.56 | 8,203.05 |
| Direct Input of Energy to Distribution System (MU) | 4,841.53 | 4,971.96 |
| Total Energy Available for Sales (MU) | 19,136.09 | 13,175.00 |

Commission's Analysis

7.29 The Commission in its earlier Order dated June 21, 2017 had set the distribution loss targets for JBVNL for the second control period FY 2016-17 to FY 2020-21. The Commission has considered the distribution loss target for FY 2019-20 for the computation of Energy Balance.

7.30 The energy requirement as approved by the Commission for FY 2019-20 based on approved energy sales and distribution losses is summarized below:

Table 105: Energy Requirement approved for FY 2019-20

| Particulars | FY 2019-20 |
|--|------------------|
| Energy Sales | 11,010.88 |
| Distribution Loss (%) | 14% |
| Distribution Loss (MU) | 1,792.47 |
| Energy Required for Distribution (MU) | 12,803.35 |

7.31 The Commission has worked out energy availability for the FY 2019-20 on the basis of actual generation from tied up power from Central, State-owned and other Generating Stations. Further, the loss in external system has been considered at the same level as approved by the Commission in its earlier Order, while the intra-state-transmission loss has been considered at 2.23% as per the Tariff Order for JUSNL dated February 24, 2018. The energy availability from various sources has been summarized below:

Table 106: Energy Balance approved for FY 2019-20

| Particulars | FY 2019-20 | | |
|---|------------|----------|-----------|
| | MYT | Petition | Approved |
| Power Purchase from Outside JBVNL Boundary (MU) | 8854.59 | 7,247.14 | 11,780.75 |
| Loss in External System (%) | 3% | 3.00% | 3.00% |



| Particulars | FY 2019-20 | | |
|---|------------------|------------------|------------------|
| | MYT | Petition | Approved |
| Loss in External System (MU) | 265.64 | 217.41 | 353.42 |
| Net Outside Power Available (MU) | 8,588.95 | 7,029.73 | 11,427.33 |
| Energy Input Directly to State Transmission System (MU) | 1,428.05 | 770.15 | 510.2919 |
| State-owned Generation (MU) | 2,720.50 | 730.32 | 1,131.58 |
| Energy Available for Onward Transmission (MU) | 14,092.47 | 8,634.78 | 13,069.21 |
| Transmission Loss (%) | 4.50% | 5.00% | 2.23% |
| Transmission Loss (MU) | 634.16 | 431.74 | 291.44 |
| Net Energy Sent to Distribution System (MU) | 13,458.31 | 8,203.05 | 12,777.76 |
| Direct Input of Energy to Distribution System (MU) | 4,551.66 | 4,971.96 | 25.59 |
| Total Energy Available for Sales (MU) | 18,009.97 | 13,175.00 | 12,803.35 |

Transmission Charges

Petitioner's Submission

- 7.32 The Petitioner has escalated the actual Inter-State Transmission Charges claimed for FY 2018-19 by 5% for estimation of Inter-State Transmission Charges for FY 2019-20.
- 7.33 The Petitioner submitted that transmission charges payable to Jharkhand Urja Sanchar Nigam Limited been computed based on the approved rate in Tariff Order of JUSNL dated February 24, 2018.
- 7.34 The Petitioner further submitted that the energy wheeled through transmission network in the above section of Energy Balance has been considered for calculating the Intra-State transmission charges payable to JUSNL and no transmission charges are applied on direct input of energy to distribution system. The estimated intra-state transmission charges payable to JUSNL for FY 2019-20 is provided in the table below.

Table 107: Transmission Charges submitted by the Petitioner for FY 2019-20 (Rs. Crore)

| Particulars | FY 2019-20 | |
|-----------------------------------|------------|----------|
| | MYT Order | Petition |
| Intra-State Transmission Charges | 282.25 | 229.10 |
| Inter-State Transmission Charges* | | 151.96 |

* Inter-State Transmission Charges included in the Power Purchase Cost Approved

Commission's Analysis

- 7.35 The Commission has observed that the Intra-State Transmission Charges claimed by the Petitioner is not as per the Tariff approved by the Commission vide its Tariff Orders for JUSNL. Hence, the Commission has calculated the Transmission Charges based on the



Tariffs approved in the previous Order at Rs. 0.25/kWh and the units transmitted as per the Energy Balance approved.

7.36 The Inter-State Transmission Charges are approved as per the claims of the Petitioner.

Table 108: Transmission Charges approved for FY 2019-20 (Rs. Crore)

| Particulars | FY 2019-20 | | |
|---|------------|----------|-----------|
| | MYT | Petition | Approved |
| Energy Wheeled in Transmission Network (MU) | 13458.31 | 9,207.40 | 13,069.21 |
| Transmission Charges (Rs./kWh) | 0.21 | 0.26 | 0.25 |
| Intra-State Transmission Charges | 282.25 | 238.29 | 326.73 |
| Inter-State Transmission Charges | | 151.96 | 151.96 |

Capital Expenditure and Capitalisation

Petitioner's Submission

7.37 The Petitioner submitted that the capital expenditure schedule for FY 2019-20 has been revised considering the Capex incurred in FY 2018-19. The capex of Rs. 5,953.37 Crore has been estimated against approved Capex of Rs. 2,493.85 Crore in FY 2018-19.

7.38 The Petitioner further submitted that under scheme wise capital expenditure schedule a new State Govt. scheme named Jharkhand Sampurna Bijli Achchadan Yojna (JASBAY) has been introduced. It is a state sponsored scheme, which aims to cover the several leftover works required to ensure 24x7 power supply to all villages/Habitations and achievement of objectives of UDAY Yojana for reduction of AT&C losses. The revised capex schedule as submitted by the Petitioner is as detailed below:

Table 109: Capital Expenditure submitted by the Petitioner for FY 2019-20 (Rs. Crore)

| Scheme Name | FY 2019-20 | |
|-------------------------------|------------|----------|
| | MYT Order | Petition |
| DDUGJY | - | 1,000.00 |
| IPDS | - | 300.00 |
| RAPDRP - A | 15.50 | 15.50 |
| RAPDRP - B | - | 476.33 |
| DDUGJY 12th Plan | - | 126.00 |
| ADP + Misc. | 770.80 | 737.00 |
| Tilka Manjhi & AGJY | - | - |
| RE State Plan | - | - |
| JSBAY - RE | - | 1,807.03 |
| RGVY (10th & 11th Plan) | - | - |
| Deposit & others | | 250.31 |
| JSBAY - Urban Electrification | | 900.00 |



| Scheme Name | FY 2019-20 | |
|---------------------------|---------------|-----------------|
| | MYT Order | Petition |
| JSBAY - IT, SCADA & TRW | | 585.14 |
| SAUBHAGYA | | - |
| IT Schemes (WB Supported) | | 184.00 |
| Total | 786.30 | 6,381.31 |

7.39 Considering the above capital expenditure schedule for FY 2019-20, the Petitioner has projected revised CWIP and creation of GFA. Considering the past experience, JBVNL has proposed a capitalization period of 3 years in the ratio of 20:40:40 for all the proposed works and capital expenditure of schemes in the respective years. Further, opening CWIP has been proposed to be capitalized in the proportion of 80:20 in first and second year.

Table 110: Capitalisation submitted by the Petitioner for FY 2019-20 (Rs. Crore)

| Particulars | FY 2019-20 | |
|----------------|------------|----------|
| | MYT Order | Petition |
| Opening CWIP | 5,946.24 | 5,709.54 |
| Capex | 786.30 | 6,381.31 |
| Capitalisation | 1,892.22 | 5,880.72 |
| Closing CWIP | 4,840.32 | 6,210.13 |

Commission's Analysis

7.40 The Commission has analysed the capital expenses proposed by the Petitioner for FY 2019-20 and is of the view that the proposed capital expenses for FY 2019-20 is very high in comparison to the actual capital expenses incurred in the previous years. The Commission during the TVS held on January 30, 2019 directed the Petitioner to justify the sudden increase in capex proposed with the physical and financial progress of the same. The Petitioner was unable to justify the capital expenses proposed due to unavailability of data from the field level. Hence, the Commission has decided to continue with the capital expenditure approved in its MYT Order dated June 21, 2017 for FY 2019-20. The Capital Expenditure approved by the Commission for FY 2019-20 is summarised in the table below:

Table 111: Capital Expenditure approved for FY 2019-20 (Rs. Crore)

| Scheme Name | FY 2019-20 | | |
|------------------|------------|-----------|----------|
| | MYT Order | Projected | Approved |
| DDUGJY | - | 1,000.00 | - |
| IPDS | - | 300.00 | - |
| RAPDRP - A | 15.50 | 15.50 | 15.50 |
| RAPDRP - B | - | 476.33 | - |
| DDUGJY 12th Plan | - | 126.00 | - |



| Scheme Name | FY 2019-20 | | |
|-------------------------------|---------------|-----------------|---------------|
| | MYT Order | Projected | Approved |
| ADP + Misc. | 770.80 | 737.00 | 770.80 |
| Tilka Manjhi & AGJY | - | - | - |
| RE State Plan | - | - | - |
| JSBAY - RE | - | 1,807.03 | - |
| RGGVY (10th & 11th Plan) | - | - | - |
| Deposit & others | - | 250.31 | - |
| JSBAY - Urban Electrification | - | 900.00 | - |
| JSBAY - IT, SCADA & TRW | - | 585.14 | - |
| SAUBHAGYA | - | - | - |
| IT Schemes (WB Supported) | - | 184.00 | - |
| Total | 786.30 | 6,381.31 | 786.30 |

7.41 The Commission had raised queries to the Petitioner to provide the projected Scheme-wise capitalisation for FY 2019-20 vis-à-vis the approved capitalisation. The Petitioner has not been able to submit the same. Hence, the Commission approves the GFA Addition and Capitalisation approved vide its MYT Order dated June 21, 2017 for FY 2019-20:

Table 112: GFA approved for FY 2019-20 (Rs. Crore)

| Particulars | FY 2019-20 | | |
|---------------|------------|-----------|-----------|
| | MYT Order | Petition | Approved |
| Opening GFA | 10,037.92 | 10,940.15 | 8,990.03 |
| GFA Additions | 1,892.22 | 5,880.72 | 1,892.22 |
| Deletions | 0.00 | 0.00 | 0.00 |
| Closing GFA | 11,930.14 | 16,820.87 | 10,882.25 |

Table 113: Capitalisation approved for FY 2019-20 (Rs. Crore)

| Particulars | FY 2019-20 | | |
|----------------|------------|----------|----------|
| | MYT Order | Petition | Approved |
| Opening CWIP | 3,570.39 | 5,709.54 | 4,200.15 |
| Capex | 786.30 | 6,381.31 | 786.30 |
| Capitalisation | 1,892.22 | 5,880.72 | 1,892.22 |
| Closing CWIP | 2,464.47 | 6,210.13 | 3,094.23 |

Consumer Contribution, Grants and Subsidies

Petitioner's Submission

7.42 The Petitioner submitted that the Consumer contribution and Grants of JBVNL for FY 2019-20 are estimated based on the closing CWIP of FY 2018-19 is provided in the table below:



Table 114: Consumer Contribution and Grants (CCG) submitted by the Petitioner for FY 2019-20 (Rs. Crore)

| Particulars | FY 2019-20 | |
|--------------|------------|-----------|
| | MYT Order | Petition |
| Opening CCG | 3,442.36 | 8,534.92 |
| Addition CCG | 206.54 | 3,827.30 |
| Closing CCG | 3,648.90 | 12,362.22 |

Commission's Analysis

7.43 The Commission has considered the values of Consumer Contribution as submitted by the Petitioner. The Grants are approved as per the funding pattern submitted by the Petitioner and the same has been allowed as per the capital expenditure approved for by the Commission for FY 2019-20.

Table 115: Consumer Contribution and Grants (CCG) approved for FY 2019-20 (Rs. Crore)

| Particulars | FY 2019-20 | | |
|-----------------------------------|------------|-----------|----------|
| | MYT | Petition | Approved |
| Opening CCG | 3,442.36 | 8,534.92 | 7,000.93 |
| Addition in Consumer Contribution | 206.54 | 250.31 | 250.31 |
| Addition in Grants | | 3576.99 | 15.50 |
| Closing CCG | 3,648.90 | 12,362.22 | 7,266.74 |

7.44 The Commission has adopted the approach for calculation of Normative Loan and Equity as per the previous Tariff Orders. For estimating the sources of finance required to fund the closing GFA, the Commission had reduced the GFA by the CCG available with the Petitioner.

7.45 For funding of above mentioned GFA, the Commission has considered the normative debt-equity ratio of 70:30 as provided in Distribution Tariff Regulation, 2015. Moreover, consumer contribution grants and subsidies for capital assets are first netted off from gross fixed assets and the normative debt-equity ratio is applied on the remaining gross fixed assets only.

7.46 The Commission has considered CCG as approved above. The normative net loans are estimated after deducting accumulated depreciation from the value of gross loans as tabulated below.



Table 116: Source of Funding of GFA approved for FY 2019-20 (Rs. Crore)

| Particulars | FY 2019-20 |
|-----------------------------------|-----------------|
| Opening CCG | 7,000.93 |
| Addition in CCG | 265.81 |
| Closing CCG | 7,266.74 |
| CCG towards GFA | 5,657.97 |
| Closing GFA (less CCG) | 5,224.28 |
| Accumulated Depreciation | 2,578.44 |
| Acc. Dep. towards GFA | 1,237.84 |
| Normative Loan (Closing) | 2,419.16 |
| Normative Equity (Closing) | 1,567.29 |

Operation & Maintenance Expenses

Petitioner's Submission

7.47 The Petitioner submitted that Employee Expenses for FY 2019-20 has been calculated by escalating the Employee Expenses for FY 2018-19 by the inflation factor of 3.85 % and the methodology provided under Clause 6.6 of JSERC MYT Regulations 2015.

7.48 The projected employee cost for FY 2019-20 is provided in the table below:

Table 117: Employee Expenses submitted by the Petitioner for FY 2019-20 (Rs. Crore)

| Particulars | FY 2019-20 | |
|--------------------------|---------------|---------------|
| | MYT Order | Petition |
| Total Emp. Expenses | 243.61 | 256.20 |
| <i>Emp. Expenses</i> | <i>211.75</i> | <i>232.29</i> |
| <i>Terminal benefits</i> | <i>31.86</i> | <i>23.91</i> |

7.49 The Petitioner submitted that the in line with the Regulation 6.6 (b) and (c), the A&G expenses have been calculated for FY 2019-20. The A&G expense of FY 2018-19 has been escalated by the inflation factor of 3.85%.

Table 118: A&G Expenses submitted by the Petitioner for FY 2019-20 (Rs. Crore)

| Particulars | FY 2019-20 | |
|--------------|------------|----------|
| | MYT Order | Petition |
| A&G Expenses | 57.37 | 81.82 |



7.50 The Petitioner submitted that the R&M expenses for FY 2019-20 have been estimated for FY 2019-20 based on the K-factor of 2.34% as approved by the Commission in Tariff Order dated April 27, 2018.

Table 119: R&M Expenses submitted by the Petitioner for FY 2019-20 (Rs. Crore)

| Particulars | FY 2019-20 | |
|--------------|------------|----------|
| | MYT Order | Petition |
| R&M Expenses | 234.89 | 256.00 |

Commission’s Analysis

7.51 The Commission has approved the O&M Expenses as per the provisions of JSERC Distribution Tariff Regulations, 2015 as reproduced below:

“6.5 The O&M expenses permissible towards ARR of each year of the Control Period shall be approved based on the formula shown below:

$$O\&M_n = (R\&M_n + EMP_n + A\&G_n) * (1 - X_n) + Terminal Liabilities$$

Where,

R&M_n – Repair and Maintenance Costs of the Licensee for the *n*th year;

EMP_n – Employee Costs of the Licensee for the *n*th year excluding terminal liabilities;

A&G_n – Administrative and General Costs of the Licensee for the *n*th year;

X_n – is an efficiency factor for *n*th year. The value of *X_n* will be determined by the Commission in its first MYT order for the Control Period;

6.6 The above components shall be computed in the manner specified below:

a) $R\&M_n = K * GFA$

Where,

‘*K*’ is a constant (expressed in %) governing the relationship between R&M costs and Gross Fixed Assets (GFA) and will be calculated based on the % of R&M to GFA of the preceding year of the Base Year;

‘*GFA*’ is the opening value of the gross fixed asset of the *n*th year;



$$b) EMP_n \text{ (excluding terminal liabilities)} + A\&G_n = (EMP_{n-1} + A\&G_{n-1}) * (INDX_n / INDX_{n-1}) + G_n$$

Where,

INDX_n – Inflation factor to be used for indexing the employee cost and A&G cost. This will be a combination of the Consumer Price Index (CPI) and the Wholesale Price Index (WPI) for immediately preceding year before the base year;

G_n – Increase in Employee Expenses in *n*th year due to increase in consumer base/ load growth. Value of *G* for each year of the Control Period shall be determined by the Commission in the MYT Tariff order based on Licensee’s filing, benchmarking with the efficient utilities, actual cost incurred by the licensee due to increase in consumer base/load growth in past, and any other factor considered appropriate by the Commission;

$$c) INDX_n = 0.55 * CPI_n + 0.45 * WPI_n;$$

...”

- 7.52 The Inflation factor is calculated as 4.37% based on the WPI and CPI data available with the Commission from April 2018 till November 2018. The Commission continues with the approach of 2.34% as k-factor as considered in the previous Tariff Order dated April 27, 2018. The O&M Expenses approved by the Commission is summarised below:

Table 120: O&M Expenses approved for FY 2019-20 (Rs. Crore)

| Particulars | FY 2019-20 | | |
|-------------------------|---------------|---------------|---------------|
| | MYT | Petition | Approved |
| Total Emp. Expenses | 243.61 | 256.20 | 233.29 |
| Emp. Expenses | 211.75 | 232.29 | 211.20 |
| Terminal benefits | 31.86 | 23.91 | 22.10 |
| A&G Expenses | 57.37 | 81.82 | 82.65 |
| R&M | 234.89 | 256.00 | 210.37 |
| O&M Expenses | 535.87 | 594.02 | 526.31 |

Depreciation

Petitioner’s Submission

- 7.53 The Petitioner submitted that depreciation for FY 2019-20 is in line with the approach adopted by the Commission in its Tariff Orders dated April 27, 2018 and June 21, 2017.
- 7.54 The Petitioner submitted that the GFA created out of debt and equity is calculated by deducting the consumer contribution and grants portion deployed towards GFA. Based on



this GFA created out of debt and equity, the Petitioner has applied the depreciation rate as approved by the Commission in its previous Tariff Order dated April 27, 2018 to arrive at the total depreciation as given below:

Table 121: Depreciation submitted by the Petitioner for FY 2019-20 (Rs. Crore)

| Particulars | FY 2019-20 | |
|---------------------|---------------|---------------|
| | MYT Order | Petition |
| GFA | 10,984.03 | 7,792.03 |
| Depreciation Rate | 5.94% | 5.94% |
| Depreciation | 212.52 | 462.85 |

Commission's Analysis

7.55 According to Provision of Regulation 6.32 of JSERC Distribution Tariff Regulations, 2015, depreciation shall not be allowed on assets funded by consumer contribution and capital subsidies/grants. Considering the consumer contribution deployed towards GFA approved in this Order, the Commission has determined the depreciation on the GFA created out of debt and equity excluding the consumer contribution, grants for the FY 2019-20. The rate of depreciation has been considered at 5.94% as approved in the earlier Order dated June 21, 2017. However, the Commission has calculated the Depreciation on Average GFA instead of the Closing GFA as per the JSERC Distribution Tariff Regulations, 2015.

7.56 Accordingly, the Commission approves the depreciation for the FY 2019-20 as summarised in the following table:

Table 122: Depreciation approved for FY 2019-20 (Rs. Crore)

| Particulars | FY 2019-20 | | |
|---------------------------------|---------------|---------------|---------------|
| | MYT | Petition | Approved |
| GFA (Average as per Commission) | 10,984.03 | 7,792.03 | 4,278.17 |
| Depreciation Rate | 5.94% | 5.94% | 5.94% |
| Depreciation | 212.52 | 462.85 | 254.12 |

Interest and Finance Charges

Petitioner's Submission

7.57 The Petitioner submitted that the interest expenses has been computed in line with the Clause 6.31 of JSERC Tariff Regulations, 2015. The Petitioner has considered the prevailing rate of interest equal to SBI base rate as on April 1, 2018, which is 8.70%, plus 200 basis points, thus totalling to 10.70%.



7.58 The total Interest and finance charges of JBVNL for FY 2019-20 is provided in the table below:

Table 123: Interest on Loan submitted by the Petitioner for FY 2019-20 (Rs. Crore)

| Particulars | FY 2019-20 | |
|-------------------------|---------------|---------------|
| | MYT Order | Petition |
| Opening Loan | 1,771.32 | 2,541.12 |
| Loan Addition | 247.78 | 1,721.99 |
| Loan Repayment | 212.52 | 462.85 |
| Closing Loan | 1,806.58 | 3,800.26 |
| Average Loan | 1,788.95 | 3,170.69 |
| Interest Rate | 11.30% | 10.70% |
| Interest on Loan | 202.15 | 339.26 |

Commission's Analysis

7.59 The Commission has observed calculation error by the Petitioner during calculation of opening loan by the Petitioner. The Commission has calculated loans considering the debt-equity ratio in line with Regulation 6.15 and 6.16 of the JSERC Distribution Tariff Regulations, 2015. The loan arrived in this manner is considered as gross normative loan for calculation of interest on loan.

7.60 The Commission has excluded interest on loan amount, normative or otherwise, to the extent of capital cost funded by Consumer Contribution, Grants or Deposit Works carried out by Distribution Licensee in line with Regulation 6.26 of the JSERC Distribution Tariff Regulations, 2015.

7.61 The repayment for the year has been considered as deemed to be equal to the depreciation allowed for that year. The opening value of loan for FY 2019-20 has been considered as per the closing value of FY 2018-19 as approved in the previous sections of this Order. Further, the rate of interest has been considered at the Base rate of SBI as applicable on April 1, 2018 plus 200 basis points as per JSERC Distribution Tariff Regulations, 2015. The interest on loan as approved by the Commission for FY 2019-20 is summarised in the following table:

Table 124: Interest on Loan approved for FY 2019-20 (Rs. Crore)

| Particulars | FY 2019-20 | | |
|--------------|------------|----------|----------|
| | MYT | Petition | Approved |
| Opening Loan | 1,771.32 | 2,541.12 | 1,862.24 |



| Particulars | FY 2019-20 | | |
|-------------------------|---------------|---------------|---------------|
| | MYT | Petition | Approved |
| Deemed Loan Addition | 247.78 | 1,721.99 | 811.04 |
| Deemed Loan Repayment | 212.52 | 462.85 | 254.12 |
| Closing Loan | 1,806.58 | 3,800.26* | 2,419.16 |
| Average Loan | 1,788.95 | 3,170.69 | 2,140.70 |
| Interest Rate | 11.30% | 10.70% | 10.70% |
| Interest on Loan | 202.15 | 339.26 | 229.05 |

*Calculation Error by the Petitioner

Interest on Consumer Security Deposit

Petitioner's Submission

- 7.62 The Petitioner submitted that in order to estimate the interest on consumer security deposit for FY 2019-20, the Petitioner has assumed an escalation of 5% over the accumulated consumer security deposit of FY 2018-19.
- 7.63 Further, the Petitioner submitted that the applicable interest rate as per JSERC Supply code Regulations, 2015 has been applied to estimate the Interest on consumer deposit for FY 2019-20. The interest rate considered is the SBI Base Rate prevailing on April 1, 2018, i.e., 8.70% p.a.

Table 125: Interest on CSD submitted by the Petitioner for FY 2019-20 (Rs. Crore)

| Particulars | FY 2019-20 | |
|--------------------|---------------|--------------|
| | MYT Order | Petition |
| Closing CSD | 1183.78 | 557.87 |
| Interest Rate | 9.30% | 8.70% |
| Int. on CSD | 110.09 | 48.53 |

Commission's Analysis

- 7.64 The Commission has considered the average security deposit per consumer as Rs.1454 per consumer as approved in the previous Tariff Order dated April 27, 2018 and the interest rate considered is as per JSERC Supply Code Regulations, 2015 at the SBI Base Rate prevailing on April 1, 2018. The Interest on Consumer Security Deposits as approved by the Commission for the FY 2019-20 is tabulated below:

Table 126: Interest on CSD approved for FY 2019-20 (Rs. Crore)

| Particulars | FY 2019-20 | | |
|--------------------|---------------|--------------|--------------|
| | MYT | Petition | Approved |
| Closing CSD | 1183.78 | 557.87 | 662.16 |
| Interest Rate | 9.30% | 8.70% | 8.70% |
| Int. on CSD | 110.09 | 48.53 | 57.61 |



Interest on Working Capital (IoWC)

Petitioner's Submission

7.65 The Petitioner submitted that the working capital requirement has been calculated in line with the Clause 6.29 of the JSERC Tariff Regulations, 2015. Based on the expenditure for FY 2019-20, the Petitioner has estimated the working capital requirement and interest thereof, as provided in the Table below:

Table 127: Interest on Working Capital submitted by the Petitioner for FY 2019-20 (Rs. Crore)

| Particulars | FY 2019-20 | |
|------------------------------------|---------------|--------------|
| | MYT Order | Petition |
| 1 month O&M Expenses | 57.94 | 49.50 |
| Maintenance Spares (@1% GFA) | 141.84 | 77.92 |
| 2 months' Receivables | 2,200.28 | 1,346.47 |
| Less: 1 month Power Purchase Cost | 335.70 | 501.70 |
| Less: Consumer Security Deposit | 806.12 | 557.87 |
| Total Working Capital requirement | 1,258.26 | 414.32 |
| Interest rate on WC | 13.50% | 12.20% |
| Interest on Working Capital | 169.90 | 50.55 |

Commission's Analysis

7.66 The Commission has considered IoWC as per the norms specified in the JSERC Distribution Tariff Regulations, 2015.

7.67 Rate of IoWC has been considered to be equal to the Base Rate of SBI as applicable on the 1st April of the respective plus 350 Basis Points as per Regulation 6.31 of the JSERC Distribution Tariff Regulations, 2015.

7.68 The Interest on Working Capital as computed by the Commission for the FY 2019-20 is summarized in the following table:

Table 128: Interest on Working Capital approved for FY 2019-20 (Rs. Crore)

| Particulars | FY 2019-20 | | |
|-----------------------------------|------------|----------|----------|
| | MYT | Petition | Approved |
| 1 month O&M Expenses | 44.66 | 49.50 | 43.86 |
| Maintenance Spares (@1% GFA) | 100.38 | 77.92 | 33.32 |
| 2 months' Receivables | 1,318.47 | 1,346.47 | 1,194.04 |
| Less: 1 month Power Purchase Cost | 569.21 | 501.70 | 449.69 |



| Particulars | FY 2019-20 | | |
|------------------------------------|-------------|--------------|--------------|
| | MYT | Petition | Approved |
| Less: Consumer Security Deposit | 1183.78 | 557.87 | 662.16 |
| Total Working Capital requirement | 289.49 | 414.32 | 159.37 |
| Interest rate on WC | 13.50% | 12.20% | 12.20% |
| Interest on Working Capital | 0.00 | 50.55 | 19.44 |

Return on Equity

Petitioner's Submission

7.69 The Petitioner submitted that in order to estimate the equity balance, it has considered the approach adopted by the Commission in its Tariff Order dated April 27, 2018, whereby normative equity is arrived at by assuming the equity to be 30% of the GFA created out of debt and equity. The return on equity is provided in the table below:

Table 129: RoE submitted by the Petitioner for FY 2019-20 (Rs. Crore)

| Particulars | FY 2019-20 | |
|-----------------|---------------|---------------|
| | MYT Order | Petition |
| Opening Equity | 4,293.96 | 1,599.61 |
| Equity Addition | 462.07 | 738.00 |
| Deletions | 0.00 | 0.00 |
| Closing Equity | 4,756.03 | 2,337.61 |
| Rate of RoE | 15.50% | 15.50% |
| RoE | 724.00 | 305.13 |

Commission's Analysis

7.70 The Commission has approved the Return on Equity on the approved equity employed for the FY 2019-20 as per the provisions of Regulation 6.16 to 6.19 as specified in the JSERC Distribution Tariff Regulations, 2015.

7.71 The Commission has considered the opening balance of normative equity as per the closing balance approved for the FY 2018-19 as approved in the previous sections of this Order. Further, the rate of RoE is considered to be 15.50%. Accordingly, the Commission computed normative RoE as follows:

Table 130: RoE approved for FY 2019-20 (Rs. Crore)

| Particulars | FY 2019-20 | | |
|-----------------|----------------|----------|----------|
| | MYT | Petition | Approved |
| Opening Equity | 1094.37 | 1,599.61 | 1,265.52 |
| Equity Addition | 71.43 | 738.00 | 301.76 |
| Deletions | 1165.80 | 0.00 | 0.00 |
| Closing Equity | 1130.08 | 2,337.61 | 1,567.29 |



| | | | |
|-------------|---------------|---------------|---------------|
| Rate of RoE | 15.50% | 15.50% | 15.50% |
| RoE | 175.16 | 305.13 | 219.54 |

Non-Tariff Income (NTI)

Petitioner's Submission

7.72 The Petitioner submitted that the Non-Tariff Income (Other Income) for FY 2019-20 has been projected based on the growth trend of historical figures. The Petitioner further submitted the rationale behind the computation of NTI is in line with the Judgment of Hon'ble APTEL dated July 12, 2011 in Case No. 142 & 147 of 2009 and summarised the Non-tariff income as outlined below:

Table 131: NTI submitted by the Petitioner for FY 2019-20 (Rs. Crore)

| Particulars | FY 2019-20 | |
|---|---------------|---------------|
| | MYT Order | Petition |
| D.P.S from Consumer | | 300.00 |
| Meter Rent | | 11.35 |
| Miscellaneous Charges from Consumers | | 15.00 |
| Total | | 326.35 |
| Interest rate for Receivables financing | | 12.20% |
| Corresponding Receivables against DPS | | 1,666.67 |
| Interest on Receivables against DPS | | 203.33 |
| Net NTI to be considered | 155.47 | 123.02 |

Commission's Analysis

7.73 The Commission has considered the Non-Tariff income approved for FY 2016-17 and FY 2017-18 for calculation of the NTI for FY 2019-20.

7.74 Further, the Commission has adopted a similar approach as adopted in the Tariff Order dated June 21, 2017 for approving the Non-Tariff income wherein, the Non-Tariff income has been calculated after considering financing cost for corresponding receivables, as accrued DPS is considered to be form of NTI. The Commission has taken due cognizance of the judgement of Hon'ble APTEL in Appeal no.48 of 2016 and Appeal no.316 of 2016 & IA no.656 of 2016 dated May 31, 2017, while approving the Non-Tariff Income.

7.75 Non-Tariff income as approved by the Commission for FY 2019-20 is summarized in the following table:



Table 132: NTI approved for FY 2019-20 (Rs. Crore)

| Particulars | FY 2019-20 | | |
|---|---------------|---------------|---------------|
| | MYT | Petition | Approved |
| Total NTI | | 326.35 | 348.79 |
| Interest rate for Receivables financing | | 12.20% | 12.20% |
| Corresponding Receivables against DPS | | 1,666.67 | 1,666.67 |
| Interest on Receivables against DPS | | 203.33 | 203.33 |
| Net NTI to be considered | 155.47 | 123.02 | 145.46 |

Disallowances on account of Excessive AT&C Losses

Petitioner's Submission

7.76 The Petitioner submitted that it has undertaken several administrative measures to curb the AT&C losses along with the technical measures such as increasing the metering, focusing on billing efficiency and collection efficiency improvement. Further, special focus is being taken by the Petitioner towards the HT consumers as shown below:

- Centralized Billing for all HT Consumers
- Preparation and Circulation of Circle-wise list of top 5 defaulters during each month
- Preparation and Circulation of Circle-wise list of consumers having defective meters
- Appointment of dedicated agency for regular replacement of defective meters of HT consumers

7.77 The Petitioner requested the Commission to consider the revised target of AT&C while approving the ARR for FY 2019-20. The calculation for disallowance is done by considering the difference between the Commissions approved collection efficiency i.e. 100% and the revised target of 95% for FY 2019-20 as provided in the table below.

Table 133: Provision for Bad & Doubtful Debt submitted by the Petitioner for FY 2019-20 (Rs. Crore)

| Particulars | FY 2019-20 |
|---|------------|
| Receivables (Rs. Crore) | 5,928.52 |
| Collection efficiency (%) | 95% |
| Total disallowance (Bad debt) (Rs. Crore) | 296.43 |



- 7.78 The Petitioner requested the Commission to approve for provisioning of adjustment of disallowance while deducting RGF from ARR taking cognizance of difficulties and ground realities faced by JBVNL in collection.
- 7.79 In FY 2019-20, JBVNL has considered a T&D loss of 15% while calculating the Energy availability; JBVNL has estimated a notional Surplus energy of 954.24 MU. In order to evaluate the cost of Surplus Power, the surplus units calculated are multiplied with the per unit cost of Power Purchase i.e., Rs 4.35 per unit to order to arrive at the total revenue from sale of Surplus Power i.e. Rs. 415.48 Crore. However, the Petitioner submitted that in actual there will not be any surplus and the revenue calculated above is a notional adjustment entry for treatment of Cost of Power Purchase of notional additional units purchased calculated because of lower T&D losses.
- 7.80 The Petitioner submitted that as in FY 2019-20, there will not be any RGF support from the state Government therefore, the disallowance calculated above must not be deducted from the Annual Revenue Requirement of FY 2019-20 for arriving at the Gap.

Commission's Analysis

- 7.81 The Commission had already set the targets for the Collection efficiency in Section "Targets for Distribution Losses and Collection Efficiency" of the JSERC Distribution Tariff Regulations, 2015 and as such the submission of the Petitioner regarding sudden change seems to be out of order. In addition, the Commission has also considered the MoU signed by the Petitioner under UDAY Scheme, which clearly stipulates that the AT&C Losses for FY 2019-20 should be at 14% including a collection efficiency of 100% (i.e., distribution loss of 14%). The Commission thus directs the Petitioner to abide by the targets set by the Commission and any provisions for the poor collection efficiency cannot be allowed. Accordingly, the amount of Rs. 296.43 Crore claimed towards bad debt has no justification and should not be passed on to the Consumers.
- 7.82 The Commission has observed that the actual distribution loss as proposed by the Petitioner is higher than the proposed distribution loss of 15%. The Petitioner has submitted that the Surplus energy proposed of ~952 MU is notional in nature and is proposed as adjustment in the Power Purchase Cost.
- 7.83 Hence, with respect to the Distribution Loss Targets, the Commission in its earlier Order dated June 21, 2017 had already set targets for the Second Control Period based on the GoI, UDAY scheme. The Commission notes with concern that the actual level of Distribution losses submitted by the Petitioner are still higher as compared to the targets set by the



Commission. The Commission is of the view that such high loss levels due to Petitioner's inefficiency should not be passed on to the consumers. As discussed earlier, the Commission has considered the distribution loss for FY 2019-20 as per the target approved while estimating the energy input requirement.

Summary of ARR for FY 2019-20

Petitioner's Submission

7.84 Based on the components of the ARR discussed in the above sections, the final ARR claimed by the Petitioner for FY 2019-20 is as below:

Table 134: ARR submitted by the Petitioner for FY 2019-20 (Rs. Crore)

| Particulars | FY 2019-20 | |
|---------------------------------------|------------------|-----------------|
| | MYT Order | Petition |
| Power Purchase Cost | 10,131.14 | 6,020.43 |
| Inter-State Transmission Charges | | 151.96 |
| Intra-State Transmission Charges | 330.1 | 229.10 |
| O&M Expenses | 695.3 | 594.02 |
| <i>Employee Expenses</i> | 433.0 | 256.20 |
| <i>A&G Expenses</i> | 65.6 | 81.82 |
| <i>R&M Expenses</i> | 196.8 | 256.00 |
| Depreciation | 404.4 | 462.85 |
| Interest on Long Term Loan | 1,086.3 | 339.26 |
| Interest on Working Capital Loan | 169.9 | 50.55 |
| Interest on Consumer Security Deposit | - | 48.53 |
| Return on Equity | 724.0 | 305.13 |
| Total Expenses | 13,541.2 | 8,201.83 |
| Less: Non-Tariff Income | (15.2) | 123.02 |
| Add: Provision for Doubtful Debt | - | 296.43 |
| Net ARR | 13,526.04 | 8,375.24 |
| ARR Recoverable | 13,526.04 | 8,375.24 |

Commission's Analysis

7.85 The table below summarizes the ARR approved by the Commission for the FY 2019-20.

Table 135: ARR approved for FY 2019-20 (Rs. Crore)

| Particulars | FY 2019-20 | | |
|-------------------------------------|------------|----------|----------|
| | MYT | Petition | Approved |
| Power Purchase Cost | 6,548.22 | 6,020.43 | 5,396.25 |
| Inter-State Transmission Charges | | 151.96 | 151.96 |
| Intra-State Transmission Charges | 282.25 | 229.10 | 326.73 |
| Additional REC Purchase to meet RPO | | | 128.65 |
| O&M Expenses | 535.87 | 594.02 | 526.31 |



| Particulars | FY 2019-20 | | |
|---------------------------------------|-----------------|-----------------|-----------------|
| | MYT | Petition | Approved |
| Employee Expenses | 243.61 | 256.20 | 233.29 |
| A&G Expenses | 57.37 | 81.82 | 82.65 |
| R&M Expenses | 234.89 | 256.00 | 210.37 |
| Depreciation | 212.52 | 462.85 | 254.12 |
| Interest on Long Term Loan | 202.15 | 339.26 | 229.05 |
| Interest on Working Capital Loan | 0.00 | 50.55 | 19.44 |
| Interest on Consumer Security Deposit | 110.09 | 48.53 | 57.61 |
| Return on Equity | 175.16 | 305.13 | 219.54 |
| Total Expenses | 8066.27 | 8,201.83 | 7,309.68 |
| Less: Non-Tariff Income | 155.47 | 123.02 | 145.46 |
| Add: Provision for Doubtful Debt | - | 296.43 | |
| Net ARR | 7,910.80 | 8,375.24 | 7,164.22 |
| ARR Recoverable | 7,910.80 | 8,375.24 | 7,164.22 |

* Inter-State Transmission Charges included in Power Purchase Cost in MYT Order

Revenue at Existing Tariff

Petitioner's Submission

7.86 The category wise calculation of revenue from existing tariff as submitted by the Petitioner for FY 2019-20 is summarized in the following table:

Table 136: Revenue at the Existing Tariff as submitted by the Petitioner (Rs. Crore)

| Particulars | FY 2019-20 | | |
|------------------------------|-----------------|----------------|-----------------|
| | Fixed Charges | Energy Charges | Total Revenue |
| Domestic | 3,011.95 | 188.39 | 3,200.33 |
| Commercial/Non Domestic | 603.90 | 55.06 | 658.97 |
| Public Lighting / SS | 49.29 | 0.05 | 49.34 |
| Irrigation / IAS | 110.78 | 1.95 | 112.73 |
| Industrial LT / LTIS | 146.05 | 42.80 | 188.85 |
| Industrial HT / HTS / S/ EHT | 1,368.05 | 266.31 | 1,634.35 |
| RTS/MES | 65.70 | 18.24 | 83.94 |
| Total | 5,355.72 | 572.80 | 5,928.52 |

Commission's Analysis

7.87 The Commission has computed the category-wise revenue from sale of power for the FY 2019-20 based on the approved sales, number of consumers and connected load for the relevant year as per this Order and the category-wise existing tariff's, categories and slabs as per the Tariff Order dated April 27, 2018.



7.88 The details of category wise revenue at existing tariff for the FY 2019-20 as approved by the Commission is provided in the table below:

Table 137: Category wise Revenue at Existing Tariff approved for FY 2019-20 (Rs. Crore)

| Particulars | FY 2019-20 | | |
|------------------------------|-----------------|----------------|-----------------|
| | Fixed Charges | Energy Charges | Total Revenue |
| Domestic | 3,287.96 | 184.63 | 3,472.58 |
| Commercial/Non Domestic | 564.80 | 52.28 | 617.07 |
| Public Lighting / SS | 47.11 | 0.05 | 47.15 |
| Irrigation / IAS | 115.19 | 2.05 | 117.25 |
| Industrial LT / LTIS | 126.31 | 38.29 | 164.60 |
| Industrial HT / HTS / S/ EHT | 1,483.06 | 297.19 | 1,780.26 |
| RTS/MES | 54.38 | 16.74 | 71.12 |
| Total | 5,678.80 | 591.23 | 6,270.03 |



A 8: REVENUE GAP AND ITS TREATMENT

Revenue Gap till FY 2018-19

Petitioner's Submission

8.1 The Petitioner submitted that the year wise estimated revenue gap based on the estimated ARR and revenue at existing tariff for the consideration of the Commission. The Petitioner has considered the impact of Resource Gap Funding being provided for respective year to arrive at the final revenue gap. The proposed revenue gap for FY 2016-17, FY 2017-18 and FY 2018-19 is provided in the table below.

Table 138: Estimated revenue gap by the Petitioner for FY 2016-17 and FY 2017-18 (Rs. Crore)

| Particulars | FY 2016-17 (Rs. Crore) | FY 2017-18 (Rs. Crore) |
|---|---------------------------|---------------------------|
| Resource Gap approved for the year | 1,200.00 | 3,000.00 |
| Disallowance on account of T&D losses/(Credit of Efficiency Gain) | 36.94 | -27.95 |
| Disallowance on Account of Collection Efficiency | 252.80 | 469.45 |
| RGF to be adjusted with ARR | 910.27 | 2,502.60 |

8.2 The Petitioner submitted that the Commission in the Tariff Order dated December 14, 2015 wherein, the Commission has trued-up the Annual Revenue Requirement FY 2013-14 (January 6, 2014 –March 31, 2014) & FY 2014-15 and ARR and determined the Distribution Tariff for FY 2015-16 determined the cost of power purchase due to excess T&D losses over and above the normative level. The Commission admitted in its aforementioned Tariff Order that disallowed amount should be adjusted with the Resource Gap Funding provided by the Government and only the adjusted RGF has to be reduced from the revenue gap. The relevant excerpts of the Tariff Order have been reiterated below:

“6.101 However, as the Commission disallows power purchase cost on account of high T&D losses, in order to provide support to the Petitioner and to meet the obligations arising from power generators, the resource gap funding provided by the State Government is allowed to be utilised for meeting such disallowance. On analysis of the submissions made by the Petitioner, the Commission observed that the quantum of resource gap budgeted for FY 2015-16 was higher than the amount disallowed against power purchase cost due to non-achievement of normative distribution loss trajectory in the approved ARR.

6.102 The Commission is of the opinion that the remaining resource gap funding available to the Petitioner after accounting for the aforesaid disallowance should



be considered for meeting the approved revenue gap. Thus, the resource gap funding available to meet revenue gap has been summarised as follows:

| <i>Particulars</i> | <i>FY 15-16</i> |
|---|-----------------|
| <i>Resource Gap Funding budgeted (Rs. Cr.)</i> | <i>1,000.00</i> |
| <i>Disallowances on account of excessive T&D Losses (Rs. Cr.)</i> | <i>625.14</i> |
| <i>Net Resource Gap Funding (Rs. Cr.)</i> | <i>374.86</i> |

The revenue gap for FY 2015-16 after considering the resource gap funding as approved by the Commission is Rs. 1001.7 Cr, as summarised below.

| <i>Particulars</i> | <i>Approved by the Commission (Rs. Cr.)</i> |
|--|---|
| <i>ARR</i> | <i>4,566.08</i> |
| <i>Revenue from Sale of Power</i> | <i>3,189.65</i> |
| <i>Gross revenue gap</i> | <i>1,376.43</i> |
| <i>Net Resource Gap Funding to meet revenue gap</i> | <i>374.86</i> |
| <i>Revenue Gap after resource gap funding for FY 15-16</i> | <i>1,001.57</i> |

- 8.3 The Petitioner further submitted that the Commission in its Tariff Order dated April 27, 2018 has calculated Rs. 371.19 Crore for FY 2017-18 and Rs. 413.76 Crore for the FY 2018-19 as the cost of Disallowed Power Purchase on account of excess T&D losses over and above normative level in the respective years and reduced the same from the Power Purchase Cost of the JBVNL in the respective years. The Petitioner submitted that the methodology adopted by the Commission is not in congruence with the methodology adopted by the Commission in the Order dated December 14, 2015.
- 8.4 The Petitioner further stated that the Resource Gap Funding provided by the State Government is to compensate JBVNL for any loss of revenue through disallowance by the Commission in the Annual Revenue Requirement, as such, the cost of disallowance on account of higher T&D losses and Lower Collection efficiency must be adjusted with the Resource Gap Funding provided by the State Government. The Petitioner has calculated the Cost of disallowance due to higher T&D losses and Lower collection efficiency as submitted in the table above.
- 8.5 The Petitioner submitted that the Commission in its True-up order dated April 27, 2018 has recognised a cumulative revenue gap of Rs. 2,349 Crore for FY 2013-14 (January 6 – March 31) to FY 2015-16 along with carrying cost. The details of revenue gap for FY 2013-14 (January 6 –March 31) to FY 2018-19 is provided in the detailed below.

Table 139: Revenue Gap Approved by the Commission in its earlier Orders (Rs. Crore)



| Particulars | FY 2013-14 (6 Jan - 31 Mar) | FY 2014-15 | FY 2015-16 | FY 2016-17 | FY 2017-18 |
|---|--------------------------------|---------------|------------------|-----------------|-----------------|
| Opening Revenue Gap | - | 65.32 | 724.41 | 2,349.20* | 5,082.42 |
| Revenue Gap / (Surplus) created during the Year | 63.19 | 565.97 | 1,517.95 | 2,156.49 | (181.00) |
| Closing Gap at end of the Year | 63.19 | 631.29 | 2,242.35 | 4,505.70 | 4,901.43 |
| Rate of Interest (As per prevailing SBI PLR rate) | 0.14 | 0.15 | 0.15 | 0.13 | 0.13 |
| Carrying Cost on Opening Balance | - | 9.63 | 106.85 | 300.70 | 635.30 |
| Carrying cost on Additional Gap Created during the Year | 2.13 | 83.48 | - | 276.03 | (22.62) |
| Total Gap including carrying cost | 65.32 | 724.41 | 2,349.20* | 5,082.42 | 5,514.11 |

8.6 The Petitioner further submitted that though the Commission in its Tariff Order dated April 27, 2018 approved an Accumulated Gap of Rs. 2,349.20 Crore it hadn't considered the interest on Revenue Gap created during FY 2015-16. The Petitioner has recalculated the Revenue Gap at the end of FY 2015-16 based on the value approved by the Commission. The Petitioner has calculated the Revenue Gap at the end of FY 2018-19 using the same methodology adopted by the Commission in its Earlier Orders as below:

Table 140: Revenue Gap submitted by the Petitioner till FY 2018-19 (Rs. Crore)

| Particular | FY 2015-16 | FY 2016-17 | FY 2017-18 | FY 2018-19 |
|---|-----------------|-----------------|-----------------|------------------|
| Opening Revenue Gap | 724.41 | 2,573.11 | 5,757.43 | 7,739.40 |
| Revenue Gap / (Surplus) created during the Year | 1517.95 | 2,531.00 | 1,115.93 | 2,789.17 |
| Closing Gap at end of the Year | 2,242.36 | 5,104.10 | 6,873.36 | 10,528.57 |
| Rate of Interest (As per prevailing SBI PLR rate) | 14.75% | 12.80% | 12.60% | 12.20% |
| Carrying Cost on Opening Balance | 106.85 | 329.36 | 725.44 | 944.21 |
| Carrying cost on Additional Gap Created during the Year | 223.90 | 323.97 | 140.61 | 340.28 |
| Total Gap including carrying cost | 2,573.11 | 5,757.43 | 7,739.40 | 11,813.05 |

8.7 The Petitioner requested the Commission to approve the cumulative revenue gap until FY 2018-19 as proposed by the Petitioner.

8.8 The Petitioner further stated that it has filed a Petition before the Hon'ble APTEL against the impugned Tariff Order dated April 27, 2018 which is sub-judice. The Petitioner therefore requested the Commission that outcome of the order of Hon'ble APTEL should also be included while calculating the Gap for FY 2019-20.

Commission's Analysis



- 8.9 The Commission has completed the true-up till FY 2015-16 vide its Order dated APRIL 27, 2018. Hence, the Commission is considering the gap approved of Rs. 2349.20 Crore as the closing gap for FY 2015-16 and calculated the Cumulative Gap till FY 2018-19 based on the values approved in this Order for FY 2016-17, FY 2017-18 and FY 2018-19.
- 8.10 The Commission is of the view that the Petition for True-up for FY 2016-17 should have been submitted by November 30, 2017 as per the JSERC Distribution Tariff Regulations, 2015. However, the Petitioner filed its Petition in November, 2018, which clearly indicates that the Petitioner has not complied with the timelines specified by the Commission. Accordingly, the Commission finds it prudent not to allow any carrying cost for the FY 2016-17.
- 8.11 The Commission has observed that the Petitioner has not considered the aid received in FY 2016-17 under UDAY Scheme for Rs. 6136.37 Crore for calculation of Revenue Gap. The Commission in its previous Order dated April 27, 2018 had directed the Petitioner to expedite the conversion of State Government loan into grant/ equity as per the agreed UDAY MoU. However, the Petitioner has failed to submit the details before the Commission. Hence, the Commission has considered the amount as Grant. In addition, as per Clause 1.2 i) of the MoU Signed under UDAY Scheme, the GoJ shall take over 5% of the Loss of FY 2016-17 in FY 2017-18 and 10% of the Loss of FY 2017-18 in FY 2018-19. The same has been considered by the Commission for calculation of Revenue Gap till FY 2018-19 as tabulated below:

Table 141: Cumulative Revenue Gap Approved by the Commission till FY 2018-19 (Rs. Crore)

| Particulars | FY 2016-17 | FY 2017-18 | FY 2018-19 |
|---|------------------|------------------|----------------|
| Opening Revenue Gap | 2,349.20 | -1,320.49 | -1,388.62 |
| Revenue Gap / (Surplus) created during the Year | 2,165.98 | 92.43 | 1,299.20 |
| UDAY Grants | 6,136.37 | - | - |
| Resultant Gap/Surplus during the Year | -3,970.39 | 92.43 | 1,299.20 |
| Closing Gap at end of the Year | -1,621.19 | -1,228.06 | -89.42 |
| Rate of Interest | 12.80% | 12.60% | 12.20% |
| Carrying Cost on Opening Balance | 300.70 | -166.38 | -169.41 |
| Carrying cost on Additional Gap Created during the Year | | 5.82 | 79.25 |
| Total Gap including carrying cost | -1,320.49 | -1,388.62 | -179.58 |

Treatment of Revenue gap and Creation of Regulatory Asset

Petitioner's Submission



8.12 The Petitioner submitted that considering the above cumulative revenue gap until FY 2018-19, it can be seen that the revenue from proposed tariff will only provide a partial relief to the Petitioner in recovering its revenue gap. Given the significant amount of revenue gap, the whole impact may not be possible to be passed on to consumers, by way of revision in Retail Tariffs, as it may lead to an inexorable Tariff Shock. Therefore, the Petitioner has proposed for creation of Regulatory Asset, which is as per the Regulation 10 of JSERC (Terms and Conditions for Determination of Distribution Tariff) Regulations 2015. Regulation 10.3 is reproduced below-

“10.3 Provided that if such variations are large, and it is not feasible to recover in one year alone, the Commission may take a view to create a regulatory asset, as per the guidelines provided in clause 8.2.2 of the National Tariff Policy;”

8.13 The Petitioner requested the Commission for creation of regulatory assets of such uncovered revenue gap, as discussed in the subsequent paragraphs.

8.14 The Petitioner submitted that there are cost component in JBVNL’s past Annual Revenue Requirement filing, which have been recognized but deferred for future by the Commission. Since such gap is now significantly high, it is now inevitable that the gap be passed in the subsequent Tariff Revisions. As discussed, a revenue gap of Rs. 11,813.05 Crore until FY 2018-19 including the True-up for FY 2013-14 (6 Jan – 31 Mar) to FY 2015-16 has been estimated, which the Petitioner proposes to meet through creation of Regulatory Asset.

8.15 The Petitioner in view of above requested the Commission to approve the above Regulatory Assets worth Rs 11,813.05 Crore and provide an appropriate recovery mechanism to recover the Regulatory Assets as per the provisions of Tariff Regulations 2010 and guidelines of National Tariff Policy 2016.

8.16 The Petitioner further proposed a period of 5 years that may be considered by the Commission to amortize the Regulatory Assets and passed on to the consumers over the same period in equal tranches. During the period, the Petitioner also prayed for providing return on such regulatory asset to the tune of weighted average cost of capital i.e. 12.5%

8.17 The Petitioner further submitted that the creation of Regulatory Assets has been a common practice amongst other States of the Country. The same has been allowed by the DERC in order on True-up for FY 2013-14, ARR and Distribution Tariff for FY 2015-16 for BSES Rajdhani Power Limited dated September 2015. The Petitioner reproduced relevant sections from Tariff Order as below.



“2.280 - Recovery of accumulated revenue gap, Regulatory Asset as envisaged in clause 8.2.2 of Tariff policy is as under:

- a. Carrying cost of Regulatory Assets should be allowed to the utilities.*
- b. Recovery of Regulatory Assets to be time bound and within a period not exceeding three years at the most, preferably within the control period.*
- c. The use of the facility of Regulatory Assets should not be retrospective.*
- d. In case when Regulatory Asset is proposed to be adopted, it should be ensured that the ROE should not become unreasonably low in any year so that the capability of licensee to borrow is not adversely affected.*

2.282 - The Commission is guided by the National Tariff Policy and in accordance with the Hon'ble APTEL judgment has allowed carrying cost to DISCOMs. For liquidation of the past accumulated revenue gap, the Commission introduced a surcharge of 8% over the revised Tariff, in tariff order dated July 13, 2012, and has been revising tariffs every year to a reasonable level to provide additional revenue to DISCOMs and also to reduce the burden of carrying cost on the consumers of Delhi.

2.283 - Therefore, while the tariff increase from FY 2011-12 onwards has to some extent offset the incremental increase in revenue gap, however cumulative revenue gap along with applicable carrying costs still remained uncovered. Thus, the formula evolved by the Commission i.e., including carrying costs in the ARR every year, for tariff determination and using 8% surcharge for liquidating the principal over a time is expected to liquidate the Regulatory Assets in a reasonable period of 6 to 8 years.”

- 8.18 The Petitioner further added another case for allowance of regulatory assets can be seen in Maharashtra where Maharashtra Electricity Regulatory Commission (MERC) allowed R-Infra to recover its regulatory assets for FY 2008-09 and FY 2009-10 of Rs. 178 Crore and Rs. 554 Crore respectively through Tariff.
- 8.19 The Petitioner requested the Commission to approve the Regulatory Assets through the recovery mechanism suggested by the Petitioner as per the provisions of Tariff Regulations 2010 and guidelines of National Tariff Policy 2016.
- 8.20 The Petitioner has computed the expected revenue for FY 2019-20 from sale of power by considering the existing fixed charges and variable charges per unit. Further, to arrive at the final gap for FY 2019-20, the Petitioner has adjusted the impact of recovery of previous cumulative revenue gap till FY 2018-19. The Petitioner has proposed to amortize the



Regulatory Asset in five years period starting from FY 2019-20 as detailed in the table below:

Table 142: Treatment of Revenue Gap submitted by the Petitioner for FY 2019-20 (Rs. Crore)

| Particular | Amount (Rs. Crore) |
|---|--------------------|
| ARR required for FY 2019-20 | 8,375.24 |
| Revenue Gap till FY 2018-19 | 11,813.05 |
| Carrying Cost of Revenue Gap till FY 2018-19 | 1,441.19 |
| Total Revenue Gap for FY 2019-20 (Incl. Revenue Gap with carrying cost till FY 2018-19) | 21,629.49 |
| Revenue at current Tariff | 5,928.52 |
| Gap at Current Tariff | 15,700.97 |
| Revenue at Proposed Tariff | 7,261.91 |
| Revenue from tariff Increase | 1,333.39 |
| Balance Gap | 14,367.58 |

8.21 The Petitioner submitted that after adjusting the revenue and ARR for FY 2019-20, the Petitioner is still left with the uncovered revenue gap to the tune of Rs. 14,367.58 Crore. The Petitioner requested the Commission to approve the revenue gap for FY 2019-20 as proposed by the Petitioner and requested that the same to be allowed in subsequent Tariff Orders.

Commission's Analysis

8.22 The Commission has computed total revenue gap till FY 2018-19 after factoring in the financial assistance under UDAY Scheme. The Commission has considered that 25% of the overall loss in FY 2018-19 shall be taken over by GoJ in FY 2019-20 as per the MoU signed under UDAY Scheme. The Commission has considered the Gap/Surplus approved till FY 2018-19 as part of FY 2019-20. The Revenue Gap approved till FY 2019-20 is summarised below:

Table 143: Revenue Gap approved till FY 2019-20 (Rs. Crore)

| Particulars | FY 2019-20 |
|---|-----------------|
| ARR approved for FY 2019-20 | 7,164.22 |
| Revenue at Existing Tariff for FY 2019-20 | 6,270.03 |
| Opening Revenue Gap | -179.58 |
| Revenue Gap / (Surplus) created during the Year | 894.19 |
| UDAY Grants | - |
| Resultant Gap/(Surplus) during the Year | 894.19 |
| Closing Gap at end of the Year | 714.61 |
| Rate of Interest | 12.20% |
| Carrying Cost on Opening Balance | -21.91 |
| Carrying cost on Additional Gap Created during the Year | |



| Particulars | FY 2019-20 |
|---|-------------------|
| ARR approved for FY 2019-20 | 7,164.22 |
| Revenue at Existing Tariff for FY 2019-20 | 6,270.03 |
| Total Gap including carrying cost | 692.70 |

8.23 The Commission has increased and rationalized the tariff across different consumer categories so that the above gap can be recovered through Revised Tariff. Tariff approved by the Commission for various categories has been discussed in detail in further sections of this Order.



A 9: DETERMINATION OF WHEELING CHARGE, WHEELING LOSSES AND CROSS SUBSIDY SURCHARGE FOR FY 2019-20

9.1 As per Clause 3.1 of the JSERC Distribution Tariff Regulations, 2015, the Commission shall determine wheeling tariff, cross-subsidy surcharge, additional surcharge and other open access related charges. The relevant extract of the regulations has been reproduced below:

“3.1

...

Provided further that where the Commission has permitted open access to any category of consumers under Section 42 of the Act, the Commission shall determine the wheeling tariff, cross-subsidy surcharge, additional surcharge and other open access related charges in accordance with these Regulations and JSERC (Open Access in Intra-State Transmission and Distribution) Regulations, 2005 and as amended from time to time;”

9.2 As per the Jharkhand State Electricity Regulatory Commission (Terms and Conditions for Intra-State Open Access) Regulations, 2016, the Open Access charges includes wheeling charges, wheeling losses, Cross subsidy charges and additional surcharge apportioned voltage wise at 33 kV and above, 11kV and LT levels.

9.3 The Petitioner has submitted its proposal for the determination of wheeling charge, cross subsidy surcharge for the FY 2019-20 in response to the Commission’s comments in the TVS held on January 30, 2019.

9.4 The following sections summarize the Petitioner’s submission and Commission’s analysis thereof:

Wheeling Charges

Petitioner’s Submission

9.5 The Petitioner submitted that an agency has been selected for conducting study on Voltage-wise Cost of Supply (VCoS) and the agency has initiated the work. This study is expected to be finalised within three months. However, in the absence of above study, the methodology adopted by the Petition for determining wheeling charges is detailed below.



9.6 The Petitioner submitted that Since the Jharkhand State Electricity Regulatory Commission (Terms and Conditions for Determination of Distribution Tariff) Regulations, 2015 does not specify a methodology for wheeling charge calculation, the Petitioner has proposed the methodology based on the review of methodologies followed by several other state regulators and their applicability in respect to the State of Jharkhand

9.7 The methodology used for calculating voltage level wise wheeling charges as submitted by the Petitioner is as follows:

- Step 1: Segregation of distribution ARR into wires and supply business
- Step 2: Allocation of wires business ARR to various voltage levels
- Step 3: Stacking of higher voltage level costs onto lower voltage levels

9.8 In order to compute the wheeling charges, the Petitioner has apportioned the estimated sales for FY 2018-19 into 33 KV and above, 11 KV and LT voltage levels. The Petitioner has also computed the voltage wise distribution loss taking in reference the study performed in FY 2010-11 on voltage-wise cost of supply. Further, the bifurcation of assets into different voltage levels has been based on the latest available network details and usage of network at each level.

9.9 The Petitioner submitted that the ARR proposed in the tariff Petition for FY 2019-20 has been segregated into wires and supply business based on the allocation ratios defined under sub-regulation 42.4 of the Jharkhand State Electricity Regulatory Commission (Power Regulatory Accounting) Regulations 2016. The segregation as provided by the Petitioner has been tabulated below:

Table 144: Segregation of ARR submitted by the Petitioner for FY 2019-20 (Rs. Crore)

| Particulars | Share of Supply Business | Share of Wires Business | ARR proposed for FY 2019-20 | Supply Business ARR (Rs Crore) | Wires Business ARR (Rs Crore) |
|------------------------------------|--------------------------|-------------------------|-----------------------------|--------------------------------|-------------------------------|
| O&M Cost | | | | | |
| Employee cost | 40% | 60% | 256.2 | 102.5 | 153.7 |
| A&G Expense | 50% | 50% | 81.8 | 40.9 | 40.9 |
| R&M Cost | 10% | 90% | 256.0 | 25.6 | 230.4 |
| Power purchase (Inc. PGCIL & RLDC) | 100% | 0% | 6,401.5 | 6,401.5 | 0.0 |
| Interest on security deposit | 100% | 0% | 48.5 | 48.5 | 0.0 |
| Interest Cost | 10% | 90% | 339.3 | 33.9 | 305.3 |
| Interest on working capital | 90% | 10% | 50.5 | 45.5 | 5.1 |
| Depreciation | 10% | 90% | 462.8 | 46.3 | 416.6 |



| Particulars | Share of Supply Business | Share of Wires Business | ARR proposed for FY 2019-20 | Supply Business ARR (Rs Crore) | Wires Business ARR (Rs Crore) |
|--------------------|--------------------------|-------------------------|-----------------------------|--------------------------------|-------------------------------|
| Return on Equity | 10% | 90% | 305.1 | 30.5 | 274.6 |
| Less: Other income | 90% | 10% | -123.0 | -110.7 | -12.3 |
| Total ARR | | | 8,078.8 | 6,664.5 | 1,414.3 |

9.10 The Petitioner then allocated the Wires Business ARR to different supply voltages in the ratio of fixed assets, related to wires business, at each voltage level. The Petitioner submitted that in the absence of an Asset Register, detailed information of such assets, segregated among different voltage levels is not available and segregation of voltage wise assets would require determining the original cost of each asset, their present cost after depreciation, their remaining life and their classification into voltage levels.

9.11 Further, due to growing village electrification and increasing power demand in Jharkhand there has been significant growth in the power distribution infrastructure. The present distribution system of JBVNL consists of both old depreciated as well as newly laid infrastructure. Due to these complexities, collecting this data would take substantial effort and time, which may delay the determination of wheeling and open access charges further.

9.12 The Petitioner submitted that in the present situation, in order to estimate the ratio of fixed assets at various voltage levels, the network details of JBVNL as on December, 2018 are used by for determining the assets at each voltage level. Further, the number of assets is multiplied by the present purchase cost of assets as per Cost Data book of JBVNL for FY 2017-18 to estimate their present cost (without taking consideration of depreciation). The value of different assets types (calculated based on the assumptions discussed above) and their classification into voltage level as submitted by the Petitioner, are detailed in the tables below:

Table 145: Estimated Cost of PSS submitted by the Petitioner for FY 2019-20 (Rs. Lakh)

| PSS (capacity) | Quantity (Nos) | Cost/ PSS | Total Cost |
|----------------|----------------|-----------|------------|
| 10 MVA | 159 | 180.2 | 28,648.4 |
| 7.5 MVA | 2 | 160.0 | 320.0 |
| 7.15 MVA | 10 | 150.0 | 1,500.0 |
| 5 MVA | 554 | 113.7 | 62,993.3 |
| 3.15 MVA | 136 | 105.0 | 14,280.0 |
| 3 MVA | 14 | 90.0 | 1,260.0 |
| 1.6 MVA | 15 | 80.0 | 1,200.0 |

Table 146: Estimated Cost of Lines submitted by the Petitioner for FY 2019-20 (Rs. Lakh)



| Line Length | Length | Cost/ km | Total Cost |
|-------------------------|----------|----------|------------|
| 33 kV Incoming (in km.) | 6,844 | 20.6 | 1,41,325.6 |
| 33 kV Outgoing (in km.) | 2,735 | 20.6 | 56,470.6 |
| 11 kV Length (in km.) | 58,581 | 7.0 | 4,08,116.5 |
| LT Length (in km.) | 1,34,443 | 6.0 | 8,07,848.4 |

Table 147: Estimated Cost of DTRs submitted by the Petitioner for FY 2019-20 (Rs. Lakh)

| DTR (capacity) | Quantity | Cost/ DTR | Total Cost |
|----------------|----------|-----------|------------|
| 500 KVA | 275 | 7.65 | 2,103.4 |
| 250 KVA | 75 | 6.00 | 450.0 |
| 200 KVA | 6,771 | 4.39 | 29,707.8 |
| 150 KVA | 30 | 4.00 | 120.0 |
| 100 KVA | 19,288 | 3.31 | 63,835.8 |
| 63 KVA | 9,700 | 2.94 | 28,527.1 |
| 25 KVA | 19,022 | 2.20 | 41,895.8 |
| 16 KVA | 12,673 | 1.90 | 24,078.7 |
| 10 KVA | 17,972 | 1.70 | 30,552.4 |

9.13 The Petitioner submitted that in the absence of asset register, the consideration of present cost of creating the distribution infrastructure is built on a premise, that the high voltage and low voltage assets have been created simultaneously. Thus, the depreciation of all HT and LT assets is assumed to be at the similar level.

9.14 Based on the above, the estimated present cost of assets, apportioned into different voltage levels as submitted by the petitioner is depicted in the table below:

Table 148: Voltage-wise Asset Ratio submitted by the Petitioner for FY 2019-20 (Rs. Lakh)

| Voltage levels | Total cost | Ratio |
|----------------|--------------|-------|
| 33 kV | 3,07,997.8 | 18% |
| 11 kV | 4,08,116.5 | 23% |
| LT | 10,29,119.34 | 59% |

9.15 Based on the voltage wise asset bifurcation, the Petitioner has allocated the Wires Business ARR at respective voltage levels, as depicted in the table below:

Table 149: Voltage-wise Allocation of ARR of wire business submitted by the Petitioner for FY 2019-20 (Rs. Crore)

| Voltage levels | Asset Segregation | Asset Segregation (%) | Segregation of ARR |
|-----------------|-------------------|-----------------------|--------------------|
| LT | 10,291.19 | 59.0% | 833.98 |
| 11 kV | 4,081.17 | 23.4% | 330.73 |
| 33 kV and above | 3,079.98 | 17.6% | 249.60 |
| Total | 17,452.34 | | 1,414.30 |



9.16 The Petitioner submitted that the above methodology of segregation of ARR is in line with several other States, whereby the average cost of assets is utilized to arrive at the ratio for segregation.

9.17 Further, assuming power is injected at higher voltage levels and flows linearly from higher to lower voltage levels, the Petitioner assumed that

- The power wheeled to LT consumers first passes through the 33kV network, then 11kV network and finally onto LT network.
- The power wheeled to 11kV consumer would first pass through 33kV network and then onto 11kV network. Therefore, the assets pertaining to 33 kV and above voltage level are being used to supply power to consumers connected at 33 kV and above, 11 kV and LT level.
- The assets pertaining to 11 kV are being used to supply power to consumers connected at 11 kV and LT level. Finally, the assets at LT level are being used by LT consumer only.

9.18 Based on the above, the Wires Business ARR of higher voltage levels, is apportioned by the Petitioner between lower voltage levels in the ratio of voltage wise energy sales, and stacked accordingly. The consumer category wise energy sales allocated to different voltage levels by the Petitioner is depicted in the table below:

Table 150: Voltage-wise Sales submitted by the Petitioner for FY 2019-20

| Consumer Category | Voltage Level | Sales (MU) |
|---------------------------------|-----------------|------------|
| Domestic | LT | 6,116.5 |
| Domestic | HT | 23.9 |
| Commercial | LT | 1,014.2 |
| Irrigation & Agricultural / IAS | LT | 221.6 |
| LTIS | LT | 265.5 |
| THIS | 11 kV | 894.1 |
| THIS | 33 kV and Above | 1,648.3 |
| Institutional | LT | 82.2 |
| Institutional | 11 kV | 19.4 |
| Institutional | 33 kV and Above | 102.0 |

9.19 Accordingly, the voltage wise energy sales ratio as submitted by the Petitioner is provided in the table below:



Table 151: Voltage-wise Sales Ratio submitted by the Petitioner for FY 2019-20

| Voltage level | Sales in MU | Sales Ratio |
|-----------------|-------------|-------------|
| LT | 7,700.0 | 74% |
| 11 kV | 937.4 | 9% |
| 33 kV and Above | 1,750.3 | 17% |
| Total | 10,387.6 | |

9.20 The voltage wise Wires Business ARR (allocated earlier in the ratio of fixed assets), is now stacked from higher to lower voltage levels, based on energy sales ratio, as tabulated below:

Table 152: Cost Stacking submitted by the Petitioner for FY 2019-20 (Rs. Crore)

| Voltage level | Total Wires Business ARR allocated in the ratio of fixed assets | Cost Staking on the basis of energy sales | | |
|-----------------|---|---|-------|-------|
| | | LT | 11 kV | 33 kV |
| LT | 834.0 | 834.0 | | |
| 11 kV | 330.7 | 294.8 | 35.9 | |
| 33 kV and Above | 249.6 | 185.0 | 22.5 | 42.1 |
| Total | 1,414.3 | 1,313.8 | 58.4 | 42.1 |

9.21 Based on the above, the voltage wise wheeling charges for the FY 2018-19 submitted by the Petitioner has been tabulated below:

Table 153: Wheeling Cost submitted by the Petitioner for FY 2019-20

| Voltage level | Wires Business ARR (Rs. Crore) | Energy Sales (MU) | Wheeling Charge (Rs./unit) |
|-----------------|--------------------------------|-------------------|----------------------------|
| LT | 1,313.8 | 7700.0 | 1.71 |
| 11 kV | 58.4 | 937.4 | 0.62 |
| 33 kV and Above | 42.1 | 1750.3 | 0.24 |

Commission's Analysis

9.22 According to Regulation 5.4 and Regulation 5.5 of JSERC Distribution Tariff Regulations, 2015, the Petitioner is required to segregate the accounts of the Licensed Business into Wheeling Business and Retail Supply Business. In absence of segregated accounts, the Petitioner is required to submit an allocation statement duly approved by the Board of Directors accompanied with an explanation of the basis and methodology used for segregation. The relevant extract of the Regulation has been reproduced hereunder:

“5.4 The Licensee shall segregate the accounts of the Licensed Business into Wheeling Business and Retail Supply Business. The ARR for Wheeling Business shall be used to determine Wheeling Tariff and the ARR for Retail Supply Business to determine Retail Supply Tariff;



5.5 For such period until accounts are segregated, the Licensees shall prepare an Allocation Statement to apportion costs and revenues to respective business. The Allocation Statement, approved by the Board of Directors of the Licensee, shall be accompanied with an explanation of the basis and methodology used for segregation which should be consistent over the Control Period.”

9.23 The Petitioner has not submitted duly approved allocation statement. The Commission in its earlier Order dated June 21, 2017 had directed the Petitioner to make separate accounting for wheeling & retail supply business. The relevant excerpts of the Order is reproduced below:

“13.34 The Commission strictly directs the Petitioner to make separate accounting for both the businesses and submit the allocation statement for the FY 2016-17 duly approved by the Board of Directors within 3 months of the date of issue of the Tariff Order.”

9.24 The Petitioner has not complied with the directions of the Commission. The Petitioner has not submitted board allocation statement for the segregation into wheeling & retail business. The Commission observed that the Petitioner has not justified the basis for allocation of the ARR among Wheeling and Supply businesses.

9.25 The Petitioner further submitted that is in the process of preparing a separate petition for wheeling charges and cross-subsidy surcharges under which it has attempted to segregate the figures for ARR among the Retail and Wheeling Business with proper justification.

9.26 The Petitioner in its Petition for determination of wheeling and cross subsidy surcharge has segregated the ARR based on the methodology adopted by the Commission in its earlier Order.

9.27 In absence of separate accounting for wheeling and retail supply business and board allocation statement, the Commission is constrained to consider the allocation ratios as per clause 42.4 of the JSERC (Power Regulatory Accounting) Regulations, 2016. The allocation ratios considered as per the regulations and the wheeling supply ARR as tabulated below:

Table 154: Segregation of ARR approved for FY 2019-20 (Rs. Crore)



| Particulars | Share of Supply Business | Share of Wires Business | ARR approved for FY 2019-20 | Supply Business ARR (Rs. Crore) | Wires Business ARR (Rs. Crore) |
|------------------------------------|--------------------------|-------------------------|-----------------------------|---------------------------------|--------------------------------|
| O&M Cost | | | | | |
| Employee cost | 40% | 60% | 233.29 | 93.32 | 139.98 |
| A&G Expense | 50% | 50% | 82.65 | 41.32 | 41.32 |
| R&M Cost | 10% | 90% | 210.37 | 21.04 | 189.33 |
| Power purchase (Inc. PGCIL & RLDC) | 100% | 0% | 6,003.60 | 6,003.60 | 0.00 |
| Interest on security deposit | 100% | 0% | 57.62 | 57.62 | 0.00 |
| Interest Cost | 10% | 90% | 229.05 | 22.91 | 206.15 |
| Interest on working capital | 90% | 10% | 19.43 | 17.49 | 1.94 |
| Depreciation | 10% | 90% | 254.12 | 25.41 | 228.71 |
| Return on Equity | 10% | 90% | 219.54 | 21.95 | 197.59 |
| Less: Other income | 90% | 10% | -145.46 | -130.91 | -14.55 |
| Total ARR | | | 7,164.22 | 6,173.74 | 990.48 |

9.28 In absence of asset register, to estimate the ratio of fixed assets at various voltage levels, the Petitioner has considered the network details of JBVNL as on December, 2018 on the consideration that the high voltage and low voltage assets have been created simultaneously. Thus, the depreciation of all HT and LT assets is assumed to be at the similar level.

9.29 In absence of the voltage wise depreciated value of fixed asset costs (Net fixed assets), the Commission is constrained to consider the methodology adopted by the Petitioner in considering that all the assets are created simultaneously.

9.30 Further, the number of assets is multiplied by the present purchase cost of assets as per Cost Data book of JBVNL as for FY 2017-18 to estimate their present cost (without taking consideration of depreciation). The value of different assets types (calculated based on the assumptions discussed above) and their classification into voltage level as approved by the Commission, are detailed in the tables below:

Table 155: Estimated Cost of PSS approved for FY 2019-20 (Rs. Lakh)

| PSS (capacity) | Quantity (Nos) | Cost/ PSS | Total Cost |
|----------------|----------------|-----------|------------|
| 10 MVA | 159 | 180.2 | 28,648.4 |
| 7.5 MVA | 2 | 160.0 | 320.0 |
| 7.15 MVA | 10 | 150.0 | 1,500.0 |
| 5 MVA | 554 | 113.7 | 62,993.3 |
| 3.15 MVA | 136 | 105.0 | 14,280.0 |
| 3 MVA | 14 | 90.0 | 1,260.0 |
| 1.6 MVA | 15 | 80.0 | 1,200.0 |



Table 156: Estimated Cost of 33 kV, 11 kV and LT Lines as approved for FY 2019-20 (Rs. Lakh)

| Line Length | Length | Cost/ km | Total Cost |
|-------------------------|----------|----------|------------|
| 33 kV Incoming (in km.) | 6,844 | 20.6 | 1,41,325.6 |
| 33 kV Outgoing (in km.) | 2,735 | 20.6 | 56,470.6 |
| 11 kV Length (in km.) | 58,581 | 7.0 | 4,08,116.5 |
| LT Length (in km.) | 1,34,443 | 6.0 | 8,07,848.4 |

Table 157: Estimated Cost of DTRs approved for FY 2019-20 (Rs. Lakh)

| DTR (capacity) | Quantity | Cost/ DTR | Total Cost |
|----------------|----------|-----------|------------|
| 500 KVA | 275 | 7.65 | 2,103.4 |
| 250 KVA | 75 | 6.00 | 450.0 |
| 200 KVA | 6,771 | 4.39 | 29,707.8 |
| 150 KVA | 30 | 4.00 | 120.0 |
| 100 KVA | 19,288 | 3.31 | 63,835.8 |
| 63 KVA | 9,700 | 2.94 | 28,527.1 |
| 25 KVA | 19,022 | 2.20 | 41,895.8 |
| 16 KVA | 12,673 | 1.90 | 24,078.7 |
| 10 KVA | 17,972 | 1.70 | 30,552.4 |

9.31 Based on the above, the estimated present cost of assets, apportioned into different voltage levels is depicted in the table below:

Table 158: Voltage-wise Asset Ratio approved for FY 2019-20 (Rs. Lakh)

| Voltage levels | Total cost | Ratio |
|----------------|--------------|-------|
| 33 kV | 3,07,997.8 | 18% |
| 11 kV | 4,08,116.5 | 23% |
| LT | 10,29,119.34 | 59% |

9.32 Based on the voltage wise asset bifurcation, the Wires Business ARR at respective voltage levels, is depicted in the table below:

Table 159: Voltage-wise ARR of wire business approved for FY 2019-20 (Rs. Crore)

| Voltage levels | Asset Segregation | Asset Segregation (%) | Segregation of ARR |
|-----------------|-------------------|-----------------------|--------------------|
| LT | 10,291.19 | 59.0% | 584.06 |
| 11 kV | 4,081.17 | 23.4% | 231.62 |
| 33 kV and above | 3,079.98 | 17.6% | 174.80 |
| Total | 17,452.34 | | 990.48 |

9.33 The Wires Business ARR for different voltage levels as approved by the Commission has been apportioned between lower voltage levels in the ratio of voltage wise energy sales, and stacked accordingly in line with the methodology adopted by the Petitioner as discussed earlier in this Order. The consumer category wise energy sales as approved by



the Commission has been allocated to different voltage levels as depicted in the table below:

Table 160: Voltage-wise Sales approved for FY 2019-20 (Rs. Crore)

| Category | Voltage level | Voltage-wise Sales | Aggregated sales |
|-------------------------|-------------------|--------------------|------------------|
| Domestic | LT | 6,612 | 6,638 |
| | 11 kV | 26 | |
| | 33 kV and Above | - | |
| Commercial/Non Domestic | LT | 1,002 | 1,002 |
| | 11 kV | - | |
| | 33 kV and Above | - | |
| Irrigation / IAS | LT | 230 | 230 |
| Industrial | LT | - | 2,929 |
| | 11 kV | 1,210 | |
| | 33 kV and Above | 1,719 | |
| Institution | LT | 81 | 202 |
| | 11 kV | 19 | |
| | 33 kV and Above | 101 | |
| Total sales | All voltage level | 11,001 | 11,001 |

9.34 Accordingly, the voltage wise energy sales ratio as approved by the Commission is provided in the table below:

Table 161: Sales Ratio approved for FY 2019-20 (Rs. Crore)

| Voltage Level | Sales | Sales Ratio |
|-----------------|--------|-------------|
| LT | 7,926 | 72% |
| 11 kV | 1,255 | 11% |
| 33 kV and Above | 1,820 | 17% |
| Total | 11,001 | |

9.35 The voltage wise Wires Business ARR (allocated earlier in the ratio of fixed assets), is now stacked from higher to lower voltage levels, based on energy sales ratio, as tabulated below:

Table 162: Cost Stacking approved for FY 2019-20 (Rs. Crore)

| Voltage level | Voltage-wise ARR Allocation | Cost Staking on the basis of energy sales | | |
|-----------------|-----------------------------|---|-------|-------|
| | | LT | 11 kV | 33 kV |
| LT | 584.1 | 584.1 | | |
| 11 kV | 231.6 | 199.9 | 31.7 | |
| 33 kV and Above | 174.8 | 125.9 | 20.0 | 28.9 |
| Total | 990.5 | 909.9 | 51.7 | 28.9 |

9.36 Based on the above, the Voltage wise wheeling charges for the FY 2019-20 as approved by the Commission has been tabulated below:



Table 163: Wheeling Tariff approved by the Commission for FY 2019-20

| Voltage Categories | ARR (Rs. Crore) | Sales (MU) | Wheeling Tariff (Rs./kWh) |
|--------------------|-----------------|------------|---------------------------|
| LT | 909.9 | 7932.9 | 1.15 |
| 11 kV | 51.7 | 1257.6 | 0.41 |
| 33 kV and above | 28.9 | 1820.3 | 0.16 |

9.37 However, the Commission, in order to promote competition among licensee has decided to allow a discount of 50% on wheeling tariff for domestic LT consumers who opt to avail supply from other Distribution Licensee as per the provision of JSERC (Operation of Parallel Licensees) Regulations, 2019.

Voltage-wise Cost of Supply

9.38 The cost of supply is defined as the sum of all costs including the cost of power incurred by a distribution utility to supply electricity to a group of consumers.

9.39 The cost of supply is an essential parameter to arrive at the cross-subsidy levels. Further, Section 61(g) of the Electricity Act, 2003, as amended on June 15, 2007, states that

“Section 61. (Tariff regulations)

The Appropriate Commission shall, subject to the provisions of this Act, specify the terms and conditions for the determination of tariff, and in doing so, shall be guided by the following, namely:-

.....

(g) that the tariff progressively reflects the cost of supply of electricity and also, reduces cross-subsidies in the manner specified by the Appropriate Commission;

....”

9.40 Also, clause 8.3 of the National Tariff Policy, 2016 states that the Commission should determine a roadmap so that tariffs are brought within +/-20% of the average cost of supply. The relevant excerpts of the Policy have been reproduced below:

“8.3 Tariff design: Linkage of tariffs to cost of service

.....



(2) For achieving the objective that the tariff progressively reflects the cost of supply of electricity, the Appropriate Commission would notify a roadmap such that tariffs are brought within $\pm 20\%$ of the average cost of supply.

.....”

- 9.41 Further, if strict commercial principles are to be followed, then the tariffs for each category of consumers is to be set based on the cost of supply for each category. However, it is difficult to determine the same pertaining to the issues of data adequacy.
- 9.42 The Commission is of the view that waiting indefinitely for the required data is not prudent and decided to initiate the computation of voltage wise cost of supply based on the data made available by the Petitioner as of now, which, for greater extent would reflect the actual voltage wise cost of supply.
- 9.43 In view of the same, the Commission decided to follow the methodology proposed by Hon’ble APTEL’s for the computation of voltage wise cost of supply in its Order dated May 10, 2012. The key interpretations made by the Hon’ble APTEL has been summarized below:
- a. Identical consumers connected at different nodes in the distribution network need not be differentiated.
 - b. In the absence of segregated network costs, it would be prudent to work out the voltage-wise cost of supply taking into account the distribution losses at different voltage levels.
 - c. The Power Purchase cost which is the major component of tariff can be segregated for different voltage levels taking into account the transmission and distribution losses, both commercial and technical, for the relevant voltage level and upstream system.
 - d. All consumer categories connected to the same voltage will have the same cost of supply.
- 9.44 The Commission based on the methodology proposed by Hon’ble APTEL has computed the voltage wise cost of supply as detailed below.
- 9.45 **Apportionment of Sales:** The approved sales for the FY 2019-20 have been apportioned to different voltage levels as tabulated below:



Table 164: Voltage-wise Sales approved for FY 2019-20 (Rs. Crore)

| Category | Voltage level | Voltage-wise Sales | Aggregated sales |
|-------------------------|-------------------|--------------------|------------------|
| Domestic | LT | 6,612 | 6,638 |
| | 11 kV | 26 | |
| | 33 kV and Above | - | |
| Commercial/Non Domestic | LT | 1,002 | 1,002 |
| | 11 kV | - | |
| | 33 kV and Above | - | |
| Irrigation / IAS | LT | 230 | 230 |
| Industrial | LT | - | 2,929 |
| | 11 kV | 1,210 | |
| | 33 kV and Above | 1,719 | |
| Institution | LT | 81 | 202 |
| | 11 kV | 19 | |
| | 33 kV and Above | 101 | |
| Total sales | All voltage level | 11,001 | 11,001 |

9.46 **Voltage wise Technical losses:** As per para 33 of the APTEL Order dated May 10, 2012

“33. The technical distribution system losses in the distribution network can be assessed by carrying out system studies based on the available load data. Some difficulty might be faced in reflecting the entire distribution system at 11 KV and 0.4 KV due to vastness of data. This could be simplified by carrying out field studies with representative feeders of the various consumer mix prevailing in the distribution system.

....”

9.47 The Commission in its earlier Order dated April 27, 2018 had directed the Petitioner to conduct a detailed technical study on the voltage wise losses on the distribution network. However, the Petitioner has not submitted any such report till date.

9.48 The Petitioner vide its additional data requirement for the determination of wheeling charges, wheeling losses and cross-subsidy surcharge has submitted that a study for calculating voltage wise losses had been performed in the past for calculation of voltage-wise cost of supply (VCoS) in FY 2010-11 and the same has now been considered as the basis for estimating voltage-wise losses.

9.49 Further, it is pertinent to mention that the study was conducted on Load based approach on a simulation software where for 132 kV and above levels, the entire network has been modelled in the simulation software to calculate the losses. For 33 kV and below, the modelling was done on sample basis.



9.50 The Petitioner submitted that the voltage wise losses estimated in the VCoS study FY 2010-11, are reduced by a common factor so as to get an overall loss figure which matches with AT&C loss of FY 2019-20.

9.51 The Commission is of the view that the Petitioner’s assumption that the losses at all the levels would reduce at a common factor is ill-conceived as losses would have come down at a greater level than the LT level. However, as detailed earlier, Commission decided to compute voltage wise cost of supply based on the data made available by the Petitioner.

9.52 The Commission considered the technical loss levels at 14% for the FY 2019-20 as approved in the relevant sections of this Order and accordingly computed the voltage wise losses at different levels as tabulated below:

Table 165: Voltage-wise loss approved by the Commission for FY 2019-20

| Volt Level | Dist. loss level | Sales | Input | Tech Loss |
|------------|------------------|----------|----------|-----------|
| 33 kV | 3.10% | 1,820.4 | 1,878.7 | 58.2 |
| 11kV | 8.00% | 1,254.7 | 1,363.8 | 109.1 |
| LT | 17.00% | 7,925.6 | 9,548.9 | 1,623.3 |
| | | 11,000.8 | 12,791.4 | 1,790.7 |

9.53 As per para 34 of APTEL order dated May 10, 2012

“34. Thus Power Purchase Cost which is the major component of tariff can be segregated for different voltage levels taking into account the transmission and distribution losses, both commercial and technical, for the relevant voltage level and upstream system.

.....”

9.54 Accordingly, the Commission has computed the power purchase quantum at different voltage levels as tabulated below:

Table 166: Voltage-wise Power Purchase approved by the Commission for FY 2019-20

| Voltage Level | Voltage wise Losses | Sales (MU) | Input (MU) | Technical Loss (MU) | Commercial Loss (MU) | Total Power Purchase (MU) |
|---------------|---------------------|------------|------------|---------------------|----------------------|---------------------------|
| 33 kV & above | 3.10% | 1,820.3 | 1,878.5 | 58.2 | - | 1,878.54 |
| 11kV | 8.00% | 1,257.6 | 1,367.0 | 109.4 | - | 1,367.01 |
| LT | 17.00% | 7,932.9 | 9,557.8 | 1,624.8 | - | 9,557.75 |
| | | 11,010.9 | 12,803.3 | 1,792.4 | - | 12,803.30 |

*Note: Commercial Losses considered as 0% as per the AT&C Loss Trajectory approved by the Commission



9.55 **Allocation of power purchase cost for different voltage levels:** The Net power purchase cost approved by the Commission has been allotted to different voltage levels as tabulated below:

Table 167: Voltage-wise Power Purchase Cost approved by the Commission for FY 2019-20

| Voltage Level | Dist. loss level | Sales (MU) | Input (MU) | Net APPC (Rs./kWh) | Voltage-wise PP Cost (Rs./kWh) |
|---------------|------------------|------------|------------|--------------------|--------------------------------|
| 33 kV | 3.10% | 1,820.3 | 1,878.5 | 4.69 | 4.84 |
| 11kV | 8.00% | 1,257.6 | 1,367.0 | 4.69 | 5.10 |
| LT | 17.00% | 7,932.9 | 9,557.8 | 4.69 | 5.65 |
| | | 11,010.9 | 12,803.3 | 4.69 | 5.45 |

9.56 **Network Cost:** As per para 34 of the APTEL Order dated May 10, 1012

“34.....

As segregated network costs are not available, all the other costs such as Return on Equity, Interest on Loan, depreciation, interest on working capital and O&M costs can be pooled and apportioned equitably, on pro-rata basis, to all the voltage levels including the appellant’s category to determine the cost of supply.

....”

9.57 As per the above methodology, the Commission has calculated a uniform network cost for all the categories as tabulated below:

Table 168: Network Cost approved by the Commission for FY 2019-20

| Particulars | Share of Wheeling Business (Rs Crore) |
|--|---------------------------------------|
| O&M Cost | |
| <i>Employee cost</i> | 140.0 |
| <i>A&G Expense</i> | 41.3 |
| <i>R&M Cost</i> | 189.3 |
| Power purchase (Inc. Trans. Charges and RPO) | 0.0 |
| Interest on security deposit | 0.0 |
| Interest Cost | 206.1 |
| Interest on working capital | 1.9 |
| Depreciation | 228.7 |
| Return on Equity | 197.6 |
| Less: Other income | -14.5 |
| Total ARR | 990.5 |
| Total Sales (MU) | 11,000.75 |
| Network Cost (Rs./kWh) | 0.90 |



9.58 The voltage wise cost of supply for the FY 2019-20 as approved by the Commission has been tabulated below:

Table 169: VCoS approved by the Commission for FY 2019-20

| Volt Level | Voltage-wise PP Cost (Rs./kWh) | Network Cost (Rs./kWh) | VCoS (Rs./kWh) |
|------------|--------------------------------|------------------------|----------------|
| 33 kV | 4.84 | 0.90 | 5.74 |
| 11kV | 5.10 | 0.90 | 6.00 |
| LT | 5.65 | 0.90 | 6.55 |
| ACoS | | | 6.32 |

Cross Subsidy Surcharge

Petitioner's Submission

9.59 The Petitioner submitted that as per sub-regulation 6.57 of the Jharkhand State Electricity Regulatory Commission (Terms and Condition for Determination of Distribution Tariff), Regulations, 2015:

“The surcharge payable by consumers opting for open access on the network of the Licensee will be determined by the Commission as per the following formula:

$$S = T - [C / (1 - (L / 100)) + D]$$

Where,

S is the surcharge;

T is the Tariff payable by the relevant category of consumers;

C is the weighted average cost of power purchase of top 5% at margin excluding liquid fuel source and renewable energy sources;

L is the system losses of the Licensee for the applicable voltage level, as a percentage;

D is the wheeling charge (aggregate of transmission and distribution wheeling charges);”

9.60 The Petitioner submitted that a study had been performed in the past for calculation of voltage-wise cost of supply (VCoS) in FY 2010-11, which has been now considered as the basis for estimating voltage-wise losses.



9.61 The voltage wise losses estimated in the VCoS study 2010-11, are reduced by a common factor so as to get an overall loss figure which matches with AT&C loss of FY 2019-20, thus the ratio of loss between different voltage levels to remain same as tabulated below:

Table 170: Voltage-wise losses submitted for FY 2019-20

| Voltage | Cumulative Loss % in 2010-11 | Ratio | Cumulative Loss % in FY 2019-20 | Ratio |
|-----------|------------------------------|-------|---------------------------------|-------|
| 33 kV | 6.4% | 0.19 | 3.4% | 0.19 |
| 11 kV | 15.5% | 0.47 | 8.3% | 0.47 |
| LT | 32.8% | 1 | 17.5% | 1 |
| Aggregate | | | 15.0% | |

9.62 The Petitioner submitted that estimating voltage wise losses accurately, would require a detailed VCOS study, for which significant time and efforts would be required.

9.63 For the calculation of top 5% weighted average power purchase cost, the Petitioner considered the power purchase cost of NTPC Barh and NTPC Farraka III based on the power procurement plan submitted under tariff petition for FY 2019-20, which comes out to be Rs. 4.83 per unit.

9.64 Based on the voltage wise loss levels and voltage wise wheeling charges, the Petitioner estimated the cross-subsidy surcharge as per regulation 6.57 of the Jharkhand State Electricity Regulatory Commission (Terms and Condition for Determination of Distribution Tariff), Regulations, 2015 for various consumer categories as detailed in the table below:

Table 171: Cross Subsidy Surcharge submitted by the Petitioner for FY 2019-20 (Rs./kWh)

| Consumer categories | Voltage level | T- Tariff payable (ABR) | C- Power Purchase cost | L- System losses for the applicable voltage | D- Wheeling charge | S- Cross subsidy surcharge |
|---------------------------------|-----------------|-------------------------|------------------------|---|--------------------|----------------------------|
| Domestic | LT | 6.62 | 4.83 | 0.18 | 1.97 | 0.00 |
| Domestic | 11 kV | 6.57 | 4.83 | 0.08 | 0.88 | 0.85 |
| Commercial | LT | 7.62 | 4.83 | 0.18 | 1.97 | 0.81 |
| Irrigation & Agricultural / IAS | LT | 5.09 | 4.83 | 0.18 | 1.97 | 0.00 |
| LTIS | LT | 10.08 | 4.83 | 0.18 | 1.97 | 3.27 |
| HT-Industrial | 11 kV | 8.85 | 4.83 | 0.08 | 0.88 | 3.13 |
| HT-Industrial | 33 kV and Above | 6.73 | 4.83 | 0.03 | 0.50 | 1.39 |
| Institutional | LT | 6.92 | 4.83 | 0.18 | 1.97 | 0.11 |
| Institutional | 11 kV | 7.33 | 4.83 | 0.08 | 0.88 | 1.61 |
| Institutional | 33 kV and Above | 7.40 | 4.83 | 0.03 | 0.50 | 2.06 |



9.65 The Petitioner prayed the Commission to approve Cross subsidy surcharge for the FY 2019-20 as proposed.

Commission's Analysis

9.66 As per Clause 21.5 of the Jharkhand State Electricity Regulatory Commission (Terms and Conditions for Intra-State Open Access) Regulations, 2016:

“The Cross subsidy surcharge shall be determined by the Commission in accordance with the principles and formula stipulated in the National Tariff Policy and shall be leviable at the rate as determined by the Commission from time to time.”

9.67 The National Tariff Policy, 2016 has stipulated the following formula for computation of Cross Subsidy Surcharge:

$$S = T - [C / (1 - (L / 100)) + D + R]$$

Where,

S is the surcharge;

T is the Tariff payable by the relevant category of consumers, including reflecting the Renewable Purchase Obligation;

C is the per unit weighted average cost of power purchase by the Licensee including meeting the renewable purchase obligation;

L is the aggregate of transmission, distribution and commercial losses, applicable to the relevant voltage level, as a percentage;

D is the aggregate of transmission, distribution and wheeling charge applicable to the relevant voltage level;”

R is the per unit cost of carrying regulatory assets.

Provided that the surcharge shall not exceed 20% of the tariff applicable to the category of the consumers seeking open access.

9.68 The Commission has considered the Voltage-wise losses as approved in the previous section and grossed it up with the approved Transmission losses of 2.23% for calculation of “L”.

9.69 Weighted average purchase cost at the Discom for CSS computation works out to Rs 4.23 per unit by considering the Power Purchase Cost of Rs. 5416.17 (considering transmission charges and RPO compliance) and Power Purchase Quantum of 12,791.57 MU as approved by the Commission at the Distribution Periphery.



9.70 The Tariff Policy suggests that the surcharge shall not exceed 20% of the tariff applicable to the category of the consumers seeking open access. Accordingly, the cross subsidy surcharge approved by the Commission for FY 2019-20 is as follows:

❖ HT Services 11 kV

$$\text{CSS} = 7.07 - 4.69 / (1 - 10.05\%) - 0.66 - 0 = 1.19$$

❖ HT Services 33kV & Above

$$\text{CSS} = 6.39 - 4.69 / (1 - 5.26\%) - 0.41 - 0 = 1.03$$

9.71 The Tariff Policy suggests that the surcharge shall not exceed 20% of the tariff applicable to the category of the consumers seeking open access. Accordingly, the cross subsidy surcharge approved by the Commission for FY 2019-20 is as follows:

Table 172: Cross Subsidy Surcharge approved for FY 2019-20 (Rs./kWh)

| Category | ABR (T) | APPC (C) | Losses (L) % | Charges (D) | Reg. Assets (R) | CSS |
|---------------------------|---------|----------|--------------|-------------|-----------------|------|
| HT Services 11 kV | 7.07 | 4.69 | 10.05% | 0.66 | 0.00 | 1.19 |
| HT Services 33 kV & Above | 6.39 | 4.69 | 5.26% | 0.41 | 0.00 | 1.03 |

9.72 All consumers who wish to avail open access will be levied no charge for the use of distribution network other than wheeling & cross subsidy surcharge.



A 10: TARIFF PHILOSOPHY

Simplification and Rationalisation of Tariff

Petitioner's Submission

10.1 The Petitioner submitted that as per Clause 8.3 of National Tariff Policy, the tariffs need to be simplified and the consumer categories and slabs need to be reduced. In order to further simplify the tariff structure and in accordance with the National Tariff Policy 2016, the Petitioner has removed the slabs among the tariff categories and sub-categories. This would provide a simplified tariff which would not only be easy for the consumers to understand but for the utility as well for the purpose of billing. However, in order to reduce the financial burden on the low income and needy consumers segments, the Petitioner has proposed that the subsidy from the State Govt. should be given in slab-wise manner. This would ensure that the consumers would not be impacted with the removal of slabs among the categories and sub-categories.

Commission's Analysis

10.2 The Petitioner has proposed merging of Domestic Urban and Domestic Rural Categories. The proposed merging of the categories has been vehemently opposed by consumers of rural areas during the public hearing conducted by the Commission. The consumers have apprised in their written objections that the supply has been erratic and the Petitioner has been supplying power during off-peak hours when there is not much requirement of such power. This fact was to some extent acknowledged by the Petitioner in its replies given during the hearing.

10.3 The Commission has analysed the issue and is of the view that the Petitioner is yet to provide reliable and quality power throughout the State. The poor availability of power in some parts of the State does not justify the proposal to do away with the categorisation of Rural and Urban Tariffs at this stage. Hence, the Commission has approved separate Tariffs for Rural and Urban consumers in this Tariff Order. The Commission in order to further simplify the Tariff is of the view that all consumers (irrespective of the usage type except Streetlight and Agricultural Consumers) with contracted demand below 5kW should be considered as Domestic consumers. The Commission has considered this re-categorisation to enable financially challenged consumers to earn from their homes/workplaces without being levied commercial/LT tariffs. This would also do away with the necessity of having two separate connections for small economic activities to be done from home itself.



10.4 With regards to the existing HTS/HTSS, MES, RTS Consumers and Other Licensees drawing power at HT voltages, the Commission is of the view that the Tariff of all the consumers of these consumer should be same to avoid cross-subsidising among such consumers and hence has approved a single HT Tariff for all such consumers (subsuming HTS, HTSS, RTS, MES and Other Licensees) reflecting the Average Cost of Supply.

Removal of Installation Based Tariff for LTIS Consumers

Petitioner's Submission

10.5 The Petitioner submitted that in compliance with the directives of the Commission, it has proposed to remove the installation based LTIS sub-category and has therefore not proposed any such tariff for installation based LTIS consumers for FY 2019-20. The Petitioner has proposed to completely migrate the LTIS consumers to Demand Based Tariff. The Petitioner submitted that the step would ensure judicious usage of energy and prevent the need for inspecting officer to regularly inspect the consumers premise for regularization of excess load. The Petitioner further submitted that one of the key reasons for introduction of installation based tariff was because of the fact that most of the LTIS consumers were not having the MDI meters, which is required to capture the Maximum Demand. The Petitioner submitted that it is committed towards the replacement of these non-MDI meters and has planned to replace all such meters in phased manner. However, till the time JBVNL process the shifting of consumers having Non-MDI meters to MDI meters, the Petitioner shall provide an option for consumers having installation based tariff to come forward and declare their own load (in kVA).

Commission's Analysis

10.6 The Commission observes that it had approved Installation Based Tariff in the previous Tariff Order dated April 27, 2018 only for 6 months. The Petitioner in its submission has submitted that all LTIS consumers with load more than 4 kW shall be affixed with MDI meters. Further, since the Commission in this Tariff Order has re-categorised the LTIS consumers with contracted demand upto 5 kW therefore there is no need to continue with installation based tariff. Hence, the Commission has discontinued installation based tariff for FY 2019-20.

Migration from kWh based billing to kVAh based billing

Petitioner's Submission



10.7 The Petitioner has proposed to migrate to kVAh based billing from existing kWh based billing for LTIS consumers in order to get the full recovery of all the components of Generation, Transmission and Distribution like capital cost, fuel cost, system losses etc. and to ensure grid discipline and stability. Also, the Petitioner has proposed the removal of power factor penalty and incentive for LTIS consumers.

Commission's Analysis

10.8 The Commission has accepted the proposal of the Petitioner and has approved the kVAh based tariff and has done away with the power factor rebate/penalty.

Abolishment of Unmetered Category

Petitioner's Submission

10.9 The Petitioner submitted that in compliance with the directives of the Commission, it has removed the unmetered category and has not proposed any tariff for unmetered consumers for FY 2019-20. The Petitioner submitted that unmetered consumers are being converted into metered consumers and it will be completed by March 2019. The Petitioner submitted that it is completely committed to ensure 100% metering, however, due to reasons beyond the control of Petitioner, like delay in supply of meters by the respective agencies, appointment of multiple agencies to clear the huge backlog and resistance of consumers to get the meter installed, there may be some delays in attaining 100% metering. The Petitioner has thus proposed to perform the billing of these un-metered consumers that are still left for metering based on the assessment formula (LDHF) prescribed by the Commission in Annexure 19 of the JSERC (Electricity Supply Code) Regulations, 2015.

Commission's Analysis

10.10 The Commission had raised a query on the present status of metering and the Petitioner has responded that only 2.14 Lakh meters are installed in comparison to the assessed unmetered consumers/defective consumers of ~20.73 Lakh and requested an extension for 100% metering till June 30, 2019. The Commission is of the view that the conversion of unmetered to metered category should be expedited as there seems to be a major slippage in completing the exercise. The Commission permits the Petitioner to charge the tariffs approved for unmetered consumers till June 2019.

kW based Demand Charges



Petitioner's Submission

10.11 The Petitioner has proposed to levy the fixed charge on the domestic consumers, commercial consumers and agriculture consumers on per kW basis, once the meters installed at their premises are replaced with smart meters (AMR/AMI) as targeted under the UDAY Scheme. The Petitioner further submitted that since the replacement of ordinary meters with smart meters would be carried out in a phased manner, the Petitioner propose to levy the fixed charges on per kW basis in a phased manner over consumers with smart meters in the coming future.

Commission's Analysis

10.12 The Commission is of the view that the Petitioner shall submit to the Commission the actual kW connected load once 100% metering is completed for considering the shift from fixed charges per connection to per kW based billing. The Petitioner is required to submit the status of the same for consideration by this Commission.

Power Factor Penalty/Rebate

10.13 The Commission is of the view that since bulk of the Tariff Categories have moved to kVAh based billing, which has an in-built rebate/penalty for power factor, the Power Factor Penalty/Rebate stands withdrawn.

Voltage Rebate

10.14 The Clause 4.5 of the JSERC (Electricity Supply Code) Regulations, 2015 provides the condition under which Voltage Rebate has to be given. Hence, the Commission has modified the Voltage Rebate applicability to the consumers in line with the above provision of supply code.

Load Factor Rebate

10.15 The Commission has rationalised the load factor rebate and has taken the same into account while approving the tariff for the Consumers.



A 11: APPROVED RETAIL TARIFF FOR FY 2019-20

Petitioner's Submission

11.1 The summary of Tariff proposed by the Petitioner is provided below:

Table 173: Summary of Proposed Tariff submitted for FY 2019-20

| Category/ Sub-Category | Sub-Category | Existing Component of Tariff (FY 18-19) | | Proposed Component of Tariff (FY 19-20) | |
|-------------------------------|--|--|------------------------|--|------------------------|
| | | Energy Charges (Rs.) | Fixed Charges (Rs.) | Energy Charges (Rs.) | Fixed Charges (Rs.) |
| Domestic | Kutir Jyoti | 4.40 / kWh | 20 / Conn./ Month | 6.00 / kWh | 75 / Conn./ Month |
| | Rural | 4.75 / kWh | 35 / Conn./ Month | | |
| | Urban | 5.50 / kWh | 75 / Conn./ Month | | |
| | HT | 5.25 / kWh | 200 / kVA / Month | 6.00 / kWh | 200 / kVA / Month |
| Commercial | Rural | 5.25 / kWh | 60 / Conn./ Month | 7.00 / kWh | 225 / Conn./ Month |
| | Urban | 6.00 / kWh | 225 / Conn./ Month | | |
| Irrigation and Agriculture | | 5.00 / kWh | 20 / HP/ Month | 5.00 / kWh | 20 / HP / Month |
| Industrial | Low Tension Industrial Supply | 5.50 / kWh | 160 / kVA / Month | 6.00 / kVAh | 300 / kVA / Month |
| | High Tension Industrial Supply | 5.75 / kVAh | 300 / kVA / Month | 6.00 / kVAh | 400 / kVA / Month |
| | High Tension Special Service | 4.00 / kVAh | 500 / kVA / Month | 6.00 / kVAh | 400 / kVA / Month |
| Institutional | Streetlight Service | 6.00 / kWh | 100 / Conn./ Month | 6.50 / kWh | 100 / kW / Month |
| | Railway Traction Services | 4.60 / kVAh | 350 / kVA / Month | 5.00 / kVAh | 350 / kVA / Month |
| | Military Engineering Services | 4.60 / kVAh | 350 / kVA / Month | 5.00 / kVAh | 350 / kVA / Month |
| | Other distribution licensee/ Deemed Licensee | 4.60 / kVAh | 350 / kVA / Month | 4.70 / kVAh | 350 / kVA / Month |



Commission's Analysis

11.2 Based on the above discussions, the summary of Tariff approved by the Commission for FY 2019-20 is as below:

Table 174: Summary of Approved Tariff for FY 2019-20

| Category/ Sub- Category | Sub-Category | Existing Tariff (FY 2018-19) | | Approved Tariff (FY 2019-20) | |
|-----------------------------------|--|------------------------------|-----------------------|------------------------------|---------------------|
| | | Energy Charges (Rs.) | Fixed Charges (Rs.) | Energy Charges (Rs.) | Fixed Charges (Rs.) |
| Domestic | Kutir Jyoti | 4.40 / kWh | 20 / Conn./ Month | 5.75/kWh | 20/Conn./ Month |
| | Rural | 4.75 / kWh | 35 / Conn./ Month | | |
| | Urban | 5.50 / kWh | 75 / Conn./ Month | 6.25/ kWh | 75/Conn./ Month |
| | HT | 5.25 / kWh | 200 / kVA / Month | 6.00/ kVAh | 100/kVA / Month |
| Commercial | Rural | 5.25 / kWh | 60 / Conn./ Month | 6.00/ kWh | 40/Conn./ Month |
| | Urban | 6.00 / kWh | 225 / Conn./ Month | 6.25/ kWh | 150/Conn./ Month |
| Irrigation and Agriculture | | 5.00 / kWh | 20 / HP/ Month | 5.00/ kWh | 20/HP/ Month |
| Industrial | Low Tension Industrial Supply | 5.50 / kWh | 160 / kVA / Month | 5.75/ kVAh | 100/kVA / Month |
| | High Tension Industrial Supply | 5.75 / kVAh | 300 / kVA / Month | 5.50/ kVAh | 350/kVA / Month |
| | High Tension Special Service | 4.00 / kVAh | 500 / kVA / Month | | |
| Institutional | Streetlight Service | 6.00 / kWh | 100 / Conn./ Month | 6.25/ kWh | 100/kW/ Month |
| | Railway Traction Services | 4.60 / kVAh | 350 / kVA / Month | 5.50/ kVAh | 350/kVA / Month |
| | Military Engineering Services | 4.60 / kVAh | 350 / kVA / Month | | |
| | Other distribution licensee/ Deemed Licensee | 4.60 / kVAh | 350 / kVA / Month | | |



A 12: SCHEDULE OF CHARGES

Petitioner's Submission

- 12.1 The Petitioner submitted that the miscellaneous charges have been slightly revised by the Commission for FY 2018-19. However, the Petitioner submits that these charges are not in line in consonance with the current inflation and the charges levied by other States.
- 12.2 The Petitioner further submitted that inflation in the last six years (FY 2013-14 to FY 2018-19) has been increased with an annual rate of 3.85% considering both CPI and WPI index as per JSERC Distribution Tariff Regulations, 2015. The current miscellaneous charges are not complying with the industry standards and need to be revised to bring them to a realistic level.
- 12.3 The Petitioner further submitted that JBVNL is the distribution utility with one of the lowest miscellaneous charges in the country. Even neighbouring States like Bihar, Odisha, Chhattisgarh and West Bengal have significantly higher charges.
- 12.4 The Petitioner has proposed the revised schedule of miscellaneous charges along with simplification of charges with only seven major charges namely- New Connection application charges, Disconnection charges, Reconnection charges, Consumer service charges, Meter testing charges, Meter rent and Transformer rent.
- 12.5 The Petitioner submitted that the new connection application fees includes the application fees for new connection which is exclusive of other charges related to new connection (applicable as per the cost estimate). The Petitioner further submitted that it is pertinent to mention that free of cost/ instalment basis electricity connections are being provided under various Central and State sponsored schemes. Therefore, the charges shall be applicable as per the scheme guidelines for the consumers covered under any Central or State Government sponsored scheme.
- 12.6 The Petitioner has also revised the charges for Temporary and Permanent disconnection charges. The Petitioner submitted that significant effort is being required for permanent disconnection as the job includes removal of meter, metering units, cables & wires and other allied materials, transportation charges, labor charges, etc. Therefore, a higher amount as compared to temporary charges is being proposed for Permanent disconnection. Also, reconnection charges have been proposed which is in line with the temporary disconnection charges.



- 12.7 The Petitioner has also proposed a single charge related to consumer services which includes- re-sealing, fuse replacement, modification in connection layout/ meter shifting, meter fixing/ removal, service line replacement, name change, load modification, subsequent installation testing, Replacement of Defective or Burnt meters. The Petitioner submitted that considering the average life of 5 years of meters, the burnt meter charges shall not be applicable, if the meter gets defective after 5 years from the date of installation and the consumer has to bear the actual cost of meter as the penalty in case of burnt meters and defective meters (in case of consumers' fault).
- 12.8 The Petitioner has not proposed any increase in the charges related to meter rent. However, the charges related to meter testing are proposed which is inclusive of metering unit in case CT operated and Tri-vector meter. The Petitioner submitted that in case where the consumer opts for meter testing through a third party/ external agency, the charges of external agency shall be borne by the consumer itself, in addition to the above applicable service charges.
- 12.9 The Petitioner submitted that industrial consumers have to make a separate arrangement of required capacity transformer for availing electricity. However, in some special cases, JBVNL has provided a temporary arrangement of transformer to Industrial consumers or in some cases of temporary supply. Therefore, the approved charges pertaining to transformer rent is inevitable to bring clarity among consumer as well as to utility.
- 12.10 Based on the above, the Petitioner has proposed the charges related to transformer rent based on the capacity of transformer required. To discourage the consumer for opting transformer on rent and to make self-arrangement of the same, the Petitioner has proposed for slightly higher transformer rent which shall only be applicable for maximum of 3 months.
- 12.11 The Petitioner further submitted that the revised schedule of charges shall roughly fetch an additional Rs 2 Crore to the Non-Tariff Income of the Petitioner.
- 12.12 The summary of miscellaneous charges proposed by the Petitioner is detailed in the table below.



Table 175: Miscellaneous Charges proposed for FY 2019-20 (Rs.)

| Types of Charges | | Single phase | 3 Phase (whole-current) | Phase (CT operated) | Meter at 11kV | Meter at 33kV | 132/220 kV |
|---|-----------|--------------|-------------------------|---|---------------|---------------|------------|
| New Connection application fees | | 50 | 100 | 100 | 500 | 1000 | 1500 |
| Dis-connection charges (on consumer request) | Temporary | 100 | 200 | 500 | 1000 | 1500 | 1500 |
| | Permanent | 200 | 400 | 1000 | 2000 | 5000 | 5000 |
| Re-connection charges | | 100 | 200 | 500 | 1000 | 1500 | 1500 |
| Consumer service for each incidence (including, re-sealing, fuse replacement, modification in connection layout/ meter shifting, meter fixing/ removal, service line replacement, name change, load modification, subsequent installation testing, Replacement of Defective or Burnt meters) | | 100 | 500 | 700 | 1,000 | 2,000 | 5,000 |
| Meter Testing (including combined metering unit) | | 100 | 200 | 1,800 | 6,800 | 6,800 | 9,800 |
| Meter Rent/ meter/ month | | 20 | 50 | 250 | 400 | 2500 | 15,000 |
| Transformer Rent- if provided by JBVNL on request of consumer | | NA | NA | Rs. 100/kVA/month of transformer capacity | | | |

Commission's Analysis

12.13 In view of the submissions made by the Petitioner, the Commission has analysed various aspects of these charges and for the purpose of simplification of the schedule, the Commission has rationalised the schedule of miscellaneous charges as given in the Section A13 of this Order.



A 13: TARIFF SCHEDULE FOR FY 2019-20

APPLICABLE FROM 01.04.2019

I. Domestic Service- Rural and Urban

Applicability:

This schedule shall apply to private residential premises for domestic use for household electric appliances such as Radios, Fans, Televisions, Desert Coolers, Air Conditioner, etc. and including motor pumps for lifting water for domestic purposes and other household electrical appliances not covered under any other schedule.

This rate is also applicable for supply to religious institutions such as Temples, Gurudwaras, Mosques, Church and Burial/ Crematorium grounds and other recognised charitable institutions, where no rental/fees are charged for the energy needs for products and services for which no charge is levied.

This rate is also applicable for all consumers with contracted demand of upto 5 kW mixed, commercial, industrial, educational institutions, drinking water schemes or for any other purpose, except streetlight connections and agriculture/allied connections.

Category of Services:

Domestic Service – Rural: areas not covered by Nagar Nigam, Nagar Parishad and Nagar Panchayat.

Domestic Service – Urban: areas covered by Nagar Nigam, Nagar Parishad and Nagar Panchayat.

Service Character:

- (i) For Rural: AC, 50 Cycles, Single Phase at 230 Volts.
- (ii) For Urban: AC, 50 Cycles, Single Phase at 230 Volts, Three Phase at 400 Volts.

Tariff:

| Category | Fixed Charges | | Energy Charges (Rs./kWh) |
|----------|-----------------|------|-----------------------------|
| | Unit | Rate | |
| Rural | Rs./conn./month | 20 | 5.75 |
| Urban | Rs./conn./month | 75 | 6.25 |



Delayed Payment Surcharge: In accordance with Clause III of Terms & Conditions of Supply as provided in Section A14 of this Tariff Order.

II. Domestic Service- HT

Applicability:

This schedule shall apply to private residential premises for domestic use for household electric appliances such as Radios, Fans, Televisions, Desert Coolers, Air Conditioner, etc. and including motor pumps for lifting water for domestic purposes and other household electrical appliances not covered under any other schedule.

Category of Services:

Domestic Service – HT: This Schedule shall apply for domestic connection in Housing Colonies / Housing Complex / Houses of multi storied buildings purely for residential use for single point metered supply, with power supply at 33 kV or 11 KV voltage level. DS- HT consumers, who supply power to individual households, the average per unit charges billed to an individual consumer shall not exceed 105% of average per unit cost paid to the Petitioner. This additional 5% allowed reflects the internal distribution losses in housing complex and administrative and distribution costs.

Service Character:

(i) For HT: AC, 50 Cycles, at 11 KV or 33 kV

Tariff:

| Category | Fixed Charges | | Energy Charges |
|----------|---------------|------|----------------|
| | Unit | Rate | (Rs./kVAh) |
| HT | Rs./kVA/month | 100 | 6.00 |

Delayed Payment Surcharge: In accordance with Clause III of Terms & Conditions of Supply as provided in Section A14 of this Tariff Order.



III. Irrigation & Agriculture Service (IAS)

Applicability:

This schedule shall apply to all consumers for use of electrical energy for Agriculture purposes including tube wells and processing of the agricultural produce, confined to Chaff-Cutter, Thresher, Cane crusher and Rice-Hauler, when operated by the agriculturist in the field or farm and does not include Rice mills, Flour mills, Oil mills, Dal mills, Rice-Hauler or expellers.

Service Character:

AC 50 Cycles, Single Phase at 230 volts / 3 Phase at 400 volts

Tariff:

| Category | Fixed Charges | | Energy Charges |
|----------|---------------|------|----------------|
| | Unit | Rate | (Rs./kWh) |
| Metered | Rs./HP/month | 20 | 5.00 |

Delayed Payment Surcharge: In accordance with Clause III of Terms & Conditions of Supply as provided in Section A14 of this Tariff Order.



IV. Commercial Services

Applicability:

This schedule shall apply to all consumers, using electrical energy for light, fan and power loads for non-domestic purposes like shops, hospitals (govt. or private), nursing homes, clinics, dispensaries, restaurants, hotels, clubs, guest houses, marriage houses, public halls, show rooms, workshops, central air-conditioning units, offices (govt. or private), commercial establishments, cinemas, X-ray plants, schools and colleges (govt. or private), boarding/ lodging houses, libraries (govt. or private), research institutes (govt. or private), railway stations, fuel – oil stations, service stations (including vehicle service stations), All India Radio / T.V. installations, printing presses, commercial trusts / societies, Museums, poultry farms, banks, theatres, common facilities in multi-storied commercial office/buildings, Dharmshalas, public Electric Vehicles Charging stations and such other installations not covered under any other tariff schedule whose contracted demand is greater than 5 kW.

This schedule shall also be applicable to electricity supply availed through separate (independent) connections for the purpose of advertisements, hoardings and other conspicuous consumption such as external flood light, displays, neon signs at public places (roads, railway stations, airports etc.), departmental stores, commercial establishments, malls, multiplexes, theatres, clubs, hotels and other such entertainment/ leisure establishments whose connected load/contracted demand is greater than 5kW.

Service Category:

Commercial Service Rural: For Rural Areas not covered by area indicated for Commercial Service Urban.

Commercial Service Urban: For Urban areas covered by Nagar Nigam, Nagar Parishad, Nagar Panchayat.

Service Character:

Rural: AC 50 Cycles, Single phase at 230 Volts.

Urban: AC 50 Cycles, Single phase at 230 Volts or Three Phase at 400 Volts.



Tariff:

| Category | Fixed Charges | | Energy Charges |
|----------|-----------------|------|----------------|
| | Unit | Rate | (Rs./kWh) |
| Rural | Rs./conn./month | 40 | 6.00 |
| Urban | Rs./conn./month | 150 | 6.25 |

Delayed Payment Surcharge: In accordance with Clause III of Terms & Conditions of Supply as provided in Section A14 of this Tariff Order.

Installation of Shunt Capacitors: In accordance with Clause VI of Terms & Conditions of Supply as provided in Section A14 of this Tariff Order.



V. Low Tension Industrial Services

Applicability:

Low Tension Industrial Service (LTIS): This schedule shall apply to all industrial units having a contracted load more than 5 kW and less than or equal to 100 kVA (or equivalent in terms of HP or kW). The equivalent HP for 100 kVA shall be 114 HP and the equivalent kW for 100 kVA shall be 85.044 kW.

Service Character:

Low Tension Industrial Service (LTIS): AC, 50 Cycles, Single Phase supply at 230 Volts or 3 Phase Supply at 400 volts. Demand Based tariff / Installation based tariff for sanctioned load upto 100 kVA.

Tariff:

| Category | Fixed Charges | | Energy Charges |
|----------|---------------|------|----------------|
| | Unit | Rate | (Rs./kVAh) |
| LTIS | Rs./kVA/month | 100 | 5.75 |

The billing demand shall be the maximum demand recorded during the month or 50% of contract demand whichever is higher. The penalty on exceeding billing demand will be applicable in accordance with Clause I of Terms & Conditions of Supply as provided in Section A13 of this Tariff Order.

Delayed Payment Surcharge:

In accordance with Clause III of Terms & Conditions of Supply as provided in Section A14 of this Tariff Order.

Installation of Shunt Capacitors for LTIS: In accordance with Clause VI of Terms & Conditions of Supply as provided in Section A14 of this Tariff Order.



VI. HT Services

Applicability:

High Tension Service (HTS): All the consumers drawing power at voltage level at 6.6 kV and above except Domestic-HT consumers.

Service Character:

High Tension Service (HTS): 50 Cycles at 6.6 kV / 11 kV / 33 kV / 132 kV / 220 kV / 400 kV

Tariff:

| Category | Fixed Charges | | Energy Charges |
|----------|---------------|------|----------------|
| | Unit | Rate | (Rs.kVAh) |
| HTS | Rs./kVA/month | 350 | 5.50 |

HTS: The billing demand shall be the maximum demand recorded during the month or 75% of contract demand whichever is higher. The penalty on exceeding billing demand will be applicable in accordance with Clause I of Terms & Conditions of Supply as provided in Section A13 of this Tariff Order.

Load Factor Rebate: In accordance with Clause V of Terms & Conditions of Supply as provided in Section A14 of this Tariff Order.

Voltage Rebate: In accordance with Clause IV of Terms & Conditions of Supply as provided in Section A14 of this Tariff Order.

Delayed Payment Surcharge:

The Delayed Payment Surcharge will be charged on a weekly basis at the rate of 0.4% per week and other conditions in accordance with Clause III of Terms & Conditions of Supply as provided in Section A14 of this Tariff Order.

TOD Tariff: In accordance with Clause VII of Terms & Conditions of Supply as provided in Section A14 of this Tariff Order.

Load factor rebate shall not be allowed to consumers who have not paid all dues accrued till previous billing cycle. However, the applicable rebate shall be allowed to consumers with outstanding dues, wherein such dues have been stayed by the appropriate Courts.



VII. Street Light

This tariff schedule shall apply for use of Street Lighting system

Applicability:

Street Light Service (SS): This tariff schedule shall apply for use of Street Lighting system, including single system in corporation, municipality, notified area committee, panchayats etc. and also in areas not covered by municipalities and Notified Area Committee provided the number of lamps served from a point of supply is not less than 5.

Service Character:

Street Light Service (SS): AC, 50 cycles, Single phase at 230 Volts or three phase at 400 Volts.

Tariff:

| Category | Fixed Charges | | Energy Charges |
|-------------|---------------|------|----------------|
| | Unit | Rate | (Rs./kWh) |
| Streetlight | Rs./kW/month | 100 | 6.25 |

Delayed Payment Surcharge:

In accordance with Clause III of Terms & Conditions of Supply as provided in Section A14 of this Tariff Order.



VIII. Temporary Connections

Applicability:

The Temporary tariff shall be applicable as per the following conditions:

- (a) Temporary tariff is proposed to be equivalent to 1.5 times of the applicable fixed and energy charges for temporary connections falling in each prescribed tariff category with all other terms and conditions of tariff remaining the same.
- (b) Temporary connections may be given with normal meters with security deposit as per JSERC (Electricity Supply Code) Regulations, 2015.
- (c) Temporary connections may also be given with prepaid meters with minimum prepaid balance equivalent to 45 days of sale of power which shall be based on the assessment formula (LDHF) prescribed by the Commission.
- (d) Temporary connections shall initially be provided for a period of up to 30 days which can be extended on month to month basis upto six months.

Tariff:

| Category | Fixed Charges | Energy Charges |
|-----------|---|--|
| | Rate | (Rs.) |
| All Units | 1.5 times of the applicable fixed charges | 1.5 times of the applicable energy charges |



IX. Tariff for Gross/Net Metering of rooftop Solar PV projects

The Commission had notified the JSERC (Rooftop Solar PV Grid Interaction Systems and Net/Gross Metering) Regulations, 2015, on 10th November, 2015, (hereinafter called the 'Principal Regulations') and further notified its 1st amendment as JSERC (Rooftop Solar PV Grid Interaction Systems and Net/Gross Metering) (1st Amendment) Regulations, 2019. The Tariff for Gross/Net metering of RSPV for FY 2019-20 for such eligible consumers of the JBVNL shall be as under:

Gross Metering: Rs. 4.16/kWh

Net Metering: Rs. 3.80/kWh

The tariff approved as above for FY 2019-20 shall remain effective till the issue of subsequent Tariff Order/Individual Order as the case may be.



Schedule for Miscellaneous Charges

| Sl. No. | Purpose | Scale of Charges | Payment Realisation |
|-----------|--|---|---|
| 1. | Application Fee | | |
| | LT Connection | Rs.100 | Payable with Energy Bill |
| | HT Connection | Rs. 500 | |
| 2 | Revision of Estimate on Consumer Request based on Revision in Original Application | | |
| | LT Connection | Rs. 100 | Payable with Energy Bill |
| | HT Connection | Rs. 500 | |
| 3 | Testing of Consumers Installation¹ | | |
| | LT Supply | Rs. 100 | Payable with Energy Bill |
| | HT Supply | Rs. 500 | |
| 4 | Meter Test when Accuracy disputed by Consumer² | | |
| | Single Phase/Three Phase | Rs. 100 | Payable with Energy Bill |
| | Trivector/Special Type Meter, HT, EHT Metering Equipment | Rs. 1000 | |
| 5 | Removing/Refixing of Meter/Changing of Meter or Meter Equipment/Fixing of Sub Meter on the request of the Consumer/Fixing of Sub Meter Resealing of Meter when seals are found broken | | |
| | Single Phase/Three Phase | Rs. 200 | Payable with Energy Bill |
| | Trivector/Special Type Meter, HT, EHT Metering Equipment | Rs. 1000 | |
| 6 | Fuse call-Replacement | | |
| | Consumer Fuse | Rs. 100 | Payable with Energy Bill |
| 7 | Disconnection/ Reconnection | | |
| | LT Connection | Rs. 200 | Payable in advance along with the Consumer request. In case, the same consumer is reconnected or disconnected within 12 months, 50% will be charged extra. |
| | HT Connection | Rs. 1500 | |
| 10 | Replacement of meter card, if lost or damaged by Consumer | Rs. 100 | Payable with Energy Bill |
| 11 | Security Deposit | As per JSERC (Electricity Supply Code) Regulations, 2015 as amended from time to time | |
| 12 | Meter Rent/Month | | |
| | DS Category except Rural Single Phase/Three Phase | Rs. 20/ Rs. 50 | Payable with Energy Bill |
| | LT meter with CT | Rs. 250 | |
| | 11 kV | Rs. 400 | |
| | 33 kV HT side | Rs. 2500 | |
| | 132 kV/ RTS or 220 kV | Rs. 15000 | |



| Sl. No. | Purpose | Scale of Charges | Payment Realisation |
|---------|-------------------------------------|------------------|--------------------------|
| 13 | Replacement of Burnt Meter | Cost of Meter | Payable with Energy Bill |
| 14 | Transformer Rent³ | | |
| | Upto 200 kVA | Rs. 5500/Month | Payable with Energy Bill |
| | Above 200 kVA | Rs. 7500/Month | Payable with Energy Bill |

¹First test & Inspection free of charge, but should any further test and inspection be necessitated by faults in the installation or by not compliance with the conditions of supply for each extra test or inspection.

²If the meter is found defective within the meaning of the Indian Electricity Rules 1956, no charge shall be levied. If it is proved to be correct within the permissible limits laid down in the Rules, the amount will be charged in the next energy bill.

³Applicable for 6 month duration from the date of taking the transformer on rent, thereafter monthly escalation of 10% would be applicable.



A 14: TERMS AND CONDITIONS OF SUPPLY

Clause I: Penalty for exceeding Billing/ Contract Demand

In case of the actual demand exceeding 110% of the contract demand, the consumer shall pay penal charges for the exceeded demand. The penal charges would be charged as follows: If the recorded demand exceeds 110% of Contract Demand, then the demand charge up to contract demand will be charged as per the normal tariff rate. The remaining recorded demand over and above the contract demand will be charged at 1.5 times the normal tariff rate.

In case actual demand is higher than the contract demand by the quantum and for the duration as specified under Regulations 7.18 of JSERC Supply Code 2015, the Contract Demand shall be revised as per the procedure specified therein.

Clause II: Jharkhand Electricity Duty

The charges in this tariff schedule do not include charges on account of State Electricity Duty/Surcharge to the consumers under the State Electricity Duty Act and the rules framed there under as amended from time to time and any other Statutory levy which may take effect from time to time after making corrections for the loss in the distribution system.

Clause III: Delayed Payment Surcharge

The delayed payment surcharge will be at the rate of 1.5% per month and part thereof. The due date for making payment of energy bills or other charges shall be 21 days after issue date of bill. The bill should be generated and delivered on monthly basis. In case, the licensee defaults in generating and delivering bills on monthly basis, DPS will not be charged for the period of default by licensee. The consumer should not be deprived of any subsidy/benefit which could have been otherwise accrued to the consumers i.e., energy units/amount (in case of unmetered) billed has to be apportioned on average monthly basis for the whole billing duration.

Clause IV: Voltage Rebate

Voltage rebate* will be applicable on demand and energy charges as per Clause 4.5 of JSERC (Electricity Supply Code) Regulations, 2015 as amended from time to time at the rate given below:

| Consumer Category | Voltage Rebate |
|-----------------------------|-----------------------|
| HTS/HTSS – 33 kV/66 kV | 2.00% |
| HTS/HTSS – 132 kV and above | 3.00% |



* Note: The above rebate will be available only on monthly basis and consumer with arrears shall not be eligible for the above rebate. However, the applicable rebate shall be allowed to consumers with outstanding dues, wherein such dues have been stayed by the appropriate Courts.

Clause V: Load Factor Rebate

Load Factor rebate^{\$} will be applicable on energy charges only as given below:

| Load Factor | Rebate |
|---------------|--|
| 70% and below | Nil |
| 70%-80% | 1.50% for energy consumption above 70% |
| 80%-100% | 2.50% for energy consumption above 80% |

\$ Note: The above rebate will be available only on monthly basis and consumer with arrears shall not be eligible for the above rebate. However, the applicable rebate shall be allowed to consumers with outstanding dues, wherein such dues have been stayed by the appropriate Courts.

Clause VI: Installation of Shunt Capacitors

Connections with inductive load as specified in Regulation 8.2.34 and 8.2.35 of JSERC (Electricity Supply Code) Regulations, 2015 as amended from time to time, shall install capacitors of required kVAr rating provided in the following table:

| Rating of Individual Inductive Load in HP | kVAr rating of LT capacitors |
|---|------------------------------|
| 3 to 5 | 1 |
| 5 to 7.5 | 2 |
| 7.5 to 10 | 3 |
| 10 to 15 | 4 |
| 15 to 20 | 6 |
| 20 to 30 | 7 |
| 30 to 40 | 10 |
| 40 to 50 | 10-15 |
| 50 to 100 | 20-30 |

For existing consumer, the Petitioner should first serve one month's notice to all such consumers who do not have or have defective shunt capacitors. In case the consumers do not get the capacitor installed/replaced within the notice period, the consumer shall be levied a surcharge at 5% on the total billed amount charge (metered or flat), till they have installed the required capacitors.



No new connection shall be released for any consumer having aggregate inductive load greater than 3 HP (2.2 kW) unless the capacitors of suitable rating are installed as specified under Regulation 8.2.34 and 8.2.35 of the Supply Code 2015.

Clause VII: TOD Tariff

TOD tariff proposed shall be applicable as follows:

- **Off Peak Hours: 10:00 PM to 06:00 AM:** 85% of normal rate of energy charge.
- **Normal Hours: 10:00 AM to 6:00 PM:** 100% of normal rate of energy charge
- **Peak Hours: 06:00 AM to 10:00 AM & 06:00 PM to 10:00 PM:** 120% of normal rate of energy charge

Clause VIII: Rebate for prompt online payment

The due date for making payment of energy bills or other charges shall be 21 days after issue date of the bill. Rebate of 0.5% on the billed amount for timely payment of the full amount of the bills through online web portal or digital methods shall be allowed for all categories of consumers.

Clause IX: Other Terms and Conditions

Reduction in Fixed Charges

If at any time any consumer is prevented from receiving or using the electric energy to be supplied by JBVNL either in whole or in part due to strike, riots, fire, floods, explosion, act of God or any other case reasonable beyond control or if JBVNL is prevented from supplying or unable to supply such electric energy owing to any or all of the causes mentioned above, then the fixed charges/ demand charges set out in the Tariff Schedule for that particular category of consumer shall be reduced in the manner prescribed below.

The Government of India has made it mandatory for all distribution licensees to supply round the clock power from 01.04.2019. Further, there has been considerable effort put in by Petitioner to electrify all villages and capital expenses have been incurred by the Petitioner to meet the above objective. However, the Commission during the current tariff proceedings received several objections from across all the consumers that the supply has not been round the clock. The Petitioner in its submissions have also submitted that currently it is not able to supply continuous power to all the consumers.

The Commission observes that the supply has been erratic in the past, however the Petitioner has been charging the entire fixed charges from the consumers. It has also been observed that in some



areas the supply has been as low as 9-10 hrs per day. The Commission is of the view that it would not be prudent if the Petitioner is allowed to recover the entire fixed charges for such erratic supply.

The Commission in its JSERC (Distribution Licensees' Standards of Performance), Regulations, 2015 (hereinafter referred to as JSERC SOP Regulations, 2015) in Regulation 16.1 has specified that the licensee shall prepare Reliability Indices consolidated for all 11 kV feeders in the supply area excluding those feeders predominantly serving agricultural loads. The Commission has specified that the Petitioner shall compute the following indices:

- 1) System Average Interruption Frequency Index (SAIFI)
- 2) System Average Interruption Duration Index (SAIDI)
- 3) Momentary Average Interruption Frequency Index (MAIFI)

Among the above Indices, SAIDI is a measure of the total duration of outages affecting the consumers. The Commission has therefore linked the recovery of fixed charges of all the consumers for which SAIDI is computed in terms of JSERC SOP Regulations, 2015. In order to implement the same and prepare itself, the Commission has allowed Petitioner time till June 2019. This mechanism shall come in force from the second quarter starting July-September 2019. The Petitioner shall compute SAIDI on quarterly basis starting from the first quarter of FY 2019-20 and submit the report before the Commission by first week of the following quarter and also publish it on its website as it indicates the average hours of supply available to the consumers.

The Commission has considered 20 hours of supply for recovery of the entire fixed charges. Considering 20 hours of supply the SAIDI should not exceed 4 hrs per day on an average basis. If SAIDI exceeds 4 hrs for the quarter on average basis, the fixed charges for the consumers shall be pro-rata reduced in the following manner.

$$FC_r = FC \times (20-Y)/20$$

FC = Total Fixed Charges for the consumer for the Billing Period.

FC_r = Fixed Charges recoverable by the Petitioner for the Billing Period.

Y = Average duration of no supply of power beyond 4 hours per day as recorded for the previous quarter.

The Petitioner is directed to adjust from the monthly fixed charges as per the above specified mechanism based on the SAIDI recorded in the previous quarter.



In view of the above, no separate or additional relief to any specific categories of consumers can be allowed. Therefore, any provision relating to this issue in any agreement contrary to this provision such as Caluse 13 of the HT agreement is not applicable.

Dishonoured Cheques

In terms of Regulation 10.10.5 of the JSERC (Electricity Supply Code) Regulations, 2015 as amended from time to time, in the event of dishonoured cheque for payment against a particular bill, the Licensee shall charge a minimum of Rs. 300 or 0.5% of the billed amount, whichever is higher. In addition to the same, the DPS shall be levied extra as per the applicable terms and conditions of DPS for the respective category.

Stopped/ defective meters

In case of existing consumers with previous consumption pattern, the provisional average bill shall be issued as per Clause 10.3.1 of the JSERC (Electricity Supply Code) Regulations, 2015 as amended from time to time.

In case of meter being out of order from the period before which no pattern of consumption is available, the provisional average bill shall be issued on the basis of sanctioned/ contract load on following load factor applicable to respective categories, as shown below:

| Consumer Category | Load Factor |
|--------------------------------|--------------------|
| Domestic | 0.15 |
| Non Domestic | 0.20 |
| LTIS | 0.20 |
| DS-HT | 0.15 |
| HT Consumers (Including DS-HT) | |
| 11 kV/33 kV till 132 kV | 0.30 |
| 132/220/440 kV | 0.50 |

Sale of Energy

No consumer shall be allowed to sell the electricity purchased from the Licensee to any other person/ entity. In case of DS- HT consumers, who supply power to individual households, the average per unit charges billed to an individual consumer shall not exceed 105% of average per unit cost paid to the Petitioner. This additional 5% allowed reflects the internal distribution losses in housing complex and administrative and distribution costs.

Release of New Connections

No new connections shall be provided without appropriate meter.



Unmetered Category

The tariff for unmetered connections as per the Order dated April 27, 2018 shall be applicable until June 30, 2019. By this time all consumers should have been metered and all billing shall be done as per the meter readings only.

Conversion Factors

The following shall be the conversion factors, as and where applicable: (PF=0.85):

1 kilowatt (kW) = 1.176 Kilovolt ampere (kVA)

1 kilowatt (kW) = 1 / 0.746 Horse Power (HP)

1 Horse Power (1 HP) = 0.878 Kilovolt ampere (kVA)

Fuel & Power Purchase Cost Adjustment (FPPCA)

Applicable as per 'Distribution Tariff Regulations, 2015' and as amended by the Commission from time to time.



A 15: STATUS OF EARLIER DIRECTIVES

The Commission has time and again issued various directives in order to improve the functioning of the Petitioner. However, the Commission notes with concern that the Petitioner has repeatedly failed to comply with the directives of the Commission. The Commission directs the Petitioner to comply with the directives with utmost sincerity failing which penal action may be taken.

| Directives | Status | Views of the Commission |
|---|--|---|
| Abolishment of Un-metered Category | | |
| <p>The Commission directs the Petitioner to strictly adhere to complete 100% metering by December 2018. The tariff approved by the Commission for the unmetered category shall be applicable till December 2018 only. Failure to comply with the timeline may invite penal action.</p> <p>The Commission directs the Petitioner to submit within one month of issuance of this Order a revised metering plan indicating total consumers, metered (working), metered (defective), unmetered consumers as on date, along with month-wise plan of procurement, installation and replacement of new meters. Consequent to submission of the report, the Petitioner should update the progress to the Commission on bi-monthly basis in order to achieve 100% metered status till December 2018.</p> | <p>The Petitioner has submitted the revised Metering Plan to the Commission in May, 2018. The Petitioner has estimated that approx. 18.59 lakh consumers are still pending & planned to be completed by March, 2019 and did not propose any tariff for un-metered consumers in the Petition.</p> <p>Out of total requirement, ~5.8 Lakh meters are already under installation under DDUGJY Scheme, completion deadline till Feb'19, Further, out of remaining 12.81 lakh, metering of 7.80 Lakh consumers is allocated to agencies working under DDUGJY Scheme & ~5.01 Lakh consumers is being targeted departmentally, for which agencies have been appointed at Circle-level, with the target completion by March, 2019. Considering minor unavoidable spill-over/gaps, the Petitioner requested the Commission to allow the continuation of tariff for unmetered categories till June'19.</p> | <p>The Commission observes that the Petitioner has not been able to comply with its self-declared target of December 2018. The Commission takes serious note of the same.</p> <p>The Commission however, provides final opportunity to the Petitioner to complete the metering of by June 2019 and submit the completion report by July 2019.</p> |
| Power Purchase Cell | | |
| <p>The Commission directs the Petitioner to form a dedicated</p> | <p>The Petitioner has already formed a Centralized Power</p> | <p>The Commission directs the Petitioner to finalize the</p> |



| Directives | Status | Views of the Commission |
|---|---|---|
| <p>power purchase cell with a high qualified team so that short term as well as long term power procurement of the Discom can be continuously monitored and the power procurement cost of the Utility can be optimised. The Commission also observes that the Petitioner has paid UI charges, which may indicate non-optimum forecasting and planning on behalf of the Utility. Such power purchase cell shall aid the Utility in effective demand forecasting and planning. The Petitioner's Board shall review every three months, the analysis of the power procurement quantum and cost, prepared by the Cell and take necessary action to optimize the power purchase cost.</p> <p>The Petitioner should submit a report in this regard along with the next Tariff Petition.</p> | <p>Purchase Cell which is fully functional. The Power purchase cell has dedicated officers headed by General Manager (Commercial), 2-Dy. General Managers (ESEs), 2-Senior Managers (EEEs) and 4-Managers (AEEs).</p> <p>Further, in order to strengthen the Power Purchase Cell, the Petitioner is in process of procuring of specialized services with an integrated software based solution for forecasting, planning and procurement of power, under the World Bank Technical Assistance program. The EOI stage has been completed & the issuance of RFP is presently underway. The appointment of agency for power portfolio management and optimization through integrated software solution is likely to be completed by Mar'19.</p> | <p>agency and submit the compliance report by June 2019.</p> |
| RPO Obligation | | |
| <p>The Commission strictly directs the Petitioner to comply with the RPO Norms set by the Commission and accordingly submit a detailed action plan in order to comply with the same within three months from the date of issuance of this Tariff Order. The Commission, in this Order has imposed a penalty for non-fulfilment of RPO. The Commission may be constrained to continue to do so in future, if the Petitioner pays no heed in this regard. A monetary penalty may also be imposed on the Managing</p> | <p>The total tied up capacity of solar power is 740 MW against compliance of 520 MW to fulfil the RPO requirement. In case of non-solar, capacity of 500 MW is tied up, against RPO of 355 MW.</p> <p>Besides above, the Petitioner is in discussion to procure solar power from the following sources in future.</p> <p>Floating solar plant of 150 MW (100 MW Getalsud Dam +50MW Dhurwa Dam) is presently under development.</p> | <p>The Commission direct the Petitioner to comply with the RPO Obligation by March 2019 for period till FY 2018-19 and submit the report by April 2019. The Petitioner is required to submit the quarterly report on RPO compliance for FY 2019-20.</p> <p>The Commission, in this Order has not imposed a penalty for non-fulfilment of RPO. The Commission may be constrained to levy penalty in future, if the</p> |



| Directives | Status | Views of the Commission |
|--|---|--|
| <p>Director and/ or senior management of the Discoms, if the Commission deems so.</p> | <p>2 MW canal top with JREDA is also being developed.</p> | <p>Petitioner do not comply with the same. A monetary penalty may also be imposed on the Managing Director and/ or senior management of the Discoms, if the Commission deems so.</p> |
| Quality of Power/ Reliability Indices and Standard of Performance (SOP) | | |
| <p>The Commission directs the Petitioner to continue submitting monthly report on Reliability Indices in MS-Excel format along with compliance to SOPs in true spirit, in course of achieving 24x7 quality & reliable power.</p> | <p>The Petitioner has implemented the measure and the Reliability Indices are available on the JBVNL website under Reliability Section and are regularly updated.</p> <p>The Petitioner has further submitted that they have implemented a single touch solution to consumers to claim compensation against the non-compliance of the stipulated SOP's.</p> <p>Further, a compiled report for the first 3 quarters of FY 18-19 (1st April 2018 to 25th Dec 2018) is submitted along with petition and committed that going forward the Petitioner shall submit the quarterly SOP compliance report.</p> | <p>The Commission notes the compliance of the Petitioner and directs the Petitioner to continue implementing SoP as per Standards of Performance as per the JSERC(Standards of Performance) Regulations, 2015.</p> |
| Strengthening of Distribution Network | | |
| <p>The Commission directs the Petitioner to implement safety measures in its network to avoid accidents which not only disrupts supply but also leads to loss of human life. The Commission also directs the Petitioner to update and implement its Safety Manual in line with the Provisions of Indian Electricity Rules to</p> | <p>The Petitioner has prepared a detailed Safety Manual which is an addendum to the existing Operation and Maintenance (O&M) manual and duly approved by the concerned authorities.</p> | <p>The Commission takes note of the compliance of the directive.</p> |



| Directives | Status | Views of the Commission |
|--|---|---|
| <p>avoid such disruptions and mishaps. The same should be submitted to the Commission within 3 months of issuance of this Order</p> | | |
| Energy Audit & T&D Loss Reduction Plan | | |
| <p>The Commission directs the Petitioner to conduct division-wise Energy Audit & prepare circle-wise T&D Reduction Plan and submit the same along with its progress to the Commission within six months of issue of this Tariff Order. The Commission also directs the Petitioner to submit sample energy audit report for transformers having different consumer mix along with action taken, if any, for reducing losses within six months from the date of issuance of the order.</p> | <p>The Petitioner had prepared an overall AT&C loss reduction plan in July 2018, which was submitted to Ministry of Power, as per the requirement of UDAY scheme and being submitted to Commission along with Petition. Further, the agency has been appointed for preparing the circle-wise T&D loss reduction plan, which shall be duly submitted by end of March'19.</p> <p>Further, in accordance with the directive issued the Commission, the Petitioner submitted the sample energy audit report for transformers having different consumer mix.</p> | <p>The Commission infers that there is a huge gap in billing and collection efficiency based on the sample audit data submitted by the Petitioner.</p> <p>The Commission directs to submit the verified audit report on sample basis within 3 months from the date of issuance of this Order without any fail.</p> |
| Interest on Consumer Security Deposit (CSD) | | |
| <p>The Commission directs the Petitioner submit a list of consumers who have not been paid at prevailing bank rate and clear the dues pending of the consumers by within six months of issuance of this Order. Failure to comply with the directive would attract appropriate penal consequences wherein the fixed charges payable by the consumer shall be reduced by 5% every month (from sixth month onwards) until such date payment has been made by JBVNL.</p> | <p>The Petitioner submits that the interest on CSD is already being paid to the HT consumers of JBVNL. Further, a web-portal has been created by the Petitioner, where the consumer can submit their details & claim the interest thereof. Post verification of documents & records consumer's claim by JBVNL, the security deposit interest shall be paid regularly to the consumer. The Petitioner has already under process of paying interests on security deposits of those consumers where the security deposit</p> | <p>The Commission takes note of the steps taken by the Petitioner. However, the Petitioner is yet to ensure that the interest is paid to all the consumers on the security deposits.</p> <p>The Commission directs the Petitioner to continuously update its data bases and submit the monthly compliance report to the Commission.</p> |



| Directives | Status | Views of the Commission |
|------------|---|-------------------------|
| | <p>details are available in JBVNL's database.</p> <p>The Petitioner submitted that for LT consumers, where security deposit details have not been available in the database, the Petitioner has initiated the updating of these details from the past hard copy records available in the field offices and approx. 3 lakhs entries have been completed as on 27th Dec'18. The Petitioner has already made update in billing software to pay the interest on security deposit for FY17-18 by December'18 and out of the 3 lakh identified consumers, the security deposit interest has been already paid to more than 2.92 lakh consumers in their bills generated during the month of December'18.</p> <p>Further, it submitted that out of nearly 20 lakh rural consumers of licensee, majority have been provided connection under erstwhile schemes like RGGVY and more than 30 Lakh households have been electrified under new schemes like DDUGJY & Saubhagaya. Under such schemes, no security deposit has been taken from the consumers, thus no interest on security deposit is to be paid to these. Hence, considering the above beneficiary consumers, the Petitioner's compliance to the directive of providing interest on security deposit to consumer is already above 70%.</p> | |



| Directives | Status | Views of the Commission |
|--|--|---|
| | <p>The Petitioner submitted that it is committed that the records available from field offices shall be updated over the next 2 months and the consumers shall be paid interest on security deposit along with March'19 bill, in line with the Regulations.</p> <p>The Petitioner further submitted that any change in billing software and devising the methodology/ tools for updating the consumer security deposit details from field offices is a time taking exercise and the slight delay may considered to be inadvertent.</p> | |
| System Loading Charges | | |
| <p>The Commission directs the Petitioner to submit Zone wise, Category wise estimates of System loading charges for sample five new consumers of different connected load in each category.</p> | <p>The Petitioner submitted that charges levied on consumers are in accordance with the Regulations prescribed by Commission.</p> | <p>The Commission notes compliance of the Petitioner.</p> |
| Segregation into Retail & Wheeling Supply of Business | | |
| <p>According to the Regulation 5.4 of the JSERC Distribution Tariff Regulations 2015, separate accounting has to be done for Wheeling & Retail supply of Business which has not been the case till now. As per Regulation 5.5 of JSERC Distribution Tariff Regulations 2015, until the time accounts are not segregated an Allocation Statement shall be prepared and submitted to apportion the costs and</p> | <p>The Petitioner submitted that it has segregated the accounts for wheeling & retail supply business for FY 16-17 and FY 17-18 based on assumed ratios. The Petitioner has further mentioned that the segregated accounts of FY 2016-17 & FY 2017-18 have been approved by the Board of Directors (BoD) in the recent board meeting.</p> <p>The Petitioner submitted that it has already taken up Fixed</p> | <p>The Commission notes compliance of the Petitioner and directed to prepare the FAR and submit the same before Commission. The Commission directs the Petitioner to submit the same within six months from the date of this Order.</p> |



| Directives | Status | Views of the Commission |
|--|--|--|
| <p>revenues after the approval of the Board of Directors.</p> <p>The Commission strictly directs the Petitioner to make separate accounting for both the businesses & submit the allocation statement duly approved by the Board of Directors within 3 months of the date of issue of the Tariff Order.</p> | <p>Asset Register preparation under the World Bank Technical Assistance Program and the RFP issuance is presently underway, followed by selection of agency for preparation of FAR. The Petitioner requested the Commission to stipulate realistic deadlines to complete such a laborious exercise, as the selection of agency and preparation of FAR may take few months.</p> | |
| Actual Supply Hours in Rural Areas | | |
| <p>The Commission directs the Petitioner to submit a report detailing the area-wise actual number of supply hours provided to rural areas for the FY 2016-17 as most of the Capex for the MYT Control period is towards rural electrification.</p> <p>The Petitioner is also directed to provide the status of electrification in un-electrified areas for the last two financial years within one month from the date of issuance of the order.</p> | <p>The report on the area-wise actual number of supply hours provided in the rural areas for FY 16-17 is submitted by the Petitioner.</p> <p>The Petitioner has already submitted the status of electrification in un-electrified areas for the last two years to the Commission on 29th May'18. The recent status of Electrification, as on 26th December'18 is as below:</p> <p>Village electrification-29,376 (100%) Intensive electrification of villages-22,559 (77%) Household electrification-67.5 Lakhs (100%)</p> | <p>The Commission notes the compliance of the Petitioner. The Petitioner is directed to comply with the SOP and submit the monthly report in the prescribed formats.</p> |
| Voltage wise- Cost of Supply | | |
| <p>The Commission directs the Petitioner to carry out a detailed technical study on voltage wise losses on Distribution network and furnish a report within 6</p> | <p>The Petitioner has now concluded the process of selection of agency for carrying out the voltage wise losses of distribution network. As per the terms and conditions, the</p> | <p>The Commission has noted the submissions of the Petitioner. The Petitioner is directed to submit the study within 3 months from the date of issue of this Order.</p> |



| Directives | Status | Views of the Commission |
|---|---|--|
| <p>months from the date of issuance of the order.</p> | <p>agency shall complete the study within a period of 3 months, hence the Petitioner is likely to submit the study by the end of FY18-19.</p> | |
| Wheeling Charges | | |
| <p>The Petitioner has submitted a proposal for the approval of voltage wise wheeling tariff for the FY 2018-19. The Commission finds that the Petitioner, instead of segregating its accounts into wheeling and retail supply business, had followed the methodology adopted by the Commission in its earlier Order. The Commission is of the view that the Petitioner has not taken proper cognizance of the directives of the Commission. The Commission directs the Petitioner to maintain separate accounting for wheeling & retail supply business, failure of which may attract penalty. Meanwhile, even though the Commission has approved wheeling charges based on the current submission of the Petitioner, failure to comply with the Commission's directive may force the Commission to withdraw levying of any wheeling charge for use of Petitioner's network</p> | <p>The Petitioner has segregated the accounts for wheeling & retail supply business for FY 16-17 and FY 17-18 based on assumed ratios. The Petitioner has further mentioned that the segregated accounts of FY 16-17 & FY 17-18 have been approved by the Board of Directors (BoD) in the recent Board meeting.</p> <p>The Petitioner would like to submit that it has already taken up Fixed Asset Register preparation under the World Bank Technical Assistance Program and the RFP issuance is presently underway, followed by selection of agency for preparation of FAR. The Petitioner would like to request the Commission to stipulate realistic deadlines to complete such a laborious exercise, as the selection of agency and preparation of FAR may take few months.</p> | <p>The Commission directs the Petitioner to prepare the FAR and submit detailed calculation for voltage wise wheeling charge in the next tariff petition.</p> |
| Theft of Electricity | | |
| <p>The Commission directs the Petitioner to strengthen the vigilance wing and take up frequent checking of theft prone areas and also take appropriate steps to improve revenue collection in relation to revenue assessed in cases of theft.</p> | <p>The Petitioner submitted that massive raids are also being conducted regularly (14,538 from April to Nov'18) & FIR's are being lodged (3,408 from April to Nov'18) against theft of electricity. Moreover, in order to ensure reduction in</p> | <p>The Commission notes the various steps taken by the Petitioner. The Commission also raised the concern that the Petitioner is not able to comply with the AT&C loss levels set by the Commission in its</p> |



| Directives | Status | Views of the Commission |
|--|--|---|
| <p>JBVNL should also create an online portal (or a dedicated section on its existing website) in which any consumer can report theft through uploading of photographs along with other details such as location etc. so that necessary action can be taken expeditiously. Awareness about such portal should be disseminated through consumer bills, SMS and print/ electronic media.</p> | <p>theft, the Petitioner has undertaken electrification through LT AB cables only & existing LT lines (bare conductors) are being replaced with AB cables, As a matter of fact, a total of 11,959 cKm of AB cables have been laid and replaced so far under various schemes. The Petitioner has total target of laying and replacing more than 44,660 cKm of AB cables, under various State and Central Govt. schemes. In addition, several modes like written complaints, Jan Samwad, Urja Mitra, JBVNL website, Customer Care Centres Social Media platforms like Facebook and Twitter are created to report cases related to theft.</p> | <p>earlier Order. The Commission directs the Petitioner to continue doing such activities to curb the AT&C losses and bring it down to the levels as set by the Commission.</p> |
| Employee Performance Appraisal | | |
| <p>The Commission directs the Petitioner to submit a report, within one month of issuance of this Order, on the Employee Performance Appraisal system adopted by the Petitioner. The report should explicitly mention the parameters / KPIs taken into consideration for the formulation of the same and whether there are any parameters for monitoring the performance of the employees in respect of service quality besides AT&C loss reduction and revenue enhancement.</p> | <p>The Petitioner has institutionalized a non-monetary incentive scheme to monitor & reward the performance of field offices. Following are the parameters/KPIs used for measurement of performance</p> <ul style="list-style-type: none"> • Billing % • Collection Efficiency • Complaints Resolution % <p>Six Month avg. of monthly ratios of Meter replacement advice punch in a month and no. of defective meters at the start of the month.</p> <p>The non-monetary incentive scheme will provide a platform to replace the existing ACR based performance</p> | <p>The Commission observes that the Petitioner is yet to submit any report in this regard to the Commission.</p> <p>The Commission observes that the Petitioner has made some interim arrangement.</p> <p>The Commission directs the Petitioner to develop an arrangement whether the quality of supply can be objectified into performance indicators and for an area is linked to respective Officers. The Petitioner to submit the compliance report in 3 months from the date of issue of this order.</p> |



| Directives | Status | Views of the Commission |
|---|--|---|
| | <p>management system with a KPI based individual performance management system. Once the revamped organizational structure is fully implemented and ERP is stabilized, the non-monetary reward scheme shall be integrated with the PMS.</p> | |
| Capacity Building of Employees | | |
| <p>The Commission observes that Discom officials are not conversant with the Regulations notified by the Commission, especially those dealing with various aspects of power distribution. Moreover, the Tariff Orders as well as the directives issued by the Commission in those tariff orders for JBVNL, are not read by the concerned officials of the Discoms. The Commission directs the Petitioner to undertake capacity building workshops for its employees so that Discom officials are apprised of the key Regulations notified by the Commission. The Petitioner should submit details of such workshops undertaken along with the next Tariff Petition.</p> | <p>The Petitioner has conducted training need assessment study to analyze the capacity building requirements of JBVNL & identified the training program for 29 areas.</p> <p>It is further submitted that JBVNL has successfully completed 3,934 man-days of executive training in 2018 in collaboration with REC-IPMT, IIM Ranchi, AIPM.</p> <p>The Petitioner has further streamlined the training process through empanelment of training partners.</p> | <p>The Commission takes note of the compliance of the directive. However, the Commission directs the Petitioner to ensure such capacity building program should be conducted on regular basis.</p> |
| Monitoring of Compliance to Directives | | |
| <p>The Commission has observed that the Petitioner has repeatedly failed to comply with the directives of the Commission in letter as well as spirit. This shows lackadaisical attitude of the Petitioner which has also resulted in imposition of a penalty in the form of reduction in ARR. In order to avoid repetition of the same, the Petitioner's Board should</p> | <p>The Petitioner has ensured that the compliance of Directives is being periodically reviewed & monitored by the Top Management. There have been regular review meetings, held at the highest management level (i.e. at the level of CMD and MD) to review the overall progress, which directly and indirectly covers the compliance of directives.</p> | <p>The Commission observes that the Petitioner has not been prompt in complying with the directions of the Commission and several directions are yet to be complied with even after repeated reminders.</p> <p>The Commission directs the Petitioner to strictly comply with the directions</p> |



| Directives | Status | Views of the Commission |
|--|--|--|
| <p>monitor/ review the compliance of the Directives periodically.</p> | <p>The Petitioner would also like to propose a quarterly meeting with the Commission covering the status of directives, key issues and challenges, to ensure timely information and compliance of Directives.</p> | <p>of the Commission and regularly apprise the Commission on the compliances.</p> |
| <p>Involvement of Private Sector in Distribution</p> | | |
| <p>The Petitioner may explore options for involvement of private sector in state distribution sector through franchisee arrangements or any other mode of private participation.</p> | <p>The Petitioner is taking several measures for the involvement of private players in the distribution sector of Jharkhand State. The Petitioner with the assistance of the World Bank has already completed the study to evaluate the possible models of private participation. Further, the approval from Board of Directors has been obtained for undertaking PPP in selected areas based on the Study and the proposal is has been sent to the State Government for further considerations.</p> | <p>The Commission takes note of the compliance of the directive.</p> |
| <p>Investment in Cyber Security Solutions</p> | | |
| <p>Owing to widespread cases of compromise of various Government websites in the country, the Commission is of the view that deployment of cyber security solutions needs to be looked into. Moreover, with increasing focus on digital mode of payment coupled with the rebate on payment of electricity bills online/ through digital mode, it becomes even more important to invest in cyber security solutions. In this regards, the Petitioner may look into the possibilities of investing in such cyber security solutions. The cost incurred on such investment shall be</p> | <p>The Petitioner is currently undertaking major reforms using IT as the key enabler for improving revenue collection, Optimizing Utility operations, minimizing AT&C losses, energy accounting and efficient consumer services. The utility is now ERP ready and shall go-live within the ongoing financial year, enabling it scale one more step towards utility digitalization.</p> <p>Further, in order to further strengthen the cyber security solutions in IT, Petitioner has already prepared an IT Roadmap which summarizes</p> | <p>The Commission takes note of the compliance of the directive. The Petitioner is required to submit the implementation and completion report of ERP Implementation.</p> <p>The Petitioner should further submit the quarterly status report of implementation of Integrated Technology Roadmap - IT/OT Feasibility</p> |



| Directives | Status | Views of the Commission |
|--|---|--|
| <p>allowed to be recovered through the ARR, subject to prudence check.</p> | <p>the “Integrated Technology Roadmap - IT/OT Feasibility” for Jharkhand Bijli Vitran Nigam Limited (JBVNL).</p> | |
| <p>Strengthening/ Increasing effectiveness of Consumer Grievance Redressal Mechanism</p> | | |
| <p>During the course of the public hearings, various stakeholders expressed displeasure on the grievance redressal mechanism of the Petitioner. The complaints of the consumers are not being resolved in a timely and appropriate manner, as stated by the stakeholders. The Commission directs the Petitioner to strengthen and increase effectiveness of its consumer grievance handling mechanism and submit a report to the Commission along with the next Tariff Order indicating- total number of complaints received, nature of complaint, complaints resolved, average resolution time, complaints pending etc.</p> | <p>Consumer Care set up has been established in each of the 15 Circles. These centers are integrated by a centralized customer care cell named “SASHAKT”, which centrally monitors the consumer complaints received. Under the SASHAKT program, a single window has been created for complaint registration, redressal and monitoring.</p> <p>Consumers can also register their complaints through other means like Common complain number-1912, social media- Facebook & Twitter, JBVNL website-www.jbvn.co.in, email, jan samvad, written complaints, etc.</p> <p>A circle-wise status summary of complaints received and complaints resolved between 1st Apr’18 to 25th Dec’18 is submitted to Commission.</p> | <p>The Commission takes note of the compliance of the directive.</p> |



A 16: DIRECTIVES

Abolishment of Un-metered Category

16.1 The Commission observes that the Petitioner has not been able to comply with its self-declared target of December 2018 and takes serious note of the same. The Commission however, provides final opportunity to the Petitioner to complete the metering of by June 2019 and submit the completion report by July 2019.

Power Purchase Cell

16.2 The Commission directs the Petitioner to form a dedicated power purchase cell with a high qualified team so that short term as well as long term power procurement of the Discom can be continuously monitored and the power procurement cost of the Utility can be optimised. The Commission also observes that the Petitioner has paid UI charges, which may indicate non-optimum forecasting and planning on behalf of the Utility. Such power purchase cell shall aid the Utility in effective demand forecasting and planning. The Petitioner should finalize the agency and submit the compliance report by June 2019.

RPO Obligation

16.3 The Commission direct the Petitioner to comply the RPO Obligation by March 2019 for period till FY 2018-19 and submit the report by April 2019. The Petitioner is required to submit the quarterly report on RPO compliance for FY 2019-20.

16.4 The Commission, in this Order has not imposed a penalty for non-fulfilment of RPO. The Commission may be constrained to levy penalty in future, if the Petitioner do not comply with the same. A monetary penalty may also be imposed on the Managing Director and/ or senior management of the Discoms, if the Commission deems so.

Quality of power/ Reliability Indices and Standard of Performance (SOP)

16.5 The Commission directs the Petitioner to continue to continue implementing SoP as per Standards of Performance as per the JSERC (Standards of Performance) Regulations, 2015 and report to the Commission as per Regulation.



Strengthening of Distribution Network

16.6 The Commission has noted the submission made by the Petitioner on the Safety Manual. The Commission directs the Petitioner to follow the same to reduce accidents and also follow the continuous routine maintenance schedule for improved services to the consumers.

Energy Audit & T&D Loss Reduction Plan

16.7 The Commission directs the Petitioner in its earlier Order to conduct division-wise Energy Audit & prepare circle-wise T&D Reduction Plan and submit the same along with its progress to the Commission within six months of issue of this Tariff Order. The Commission also directs the Petitioner to submit sample energy audit report for transformers having different consumer mix along with action taken, if any, for reducing losses within six months from the date of issuance of the order.

16.8 The Commission infers that there is a huge gap in billing and collection efficiency based on the sample audit data submitted by the Petitioner.

16.9 The Commission directs to submit the verified audit report on sample basis within 3 months from the date of issuance of this Order without any fail.

16.10 The Commission also directs the Petitioner to move towards prepaid meters to improve the collection efficiency.

Interest on Consumer Security Deposit

16.11 The Commission takes note of the steps taken by the Petitioner. However, the Petitioner is yet to ensure that the interest is paid to all the consumers on the security deposits.

16.12 The Commission directs the Petitioner to continuously update its data bases and submit the monthly compliance report to the Commission. The Petitioner is required to submit data related to total amount of consumer security received by the Petitioner, interest payable on consumer security deposit and actual amount paid till date on quarterly basis to Commission.

Segregation into Retail & wheeling supply of business

16.13 According to the Regulation 5.4 of the JSERC Distribution Tariff Regulations 2015, separate accounting has to be done for Wheeling & Retail supply of Business which has not been the case till now. As per Regulation 5.5 of JSERC Distribution Tariff Regulations



2015, until the time accounts are not segregated an Allocation Statement shall be prepared and submitted to apportion the costs and revenues after the approval of the Board of Directors.

16.14 The Commission strictly directs the Petitioner and directed to prepare the FAR and submit the same before Commission. The Commission directs the Petitioner to submit the same within six months from the date of this Order.

Actual Supply Hours in Rural Areas

16.15 The Petitioner is directed to comply with the SOP and submit the monthly report in the prescribed formats.

Voltage Wise-Cost of Supply

16.16 The Commission directs the Petitioner to carry out a detailed technical study on voltage wise losses on Distribution network and furnish a report within 3 months from the date of issuance of this Order.

Wheeling Charges

16.17 The Commission directs the Petitioner to prepare the FAR and submit detailed calculation for voltage wise wheeling charge in the next tariff petition.

Theft of Electricity

16.18 The Commission reviewed the steps taken out by the Petitioner to strengthen the vigilance wing and curb theft of electricity. The Commission directs the Petitioner to continue doing such activities and bring it down to the levels as set by the Commission.

16.19 The Commission directs the Petitioner to develop web based application where anyone can upload a picture or provide information about power theft. The Petitioner may also develop a suitable scheme for rewarding the people who provide credible/actionable information of power theft.

Employee Performance Appraisal

16.20 The Commission observes that the Petitioner has made some interim arrangement. The Commission directs the Petitioner to develop an arrangement whether the quality of supply can be objectified into performance indicators and for an area is linked to respective Officers. The Petitioner to submit the compliance report in 3 months from the date of issue of this order.



Capacity Building of Employees

16.21 The Commission takes notes of the training and capacity program carried out by the Petitioner. The Commission directs the Petitioner to ensure such capacity building program should be conducted on regular basis and submit details of such workshops undertaken along with the next Tariff Petition.

Monitoring of Compliance to Directives

16.22 The Commission observes that the Petitioner has not been prompt in complying with the directions of the Commission and several directions are yet to be complied with even after repeated reminders.

16.23 The Commission directs the Petitioner to strictly comply with the directions of the Commission and regularly apprise the Commission on the compliances.

Investment in Cyber Security Solutions

16.24 The Commission takes note of the compliance of the directive. The Petitioner is required to submit the implementation and completion report of ERP Implementation. The Petitioner should further submit the quarterly status report of implementation of Integrated Technology Roadmap - IT/OT Feasibility.

Quarterly forecast of the Quantum of Short Term Power to be purchased

16.25 The Commission directs the Petitioner to submit the rolling quarterly forecast of the quantum of short term power to be purchased in FY 2019-20 as per Regulation 5.20 of the Distribution Tariff Regulations, 2015.

Submission of PPA

16.26 The Petitioner needs to optimise its power purchase cost. It is required to get all PPAs approved by the Commission. The Commission has noticed that the PPA with DVC is yet to be approved by the Commission. The therefore Commission directs the Petitioner to apply for approval of the PPA with DVC to the Commission within 1 month of the issue of this Order. The Commission has considered the power purchase from DVC (Koderma) as a Generator provisionally and shall approve the same subject to approval of the PPA.

Conversion of UDAY Loan into Grant/Equity

16.27 The Commission directs the Petitioner to expedite the conversion of State Government loan into grant/ equity as per the agreed UDAY MoU.



Consumer Awareness Programmes

16.28 The Commission directs the Petitioner to improve the Consumer Awareness Programme to better enable to consumers to understand the Tariff Order as well as the Tariff Schedule for an improved understanding of the Electricity Tariffs applicable.

This Order is signed and issued by the Jharkhand State Electricity Regulatory Commission on 28.02.2019.

It is made clear that the Order regarding revision of tariff shall come into effect from 01.04.2019 and shall remain in force till the next order of the Commission to this regard.

Let the order be placed on website of the Commission, and a copy thereof be sent each to the JBVNL, all the other Licensees of the State, CGRFs/VUSNFs, Department of Energy-Government of Jharkhand, Central Electricity Regulatory Commission, Central Electricity Authority, Electricity Regulatory Commission of all States and Joint Electricity Regulatory Commission.

A copy of the Order be also sent to all Postgraduate Institutions of the State to be kept in their library.

Date: 28.02.2019

Place: Ranchi

Sd/-

(Shri R. N. Singh)

MEMBER (T)

Sd/-

(Dr. Arbind Prasad)

CHAIRPERSON



ANNEXURES

Annexure-1: List of participating members of public in the public hearing

| Sr. No. | Name | Address/Organization |
|--------------------|----------------------|--|
| Medininagar | | |
| 1 | Yogendra Bharti | Aghoragram, Sudna, Daltonganj |
| 2 | Aashish Kumar | Police Line Road, Azad Nagar, Sudna, Medininagar |
| 3 | Kumar Ravi Shekhar | Police Line Road, Azad Nagar, Sudna, Medininagar |
| 4 | Kush Kumar | Azad Nagar, Sudna, Medininagar |
| 5 | Randhir Raj Chouhan | Redma, Daltonganj Gramin |
| 6 | Bipin Kumar Sinha | Redma |
| 7 | Sunaina Devi | Redma, Daltonganj Gramin |
| 8 | Arvind Kumar | Sub-division, DTO Rural Office Redma, Daltonganj |
| 9 | Satish | Electric Supply Circle, Daltonganj |
| 10 | Sukh Lal Porwar | Supply Circle, Daltonganj |
| 11 | Subhash Prasad | Assistant Electrical Engg. Nagar Utari |
| 12 | S. N. Jha | Vidyut Clolony, Daltonganj |
| 13 | Uma Shankar Prakash | ESA Medininagar |
| 14 | Sazid Mia | ESC, Daltonganj |
| 15 | Vikash | ESSD, Daltonganj |
| 16 | Rajesh Kumar | Redma, Daltonganj |
| 17 | D. Mahapata | JBVNL Nigam HQR |
| 18 | Vijay Prajapati | ESC, Daltonganj |
| 19 | Prem Kumar Singh | ESD Medininagar |
| 20 | B. Kumar | ESA Medininagar |
| 21 | Rekha Gupta | ESE, Medininagar |
| 22 | Rohit Tiwari | Project Manager EIU Ltd. |
| 23 | T. Singh | ESA, Daltonganj |
| 24 | Ram Niwash Singh | Electric Colony Sudna, Daltonganj |
| 25 | Mona | Sahpur, Chainpur |
| 26 | Kumari Anuradha | Jailhatha, Daltonganj |
| 27 | Basant Kumar | ESA (C&R), Daltonganj |
| 28 | Nawal Kishor | Sudna, Daltonganj |
| 29 | Jagnarayan Ram | Sahpur, Chainpur, Palamu |
| 30 | Rjaendra Nath Tiwari | Dhamni, Nagar Utari, Gadhwa |
| 31 | Rita Devi | Baralota, Redma |
| 32 | Aasha Kumari | Circle office, Daltonganj |
| 33 | Sarswati Devi | Kundmuhalla, Daltonganj |
| 34 | Chandra Kumar Mishra | ESC, Daltonganj |



| Sr. No. | Name | Address/Organization |
|---------|------------------------|--|
| 35 | Govind Kumar Mishra | Behaind Electric Colony Sudna, D. Ganj |
| 36 | Chitranjan Kumar Gupta | Daltonganj |
| 37 | Rohit Choudhary | Palamu |
| 38 | Sumit Kumar | Daltonganj |
| 39 | Azad Ahmad | Near Gayatri Mandir, Sudna, D. Ganj |
| 40 | Ashok Kumar | Daltonganj |
| 41 | Shankar Paswan | Baralota, Redma, Daltonganj |
| 42 | Naveen Kumar Singh | Shahpur, Chainpur, Daltonganj |
| 43 | Panchanan Sahu | Daltonganj |
| 44 | Akash Ranja | Daltonganj |
| 45 | Shayam Kumar | Daltonganj |
| 46 | Pushpa Devi | Shahpur, Daltonganj |
| 47 | Rahul Kumar Agrawal | Shahpur, Daltonganj |
| 48 | Kunal Kumar | Daltonganj |
| 49 | Navneet Tripathi | Daltonganj |
| 50 | Raju Kumar Sukla | Daltonganj |
| 51 | Krishna Paswan | Daltonganj |
| 52 | S. C. Mishra | Daltonganj, Gaytri Mandir Road, Daltonganj |
| 53 | Gunwant Kumar | Bishrampur, Daltonganj |
| 54 | Haldhar Prasad Barnwal | Latehar Elec. Supply Division |
| 55 | Vikas Kumar | Electric supply MRI Division, Daltonganj |
| 56 | Ankit Kumar | Electric Supply Section Latehar |
| 57 | Mahaveer Singh | Chainpur |
| 58 | Ashish Kumar | Daltonganj |
| 59 | Ravindra Kumar Yadav | Vidyut Supply Division, Chainpur |
| 60 | Omprakash Ram | Electricity Division |
| 61 | Anuj Mishra | Redma |
| 62 | Srawan Kumar Arya | Daltonganj |
| 63 | Naresh Kumar Agrawal | Daltonganj |
| 64 | Satyendra Kumar | Circle Account Section ESC, Daltonganj |
| 66 | Yogendra Kumar Pal | Electrical Division, Daltonganj |
| 67 | Amit Kumar | PMC RAPDRP Part-B Daltonganj |
| 68 | Radheshyam Ram | Daltonganj |
| 69 | Manish Kumar Sinha | Daltonganj |
| 70 | Jitendra | Palamu |
| 71 | Raiv Prsad | MRT, Daltonganj |
| 72 | Birendra Paswan | Central Store, Electricity, Daltonganj |
| 73 | Mahendra Kumar | Tata Project Ltd., Daltonganj |
| 74 | Shivcharan Mahto | Daltonganj |
| 75 | Sanjay Kishor Singh | Tata Project Ltd., Daltonganj |
| 76 | Santosh Kumar Mandal | JEE/Dganjrural/Elec. , Daltonganj |



| Sr. No. | Name | Address/Organization |
|-------------------|--------------------|---|
| 77 | Arun Kumar | TA/JCM/D.Ganj Electrical Supply Division |
| 78 | Pawa Devi | Redma |
| 79 | Dhirendra Kumar | Redma |
| 80 | Ganesh | Redma |
| 81 | Styanarayan Prasad | Chainpur |
| 82 | Subahan Shahjada | Chainpur |
| 83 | Nahku Oraon | Chainpur |
| 84 | Arvind Thakur | Daltonganj |
| 85 | Suryanath Oraon | Vidyut apurti Daltonganj |
| 86 | M. Singh | Jailhatha, Daltonganj |
| 87 | Yaduvansh Mishra | Daltonganj |
| 88 | Shantu Ram | Daltonganj |
| 89 | Punam Devi | Redma |
| 90 | P. K. Singh | Zila parshad Chainpur |
| 91 | Rajan Kumar | Daltonganj |
| 92 | Samim Afjal Ansari | Daltonganj |
| 93 | Basant Kumar Ram | Daltonganj |
| 94 | Smt. Bechni Devi | Redma |
| 95 | Sunil Kumar Thakur | Chief Engineer (C&R), JBVNL |
| 96 | K.K. Mahto | Daltonganj |
| 97 | Ramprakash Paut | Electric Supply Circle D. Ganj |
| 98 | Abhishek Kumar | Bypass Road, Daltonganj |
| 99 | Damodar Pandey | HE cumI/e JEE Chainpur |
| 100 | A. N. Tirkey | EEE/cs/ Daltonganj |
| 101 | Himanshu Verma | JBVNL |
| 102 | Mahadev Mahto | JBVNL |
| 103 | Vikas Kumar | JBVNL |
| 104 | Amit Xen | Daltonganj |
| 105 | Md. M. Ashraf | JEE, Daltonganj |
| Hazaribagh | | |
| 1 | Shayam Kishor Saw | Hazaribagh |
| 2 | Ranjeet Kumar | Hazaribagh |
| 3 | Sunil Kumar | Knedari, Hazaribagh |
| 4 | Akash Sharma | Sharma Tola, H. Bagh |
| 5 | Tripurari Sandesh | Mahudar, Hazaribagh |
| 6 | Bijay Kumar Saw | Rewali, Hazaribagh |
| 7 | Subodh Kumar | Vice President, Hazaribagh Chamber of Commerce & Ind. |
| 8 | Ashok Kumar Singh | Hazaribagh |
| 9 | Arbind Sharma | Karra Jabara Road New Colony Hazaribagh |



| Sr. No. | Name | Address/Organization |
|---------|---------------------|--------------------------------------|
| 10 | Ram Kishun Ram | Hazaribagh |
| 11 | Zeyaul Hasan | Hazaribagh |
| 12 | Vikramaditya | Anand Nagar, Hazaribagh |
| 13 | Rupesh Kumar | Budhakhukhara, Gosa, Ramgarh |
| 14 | Ranjeet Kumar | Maganpur, Gola, Ramgarh |
| 15 | Nitesh Mahto | Baradih |
| 16 | Birendra Kumar | Budhakhukhara, Gosa, Ramgarh |
| 17 | Guddu Kumar | Mukundganj |
| 19 | Deepak Kumar Singh | Hazaribagh Division |
| 20 | Ashish Kumar Sinha | Hazaribagh Division |
| 21 | Binay Kumar | Hazaribagh Division |
| 22 | Amar Kumar Munda | Hazaribagh Division |
| 23 | Lakshmi Prasad | Hazaribagh Division |
| 24 | Ram Prasad | Hazaribagh Division |
| 25 | Kali Ram | Hazaribagh Division |
| 26 | Md. Idris | Hurhur |
| 27 | Sahdev Prasad Mehta | Churchu, Ichak, Hazaribagh |
| 28 | Dhirendra Prasad | N. Nagar, Lakhe Korrah, Hazaribagh |
| 29 | Amit Kumar | Imli Kothi Hazaribagh |
| 30 | Krishna Kumar Das | Hazaribagh |
| 31 | Durga Rani Kerketta | Bundel Nagar, Hazaribagh |
| 32 | Rahul Singh | North Sivpuri, Hazaribagh |
| 33 | Bokosh Kumar Bhokta | Hazaribagh |
| 34 | Saket | Mukundganj |
| 35 | Barun Kumar | Meyatu Soltana, Hazaribagh |
| 36 | Bahadur Prajapati | Nayakhap |
| 37 | Ravi Kumar | Arya Nagar Patratu Chowk, Hazaribagh |
| 38 | Purna Ch. Das | Mukundganj |
| 39 | S. Mandal | Mukundganj |
| 40 | Jaykrishna Singh | Mukundganj |
| 41 | Vivek Kumar | Mangal Bazar |
| 42 | R. B. Singh | Hazaribagh |
| 43 | Radhvender Sharma | Hazaribagh |
| 44 | Sulman | Hazaribagh |
| 45 | Bira Thakur | Barkagaon, Hazaribagh |
| 46 | Anu Thakur | Barkagaon, Hazaribagh |
| 47 | Sabitri Devi | Barkagaon, Hazaribagh |
| 48 | Sanjay | Hazaribagh |
| 49 | Manoj Kumar | Matwari |
| 50 | Kauleshwar Kumar | Hurhur |
| 51 | Kripal Rana | Hazaribagh |
| 52 | Niraj Kumar | Hazaribagh |



| Sr. No. | Name | Address/Organization |
|---------|----------------------|--|
| 53 | Md. Aslam | Harli, Hazaribagh |
| 54 | Zeyaur rashid | Pelawal, Hazaribagh |
| 55 | Salique Hussain | MKRM School, Hazaribagh |
| 56 | Kistu Saw | Bocho Babhanbe, Hazaribagh |
| 57 | Laxman Prasad | Hazaribagh |
| 58 | Darba Devi | Bocho, Babhnbe, Hazaribagh |
| 59 | Sanjay Gupta | Mukundganj |
| 60 | Mahendra Thakur | Sivpiri, Hazaribagh |
| 61 | Raju Kumar | Near Head post office Hazaribagh |
| 62 | S. Sharma | Forest colony Hazaribagh |
| 63 | Md. Aslam | Harli, Hazaribagh |
| 64 | Sanjay Bahadur | Hazaribagh |
| 65 | Sachin Raj | Hazaribagh |
| 66 | Dilip Kumar | Khilrgon Hazaribagh |
| 67 | Basant Kumar | Guru Chatli, Barkagaon, Hazaribagh |
| 68 | Mithun Kumar | Arya Nagar, Patnatra Choek, Hazaribagh |
| 69 | Hemant Kumar | Lapasiya, Brindaban Chouparan, Hazaribagh |
| 70 | Ajay Mukherjee | Hazaribagh |
| 71 | N. Bhowmin | Barkagaon, Hazaribagh |
| 72 | Nandkishor Kumar | Barkagaon, Hazaribagh |
| 73 | Umesh Kumar | GM/A&R, JBVNL |
| 74 | D. Mahapatra | Sr. Mgr (F&A) JBVNL HQ |
| 75 | Aftab Alam | AEE/P/Chatra, JBVNL |
| 76 | Pappu | AEE/s/Charta |
| 77 | Mantu Kumar | JEE/s/Chatra |
| 78 | Md. Df shad | Hazaribagh |
| 79 | Dhiraj Kumar Rana | Pasai Rewali, Hazaribagh |
| 80 | Dipak Kumar | Hazaribagh |
| 81 | M. Aftab | Hazaribagh |
| 82 | P. Kumar | Hazaribagh |
| 83 | Shambhu Nath Agrawal | President, Federation of Hazaribagh Chamber of Commerce & Industry, Hazaribagh |
| 84 | Raj Kumar Jain | Hazaribagh Chamber of Commerce |
| 89 | Ayush Jain | Hazaribagh |
| 90 | Upendra | JBVNL |
| 91 | Sanjay Kumar | Elec Supply Engg. Ramgarh, JBVNL |
| 92 | Omprakash | Member (T), VUSNF, Hazaribagh |
| 93 | Rakesh Prasad | GM cum CE, Electric Supply area, Hazaribagh |



| Sr. No. | Name | Address/Organization |
|---------|--------------------------|--|
| 94 | Prabhat Kumar Srivastava | Electrical superintending Engineer Electric supply circle, Hazaribagh |
| 95 | Kunal Kishor Ray | Ranchi |
| 96 | Somnath Singh | Ranchi |
| 97 | Gandadhar Dubey | Babugaon, Shivamandir Road, Korrah, Hazaribagh |
| 98 | Krishna Pd. Singh | EEE W & MM ESA Hazaribagh |
| 99 | Sudhakar Choubey | EEE/S, Hazaribagh |
| 100 | Arbind Kumar Amar | EEE (C&R), JBVNL |
| 101 | Virendra Pal | AE (Civil), JBVNL |
| 102 | Sunil Kumar Thakur | CE (C&R), JBVNL |
| 103 | Mohit Bharwat | Consultant |
| 104 | Raviprakash Narayan | Nutan Nagar |
| 105 | Rishi Singh | Consultant |
| 106 | Rajan | Jama Masjid, Hazaribagh |
| 107 | Amit Kumar Soni | Vishnupuri, Hazaribagh |
| 108 | Satyendra Kumar | EEE/s/Charta, Hazaribagh |
| 109 | NawAlesh Kumar | EEE/MRT, Hazaribagh |
| 110 | Panchnan Singh | EE/s/Hazaribagh |
| 111 | Sunavam Soren | EEE/s/Ramgarh, Hazaribagh |
| 112 | Rajkumar Choudhary | Electrical Engineer, Kuju, Hazaribagh |
| 113 | Hahihar Prasad | Ichak section Hazaribagh |
| 114 | Mangal Oraon | Donoresam, Hazaribagh |
| 115 | Kishori Lal Kushwaha | Ramdeo Khariva, Hazaribagh |
| 116 | Sujeet Kumar | Lapo Road, Hazaribagh |
| 117 | Praveen Pandey | S. Nagar, Hazaribagh |
| 118 | Ajay Kumar | Krishna Nagar Hazaribagh |
| 119 | Sunny Kumar | Hirabag Hazaribagh |
| 120 | Vikush Kumar | Hapli Hazaribagh |
| 121 | Ramraj Pandey | Hazaribagh |
| 122 | Vinay Tiru | Donoresam Harhar Hazaribagh |
| 123 | Nucleus Tiru | Donoresam Hahar Bana Nawadi |
| 124 | Vikas Kumar | Buehu, Hazaribagh |
| 125 | Abinash Kumar | Harhar, Hazaribagh |
| 126 | S. Sahana | Mukundganj |
| 127 | Dayanand Paswan | Hazaribagh |
| 128 | Biku Sharma | Ichak , Hazaribagh |
| 129 | Kuldeep Kumar | Badkagaon |
| 130 | Sonu Ram | Parasi Ichak Hazaribagh |
| 131 | Sandeep Kumar | Ramgarh |
| 132 | Somnath Karmakar | Hazaribagh |
| 133 | Asit Das | Hazaribagh |



| Sr. No. | Name | Address/Organization |
|--------------|-----------------------|---|
| 134 | Indranath Thakur | Hazaribagh |
| 135 | Rahul Purwar | Managing Director, JBVNL |
| Dumka | | |
| 1 | D. Mahapatra | Sr. Mgr (F&A), JBVNL HQ |
| 2 | Somnath Singh | Ranchi |
| 3 | Kunal Kishor Ray | Ranchi |
| 4 | Sudan Kumar Sharma | Dumka |
| 5 | Mukesh Kumar Dey | Dumka |
| 6 | S. K. Singh | Electric Supply Division Jamtara |
| 7 | Manir Ansari | Shikaripara, Maluti, Dumka |
| 8 | Mustak Ali | Dumka Chamber of Commerce |
| 9 | Prem Prakash | Dumka |
| 10 | Gourav Kumar | Dumka |
| 11 | Sandeep K. Jay Bambam | Naya Para, Dumka |
| 12 | Ravi Kumar | Hindustan Newspaper |
| 13 | Md. Sarif | Babu Para, Dumka |
| 14 | Sikadu Mandal | Advocate, Dumka |
| 15 | Manoj Kumar Ghos | Secretary, Chamber of Commerce & Industries |
| 16 | Pankaj Kumar Bhandar | Dainik Jagran |
| 17 | Sanjiv Kumar | Dumka |
| 18 | Nikladh | Dumka |
| 19 | Ashwini Sodhu | Dumka |
| 20 | Ram S. Paswan | GM Office, Dumka |
| 21 | Shivnandan Ray | Mahua Dengal |
| 24 | Karmela Soren | Dumka |
| 25 | Sukhdeo Mahto | Dumka |
| 26 | Deepak Kumar Singh | Dumka |
| 27 | Pawan Kumar Modi | Dangal para Dumka |
| 28 | S. K. Viskarma | Dangal para Dumka |
| 29 | Surendra Roy | Mahua Dangal Dumka |
| 30 | Sunil Pal | Shikaripara, Dumka |
| 31 | Sunil Kumar Thakur | Chief Engineer (C&R), JBVNL |
| 32 | Abhay Mohan Sahay | AEE/Dumka |
| 33 | Awadhesh Kumar Bakshi | AEE/Dumka, JBVNL |
| 34 | Harendra Kumar Singh | GM cum CE, Dumka |
| 35 | Deepak Kumar | ESE/s/Dumka |
| 36 | Vishnu Jhunjunwala | Zila School Road, Dumka |
| 37 | Pankaj Kumar | Dudhani Dumka |
| 38 | Ajay Kumar Mohan | Ajay Udyog, Iabutar Industrial Area, Dumka |
| 39 | Poresh Soren | Rashikpur Dumka |



| Sr. No. | Name | Address/Organization |
|---------------|----------------------|--|
| 40 | S. N. Bhogta | Dumka |
| 41 | Rakesh Ranjan | DDC Office Dumka |
| 42 | Anoop | Dainik Jagran |
| 43 | Jitan Baidya | Dudhari Gosala Dumka |
| 44 | Ravindra Kumar Singh | Dumka |
| 45 | Santosh Singh | Hejla Road Dumka |
| 46 | Anil John | Dudhari, Dumka |
| 47 | Aniket Kumar | Dumka |
| 48 | Raman Kamar Pandey | Dumka |
| 49 | Harendra Kumar | Electric Office Supply Dumka |
| 50 | Dilip Kumar Singh | Electric Office Dumka |
| 51 | Ravi Pal | Electric Office Circle |
| 52 | Santosh Kumar | Electric Office circle |
| 53 | Jaikun | Electric Office Circle |
| 54 | Md. Zeeshan Rashid | Dudhani Dumka |
| 55 | Bijay Shah | Electric office Dumka |
| 56 | Anjani Kumar | Electric Office Dumka |
| 57 | Md. Ishlam | Electric Office Dumka |
| 58 | Chandan Kumar Singh | Electric Office Dumka |
| 59 | Mohit | Consultant |
| 60 | Nitesh Kumar | Basukinath, JBVNL |
| 61 | Debprasad Dutta | Basukinath, JBVNL |
| 62 | Goutam Keshri | Main Road, Dumka, JBVNL, Dumka |
| 63 | Raman Raj | Dumka |
| 64 | Jitendra Kumar | Electric Supply Subdivision, Jamtara |
| 65 | Md. Rafique Alam | Electric Supply Section Jamtara |
| 66 | Rakesh Kumar | Electric Supply Section Mihijam |
| 67 | Ravi | Sharda Industries |
| 68 | Rajesh | Electric Supply Division Dumka |
| 69 | Gouri Shankar Singh | Naya Para, Dumka |
| 70 | Md. Shabbiransari | Kathikund Dumka |
| 71 | Kayum Ansari | Kathikund, Dumka |
| 72 | Siya Ram Ghiria | Dumka |
| 73 | Santosh Kumar | Dumka |
| 74 | Suresh Pd. Sah | Dumka |
| Ranchi | | |
| 1 | Saurabh Srivastava | Singhbhum Chamber of Commerce & Industry |
| 2 | Rishi Singh | Consultant |
| 3 | Shubham Verma | Consultant |
| 4 | Sushil Singh | Kumardhubi, Dhanbad |
| 5 | Birendra Rai | Kumardhubi, Dhanbad |



| Sr. No. | Name | Address/Organization |
|---------|---|--|
| 6 | Rana Gautam | News 24 hour.com |
| 7 | Sunil Kumar Thakur | Chief Engineer (C&R), JBVNL |
| 8 | Natthan Rajak | EEE (C&R), Electric Supply Circle, Ranchi |
| 9 | Satyadev Yadav | Hindustan Press, 7, Kokar Industrial Area, Kokar, Ranchi |
| 10 | Arun Kumar Khemka | 602 Green Park Appartment, Bariatu Road, Ranchi |
| 11 | Arvind Kumar | Sokale Sokale Press Bangla Daily |
| 12 | R. P. Shahni | Jharkhand Civil Society, 328, Doranda, Ranchi – 2 |
| 13 | Sanjay Kumar | General Manager-cum-Chief Engineer, Ranchi Area, Kusai Doranda, Ranchi |
| 14 | Shalendra K. S. | Kashish News |
| 15 | Kaushal | Kashish News |
| 16 | Yogoda Satsanga Brahamodeni Bhaskarenande | Yogoda Satsanga Ashram |
| 17 | Yogoda Satsanga Kinamneneda | Yogoda Satsanga Ashram |
| 18 | Saurav Roy | The Pioneer |
| 19 | Ashok Kumar Bihany | ASIA, Tata Kandra Road, Adityapur, Saraikela |
| 20 | Piyush Goyal | 4th Floor S Building, Bistupur |
| 21 | Subhash Shekhar | localkhabar.com |
| 22 | Prabhat Kumar | Harihar Singh Road |
| 23 | Arun Kumar Khemka | Ratu Road Ranchi |
| 24 | Hemlata Oraon | Murto, Chanho, Ranchi |
| 25 | Santosh | Kokar Ranchi |
| 26 | Ajeet Kumar | ESE/s/Ranchi, JBVNL |
| 27 | Deepak Kumar Maroo | President, FJCCI |
| 28 | Sanjay Saha | Zima of India (Press) |
| 29 | Anjay Pachariwala | Old HB Road, Kokar, Ranchi |
| 30 | Gopal Mallik | Kombo, Mandar, Ranchi |
| 31 | Chandan Bhattacharya | Ranchi |
| 32 | Ramu Oran | Gurjari, Kombo, Mandar, Ranchi |
| 33 | Rajesh Oraon | Gram- Gurjari, Kombo Prakhand, Mandar, Ranchi |
| 34 | Binod Tigga | Dhaspari, Mandar, Ranchi |
| 35 | Karma Oraon | Bansjari |
| 36 | Mahadev Oraon | Murjili Mandar, Ranchi |
| 37 | Jagdev Oraon | Gurjari, Mandar, Ranchi |
| 38 | Binod Oraon | Gurjari, Kombo, Mandar, Ranchi |
| 39 | Charba Oraon | Gurjari, Kombo, Mandar, Ranchi |



| Sr. No. | Name | Address/Organization |
|---------|---------------------|---|
| 40 | Rohit Sahu | Gurjari, Kombo, Mandar, Ranchi |
| 41 | Pinki Kujur | Ranchi |
| 42 | Lalimuleti | Mandar, Ranchi |
| 43 | Anupam Anjali | JBVNL |
| 44 | Mahesh Sonthalia | Singhbhum Chamber of Commerce & Industry |
| 45 | Sudhir Kumar Singh | JBVNL |
| 46 | Eshan Singh | Bariatu, Ranchi |
| 47 | A.V. Sinha | Shyam Lal Iron & Steel Co., Adityapur, Jamshedpur |
| 48 | S. Lal | Jamshedpur |
| 49 | Om Prakash | At+PO - Tangar, Chanho |
| 50 | Budheshwar Oraon | Ranchi |
| 51 | Vimal Tigga | Bansjari, Mandar, Ranchi |
| 52 | Shekh Akrabba | Bero, Ranchi |
| 53 | Subodh Kachhap | Sant Jons Uchya Vidhalaya, Ranchi |
| 54 | Rajesh Kumar Mandal | New Capital Pramandal, Ranchi |
| 55 | Aubhash Oraon | Mandar, Ranchi |
| 56 | Anwar Ansaei | Mandar, Ranchi |
| 57 | Kumardev Oraon | Bansjari, Po - Mahuajari, Mandar, Ranchi |
| 58 | Niraj Kumar | Gram-Barhe, PO - Tangar, Chanho, Ranchi |
| 59 | Saurav Kumar | Adarsh Nagar, Jamshedpur |
| 60 | Sharad Poddar | Ch Area, Jamshedpur |
| 61 | Rajkushun Oraon | Murjali, Mandar |
| 62 | Rameshwar Oraon | Murjali, Mandar |
| 63 | Ajay Kumar Sahu | Sukurhutu, Ranchi |
| 64 | Harsh Kausal | Galaxy Exports Pvt. Ltd. |
| 65 | Sushil Bhagat | JBVNL |
| 66 | Prashant | Dainik Bhaskar |
| 67 | Raj Kumar | Press-Aaj |
| 68 | Nausheen | Central University of Jharkhand |
| 69 | Nitith Kumar | Chanho, Ranchi |
| 70 | Jatti Devi | Chanho, Ranchi |
| 71 | Manju Lakra | Chanho, Ranchi |
| 72 | Nitin Halotia | Jamshedpur |
| 73 | Vishu Oraon | Murjili Mandar, Ranchi |
| 74 | Ashok Sahu | Bijupara, Chanho, Ranchi |
| 75 | Aman Kansal | Galaxy Exports Pvt. Ltd., Jamshedpur |
| 76 | Praveen Lohia | Ranchi |
| 77 | Rajesh Prasad | Upper Bazar, Ranchi |
| 78 | Shambhavi Mishra | Central University of Jharkhand |



| Sr. No. | Name | Address/Organization |
|---------|----------------------|--|
| 79 | Karma Oraon | Bejang, Po.- Tangar, Chanho, Ranchi |
| 80 | Saneya Oraon | Bejang, Po.- Tangar, Chanho, Ranchi |
| 81 | Sitaram Oraon | Bejang, Po.- Tangar, Chanho, Ranchi |
| 82 | Rajesh Kumar Singh | Harmu Road, Ranchi |
| 83 | Saurav Jaiswal | Jamshedpur |
| 84 | Chandradev Bhagat | Gurgurjari |
| 85 | B. K. Tulsyan | Ranchi |
| 86 | Bhai Gokul Chand | Sai Mandir Marg, Ratu Road, Ranchi |
| 87 | Kunal Ajmani | IJCCI |
| 88 | S. Gewal | Kadru, Ranchi |
| 89 | Martin Tigga | Vill.- Kadma, PO/PS - Kanke Ranchi |
| 90 | Vivek Aryah | Dainik Jagran, Kokar, Ranchi |
| 91 | Siddharth Banerjee | Press - Sokal Sokal, Ranchi |
| 92 | Birendra Kumar | Electric Supply Sub-division, Kokar, Ranchi |
| 93 | Vikash Vijayvargi | FJCCI, Ranci |
| 94 | Jitia Minz | Chinoro, Purio |
| 95 | Dashrath Kujur | Itki, Ranchi |
| 96 | Abhishek Kumar | Zee Bihar/Jharkhand – Reporter |
| 97 | Kunal Tirky | Nayatoli, Old HB Road, Ranchi |
| 98 | Dr. Anjana Verma | Yogoda College |
| 99 | Bhanu Priya | Yogoda Satsanga Mahavidyalaya |
| 100 | Reetu Raj | Tododa Satsanga Mahavidyalaya |
| 101 | Haddhoo Oraon | Mandar, Ranchi |
| 102 | Dr. Priya Srivastava | Dept. of Zoology SXC |
| 103 | Ruppam Kumari | Yogda Satsanga Mahavidyalaya |
| 104 | Mayank Thakur | Yogoda Satsanga Mahavidyalaya |
| 105 | Bushra Amin | Yogoda Satsanga Mahavidyalaya |
| 106 | Shweta Kumari | Yogoda Satsanga Mahavidyalaya |
| 107 | Brajesh Kumar | Yogoda Satsanga Mahavidyalaya |
| 108 | Ramesh Oraon | Itki, Ranchi |
| 109 | D. Mahapatra | Sr. Mgr (F&A) JBVNL HQR |
| 110 | Ajay Bhandari | E-71, Ashok Vihar, Ranchi |
| 111 | Divya Kumari | Shukala Colony, Bajpai Path, Hinoo, Ranchi |
| 112 | Abhay Kumar | Electric Supply Division Ranchi (East) Kusai Colony Doranda |
| 113 | S. P. Singh | Tupudana Industries Association |
| 114 | Dhananjay Pathak | Advocate, Jharkhand, High Court |
| 115 | Tapeshwar Lohra | Doranda, Pipartoli |
| 116 | Pramod Sahu | Doranda, Pipartoli |
| 117 | Parvez | Rashtriya Sagar (Press) |



| Sr. No. | Name | Address/Organization |
|-----------------|---------------------|-------------------------------------|
| 118 | Dinesh Gupta | Doranda, Pipartoli |
| 119 | Amit Oraon | Doranda, Pipartoli |
| 120 | Rajkishor Sahu | Doranda, Pipartoli |
| 121 | Sanju Lohar | Doranda, Pipartoli |
| 122 | Kuldeep Sahu | Doranda, Pipartoli |
| 123 | Ashok Prasad | Doranda, Pipartoli |
| Chaibasa | | |
| 1 | Ashok Bihany, CA | ASIA, Jamshedpur |
| 2 | Sunil Kumar Thakur | CE (C&R), JBVNL |
| 3 | S. K. Paswan | AEE Rajkharsawan |
| 4 | Rohit Munda | Chaibasa |
| 5 | Hari Singh Munda | Chaibasa |
| 6 | Kashif Ali | Chaibasa |
| 7 | Gajendra Toppo | ESSD Chaibasa Urban – I |
| 8 | Ajay Kumar Singh | AEE (Chaibasa) |
| 9 | Sunil Kumar | Chaibasa |
| 10 | Neeraj Kumar | Chaibasa |
| 11 | Prem Prakash Gupta | Chaibasa |
| 12 | Abhishek Kumar | Chaibasa |
| 13 | Akhlesh Kumar Singh | AEE/Saraikella |
| 14 | D. K. Singh | ESE/Chaibasa |
| 15 | M. K. Nirala | AEE/Chakradharpur |
| 16 | Sudhanshu | ESE/Jamshedpur |
| 17 | Chandra Bhushan | Chaibasa |
| 18 | Lakhbir Singh | Chaibasa |
| 19 | Bipin Kumar Yadav | Chaibasa |
| 20 | Nitin Balotia | Lord Ballaji Chandil |
| 21 | Sourav | Sukh Sagar Steel Dalbum, Jamshedpur |
| 22 | Kasi Nath Ray | Khaparsai, Chaibasa |
| 23 | Doma Minz | Meri Tola, Chaibasa |
| 24 | Chandan Kumar | Garikhana, Chaibasa |
| 25 | Sudhansu Kumar | Chaibasa |
| 26 | Aditya Kumar Sinha | Chaibasa |
| 27 | Manish Sundi | Chaibasa |
| 28 | Gautam Rana | AEE/s/Chaibasa |
| 31 | Saleem Khan | Elect. Executive Engineer, JBVNL |
| 32 | Ravi Shankar | Elect. Executive Engineer, JBVNL |
| 33 | Arvind Kumar | GM-cum-CE, Jamshedpur |
| 34 | Piyush Gupta | Jamshedpur |
| 35 | Birendra Kisku | Electric Supply division Saraikela |
| 36 | Santosh Kumar Saw | Khaparsai |
| 37 | Nitish Kumar Mahto | Kaparsai Chaibasa |



| Sr. No. | Name | Address/Organization |
|---------|-----------------------|---|
| 38 | Alok Ranjan | AEE/ESSD/Manoharpur |
| 39 | T. Kumar | Jamshedpur, Bistupur Ara Board |
| 40 | Binod Singh | Chaibasa Garikhana |
| 41 | Ajay Kumar | AEE Electric Supply Subdiv. Chandil |
| 42 | Mahesh Santholia | SCCI, JSR |
| 43 | Pravin Pankaj Kashyap | Chaibasa |
| 44 | Jitendra Kumar Mahto | Chaibasa |
| 45 | Harishankar Gupta | Dainik Bhaskar |
| 46 | Prashant Yadav | JSR |
| 47 | Hareesh Kansal | Heta Steels P Ltd. |
| 48 | Amankansal | Galaxy Export Pvt. Ltd. |
| 49 | Suresh Sonthalia | SCCI, JSR |
| 50 | Anil Modi | SCCI JSR |
| 51 | Nitesh | SCCI |
| 52 | Binod Sharma | SCCI |
| 53 | S. N. Agrawal | SCCI |
| 56 | Ashok K. Anurag | ASIA, Jamshedpur |
| 57 | Prem Khalkho | Ichapur |
| 58 | Sani Kumar Shah | Niyari |
| 59 | Bama Charan Ichayutu | Tungri Chibasa |
| 60 | B. N. Sharma | Shinghbhum Chamber of Commerce & Industries |



Annexure-2: Minutes of Meeting (MOM) of the SAC Meeting

दिनांक 31.01.2019 को संपन्न हुए राज्य सलाहकार समिति की बैठक की कार्यवृत्ति

राज्य सलाहकार समिति की बैठक माननीय डॉ० अरविंद प्रसाद, अध्यक्ष, झारखण्ड राज्य विद्युत नियामक आयोग, राँची की अध्यक्षता में दिनांक 31.01.2019 को होटल मैपलऊड, सिरमटोली चौक, राँची में संपन्न हुई । इस बैठक में राज्य सलाहकार समिति के निम्नांकित सदस्यों/सदस्यों के प्रतिनिधि उपस्थित हुए:-

| क्र०सं० | सदस्यों के नाम | सदस्य/ प्रतिनिधि |
|---------|---|------------------|
| 1 | श्री आर०एन०सिंह, माननीय सदस्य, झारखण्ड राज्य विद्युत नियामक आयोग, राँची। | सदस्य |
| 2 | श्री बिजय कुमार सिन्हा, ऊर्जा विभाग, झारखण्ड सरकार | प्रतिनिधि |
| 3 | श्री राहुल कुमार पुरवार, प्रबंध निदेशक, झारखण्ड बिजली वितरण निगम लिमिटेड, अभियंत्रण भवन, एच०ई०सी०, धुर्वा, राँची। | सदस्य |
| 4 | श्री निरंजन कुमार, प्रबंध निदेशक, झारखण्ड उर्जा संचार निगम लिमिटेड, अभियंत्रण भवन, एच०ई०सी०, धुर्वा, राँची। | सदस्य |
| 5 | श्री एस० के० ठाकुर, मुख्य अभियंता, झारखण्ड बिजली वितरण निगम लिमिटेड, अभियंत्रण भवन, एच०ई०सी०, धुर्वा, राँची। | प्रतिनिधि |
| 6 | श्री निरंजन कुमार, प्रबंध निदेशक, झारखण्ड उर्जा संचार उत्पादन निगम लिमिटेड, अभियंत्रण भवन, एच०ई०सी०, धुर्वा, राँची। | सदस्य |
| 7 | श्री जी०एस० कुमार, विद्युत अधिक्षण अभियंता, तेनुघाट विद्युत निगम लिमिटेड, हिन् | प्रतिनिधि |
| 8 | श्री विजय प्रकाश सिंह, प्रबंधक, जुस्को, जमशेदपुर । | प्रतिनिधि |
| 9 | श्री अजय कुमार, प्रबंधक, टाटा स्टील लिमिटेड, जमशेदपुर । | प्रतिनिधि |
| 10 | श्री एस० के० समदर्शी, विद्युत अभियंत्रण विभाग, केन्द्रीय विश्वविद्यालय, ब्राम्बे, राँची, झारखण्ड। | सदस्य |



| | | |
|----|---|-----------|
| 11 | श्री राकेश महापात्रा, टाटा पावर कम्पनी लिमिटेड, जमशेदपुर | प्रतिनिधि |
| 12 | श्री अमरेन्दू नंदी, सहायक प्रोफेसर, आई०आई०एम, राँची। | प्रतिनिधि |
| 13 | श्री दीपक कुमार मारु, सभापति, फेडरेशन ऑफ झारखण्ड चैम्बर ऑफ कॉमर्स एण्ड इण्डस्ट्री, राँची। | सदस्य |
| 14 | श्री बी०के०तुलसियान, फेडरेशन ऑफ झारखण्ड चैम्बर ऑफ कॉमर्स एण्ड इण्डस्ट्री, राँची। | प्रतिनिधि |
| 15 | श्री अंजय पचेरीवाला, झारखण्ड स्मॉल इन्डस्ट्री एशोसिएशन, राँची। | प्रतिनिधि |
| 16 | श्री निरंजन कुमार, निदेशक, जेडा, कुसई कॉलोनी, डोरण्डा, राँची। | सदस्य |
| 17 | श्रीमती हेमलता उराँव, ग्राम-मुर्तो,पी०एस०- चान्हों, राँची। | सदस्य |

सर्वप्रथम आयोग के सचिव द्वारा राज्य सलाहकार समिति के सभी सदस्यों का स्वागत किया गया।

तत्पश्चात सचिव महोदय ने माननीय अध्यक्ष महोदय की अनुमति से बैठक की कार्यवाही प्रारंभ करते हुए बताया गया कि आज की विशेष बैठक में झारखण्ड बिजली वितरण निगम लिमिटेड के द्वारा आयोग के समक्ष वित्तीय वर्ष 2016-17 एवं 2017-18 के लिए True-up और वित्तीय वर्ष 2017-18 के लिए APR एवं वित्तीय वर्ष 2019-20 के लिए विद्युत वितरण निर्धारण हेतु आवेदन पर चर्चा की जायगी।

माननीय अध्यक्ष, डॉ० अरविंद प्रसाद ने अपने अध्यक्षीय संबोधन में उपस्थित राज्य सलाहकार समिति के सभी सदस्यों, नये सदस्यों, बिजली वितरण के प्रबंध निदेशक, बिजली वितरण के अधिकारी-गण, प्रेस एवं मीडिया के प्रतिनिधि का स्वागत किया। उन्होंने कहा कि झारखण्ड बिजली वितरण निगम ने वर्ष 2019-20 का विद्युत वितरण दर निर्धारण करने के लिए आयोग में आवेदन दिया है जिस पर बिजली वितरण के प्रबंध

निदेशक पीपीटी के माध्यम से अपनी बात रखेंगे । उन्होंने सदस्यों से वितरण लाईसेंस की टैरिफ याचिकाओं पर ध्यान केंद्रित कर कार्यवाही में सक्रिय रूप से भाग लेने का आग्रह किया । उन्होंने कहा कि उद्योगों से तकनीकी रूप से सुझाव मिलते रहे हैं, परन्तु कुछ ऐसे क्षेत्र हैं जहाँ से बिजली से संबंधित सुझाव प्राप्त नहीं हो रहे हैं । विद्युत अधिनियम में यह प्रावधान है कि आयोग किसी भी संस्था या व्यक्ति को जनहित का पक्ष रखने हेतु नामित कर सकता है । इसलिए झारखण्ड के दो महत्वपूर्ण संस्थानों आई0आई0एम0, राँची एवं केन्द्रीय विश्वविद्यालय, ऊर्जा विभाग, झारखण्ड एवं सुश्री हेमलता उरांव को नामित किया है ताकि आयोग को उपभोक्ताओं के हितों पर तथ्यपूर्ण सुझाव मिल सके।

माननीय सदस्य श्री आर0एन0 सिंह ने अपने संबोधन में इस बैठक में भाग लेने के लिए सभी सदस्यों को धन्यवाद दिया । उन्होंने सभी घरों को विद्युतिकृत करने के लिए झारखण्ड बिजली वितरण निगम लिमिटेड के प्रबंध निदेशक, श्री राहुल कुमार पुरवार को बधाई दी । उन्होंने कहा कि वितरण दर पर कुछ बिन्दुओं पर चर्चा करना आवश्यक है। बिजली की आपूर्ति सुदृढ़ हो और इसे कैसे सुधारा जाय यह विचारनीय है । उन्होंने वर्तमान परिप्रेक्ष्य में बिजली आपूर्ति की गुणवत्ता एवं वितरण कंपनी द्वारा आयोग के निर्देशों (उपभोक्ता जागरूकता कार्यक्रम, Safety measure, Standard of Performance, Renewable Purchase Obligation) का नियमित पालन न करने पर भी चिंता व्यक्त की । उन्होंने कहा कि वितरण कंपनी सेवा प्रदाता कंपनी है इसलिए उपभोक्ताओं के द्वारा सेवा एवं गुणवत्ता पर दिये गये फीडबैक के आधार पर ही दर का निर्धारण होना चाहिए । उन्होंने कहा कि ग्रामीण एवं शहरी विद्युत दर को एक बराबर करने का

प्रस्ताव वाद-विवाद का विषय है क्योंकि दोनों क्षेत्रों में सेवा की गुणवत्ता एक समान नहीं है। उन्होंने बिहार के ग्रामीण क्षेत्रों को उदाहरण देते हुए कहा कि बिहार हमें ग्रामीण क्षेत्रों में 20 से 22 घंटे बिजली की आपूर्ति हो रही है। अपने विचारों में छोटी-छोटी तकनीकी बातों को जो बहुत ही महत्वपूर्ण होती हैं उन्हें समिति के समक्ष रखा। तथा मुख्य लक्ष्य उपभोक्ता की सेवा करने को कहा और स्पष्ट किया कि बिजली वितरण निगम लिमिटेड की ओर से प्रयास भी किये जा रहे हैं लेकिन और प्रयास करने की जरूरत है इस बात पर भी जोर दिया। उन्होंने वितरण ट्रांसफॉर्मर में ए0बी0स्वीच लगाने, अर्थिंग सुधारने के काम को महत्वपूर्ण बताया। उपभोक्ताओं की संख्या बढ़ती जा रही है इसके लिए मैन पावर को बढ़ाने का भी सुझाव दिया। उन्होंने ग्रामीण क्षेत्रों में विद्युत की दयनीय स्थिति का भी जिक्र करते हुए कहा कि लाईन कटने पर दो से तीन दिन बीतने पर भी विद्युत आपूर्ति नहीं मिल पाती है। श्री सिंह ने उपभोक्ताओं के शिकायतों का जिक्र करते हुए कहा कि उपभोक्ताओं को यदि ट्रांसफॉर्मर लगाना हो अथवा कनेक्शन लेना हो तो उन्हें कई कठिनाईयों से गुजरना पड़ता है, बिजली, जो सभी के लिए आवश्यक है, के सुधार की आवश्यकताओं पर ध्यान आकृष्ट किया। एसटैंडर्ड ऑफ परफोरमेंस की गाईड लाईन का अक्षरसः पालन हो, उपभोक्ता को जागरूक करने का काम हों और उनकी सुविधाओं को ध्यान में रखने के लिए बिपत्र के पीछे सारी जानकारियाँ, जो उपभोक्ताओं के हित में हों, दिया जाना चाहिए। पिछले टैरिफ निर्धारण के समय दिए गए निर्देशों का पूर्ण अनुपालन अपेक्षित है।

तत्पश्चात श्री राहुल कुमार पुरवार, प्रबंध निदेशक, झारखण्ड बिजली वितरण निगम लिमिटेड, द्वारा वितरण दर के आवेदन पर संक्षिप्त विवरणी



पावर प्वाइंट प्रस्तुतिकरण (PPT) के माध्यम से दिया गया (PPT की प्रति संलग्न है)।

वितरण कंपनी द्वारा आवेदन पर PPT के पश्चात समिति के सदस्यों द्वारा दिए गए सुझाव निम्नलिखित हैं :-

श्री दीपक कुमार मारु: ने कंज्यूमर सिक्योरिटी डिपोजिट पर ब्याज नहीं मिलने की शिकायत की। इसके जवाब में प्रबंध निदेशक, श्री पुरवार ने कहा कि वर्तमान में उनके पास जो डाटा उपलब्ध है उस पर उन्होंने ब्याज देने का काम प्रारंभ कर दिया है। शेष कनेक्शन की तारीख और डाटा प्राप्त होने पर उन्हें भी ब्याज दिया जायगा।

श्री बी०के० तुल्स्यान: ने कहा कि फिक्सड चार्ज सभी श्रेणी के उपभोक्ताओं के लिए समान होनी चाहिए, जैसे कि Commercial category से भी फिक्सड चार्ज Industry के समान वसूला जाना चाहिए। उन्होंने कहा कि KWH से KVAH में प्रवासन का प्रस्ताव स्वागत योग्य है। हालांकि वर्तमान परिदृश्य में उपभोक्ताओं की 100% मीटरिंग संदिग्ध है। उन्होंने कहा कि ब्रेकडाउन को कम करने एवं गुणवत्ता और विश्वसनीयता में सुधार के लिए सुरक्षा मैनुअल भी बनाना चाहिए और इसे सख्ती से लागू किया जाना चाहिए। उन्होंने कहा कि बिलिंग दक्षता और वसूली की व्यवस्था लचर है और इसको 100% तक सुधारने की आवश्यकता है। उन्होंने कहा कि ए०टी० एण्ड सी० लॉस 36 प्रतिशत तक है और इस नुकसान के स्तर को कम करने की आवश्यकता है। यदि उपभोक्ता ससमय बिल का भुगतान करते हैं तो उन्हें मानकों के अनुसार उचित सुविधा मिलना चाहिए।



श्री अंजय पचेरीवाला: ने कहा कि वितरण कंपनी शहरी क्षेत्र में भी बिलिंग और वसूली 100% करने में सक्षम नहीं है। ससमय बिलिंग और वसूली आवश्यक है क्योंकि यह राजस्व हानि का महत्वपूर्ण कारणों में से एक है। उपभोक्ताओं को ससमय बिलिंग के लिए इंटरनल बिलिंग अलर्ट सिस्टम विकसित करने की आवश्यकता है।

इसके जवाब में एम0डी0, जे0बी0भी0एन0एल0 ने कहा कि हम उपभोक्ताओं के लिए स्व-बिलिंग तंत्र को शुरू करने की योजना बना रहे हैं जो अप्रैल 2019 से शुरू हो जायगा।

श्री पचेरीवाला ने कहा कि वितरण कंपनी अपने टैरिफ याचिका में वित्तीय वर्ष 2017-18 एवं 2018-19 में एल0टी0आई0एस0 एवं एच0टी0 उपभोक्ताओं से वसूली को कम दर्शाया है जो कि राजस्व में कमी को दर्शाता है। यह वितरण कंपनी के लिए प्रमुख चिंता का विषय होना चाहिए, क्योंकि मुख्यतः राजस्व इन्हीं श्रेणी के उपभोक्ताओं से वसूल किया जाता है।

सुश्री हेमलता उरांव: इन्होंने कहा कि टैरिफ याचिका हिंदी में बनना चाहिए ताकि गांव के कम पढ़े-लिखे लोग भी इसे समझ सकें। उन्होंने कहा कि पिछले वर्षों में कुटीर ज्योति उपभोक्ताओं, ग्रामीण घरेलू उपभोक्ताओं और ग्रामीण वाणिज्यिक उपभोक्ताओं के टैरिफ में काफी वृद्धि हुई है परन्तु गुणवत्ता में कोई सुधार नहीं हुआ है। इसलिए ग्रामीण घरेलू और वाणिज्यिक उपभोक्ताओं के वितरण दर में वृद्धि नहीं करने का अनुरोध किया। उन्होंने आयोग द्वारा निर्गत स्टैंडर्ड ऑफ परफॉरमेंस (एस0ओ0पी0) की समीक्षा करने का भी अनुरोध किया। उन्होंने कहा कि ग्रामीण एवं शहरी क्षेत्र में बिजली आपूर्ति एवं एस0ओ0पी0 की सुविधा में



कोई समानता नहीं है इसलिए उनका टैरिफ भी एक बराबर नहीं होना चाहिए । उन्होंने ग्रामीण उपभोक्ताओं के लिए फिक्स चार्ज को समाप्त करने एवं आपूर्ति की गुणवत्ता में सुधार करने की आवश्यकता पर जोर दिया । उन्होंने कहा कि वितरण कंपनी का पूर्ण विद्युतीकरण का दावा मिथ्यापूर्ण है। अभी भी बहुत गांव ऐसे हैं जहां विद्युतीकरण पूर्ण रूप से नहीं किया गया है ।

प्रो० एस०के० समदर्शी: ने कहा कि आपूर्ति की गुणवत्ता पर ध्यान देने की आवश्यकता है ।

अंत में अध्यक्ष महोदय ने सभी सदस्यों को बैठक में भाग लेने के लिए धन्यवाद दिया और कहा कि आयोग को JBVNL के प्रस्ताव पर निर्णय लेने में सदस्यों से प्राप्त सुझाव सहायक होंगे । अध्यक्ष महोदय ने प्रो० एस०के० समदर्शी एवं प्रो० अमरेन्दू नंदी से अनुरोध किया कि वे विशेषज्ञ टीम गठित कर उसके माध्यम से प्रस्तावित टैरिफ आवेदन पर विश्लेषण कराने का अनुरोध किया ताकि आयोग को इसे राष्ट्रीय परिप्रेक्ष्य में समझने में सुविधा हो सके । उन्होंने यह भी कहा कि आयोग वितरण दर निर्धारित करते समय समिति के महत्वपूर्ण सुझावों पर ध्यान देगा। अध्यक्ष महोदय ने सभी सदस्यों से दो सप्ताह के अन्दर लिखित सुझाव देने का भी अनुरोध किया ।

(अरविंद कुमार मेहता)
सचिव



1/30/2019



झारखंड बिजली वितरण निगम लिमिटेड
JHARKHAND BIJLI VITRAN NIGAM LIMITED

Discussion on
Petition for True-up of FY 16-17 & FY 17-18,
APR for FY 18-19 and determination of ARR & Tariff for FY 19-20

30th Jan'19

The Remarkable Journey of JBVNL
Key Developments and thrust areas

1



1/30/2019

Remarkable Journey of JBVNL

Key Parameters

| Parameters | Jharkhand (FY 15-16) | Jharkhand (Present) | National (Present) |
|--|----------------------|---------------------|--------------------|
| All Households access to electricity (in %age) | 58% | 100% | 99.6% |
| Rural HHs – electricity access (in %age) | 44% | 100% | 99.1% |
| Urban HHs – electricity access (in %age) | 89.5% | 100% | 100% |
| Per Capita Power Consumption (kWh) | 552 | 628** | 1,122 |
| AT&C losses (in %age) | 36.01% | 31.8%** | 21.6% |
| Peak Shortage (in %age) | 14.6% | 0.0%* | 1.6%* |
| ACS – ARR Gap (Rs/kWh) | Rs.3.55/kWh | Rs.0.57/kWh** | Rs.0.44/kWh |
| Energy shortage (in %age) | 6.0% | 0.1%* | 0.5* |
| Village electrification (UE) (in %age) | 97% | 100% | 99.9% |

*Source: CEA Aug'2018 **FY 17-18

Jharkhand BPL Vikas Nigam Limited

Remarkable Journey of JBVNL

Consumer Electrification: Reaching the Last Mile

100% Village Electrification

All 29,376 Villages have been electrified within targeted deadline of 31st Dec'17, providing last mile electricity access

JBVNL has been able to achieve the electrification targets despite difficult terrains and several geo-political challenges

Intensive Electrification

Intensive electrification of 22,559 Villages has been completed till Dec'18, remaining 5,669 villages have also been covered with basic infrastructure and are targeted to be intensively electrified by Feb'19

Electricity to All

100% households have been electrified by Dec'18 and consumer facilitation for new connection through various modes including, miss call, provisional connections in urban areas, camps for connections, etc. has been done

Feeder Segregation

Segregation of more than 560 cKm of Agricultural Feeders has been done and the remaining 9,980 cKm is under commissioning as part of DDUGJY and JSBAY

Jharkhand BPL Vikas Nigam Limited



1/30/2019

Remarkable Journey of JBVNL

Focusing on Infrastructure for Improving Quality of supply

| | |
|--|--|
| <p>01 In last 3.5 years, 48 new PSS have been added and capacity augmentation of 59 PSS has been completed under various schemes and 190 more PSS are to be added by May' 19</p> | <p>04 Underground cabling of 303.36 cKms of 11kV line has been completed under various urban electrification schemes with ongoing work on 180.63 cKms to be completed by Mar'19</p> |
| <p>02 181.7 cKm of 33kv Line has been laid in Rural & Urban areas under ongoing schemes. More than 1,900 cKm line is to be added under ongoing schemes in 2019</p> | <p>05 Replacement & Re-conductoring of more than 1,189.7 ckm of 11 kV line has been completed with ongoing work on 5,062 cKms</p> |
| <p>03 Replacement of 3,622.5 ckm bare conductors with AB cables has been achieved till Dec'18 and more than 3,200 cKm are to be added under IPDS & R-APDRP in '19</p> | <p>06 DT capacity has increased from 3,762 MVA (Apr'15) to 4,912 MVA as on 31st Dec 2018 with total 1.28 Lac DTs installed</p> <ul style="list-style-type: none"> More than 12,000 DTs have been replaced with higher capacity DTs and more than 40,000 new DTs have been added to the network |

Jharkhand BPL Vikas Nigam Limited

Remarkable Journey of JBVNL

Reforms for Operational and Commercial Viability

Metering

- Achieved 100% Feeder metering & more than 60% communication at 33kV and 11kV
- More than 16,500 rural DTs and 10,140 (61%) urban DTs have been metered, rest are targeted to be completed by May'19
- 100% consumer metering targeted by Mar'18

Billing

- Successful implementation of Android based mobile photo spot billing
- Analysis of real time billing data to plan interventions
- Self-billing to be introduced

Collection

- Creation of multiple collection avenues- ATP, PoS machine, e-wallet, post offices, pragra Kendra Online payment portal, NEFT/RTGS, CSC etc.
- Support from local NGOs/ SHGs etc. to improve collections
- Name & Shame campaigns on regular basis

AT&C Loss Reduction

Energy Accounting

- Initiation of feeder wise energy accounting
- Fixing accountability- appointment of feeder manager
- DT wise accounting post 100% DT metering

Arrear Collection

- Pursuing consumers with high Arrears
- Organizing collection camps on weekly basis
- Mass disconnection and "Name and Shame" campaign
- Persuasion with Govt. Dept. for recovery of Govt. dues

Theft Reduction

- Large number of FIRs (~3,000) in last ~6 months, leading to recovery of outstanding dues
- 100% AB cabling on LT lines targeted
- Mass Raids and collection drives (> 12,000 raids so far in FY 18-19)

Jharkhand BPL Vikas Nigam Limited

3



Remarkable Journey of JBVNL
Consumer Engagement: Enhancing the Consumer Service Experience

| | |
|---|--|
| <p>SASHAKT</p> <ul style="list-style-type: none"> A centralized Customer Complaints Redressal platform to enhance consumer's approachability More than 10,500 (95.1%) complaints have been addressed within the stipulated time, since the launch of SASHAKT in May'18 | <p>SUVIDHA</p> <ul style="list-style-type: none"> More than 1 Lac downloads of eZy-bZly mobile App, providing various essential consumer services like new connection, name/ load change, SOP Compensation, etc. 52,746 service requests on SUVIDHA portal have been received as on 28 Jan 2019 and XXX requests have been closed |
| <p>Social Media</p> <ul style="list-style-type: none"> Consumers have been provided with an effective platform to raising issues and queries, with nearly 8,000 Facebook page subscribers and achieving reach of around 6 lac FB users More than 4,900 queries and 110 complaints on Social Media have been addressed so far | <p>Awareness Campaigns</p> <ul style="list-style-type: none"> Organizing awareness campaigns for consumers such as theft prevention, energy conservation, etc. Distributing Pamphlets through Urja Mitras to all the consumers with 75k pamphlets have been distributed and printing of another 30Lac is presently underway |

Jharkhand Biju Vitran Nigam Limited

Remarkable Journey of JBVNL
Key IT Interventions for a Robust Organization

- A detailed IT Roadmap has been prepared and approved by the BoD, which outlines host of Strategic IT Interventions, in short, medium and long term
- As an interim solution, HT consumer's billing has been centralized

| | | |
|--|--|--|
| | <p>Enterprise Resource Planning</p> | <ul style="list-style-type: none"> Implementation of 5 modules of ERP (FI/CO, MM, HCM, PS and BI/BO) is presently underway and expected to Go Live from Feb'19 |
| | <p>Smart Metering</p> | <ul style="list-style-type: none"> Bidding process for Implementation of smart meters AMI for Ranchi (3.5 Lacs Smart meters) is presently underway. Procurement of more than 6.5 Lac smart meter in other urban areas is under planning |
| | <p>Geographical Information System</p> | <ul style="list-style-type: none"> GIS has been implemented in 30 towns covered under RAPDRP, stabilization underway Mapping of distribution infrastructure across Jharkhand through GIS covering asset mapping and consumer indexing is being done |
| | <p>Supervisory Control & Data Acquisition</p> | <ul style="list-style-type: none"> SCADA is being implemented in Ranchi, Jamshedpur and Dhanbad under R-APDRP Real-time monitoring and controlling of system parameters with SCADA across Jharkhand shall allow better control over the Distribution Network |

Jharkhand Biju Vitran Nigam Limited



1/30/2019

Remarkable Journey of JBVNL
Regulatory Effectiveness and Financial Management

Regulatory Effectiveness

- Tariff petition for FY18-19 along with True up till FY15-16 was filed within the regulatory timelines
- Migration from Govt. Support to Subsidy support – however, inadequate tariff hike has resulted in lower subsidy availability
- Tariff petition for FY19-20 along with True up till FY17-18 has been filed in November 2018
- Simplification of electricity tariff and rationalization has been proposed for FY 19-20

Financial Management & Accounting

- Short term loan and working capital loan for better financial management are being undertaken – Govt. guarantee has been obtained for availing low cost working capital loan
- Annual Accounts preparation from FY13-14 to FY15-16 completed in FY15-16 only and Annual accounts for FY16-17 and FY17-18 have been audited to ensure 100% compliance
- Preparation of Quarterly Accounts is being targeted from Q1 of FY19-20
- Fixed Asset Register preparation is targeted in FY19-20 – Agency selection is underway

Jharkhand Biji Vikas Nigam Limited

Remarkable Journey of JBVNL
Key Challenges faced and support required from Stakeholders

Support and Cooperation from Stakeholders

- Encouraging consumers for timely payments against energy bills
- Cooperation with JBVNL staff during O&M activities
- Providing information on pilferages and un-authorized access
- Energy conservation and saving and use of efficient appliances
- Move towards cost reflective tariff and removal of differential tariff
- Cooperation & support during stabilization phase of new IT interventions through constructive inputs

- Resistance from newly added consumers for payment of electricity bills
- Historically lower tariff leading to financial imbalance & increasing burden on Govt.
- Legacy issues of multiple utilities with overlapping geographies and dependence upon DVC network
- Difficulty to meet RPO despite PPA of 700 MW of solar and wind power, due to uncontrollable delays
- Hilly and difficult terrains affecting the pace of O&M activities
- Legacy of outdated business processes with very minimal IT infrastructure

Jharkhand Biji Vikas Nigam Limited



1/30/2019

Summary of Tariff Proposal

Balancing Consumer's Interest and Removal of Cross-subsidisation

Summary of Tariff Proposal

Key Features of Tariff Proposal: Simplification and Rationalization

In accordance with the National Tariff Policy 2016, slabs among the tariff categories and sub-categories have been removed for simplification of tariff

| Category | Existing Sub Categories | Proposed Sub Category / Slab | Remarks |
|---------------|--|---------------------------------------|---|
| Domestic | DS-Kutir Jyoti, DS-Rural, DS-Rural (Unmetered), DS-Urban | DS | Uniform Tariff for entire Domestic Category |
| | DS-HT | DS-HT | No change in category |
| Commercial | CS-Rural, CS-Rural (Unmetered), CS-Urban | CS | Uniform Tariff for entire Commercial Category |
| | IAS, IAS Unmetered | IAS | Removal of unmetered IAS sub category |
| Industrial | LTIS- Demand Based, LTIS- installation Based | LTIS | Merging of LTIS demand based and Installation based |
| | High Tension Industrial Supply | High Tension Industrial Supply | No change (uniform Tariff for all voltage level) |
| | High Tension Special Service | High Tension Special Service | No change in category (Same as HT) |
| Institutional | SS, SS (unmetered) | SS | Removal of unmetered SS sub category |
| | RTS, MES, Other Distribution Licensee | RTS, MES, Other Distribution Licensee | No change in category |

Benefits to Utility

- Monitoring and governance benefits
- Easy segmentation and focus on arrear recovery
- Regulatory Compliances in line with Tariff Policy 2016

Benefits to Stakeholders

- Transparency in Tariff structure
- Reduction of billing disputes
- Easy to understand

Jharkhand State Electricity Regulatory Commission

12

6



1/30/2019

Summary of Tariff Proposal

Key Features of Tariff Proposal: Demand based & kVAh Tariff for LTIS

- The Petitioner has proposed to completely migrate the LTIS consumers to Demand Based Tariff
- JBVNL has proposed to migrate to kVAh based billing from existing kWh based billing for LTIS consumers along with removal of power factor penalty and rebate for LTIS consumers
- High Level of preparedness, with kVAh reading of LTIS consumers already being collected by the billing agencies
- Almost all LTIS consumer having DLMS meters, capable of recording kVAh readings

| Benefits to Utility | Benefits to Stakeholders |
|---|---|
| <ul style="list-style-type: none"> Recovery of actual fixed charges as per actual demand indicated by the meters Improved and optimum power factor Replacement of Burnt Capacitor shifts becomes priority of Consumers Reduction of I²R losses | <ul style="list-style-type: none"> Improvement in system voltages leading to less interruptions Transparency in Tariff structure Reduction of billing disputes related to Power Factor and Contract Demand Easy to understand |

Jharkhand Raj Vikas Nigam Limited 13

Summary of Tariff Proposal

Key Features of Tariff Proposal: Abolishment of Un-metered Category

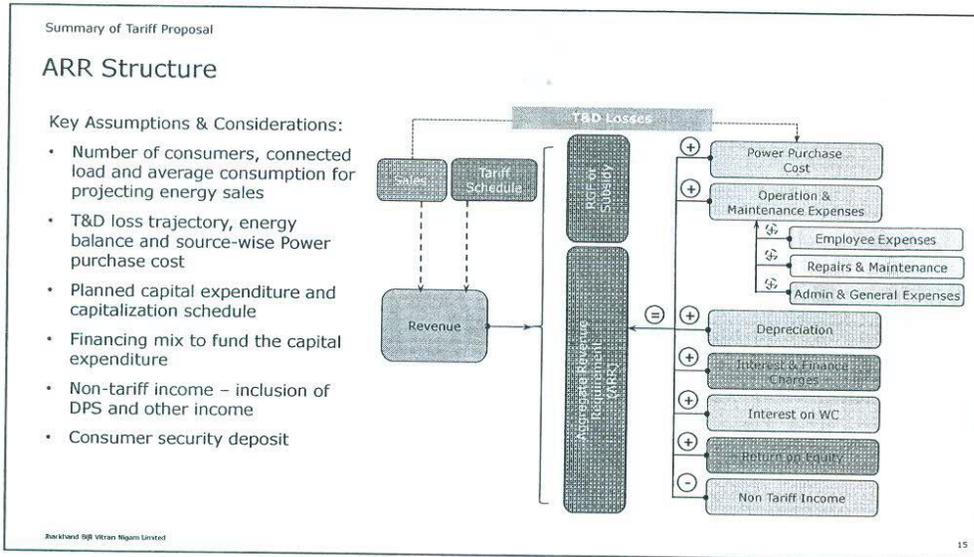
- Tariff for unmetered category of has been removed by the Petitioner in compliance with the Directives of the Hon'ble Commission for all (DS and Commercial) categories
- Detailed action plan for converting unmetered consumers to metered is being followed:

| Total unmetered/ defective meter (as on Oct'18) | Metering completed (till 15 Jan'18) | Present Requirement of meters | Metering Target | | |
|---|-------------------------------------|-------------------------------|---------------------------|----------|----------|
| | | | Jan'19 (remaining period) | Feb'19 | Mar'19 |
| 20,73,605 | 4,14,167 | 16,59,438 | 2,27,292 | 7,16,073 | 7,16,073 |

- Out of total requirement, nearly 3.8 Lac meters are already under installation under DDUGJY Scheme, having a completion deadline of Feb'19.
- From the remaining 12.81 lac meters, metering of 7.80 Lac consumers have been allocated to existing agencies working in various districts under DDUGJY Scheme
- Metering of remaining 5.01 Lac consumers is being targeted departmentally, for which agencies have been appointed at Circle-level, with the target completion by Mar'19.

Jharkhand Raj Vikas Nigam Limited 14

7



Summary of Tariff Proposal

JBVNL has significant Capex during FY 18-19 and FY 19-20

| Particulars (Rs. Cr.) | Total Actual Scheme Outlay (4 years Period) | FY 16-17 (Actual) | FY 17-18 (Actual) | FY 18-19 (RE) | FY 19-20 (Projected) |
|--|---|-------------------|-------------------|-----------------|----------------------|
| DDUGJY | 3,722.0 | 78.4 | 464.1 | 2,179.6 | 1,000.0 |
| IPDS | 920.0 | - | 8.4 | 611.6 | 300.0 |
| RAPDRP - A | 29.3 | 4.4 | 9.4 | - | 15.5 |
| RAPDRP - B | 1,303.3 | 52.7 | 192.0 | 582.3 | 476.3 |
| DDUGJY 12th Plan | 1,348.0 | - | 355.8 | 866.2 | 126.0 |
| ADP + Misc. | 2,911.6 | 428.6 | 1,076.3 | 670.0 | 737.0 |
| Tilka Manjhi & AGJY | 64.6 | 4.78 | 26.3 | 33.6 | - |
| RE State Plan | 111.7 | 67.8 | 43.9 | - | - |
| JSBAY - RE | 2,189.5 | - | 7.51 | 375.0 | 1,807.0 |
| RGGVY (10th & 11th Plan) | 3.4 | 0.2 | 3.24 | - | - |
| Deposit & others | 417.79 | - | 417.8 | 212.9 | 250.3 |
| JASBAY - Urban Electrification* | 900.00 | - | - | - | 900.0 |
| JASBAY - IT & Cyber Security, SCADA and TRW* | 650.16 | - | - | 65.0 | 585.1 |
| SAUBHAGYA* | 250.00 | - | - | 250.0 | - |
| IT Schemes (WB Supported)* | 291.20 | - | - | 107.2 | 184.0 |
| Total Capex Incurred / Planned^ by JBVNL | 15,112.8 | 636.9 | 2,604.5 | 5,953.4^ | 6,381.3^ |
| Total Capex approved by JSERC – as part of Capex Plan/ revised order - (for the 4 years period) | 12,597.7 | 3,528.2 | 5,789.4 | 2,493.8 | 785.3 |

* New schemes introduced, not included in the approved capex plan

Jharkhand State Electricity Regulatory Commission

1/30/2019

Summary of Tariff Proposal

T&D and AT&C Losses – Actual and Projections

| Particulars (Rs. Cr.) | FY 16-17 | FY 17-18 | FY 18-19 | FY 19-20 |
|-----------------------|----------|----------|----------|-------------|
| | (Actual) | (Actual) | (RE) | (Projected) |
| Billing Efficiency | 75.20% | 80.52% | 82.00% | 85.00% |
| T&D loss | 24.80% | 19.48% | 18.00% | 15.00% |
| Collection Efficiency | 90.69% | 84.86% | 90.00% | 95.00% |
| AT&C loss | 31.80% | 31.67% | 26.20% | 19.25% |

Billing Vs Collection Efficiency

T&D Vs AT&C

Key Measures to Reduce AT&C Losses

- 100% metering of distribution network by May'19 and 100% metering of all consumers by Mar'19
- Migration to smart metering – with bid process for Ranchi already underway
- Stabilization of billing system, introduction of self-billing and migration to ERP (unified) MBC system under World Bank Program
- Multiple avenues for consumers (POS, Mobile Wallets, ATP, Online, Mobile App etc.)
- Involvement of SHGs and ex-armymen for improving collection
- Introduction of Employee Incentive Scheme focusing on MBC & Energy Accounting
- Administrative focus, dedicated monitoring of Billing Agencies and in-house collection programs (20-20-5) etc.

17

Summary of Tariff Proposal

JBVNL has large cumulative revenue gap, making Tariff hike inevitable

| Particulars (Rs. Cr.) | FY 16-17 | FY 17-18 | FY 18-19 | FY 19-20 |
|-----------------------------------|----------------|----------------|----------------|----------------|
| | (Actual) | (Actual) | (RE) | (Projected) |
| Power Purchase cost | 5,223.0 | 5733.4 | 5740.2 | 6,172.4 |
| Transmission charges | 185.4 | 204.1 | 216.9 | 229.1 |
| O&M expenses | 324.1 | 346.5 | 465.0 | 594.0 |
| Depreciation | 195.6 | 185.0 | 316.7 | 462.8 |
| Interest on Loan | 162.3 | 162.2 | 205.8 | 339.3 |
| Return on Equity | 140.9 | 148.9 | 196.4 | 305.1 |
| Interest on Working Capital | 27.1 | 26.2 | 33.9 | 50.6 |
| Interest on security deposit | 42.1 | 46.1 | 46.2 | 48.5 |
| Provision for doubtful debts | - | - | 478.8 | 296.4 |
| Less: Non-tariff Income | -143.5 | -132.1 | -122.5 | -123.0 |
| Gross ARR | 6,156.9 | 6,720.1 | 7,577.5 | 8,375.2 |
| Actual Revenue (inc. RGF*) | 3,626.0 | 5,603.6 | 4,788.4 | - |
| Revenue Gap | 2,531.9 | 1,115.9 | 2,789.2 | - |
| Average Cost of Supply | 7.05 | 7.00 | 7.57 | 8.06 |

Revenue Gap & Carrying Cost

| Year | Yearly Gap (Rs. Cr.) | Carrying cost (Rs. Cr.) |
|--------------------------------|----------------------|-------------------------|
| Till FY 15-16 | 2,573.1 | - |
| FY 16-17 | 2,531.9 | 653.3 |
| FY 17-18 | 1,115.9 | 866.0 |
| FY 18-19 | 2,789.2 | 1,284.4 |
| Total gap till FY 18-19 | 11,813.1 | - |

*RGF Considered – FY16-17 = 910 Cr., FY 17-18 = 2,507 Cr.

18



1/30, 019

Summary of Tariff Proposal

Comparison with neighboring states (Avg. Billing Rate)

| Tariff Category | Jharkhand (JBVNL) | Bihar (NBPDC) | Madhya Pradesh (All Discoms) | Uttar Pradesh (All Discoms) |
|---|-------------------|---------------|------------------------------|-----------------------------|
| | FY 18-19* | FY 18-19 | FY 18-19 | FY 18-19 |
| Domestic | 3.82 | 7.23 | 6.07 | 6.13 |
| Commercial/ Non domestic | 6.50 | 8.78 | 8.36 | 10.40 |
| Irrigation & Agricultural | 1.06 | 6.61 | 5.10 | 1.12 |
| Industrial Services, LTIS | 7.11 | 8.60 | 7.99 | 9.82 |
| HTS/HTSS/EHT | 6.01 | 8.60 | 7.06 | 7.24 |
| IS-I: Public Lighting / SS | 4.86 | 8.75 | 5.72 | 8.51 |
| IS-II: RTS, MES | 6.62 | 7.93 | 5.57 | 7.24 |
| Average of all consumer categories | 4.78 | 7.82 | 6.03 | 7.45 |

*Based on approved tariff for FY18-19 & Actual sales.

Jharkhand State Electricity Regulatory Commission 19

Summary of Tariff Proposal

Comparison with neighboring states (fixed and energy charges)

| Tariff Category | Jharkhand Existing | Jharkhand - Proposed | Bihar (NBPDC) | Madhya Pradesh (All Discoms) | Uttar Pradesh DVVNL |
|----------------------------|---|-------------------------------|--|--|---|
| | FY 18-19 | FY 19-20* | FY 18-19 | FY 18-19 | FY 17-18 |
| Domestic | F- 20 to 75 /conn E- 4.40 to 5.50 / kWh | F- 75 /conn E- 6.00 / kWh | F- 20 to 40 /KW E- 6.15 to 8.60 /Kwh | F- 17 to 22 /KW E- 3.10 to 6.30 /kWh | F- 80 to 100 /KW E- 3.00 to 6.50 /kWh |
| Commercial/ Non domestic | F- 60 to 225/ conn E- 5.25 to 6.00 / kWh | F- 225/ conn E- 7.00 / kWh | F- 30 to 180 /KW E- 6.4 to 7.50 /Kwh | F- 100 to 260 /KW E- 6.10 to 8.50 /kWh | F- 95 to 430 /KW E- 5.0 to 8.30 /kWh |
| Irrigation & Agricultural | F- 20 /HP E- 5.00 /kWh | F- 20 /HP E- 5.00 /kWh | F- 30 to 200 /HP E- 5.60 to 6.65 /Kwh | F- 35 to 90 /HP E- 4.30 to 5.80 /kWh | F- 60 /HP E- 1.75 /kWh |
| Industrial Services, LTIS | F- 160 /kVA E- 5.50 to 6.50 /kWh | F- 300 /kVA E- 6.00 /kVAh | F- 144 to 180 / KVA E- 6.50 /KVAh | F- 180 to 285 /kW E- 6.30 /kWh | F- 180 to 285 /kW E- 6.30 /kWh |
| HTS/HTSS/EHT | F- 300 to 500 /kVA E- 4.00 to 5.75 /kVAh | F- 400 /kVA E- 6.00 /kVAh | F- 300 to 700 /KVA E- 4.15 to 6.80 /kVA | F- 330 to 620 /kVA E- 5.65 to 6.60/ kWh | F- 220 to 250 /kVA E- 5.95 to 6.65/ kVAh |
| IS-I: Public Lighting / SS | F- 100/ conn. E- 6.00/ kWh | F- 100/ conn. E- 6.50/ kWh | F- 50 /kW E- 7.50 / kWh | F- 100 to 350 /kW E- 4.90 to 5.20 /kWh | F- 160 to 220 /kW E- 7.00 to 7.75 /kWh |
| IS-II: RTS, MES | F- 350/ kVA E- 4.60 /kVAh | F- 350/ kVA E- 5 /kVAh | F- 280 /kVA E- 6.80 /kVAh | F- 310/ kVA E- 5.90 /kW | F- 375 kVA E- 7.90 /kW |

F = Fixed Charges E = Energy Charges * Proposed in Tariff Petition

Jharkhand State Electricity Regulatory Commission 20

10



1/30/2019

Summary of Tariff Proposal

Existing Vs Proposed Tariff Structure

| Category | Sub-Category | Existing Component of Tariff (FY 18-19) | | Proposed Component of Tariff (FY 19-20) | |
|----------------------------|---|---|---------------------|---|---------------------|
| | | Energy Charges | Fixed Charges | Energy Charges | Fixed Charges |
| Domestic | DS-Kutir Jyoti | 4.40 / kWh | 20 / Conn./ Month | 6.00 / kWh | 75 / Conn. / Month |
| | DS-Rural | 4.75 / kWh | 35 / Conn./ Month | | |
| | DS-Rural (Unmetered) | | 250 / Conn./ Month | | |
| | DS-Urban | 5.50 / kWh | 75 / Conn./ Month | | |
| Commercial | DS-HT | 5.25 / kWh | 200 / kVA / Month | 6.00 / kWh | 200 / kVA / Month |
| | CS-Rural | 5.25 / kWh | 60 / Conn./ Month | | |
| | CS-Rural (Unmetered) | | 300 / Conn./ Month | | |
| Irrigation and Agriculture | CS-Urban | 6.00 / kWh | 225 / Conn./ Month | 7.00 / kWh | 225 / Conn./ Month* |
| | IAS | 5.00 / kWh | 20 / HP / Month | | |
| Industrial | IAS Unmetered | | 400.00 / HP / Month | 5.00 / kWh | 20 / HP / Month |
| | Low Tension Industrial Supply- Demand Based | 5.50 / kWh | 160 / kVA / Month | | |
| | Low Tension Industrial Supply- Installation Based | 6.50 / kWh | 160.00 / HP / Month | | |
| | High Tension Industrial Supply | 5.75 / kVAh | 300 / kVA / Month | | |
| | High Tension Special Service | 4.00 / kVAh | 500 / kVA / Month | | |
| Institutional | SS | 6.00 / kWh | 100 / Conn./ Month | 6.00 / kVAh | 400 / kVA / Month |
| | RTS | 4.60 / kVAh | 350 / kVA / Month | | |
| | MES | 4.60 / kVAh | 350 / kVA / Month | | |
| | Other Distribution Licensee | 4.60 / kVAh | 350 / kVA / Month | | |

*to be migrated to per KW, once the Smart Meters/ AMR are installed

Jharkhand State Electricity Regulatory Commission 21

Thank You

Jharkhand State Electricity Regulatory Commission 22