

MAHARASHTRA ELECTRICITY REGULATORY COMMISSION

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MAHARASHTRA ELECTRICITY REGULATORY COMMISSION (DEMAND FLEXIBILITY AND DEMAND SIDE MANAGEMENT – IMPLEMENTATION FRAMEWORK, COST-EFFECTIVENESS ASSESSMENT; AND EVALUATION, MEASUREMENT AND VERIFICATION) REGULATIONS, 2024

STATEMENT OF REASONS

Dated: 19 November 2024

Introduction

The Maharashtra Electricity Regulatory Commission (“MERC” or “the Commission”) has notified MERC (Demand Side Management Measures and Programmes’ Cost Effectiveness Assessment) Regulations, 2010 on April 2010. During the past decade all the distribution licensees combined reported approximately 50 MW of savings through energy consumption in key categories as a part of their DSM portfolio. Two distribution licensees also demonstrated a possibility of approximately 25 MW of demand response initiatives working closely with power markets and the consumer load. Given the changing context of generation profiles from different types of generation plants including the ones behind the meter (within the consumer premises) and heavy emphasis on solarization of agriculture feeders as well as households, it is now imperative to place demand side management as an opportunity in the form of a combination of demand flexibility, demand side management, demand response, energy efficiency and energy conservation.

Accordingly, the Commission has framed the Draft MERC (Demand Flexibility and Demand Side Management – Implementation Framework, Cost-effectiveness Assessment; and Evaluation, Measurement, and Verification) Regulations, 2024 with Explanatory Memorandum providing rational for various provisions proposed in the draft Regulations.

These Draft Regulations, 2024 and the associated Explanatory Memorandum were published on the Commission’s website www.merc.gov.in in downloadable format on 27 August 2024. A Public Notice was also published in daily newspapers Marathi (Maharashtra Times and

Lokmat) and English (Economic Times and Times of India), inviting comments, objections and suggestions from all stakeholders to be submitted to the office of Commission on or before 20 September 2024. On request of the stakeholder such due date for filing comments was extended till 30 September 2024.

Total 7 (seven) stakeholders have submitted their comments/suggestions/objections on the Draft MERC (Second Amendment) Regulations, 2024. The list of stakeholders who offered their comments/suggestions/objections on the Draft MERC Regulations, 2024, which have been considered by the Commission while finalising the Regulations, is placed at Annexure-I.

The main comments/suggestions/objections and views expressed by the stakeholders through their written submissions and the Commission's views thereon have been summarized in the following paragraphs. It may be noted that all the suggestions given by the stakeholders have been considered and the Commission has attempted to elaborate all the suggestions as well as the Commission's decisions on each suggestion in this Statement of Reasons (SOR). However, in case any suggestion is not specifically elaborated, it does not mean that the same has not been considered. Further, some stakeholders have suggested changes on Syntax/phrase/addition of word(s)/rewording related changes, etc., which have been suitably incorporated, wherever necessary.

Wherever possible, the comments and suggestions or objections have been summarised clause-wise, along with the Commission's analysis and ruling on the same. However, in some cases, due to overlapping of the issues/comments, the clauses have been combined in order to minimise repetition.

Some comments and suggestions were not directly related to the Draft Regulations on which inputs were invited. While the Commission has summarised such comments and suggestions or objections briefly in this Statement of Reasons (SOR), specific rulings on the same have not been provided, as the same are outside the scope of these Regulations.

The SOR is organised in the following Chapters, along the same lines as the Draft MERC (Demand Flexibility and Demand Side Management – Implementation Framework, Cost-effectiveness Assessment; and Evaluation, Measurement and Verification) Regulations, 2024, summarizing the main issues raised during the public consultation process, and the Commission's analysis and decisions on them which underlie the Regulations as finally notified:

Chapter 1: Definitions

Chapter 2: Implementation Framework

Chapter 3: Cost-Effectiveness Assessment Tests

Chapter 4: Evaluation, Measurement and Verification

1 Definitions

1.1 Changes into definition of ‘DF/Demand-Side Resource’ and introduction of new definition of ‘Aggregator’:

“DF/Demand-Side Resource means a saving in consumption (kWh) and/or demand (kW/KVA) available as a result of implementation of DSM programme, to be expressed in three important dimensions: Quantum – as to how much is available (kWh and/or kW); Time – as to when is it available (at what time of day, on what days, in what season); and the Cost – as at what would be the cost”

1.1.1 Comments Received

Council on Energy, Environment and Water (CEEW) have submitted that the Regulation should explicitly define the time scales for demand fluctuations, ranging from sub-hourly variations to seasonal changes, it will be helpful while specifying district impact assessments and evaluation methods for various interventions also the definition of “DF/Demand-Side Resource” must be broadened to include both the reduction and increase of Renewable Energy (RE) curtailment.

Alliance for an Energy Efficient Economy (AEEE) have submitted that the definition of “DF/Demand-Side Resource” should encompass the managing of peak load and it should specify that diesel generators are ineligible for DF participation.

AEEE also submitted that it is essential to define the eligible consumers who can participate in demand flexibility programs and to include a clear definition of a demand aggregator.

1.1.2 Analysis and Commission’s Decision

The Commission is aware of the importance of distinguishing between short-term demand fluctuations and long-term changes driven by factors such as energy-efficient equipment and socio-economic influences. While the current Regulations adequately define the necessary aspects for Demand Flexibility Portfolio Obligations (DFPO), the licensees in Maharashtra have demonstrated maturity in designing demand-side management (DSM) initiatives, and the proposed measures by CEEW are already integrated into their ongoing studies. Hence, no changes to that extent are deemed necessary at this time.

Regarding suggestion for adding definition for demand aggregator, the Commission notes that aggregator can play crucial role to assist the Distribution Licensee to meet their DFPO. Aggregator can act as link between consumer and Distribution Licensee to educate and increase participation of consumers in demand response and other energy efficiency, demand side management programs. Therefore, the Commission has added the following definition of ‘Aggregator’ as 2.1.3 in the final Regulations:

“Aggregator” is an entity registered with the Distribution Licensee to provide aggregation of one or more of the services like demand response services under the demand flexibility mechanism, Distributed Generation, Energy Storage etc. within a control area;

Further, considering participation of single or multiple consumers and their connected devices in the DF/DSM programme, the definition at clause 2.1.9 is modified as follows in final Regulations:

“DF/Demand-Side Resource” means a saving in consumption (kWh) and/or demand (kW/KVA) available as a result of implementation of DF / DSM programme (as a single or group of device at a single or multiple locations) to be expressed in three important dimensions: Quantum – as to how much is available (kWh and/or kW); Time – as to when is it available (at what time of day, on what days, in what season); and the Cost – as at what would be the cost”

2 Implementation Framework

2.1 Cost recovery of DF / DSM measures:

Distribution Licensees may recover all justifiable costs incurred by them in any DF / DSM related activity, including conducting Load Research (LR), planning, designing, implementing, monitoring and evaluating DF / DSM programmes, by adding these costs in the MYT filings and annual financial reporting. All such DF / DSM related activities/ programmes undertaken by the Distribution Licensees:

- (i) Will need to be cost effective for the consumers of the Distribution Licensees as well as to the Distribution Licensees themselves as stipulated under Part B of these regulations;*
- (ii) Shall protect the interest of all consumers and be implemented in an equitable manner;*
- (iii) Will result in overall tariff reductions for all the consumers of the licensees;*
- (iv) Will result in embedding renewable energy on the consumer-side of the meter or supply-side of the meter.*

2.1.1 Comments Received

Regulatory Assistance Project (RAP) submitted that the focus should not only be on reducing tariffs but also on achieving reductions in customer bills; therefore, ratemaking/rate impacts should consider long-term effects rather than just short-term outcomes.

RAP also submitted that limiting DF to renewable resources may exclude efficient alternatives such as combined heat and power (CHP) systems or storage solutions; while promoting renewable energy resources, it is essential to accept other efficient technologies as well.

Prayas Energy Group have submitted that a portion of the DF funds should be allocated for load research activities, which are necessary for the successful implementation of DSM/DF programs.

2.1.2 Analysis and Commission's Decision

Suggestions regarding tariff impacts and demand flexibility have been noted. While the focus on reducing consumer bills is important, the existing Regulations under Part B adequately address long-term tariff impacts by considering factors such as load growth and technology lifespan. Additionally, the Regulations already allow for the inclusion of efficient alternatives to renewable resources, as stated in Regulation 4(e), which encourages licensees to explore a diverse portfolio of technologies. Also, in the Regulation 3.2, the cost recovery mechanism for DSM/DF measures already includes load research

activities, ensuring that necessary planning and implementation efforts are supported. Therefore, no changes to the Regulations are necessary.

2.2 DFPO multi-year targets:

Distribution Licensees shall adhere to specific demand flexibility portfolio obligations (DFPO) set-up with a following specific trajectory:

<i>Year</i>	<i>DFPO as percentage of peak demand experienced in previous Financial Year</i>
<i>FY 2025-26</i>	<i>3%</i>
<i>FY 2026-27</i>	<i>4%</i>
<i>FY 2027-28</i>	<i>5%</i>
<i>FY 2028-29</i>	<i>6%</i>
<i>FY 2029-30</i>	<i>7%</i>

Subsequent to the first five years of trajectory for DFPO described above, the Distribution Licensees shall perpetually ensure 7% of the previous year's peak demand as DFPO till the time it is revised by the Commission.

2.2.1 Comments Received

CEEW have submitted that the Regulation should mandate a consumer segment-level assessment of DF potential as part of the load research process. In addition to that it should also require the estimation of DF resources for resource adequacy planning.

RAP have submitted that clarity is needed on whether peak load reductions must be permanent or if they represent a flexible resource available to system operators as needed.

The Brihan Mumbai Electric Supply & Transport Undertaking (BEST), Tata Power Distribution, CEEW, have submitted that the DF Portfolio Obligation (DFPO) targets should be relaxed for the first two years to allow DISCOMs to build capacity without facing penalties, with performance measured in terms of the percentage of demand during periods of surplus (RE) generation.

Prayas Energy Group have submitted that Commission can consider introducing an Energy Efficiency Target of 1-2% of the annual sales of DISCOMs to promote the development of large-scale energy efficiency programs, aligning with BEE's report that projects an average energy efficiency potential of 10-12% across States.

AEEE have submitted that there is insufficient information on how the 3% of DFPO is calculated.

2.2.2 Analysis and Commission's Decision

The proposed Regulations are intended to trigger in-depth study of the load patterns by

carrying out consumer segment-level load research activities. Licensee should carry out the expected study to comply with DF/DR portfolio targets. The Commission intends to create a robust DF/DR portfolio.

To support DISCOMs in building capacity, the Commission is reducing DF Portfolio Obligation (DFPO) targets stated in draft Regulations and notifying the final DF Portfolio Obligation with first year target set at 1.5% and gradually increasing to 3.5% in the fifth year. Further explanation about how to demonstrate achievement of such DFPO is also added to the Regulations. Accordingly, modified provisions of the Regulations are as follows:

“c) DFPO multi-year targets: *Distribution Licensees shall adhere to specific demand flexibility portfolio obligations (DFPO) set-up with a following specific trajectory:*

<i>Year</i>	<i>DFPO as percentage of peak demand experienced in previous Financial Year</i>
<i>FY 2025-26</i>	<i>1.5%</i>
<i>FY 2026-27</i>	<i>1.5%</i>
<i>FY 2027-28</i>	<i>2.0%</i>
<i>FY 2028-29</i>	<i>2.5%</i>
<i>FY 2029-30</i>	<i>3.5%</i>

DFPO represent maximum flexibility available to decrease the load at a single instance at the time of maximum expected peak demand and corresponding increase in the non-peak hours during a 24-hours period, demonstrated for at least one hour in a year. The Licensees are required to carry out at least one DF/DR event in a year that is coincidental with the top 10 days of the previous year’s recorded peak demand. Subsequent to the first five years of trajectory for DFPO described above, the Distribution Licensees shall perpetually ensure 3.50% of the previous year’s peak demand as DFPO till the time it is revised by the Commission”

Articulation of the DPFO and how it is related with the peak demand is provided in annexure II.

Regarding suggestion for introducing Energy Efficiency Target, the Commission notes that Distribution Licensees are already mandated under Regulation 104 of MERC (Multi Year Tariff) Regulations 2024 to reduce its self-consumption by adopting energy efficiency and conservation measure. Further said Regulations also provide for stipulating trajectory for Energy Conservation in the MYT Control Period. Hence, separate Energy Efficiency Targets are not required under DF/DSM Regulations. In respect of Energy Efficiency at consumer premises, Regulations requires the Distribution Licensees to design the schemes for the same. Hence, no changes are required in the draft Regulations on this aspect.

2.3 DSM Consultation Committee (DSM-CC):

“A separate DF / DSM Consultation Committee shall be set up under these Regulations through a specific notification of the Commission with a stated tenure and terms of reference. The DF / DSM Committee shall be a group of experts working under the direction of the Commission, to review and provide suggestions and objections on the DF / DSM programme portfolio submitted by the distribution licensees and recommend its findings on DF / DSM Programmes to the Commission for approval. Secretary to the Commission shall act as the Convenor of the DF / DSM Committee with participation from distribution licensees, Maharashtra Energy Development Agency (MEDA) representing the Bureau of Energy Efficiency (BEE), Chief Electrical Inspector, sectoral experts including representatives of academic/research institutions and private sector with specific knowledge of DF / DSM opportunities. The DF / DSM Consultation Committee shall evaluate the “DF / DSM Programme Portfolio and Implementation Plan” submitted by the distribution licensees and provide its recommendations to the Commission, and assist in the evaluation of the “Status report on DF / DSM implementation” submitted by licensees. The DF / DSM Committee shall also assist in creation of sectoral expertise in the stakeholder groups to actively guide design, implementation and evaluation of DF/DSM programmes.”

2.3.1 Comments Received

Adani Electricity Mumbai Limited (AEML) have submitted that the first step in the process should be Baseline survey, to identify the potentially flexible demand. Thereafter, each Distribution Licensee will, on its own, propose the DR/DF/DSM plan after that DF/DSM Consultation Committee should be formed.

RAP have submitted that the appointment of an Independent Verification Agency (IVA) by the utility may lead to a conflict of interest.

Prayas Energy Group have submitted that Regulations mandate the establishment of a DF/DSM Consultation Committee (CC). This committee should be responsible for developing methodologies for load research and program design, with detailed terms of reference (ToR) similar to those outlined in the MERC DSM 2010 framework.

AEEE and RAP have submitted that, it is important to include consumer participation in the committee.

2.3.2 Analysis and Commission’s Decision

Regarding the appointment of an Independent Verification Agency (IVA) by the utility, it is important to note that the Commission retains the authority to appoint IVAs independently, thereby mitigating potential conflicts of interest.

Regulations 5 have highlighted the structure of the DF/DSM Consultation Committee adequately. The licenses also are a part of the proposed DF/DSM Committee. As such,

there is a good scope for a contribution of the Committee members to make the proposed Regulations successful.

The proposed committee structure could include members who can advocate for consumer interests or any agency who have expertise (including international experience) on the subject as a special invitee. Hence, no changes are envisaged in the draft Regulations in this regard.

2.4 DF/DSM funding

Funding of all the DF / DSM portfolio programmes and plans to be implemented by the Distribution Licensees shall be included in the MYT Tariff filings with an annual funds deployment requirement and reported as a part of annual review. Distribution Licensees shall be allowed to recover all costs, clearing the cost-effectiveness assessment test included in Part B of these Regulations, incurred by them in any DF / DSM related activity, including planning, conducting load research, designing, implementing, monitoring and evaluating DSM programmes, by adding these costs to their ARR to enable their funding through tariff structure. All costs incurred to conduct load research on an annual basis, setting-up of online monitoring systems, setting-up of network operating centres, data-driven online and real-time monitoring services, deployment of appliance-level metering infrastructure on a sample basis, conducting energy audits at consumers' premises, awareness campaigns, targeted research activities, dissemination efforts and all other legitimate expenses to further the cause of DF / DSM. The Commission may direct the Distribution Licensees to adopt other complementing DF / DSM funding approaches such as creating a pool of funds through collection of DF DSM Charge at a later date through tariff; if such an approach is found beneficial.

2.4.1 Comments Received

CEEW submitted that a dedicated budget or funding pool should be established for distribution companies to test or pilot innovative demand flexibility (DF) initiatives.

RAP have submitted that Non-Wires Alternatives (NWA) can include a portfolio and should also be open to amortizing the DF costs for some of DF programs, also it has suggested that capital from aggregators could be leveraged to support the DF programs.

2.4.2 Analysis and Commission's Decision

Regarding funding pool for pilot of DF program, the Commission noted that, given the maturity of DSM implementation in Maharashtra, licensees are already positioned to propose a broader DF portfolio without the need for additional funding mechanisms.

The existing Regulations, particularly part B, provide sufficient framework through hurdle tests for licensees to explore new programs. Furthermore, since all costs associated with DF programs are currently being recovered, there is no pressing need to introduce a new funding mechanism. Hence, no changes are envisaged in the draft Regulations in this regard.

3 Cost-Effectiveness Assessment Tests

3.1 Values of key inputs used in the tests

“The default input values to be considered by all Distribution Licensees in the State, shall be as follows:

a) Avoided cost of power purchase for TRC, RIM and PCT – Weighted Average of Highest Marginal Cost of Power Purchase related to top 10% of energy use stack for the past one year.

b) Avoided cost of power purchase for SCT – Rs. 12/kWh (prevalent ceiling rate for Day ahead market set by CERC)

c) Escalation rates for power sales, avoided cost of purchase – 5% year-on-year.

d) Discount rate for TRC and RIM tests – 10.5%.

e) Discount rate for PCT – 13%.

f) Discount rate for SCT – 10.5%.

The Commission may, by order, revise the above values annually, if necessary.”

3.1.1 Comments Received

AEML has submitted that in the Draft DSM Regulations 2024, the CERC has set the avoided cost of power purchase for SCT at Rs. 12/kWh. according to the CERC's Sou Motu Order (Petition No. 04/SM/2023) dated March 31, 2023, this cost has been reduced to Rs. 10 /kWh.

3.1.2 Analysis and Commission's Decision

AEML's observation regarding the avoided cost of power purchase is valid, accordingly avoided cost of power purchase has been revised from Rs. 12/kWh to Rs. 10/kWh.

Regulations, have been appropriately updated to include indexation to regulated ceilings, The Regulations 11 b) are revised accordingly.

“The default input values to be considered by all Distribution Licensees in the State, shall be as follows:

Avoided cost of power purchase for TRC, RIM and PCT – Weighted Average of Highest Marginal Cost of Power Purchase related to top 10% of energy use stack for the past one year.

Avoided cost of power purchase for SCT – Rs. 10/kWh (prevalent ceiling rate for Day ahead market set by CERC, revised from time to time but as valid at the time of submission of the DF/DSM portfolio)

Escalation rates for power sales, avoided cost of purchase – 5% year-on-year.

Discount rate for TRC and RIM tests – 10.5%.

Discount rate for PCT – 13%.

Discount rate for SCT – 10.5%.

The Commission may, by order, revise the above values annually, if necessary.”

3.2 DSM Evaluation, Measurement & Verification Guiding Principles

“Three basic types of evaluations covered under these Regulations include:

- a) Impact evaluation that determines the impacts (e.g., energy and demand savings) and co-benefits (e.g., avoided emissions, health benefits, job creation, energy security, transmission/distribution benefits, and water savings) that directly result from a programme. Impact evaluations support cost-effectiveness analyses aimed at identifying relative programme costs and benefits.*
- b) Process evaluation that assesses programme delivery, from design to implementation, in order to identify bottlenecks, efficiencies, what worked, what did not work, constraints, and potential improvements. Timeliness in identifying opportunities for improvement is essential to making corrections along the way.*
- c) Market effects evaluation that estimates a programme’s influence on encouraging future DF/DSM projects because of changes in the energy marketplace. These evaluations are primarily, but not exclusively used for programmes with market transformation elements and objectives.”*

3.2.1 Comments Received

AEML has submitted that, the historical data indicates that the costs associated with Independent Verification Agencies (IVAs) are very high, making their engagement financially unfeasible, highlighting the need for alternative verification methods and suggesting that empaneling IVAs should not be mandatory for Distribution Licensees.

3.2.2 Analysis and Commission’s Decision

Regarding contention of high costs of IVAs, the Commission is of the opinion that licensee can leverage available talent from new players and educational institutions to explore alternative verification methods, which could reduce costs. Further, as IVA expenses are included in program costs, adopting a portfolio approach could help minimize these expenses. Hence, no changes are envisaged in the draft Regulations in this regard.

4 Evaluation, Measurement and Verification

4.1 Impact Evaluation

The impact evaluation expressed as gross energy/demand savings and the demand flexibility created shall be determined by comparing energy use and demand after a DF / DSM programme is implemented (i.e. the reporting period) with the energy use and demand if the programme not been implemented (i.e. the baseline). The estimated savings shall be determined by the following equation:

Estimated savings = (baseline use) – (reporting period use) ± (appropriate adjustments)

The impact evaluation shall primarily be carried out using either of the three approaches:

- *Measurement & verification approach;*
- *Deemed savings approach; and*
- *Large-scale data analysis.*

4.1.1 Comments Received

Alliance for an Energy Efficient Economy (AEEE) submitted that it is stated in the Regulations that, there are three impact evaluation approaches: Measurement & Verification, Deemed Savings, and Large-Scale Data Analysis, but there is a concern about the accuracy of the Deemed Savings approach due to daily variations. And questions arise about the scenarios where the deemed saving approach and large-scale data analysis be applicable also the option to be exercised in order of priority based on the associated costs and efforts.

4.1.2 Analysis and Commission's Decision

The Commission notes that Regulations enables DISCOMs to select the most appropriate evaluation method based on the specific type of program, as well as the availability of data and reporting requirements. Hence, no changes are envisaged in the draft Regulations in this regard.

4.2 Process Evaluation

“Distribution licensees shall also include robust process evaluations to improve the programme design and cost-effectiveness of the proposed measures. Process evaluations shall be structured in order to examine the efficiency and effectiveness of DF/DSM programme implementation procedures and systems. These evaluations shall include interviews with those involved in the programme, analysis of their answers, and comparing results to established best practices. The process evaluation shall include recommendations for changing a programme's structure, implementation approaches, or programme design, delivery, and goals supported through the findings from the evaluation interviews. The primary instrument used in the process evaluations shall be data collection (e.g., surveys, questionnaires, and interviews) from administrators, designers, participants (such as facility operators), implementation staff (including contractors, subcontractors,

and field staff), and key policy makers. Other key elements of a process evaluation shall be workflow and productivity measurements; reviews, assessments, and testing of records, databases, programme-related materials, and tools; and collection and analysis of relevant data from third-party sources (e.g., equipment vendors, trade allies).”

4.2.1 Comments Received

AEEE submitted that, while the primary instrument for process evaluations will involve data collection through surveys, questionnaires, and interviews from various stakeholders, it should prefer to increase sub-metering to mitigate issues such as social desirability bias, enumerator bias, and limitations in long-term memory associated with primary surveys.

4.2.2 Analysis and Commission’s Decision

In response to AEEE's suggestion regarding the reliance on surveys for process evaluations, current approach of primary data collection emphasizes structuring questionnaires to minimize these biases. Hence, no changes are envisaged in the draft Regulations in this regard.

4.3 Empanelment of Independent Verification Agencies (IVAs)

“Distribution Licensees, supported through these Regulations, shall empanel Independent Verification Agencies (IVAs). The IVCs shall be selected based on the following criteria: a) IVAs should be individual consultants, consultancy organizations, academic/research institutions, civil society organisations and/or consortia thereof; b) IVAs should have at least one BEE Certified Energy Auditor or Certified Energy Manager; or a Certified Measurement & Verification Professional (CMVP) certified by any national or international certification agency on their team in case of consultancy organizations/consortia thereof; and c) Shall possess experience in design, implementation, review, measurement, verification and statistical analysis related to large datasets. The IVAs appointed for specific projects should not have been involved in DF / DSM programme design, implementation, review, and any related activity.”

4.3.1 Comments Received

TATA Power Distribution submitted that the limited availability IVAs may pose challenges for distribution licensees in appointing multiple IVAs for specific projects and DSM program activities. Therefore, it is requested to allow the appointment of a single IVA to cover all DSM program and related activities, including load research.

4.3.2 Analysis and Commission’s Decision

The Commission notes that Regulations do not mandate appointment of separate IVAs for each project. It is left to the Distribution Licensee to appoint single or multiple IVAs with only condition that such IVA shall not part of project/scheme design or implementation. Hence, no changes are envisaged in the draft Regulations in this regard.

Sd/-

(Surendra J. Biyani)
Member

Sd/-

(Anand M. Limaye)
Member

Sd/-

(Sanjay Kumar)
Chairperson

Annexure – I : Name of the stakeholders who offered their comments/suggestions/ objections

Sr. No.	Name of Stakeholders
1	Council on Energy, Environment and Water (CEEW)
2	Alliance for an Energy Efficient Economy (AEEE)
3	The Brihan Mumbai Electric Supply & Transport Undertaking (BEST)
4	Regulatory Assistance Project (RAP)
5	Tata Power Distribution
6	Prayas Energy Group
7	Adani Electricity Mumbai Limited

Annexure – II: DFPO calculation example

As an example, consumer category wise number of consumers and connected loads for one of the licensees are presented below:

Sr No.	Category	Number of consumers	Connected load/Contract Demand	
1	LT I -BPL	2,29,668	27,895	kW
2	LT I Domestic	2,13,13,414	2,32,28,744	kW
3	LT II Non-Domestic	20,56,116	43,74,152	kW
4	LT III PWW	56,108	1,70,143	kW
5	LT IV Agriculture	45,12,918	2,31,17,092	HP
6	LT V Power loom	56,864	3,88,889	kW
7	LT V Industrial General	3,81,297	46,61,941	kW
8	LT VI Streetlight	1,02,641	4,85,336	kW
9	LT X - Public services	1,34,260	72,437	kW
10	LT EV Charging	145	1,308	kW
11	LT Prepaid	7,454		
12	HT-I Industries	14,945	88,50,694	KVA
13	HT-II Commercial	3,076	5,58,151	KVA
14	HT III Railways	101	26,874	KVA
15	HT IV-PWW	1,027	3,18,404	KVA
16	HT V Agricultural	1,419	4,75,576	KVA
17	HT VI Bulk Supply (Housing Complex)	262	54077	KVA
18	HT Temporary	-		KVA
19	HT-IX Public services	1,517	2,95,596	KVA
20	MSPGCL AUX SUPPLY	28	240724	KVA
21	HT EV Charging stations 11 KV	2	391	KVA
22	HT EV Charging Stations 12 KV	4	9854	KVA
23	Total	2,88,73,266	6,73,58,278	

(Source: MERC order 226 of 2022)

This means that the total connected load of the distribution licensee is approx. 67,000 MW. Out of which 1.5% of the past year's peak demand of 22,000 MW (330 MW) can be demand flexibility prospect. Such a flexible demand can be met through multiple end-uses such as water pumping, HVAC in C&I consumers and other bulk loads.