

## CHAPTER- 8

### NEW PROPOSAL:

#### **1. Time of Day (ToD) tariff to all consumers:**

The Hon'ble Commission vide letter No. LERC/DD(Tariff)/2024-25/Solar Hours/896 Dtd. 05.11.2024 has directed to examine the proposal for implementation of Time of Day Tariff with Solar Hour Tariff as per the Electricity (Rights of Consumers) Amendment Rules, 2023 dtd.14.06.2023.

HESCOM's analysis on the above subject is as follows:

The Commission has made ToD Tariff mandatory for HT-1/HT-2a/HT-2b/HT-2c consumers above 500kVA.

The ToD tariff is aimed at optimizing the cost of power purchase, which constitutes over 80% of the tariff charged from the consumers. It also assumes importance in the context of propagating and implementing DSM and achieving energy efficiency. This is important in HESCOM situation where wide variations in load especially in summer causes problem of shortages during Peak hours and surplus during off peak hours.

- HESCOM's load during 6.00 AM to 8.00 AM varies from 1968 MW to 2697 MW & 5.00 PM to 10.00 PM varies from 1330 MW to 2340 MW.
- The solar power will be available only after 8.00 AM up to 4.00 PM.
- Due to lack of solar power generation during 6.00 AM to 8.00 AM and in the evening 5.00 PM to 10.00 PM, SLDC had instructed HESCOM to shift Irrigation pump set loads during this period.
- During 6.00 AM to 10.00AM, the domestic load will be added. If the load is catered to industries during the said morning hours, domestic consumers will be affected.
- The wind generation will be available only in the months from July to October.

#### **TOD Tariff & load factor improvement:**

The system load factor of distribution utility gives an important indication as to how efficiently it caters to the demand of its consumers. The load factor is defined as the ratio between the average demand and the peak demand for a given period of time. A higher load factor is desirable as this implies that the average power generation is closer to the maximum demand of consumers, denoting a higher operational efficiency of power plants. This also means that plant fixed costs may be spread over larger number of generated units, thereby giving a lower cost per unit.

Another incentive to reduce the gap between the peak and average demand is the increasing marginal costs of generation with increase in demand. Since as per Merit Order dispatch, plants with higher costs are dispatched to meet the demand over the average, the higher the peak-load of the system, the



higher is the cost of electricity. Further, by reducing the peak load, the fixed cost of meeting a given demand can be lowered, as any increase in demand can be accommodated without additional investments in new generation capacities. Also, security of supply can be increased without additional cost.

Thus, the relationship between TOD tariff and improving the load factor is quite apparent. By charging different tariff at peak and off-peak periods according to marginal cost, customers are incentivized to shift their loads to off-peak hours, thereby reducing the overall system peak demand and improving the system load factor.

Framework for *implementation* of TOD tariff various legislative and legal frameworks existing in the country which promote implementation of TOD as an important DSM tool are:

### **Electricity Act**

The relevant provision of Section 62(3) of the Act which guides the SERCs to incorporate TOD tariff is:

*"The Appropriate Commission shall not, while determining the tariff under this Act, show undue preference to any consumer of electricity but may differentiate according to the consumer's load factor, power factor, voltage, total consumption of electricity during any specified period or the time at which the supply is required or the geographical position of any area, the nature of supply and the purpose for which the supply is required."*

### **National Tariff Policy**

The relevant provisions of the National Tariff Policy, which define the tariff components and their applicability states as under:

*"8.4 Definition of tariff components and their applicability 1. Two-part tariffs featuring separate fixed and variable charges and Time differentiated tariff shall be introduced on priority for large consumers (say, consumers with demand exceeding 1 MW) within one year. This would also help in flattening the peak and implementing various energy conservation measures."*

### **National Electricity Policy**

The relevant provision of the National Electricity Policy with respect to encouraging metering for TOD is:

*"5.4.9 The Act required all consumers to be metered within two years. The SERCs may obtain from the Distribution Licenses their metering plans, approve these, and monitor the same. The SERCs should encourage use of pre-paid meters. In the first instance, TOD meters for large consumers with a minimum load of one MVA are also to be encouraged. The SERCs should also put in place independent third-party meter testing arrangements".*



## FOR recommendations

FOR has also given the following recommendations in its Working Group Report on "Metering Issues":

*"Time of the day metering is important while propagating and implementing Demand Side Management (DSM) and achieving energy efficiency. Hence, TOD metering and automatic meter reading system should be introduced wherever it has not already been done. High-end consumers with the connected load of 25KW and above should be covered under TOD metering."*

## CEA regulations

Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 have stated the following with respect TOD metering:

*"20. Adoption of new technologies - The distribution licensee shall make out a plan for introduction and adoption of new technologies such as pre-paid meters, time of the day meters (TOD), automatic remote meter reading system through appropriate communication system with the approval of the Appropriate Commission or as per the regulations or directions of the Appropriate Commission or pursuant to the reforms programme of the Appropriate Government."*

## Rule No. 8(A) of Electricity (Rights of Consumers) Amendment Rules, 2023:

The Government of India on 14th June, 2023 notified an amendment to the Electricity (Rights of Consumers) Rules, 2020 as "the Electricity (Rights of Consumers) Amendment Rules, 2023" in which under clause 8A "Time of Day (ToD) Tariff" Provision is introduced, which is reiterated as below:

**(8A) Time of Day Tariff.** -The Time of Day tariff for Commercial and Industrial consumers having maximum demand more than ten Kilowatt shall be made effective from a date not later than 1st April, 2024 and for other consumers except agricultural consumers, the Time of Day tariff shall be made effective not later than 1st April, 2025 and a Time of Day tariff shall be made effective immediately after installation of smart meters, for the consumers with smart meters:

Provided that, the Time of Day Tariff specified by the State Commission for Commercial and Industrial consumers during peak period of the day shall not be less than 1.20 times the normal tariff and for other consumers, it shall not be less than 1.10 times the normal tariff:

Provided further that, tariff for solar hours of the day, specified by the State Commission shall be at least twenty percent less than the normal tariff for that category of consumers:

Provided also that the Time of Day Tariff shall be applicable on energy charge component of the normal tariff:

Provided also that the duration of peak hours shall not be more than solar hours as notified by the State Commission or State Load Despatch Centre.

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Explanation: - For the purposes of this rule, the expression "solar hours" means the duration of eight hours in a day as specified by the State Commission."

Hence, HESCOM proposes for Time of Day (TOD) tariff to all consumers having maximum demand more than 10 KW, except agricultural consumers which may be made effective immediately after installation of smart meters for the consumers with smart meters as below:

Applicability of ToD Tariff		
Sl No	Time Slot	ToD Tariff
1	06.00 hrs to 08.00 hrs (peak hrs)	1.20 times the normal tariff
2	08.00 hrs to 16.00 hrs (solar hrs)	Twenty percent (20%) less than the normal tariff.
3	16.00 hrs to 17.00 hrs (Normal)	Normal Tariff
4	17.00 hrs to 22.00 hrs (peak hrs)	1.20 times the normal tariff
5	22.00 hrs to 06.00 hrs (off Peak hrs)	Normal Tariff

## 2. Single Part Tariff for Electric Vehicle Charging Stations:

A) Ministry of Power (MoP), GoI vide letter No. 12/22/2020-EV-Part (5)- Part (2) dtd. 13.06.2023, have stated that e-mobility is evolving as a key enabler on a global level to decarbonize transport sector and availability of adequate Public EV Charging Infrastructure is an essential requirement for accelerated adoption of electric vehicles in India.

MoP have directed to ensure the following:

- Tariff for supply of electricity to Public EV Charging in the state be single part and not exceed Average Cost of Supply (ACoS).
- Provision of discount of 20% in the electricity supply tariff for Public Charging Station (PCS) (i.e., from Average cost of supply of Electricity from a DISCOM for EV charging to a PCS in the solar hours i.e., between 9.00 am to 4.00 am and a 20% surcharge in the electricity supply tariff for EV charging at public charging stations during all other periods in the day.
- Application of ceiling on service charges (in addition to cost of electricity) of Rs. 2.50 and Rs. 3.50 per unit of electricity for slow AC charging and Rs. 10.00 and 12.00 per unit of electricity for DC fast charging of EVs at Public EV charging stations during the solar and non-solar hours respectively till these are revised by CEA.
- Waiver in Fixed charges component in EV supply Tariff for public EV charging stations.
- Promotion of residential office and community charging in Group Housing Societies and Commercial Complexes.
- Application of domestic tariff for residential EV charging.

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- g. Registration of all Public EV charging stations operational in the States via "EV Yatra" portal available at (<https://evyatra.beeindia.gov.in>).
- h. Timely grant of electricity connection from DISCOMs to Public EV charging stations through online portal available at PCS Connection-BEE-EV(beeindia.gov.in).

B) Ministry of Power have also issued Guidelines for Installation and Operation of Electric Vehicle Charging Infrastructure-2024 bearing No. 12/2/2018-EV (Comp No. 241852) Dated 17.09.2024.

The following guidelines have been issued for the tariff for supply of electricity to EV Charging stations;

**Clause 9.**

- 1) The tariff for supply of electricity to EV Charging Stations shall be single part and shall not exceed "Average Cost of Supply "till 31<sup>st</sup> March 2028.
- 2) The Distribution Licensee will charge 0.7 times the Average Cost of Supply (ACoS) during solar hours (9:00 AM to 4:00 PM) and 1.3 times ACoS during non-solar hours (remaining hours of the day).
- 3) Each EV charging station must have separate metering arrangements to accurately record consumption and apply the appropriate tariff.
- 4) Distribution licensee may provide sub metering of EV charger, behind the meter of an existing HT connection.

Hence, HESCOM proposes single part tariff for supply of electricity to EV Charging Stations as per Ministry of Power (MoP), GoI vide letter No. 12/22/2020-EV-Part (5)- Part (2) dtd. 13.06.2023 & Ministry of Power Guidelines for Installation and Operation of Electric Vehicle Charging Infrastructure-2024 bearing No. 12/2/2018-EV (Comp No. 241852) Dated 17.09.2024.

### **3. Discounted Energy Rate Scheme (DERS):**

Hon'ble Commission in its Tariff Order 2021, dated 09.06.2021 had introduced Discounted Energy rate Scheme for HT consumers in an attempt to bring back the EHT/HT consumers who are availing power through open access as the State has power surplus situation. The Hon'ble Commission had extended the scheme for a further period of 3 months vide letter dated 05.01.2022. In the Tariff Order-2022, dated 04.04.2022, Commission had continued the DERS for the entire period during FY-23 in all the ESCOMs, as per the terms and conditions as in the Tariff Order-2021. The Hon'ble KERC had extended the DERS fixing the discounted rate @ Rs.5.00 per unit until further orders in Tariff Order 2023 dated 12.05.2023. The Hon'ble KERC has extended the DERS for FY-25 @ discounted rate @ Rs.5.00 per unit until further orders in Tariff Order 2024 dated 28.02.2024.

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At the end of September-2024, 124 numbers of HT/EHT Consumers have opted for the Scheme.

The statistics for FY-24 and FY-25 are as below:

Month	No. of Consumers	Base consumption in MU	Consumption above the Base in MU	Actual Consumption in MU
FY-24	124	112.68	68.19	142.51
<b>FY-25 (As on Sept-2024)</b>	<b>124</b>	<b>65.17</b>	<b>30.26</b>	<b>58.95</b>

Considering all the above facts, Hon'ble Commission is requested to continue the Discounted Energy Rate Scheme for a further period of one year and following modifications may be considered for FY-26:

An increase in the discounted rate by 100 paisa i.e., discounted rate of Rs.6.00 per unit over the base consumption.

#### **4. Special Incentive Scheme (SIS):**

Hon'ble Commission had introduced Special Incentive Scheme (SIS) in Tariff Order 2018 and extended the Special Incentive Scheme in Tariff Order 2024 for FY 2024-25 and decided to withdraw the approved special incentive scheme from FY 2025-26 onwards. As per kind directions of the Commission, HESCOM requests the consumers under the SIS scheme to opt DERS Scheme from FY 2025-26 onwards.



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**NOTARY**

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