**Additional Information on filings of TSNPDCL Resource Plan for 5th(FY 2024-25 to FY 2028-29) & 6th (FY 2029-30 to FY 2033-34) Control Periods**

1. **Soft copies of petitions filed in word and excel format.**

**Reply:** The Soft copies of petitions filed in word and excel formats are enclosed in Annexure 1 (Soft copy) & Annexure 2 (Soft copy).

1. **Slab wise projections of energy consumption, load in MW and number of consumers for 5th and 6th control periods.**

**Reply:** The Slab wise projections of energy consumption, load in MW and number of consumers for 5th and 6th Control Periods are enclosed in Annexure 3 (Soft copy).

1. **Forecast of captive consumer’s energy consumption in Mwh for 5th and 6th control periods.**

**Reply**: Forecast of captive consumer's energy consumption in MWh for 5th and 6th Control

Periods is provided below:

**(A) 5th Control Period**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Voltage in kV** | **2023-24** | | **2024-25** | | **2025-26** | | **2026-27** | | **2027-28** | | **2028-29** | |
| **No,of consumers** | **Energy Consumption in MWh** | **No,of consumers** | **Energy Consumption in MWh** | **No,of consumers** | **Energy Consumption in MWh** | **No,of consumers** | **Energy Consumption in MWh** | **No,of consumers** | **Energy Consumption in MWh** | **No,of consumers** | **Energy Consumption in MWh** |
| **33** | 9 | 55301 | 9 | 56352 | 9 | 57423 | 9 | 58514 | 9 | 59625 | 9 | 60758 |
| **132** | 14 | 2061506 | 14 | 2100674 | 14 | 2140587 | 14 | 2181258 | 14 | 2222702 | 14 | 2264934 |
| **TOTAL** | **23** | **2116807** | **23** | **2157026** | **23** | **2198010** | **23** | **2239772** | **23** | **2282328** | **23** | **2325692** |

**(B) 6th Control Period**

| **Voltage in kV** | **2029-30** | | **2030-31** | | **2031-32** | | **2032-33** | | **2033-34** | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **No,of consumers** | **Energy Consumption in MWh** | **No,of consumers** | **Energy Consumption in MWh** | **No of consumers** | **Energy Consumption in MWh** | **No,of consumers** | **Energy Consumption in MWh** | **No,of consumers** | **Energy Consumption in MWh** |
| **33** | 9 | 61913 | 9 | 63089 | 9 | 64288 | 9 | 65509 | 9 | 66754 |
| **132** | 14 | 2307967 | 14 | 2351819 | 14 | 2396503 | 14 | 2442037 | 14 | 2488436 |
| **TOTAL** | **23** | **2369880** | **23** | **2414908** | **23** | **2460791** | **23** | **2507546** | **23** | **2555189** |

1. **Load profiles of each consumer category for the representative days for the 5th and**

**6th control periods.**

**Reply :** Load profiles of each consumer category for the representative days for the 5th and 6th

control periods are in Annexure 4 (Soft Copy).

1. **Forecast of Technical and Commercial losses for each voltage and category of consumers in the Distribution system for 5th and 6th Control Periods.**

**Reply**: Forecast of Technical and Commercial losses for each voltage and category of consumers

in the Distribution system for 5th and 6th Control Periods are in Annexure 5.

1. **Inputs from Railways/HMR, Industry and Lift irrigation department considered for projections for 5th and 6th control periods.**

**Reply:** Additional Inputs from Telangana State Industrial Infrastructure Corporation Limited

(TSIIC) and South Central Railway (SCR) are considered for projections for 5th and 6th

Control Periods are in Annexure 6.

1. **Historical slab wise data for past 10 years**

**Reply:** Historical slab wise data for past 10 years is enclosed in Annexure 7 (Soft Copy).

1. **Historical Technical and commercial losses data for past 10 years.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Historical Technical and Commercial losses data for past 10 years. | **YEAR WISE LOSS DETAILS IN TSNPDCL** | | | |
| **S.No.** | **Year** | **% Loss  (Incl. EHT)** | **% AT&C Loss** |
| 1 | 2014-15 | 13.25 | 13.67 |
| 2 | 2015-16 | 12.84 | 17.41 |
| 3 | 2016-17 | 12.20 | 16.11 |
| 4 | 2017-18 | 11.03 | 24.74 |
| 5 | 2018-19 | 9.92 | 28.74 |
| 6 | 2019-20 | 8.85 | 36.34 |
| 7 | 2020-21 | 9.13 | 9.03 |
| 8 | 2021-22 | 9.15 | 13.11 |
| 9 | 2022-23 (Provisional) | 8.71 | 39.36 |

**Reply:**

**.**

1. **Existing and proposed DSM programmes and their impact on energy and demand projections with cost benefit analysis for the 5th and 6th control periods.**

**Reply:** An MOU was entered in the month of October 2021 with Energy Efficiency Services Limited(EESL), in which EESL will support the proposed DSM program through bringing in the necessary investments and technology required for providing the consumers of TSNPDCL with energy efficient appliances and equipment like Super-Efficient Air Conditioners, IE3 Motors, BLDC fans etc.

1. **Details of PPA of all NCE sources i.e., Type, name of the plant, capacity, Auxiliary consumption, PLF/CUF, PPA period and tariff.**

**Reply:** Details of PPA’s of all NCE sources are enclosed in Annexure 8.

1. **Copies of PPAs of all the sources i.e., TSGenco, CGS, IPPs, NCEs.**

**Reply:** Details of PPA’s of all sources TSGenco, CGS, IPPs, NCEs are herewith submitted to Hon’ble TSERC in Pen drive.

1. **Solar rooftop capacity additions for the 5th and 6th control periods.**

**Reply:** The licensee has taken proactive steps in creating a simple and consumer friendly process

for release of roof-top solar connection. The installed capacity of Solar Roof Top in the

licensee area as on 31.3.2023 is 30.82 MW.

The Solar Rooftop Capacity for the 5th Control Period is provided below:

Capacity addition of Solar Rooftop Capacity during 5th Control Period (MW)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Capacity as on  31.3.2023 | 2023-24 | 2024-25 | 2025-26 | 2026-27 | 2027-28 | 2028-29 |
| 30.82 | 5.82 | 6.40 | 7.04 | 7.74 | 8.52 | 9.37 |

The Solar Rooftop Capacity for the 6th Control Period is provided below:

Capacity addition of Solar Rooftop Capacity during 6th Control Period (MW)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 2029-30 | 2030-31 | 2031-32 | 2032-33 | 2033-34 |
| 10.31 | 11.34 | 12.47 | 13.72 | 15.09 |

1. **Information as per clause 3.3.3 of Guidelines for load forecasts, resource plan and power procurement plan.**

**Reply:** The point wise reply to each requirement of Regulation 3.3.3 is provided below:

1. **Requirement of Regulation 3.3.3 (i) *–*** *“Each Power Procurement Plan shall be an optimal portfolio and shall contain contract options of different terms to optimise trade-off between price risk and demand variation”.*

**Reply of the above Requirement -** The Power procurement plan provides a balanced portfolio considering the long term & short term (when necessary) which helps the cover risks such as price risks and demand variation.

1. **Requirement of Regulation 3.3.3 (ii) *–*** *“Each Power Procurement Plan shall be an optimal portfolio and shall demonstrate the availability of adequate power to meet its obligation to serve its customers”.*

**Reply of the above Requirement -** The Power procurement plan provides a balanced portfolio considering the long term & short term. In the 5th Control period, the Discoms are in power surplus where as in 6th Control period the Discoms are in power deficit situation conditions. In order to bridge the gap several new generation capacities are planned. This new generation capacity includes thermal power, Non-Conventional Sources (NCS) of energy etc.

1. **Requirement of Regulation 3.3.3 (iii) *–*** *“Each Power Procurement Plan shall be an optimal portfolio and shall encourage fuel diversity in power procurement”.*

**Reply of the above Requirement -** The Power procurement plan provides a balanced portfolio not just considering the long term & short-term power diversity but also diverse fuel diversity. The power procurement plan includes procurement of power from diverse sources such as Thermal, Hydro, Non-Conventional Sources (NCS) of energy (including Bundled power) and nuclear power. This diverse source of power procurement basket provides security from supply risks.

1. **Requirement of Regulation 3.3.3 (iv) *–*** *“Each Power Procurement Plan shall be an optimal portfolio and shall demonstrate supplier diversity and viability”.*

**Reply of the above Requirement -** The Power procurement plan provides a balanced portfolio not just considering the long term & short-term power diversity but also supplier diversity. The power procurement plan includes procurement of power from sources such as GENCO, NTPC, STPP & other sources. This diverse source of power procurement basket provides security from supply risks.

1. **Plan for additional power procurement as per clause 3.3.4(iv) of Guidelines for load forecasts, resource plan and power procurement plan.**

**Reply :** The requirement of Regulation 3.3.4 (iv) is provided below:

1. **Requirement of Regulation 3.3.4 (iv) *–*** *“the plan for additional power procurement indicating portfolio mix of unit sizes, technology and fuel type, capacity contracted to meet peak / off-peak and seasonal load, year and duration of procurement, any un-contracted load with risks quantified and mitigation measures considered, and expected unit cost (to include energy, capacity and where appropriate transmission costs, the costs of DSM measures if any, and cost of risk coverage). The plan should show the options that were evaluated and the results or expected results of evaluation of alternative options. The plan should justify, in terms of economic advantage, the preferred options for meeting new capacity requirements”.*

**Reply of the above Requirement -** The Power procurement plan provides a balanced portfolio not just considering the long term & short-term power diversity but also diverse fuel diversity. The power procurement plan includes procurement of power from diverse sources such as Thermal, Hydro, Non-Conventional Sources (NCS) of energy (including Bundled power) and nuclear power. Also from BESS & Power Procurement from PUSHP portal. The long-term power ties like thermal power plant helps in managing the base load of the State. The new addition of long-term generation capacity consists of Singareni Phase II, Telangana STPP, Central Generating Stations (CGS) like Simhadri. This diverse source of power procurement basket provides security from supply risks.

1. **Demand Supply scenarios in MW during peak and off-peak period with seasonal variations at state level.**

**Reply :** Demand Supply scenarios in MW during peak and off-peak period with seasonal

variations at state level is enclosed in Annexure 9 (Soft Copy).

1. **Load curves of major consumer categories used for projection of coincident peak and non-coincident peak for 5th control period.**

**Reply :** Load curves of major consumer categories used for projection of coincident peak and

non-coincident peak for 5th control period is enclosed in Annexure 10 (Soft Copy).