

Rising Stakes:

An analysis of regulatory
treatment of renewable
electricity in Maharashtra from
2010-2020



Prayas (Energy Group)

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30th September, 2020



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Prayas (Initiatives in Health, Energy, Learning and Parenthood) is a non Governmental, non-profit organization based in Pune, India. Members of Prayas are professionals working to protect and promote the public interest in general, and interests of the disadvantaged sections of the society, in particular. Prayas (Energy Group) works on theoretical, conceptual regulatory and policy issues in the energy and electricity sectors. Our activities cover research and intervention in policy and regulatory areas, as well as training, awareness, and support to civil society groups. Prayas (Energy Group) has contributed in the energy sector policy development as part of several official committees constituted by Ministries and Planning Commission. Prayas is registered as SIRO (Scientific and Industrial Research Organization) with Department of Scientific and Industrial Research, Ministry of Science and Technology, Government of India.

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Executive Summary

As the RE share in the electricity mix increases steadily, it becomes important to understand the extent and nature of RE specific regulatory matters and litigation in the sector. Such an analysis is likely to be of potential value for policy and regulatory officials and other stakeholders in the sector, especially given how dynamic the RE sector continues to be. While there is significant reporting and analysis of overarching governance framework of renewables, laws and regulations concerning RE, many critical decisions in the sector take place on the basis of regulatory decisions in specific orders. These need to be tracked to assess the broad trends in sector governance and the lacunae/ lack of clarity in the existing legal and governance framework. The broad aim of this study is to understand how the regulatory treatment of renewable electricity has evolved in Maharashtra over the last decade and use that understanding in informing future policy and regulation. This study was limited to analysing only renewable energy related orders by Maharashtra Electricity Regulatory Commission (MERC) and RE judgements by Appellate Tribunal of Electricity (APTEL) related to Maharashtra that were issued between the decade of April 2010 and March 2020.

Increasing share of RE in overall regulatory cases

In MERC, RE related regulatory proceedings now form a substantial part of the total, with the share of RE orders rising from 8% in FY 10-11 to 60% by FY 19-20. In absolute terms, in this time period, there were a total of 408 RE orders passed by MERC. These included 55 suo motu orders and 353 orders based on the 494 petitions and review petitions. At the APTEL, a total of 36 judgements were passed in relation to the 40 appeals and petitions filed. Thus, in total, there are 444 orders and judgements which cover a total of 589 separate proceedings (petitions, appeals and suo moto orders). The most common petitioners and respondents were IPPs and Distribution licensees respectively. Considering the ever-rising number of RE cases and increasing complexity of issues, it is imperative to build internal capacity in ERCs with renewable energy expertise. MoP/FoR may consider recommending that each SERC have more staff with RE specific skills.

Payment delays and Open Access most common issues within RE

Petitions and appeals related to payment delays (119) were the most common, contributing more than one fifth of the total. Surprisingly the number of payment delay cases have increased each year over the last five years and points to the weak financial health of the distribution companies. Assured and timely payments are imperative to ensure that such delays do not adversely impact future investments in RE or lead to a markup in prices due to the risks involved. The second most commonly occurring issue relates to Open Access. The recurrence of issues that are operational in nature related to OA as seen from the regulatory proceedings make it quite clear that DISCOMs have not truly facilitated OA transactions. Under these circumstances, the role of SERC is crucial, and it should proactively attempt to address any such gaps in implementation and to ensure a level playing field and to further competition, as expected in its own regulations and orders. Similarly, the lack of consensus on the principles of OA charges, their applicability and provisions around banking, contract demand and multiple generation sources etc. points to the contentiousness of Open Access, particularly given its implications for the financial health of the DISCOM. Hence there is a

dire need for some innovative, long term and balanced risk-reward framework with broad consensus to avoid these continuous regulatory battles. One possible way forward is outlined in a recent Prayas (Energy Group) publication, *'Electricity Distribution Companies in India: Preparing for an uncertain future'* (Prayas (Energy Group), 2018).

Good compliance in non-solar RPO, but lacking in solar RPO

MERC has been quite consistent and methodological in terms of monitoring and verifying of Renewable Purchase Obligation (RPO) compliance of DISCOMs, which is getting stricter over time. In three instances, MERC in fact penalised MSEDCL for not having fulfilled its solar, non solar or both RPO targets by not allowing cost of REC procurement for shortfall from previous years to be passed through to the consumers. However, there is still a long way to go for monitoring and verification of OA and Captive Power Producers (CPP) obligated entities considering the paucity of data. In the short term, RPO targets are still crucial for RE promotion. This is clear from the fact that in spite of the low and fixed tariffs for solar and wind, RPO targets have not yet been met in totality. In Case No. 108 of 2016, MSEDCL sought to merge the solar and non-solar RPO into a composite one, but this was disallowed by MERC. This is a crucial policy matter for the future considering that while the two major RE sources (wind and solar PV) are both available for a fixed price of ~ Rs 2.5/kWh, their value to the procuring DISCOM can differ depending on the load shape and RE generation profile. Hence DISCOMs should ideally be soon allowed to procure RE that is best suited to their needs and be obligated to only meet an overall composite RPO target. Regulators will have to be more agile in responding to the evolving requirements on the energy transition.

We plan to keep this database updated in the hope that continued analyses of this type can aid in informing policy by providing forward looking insights on topics that are growing in relevance and those which are becoming obsolete.

1. Introduction

Large scale electricity generation from renewable energy (RE) sources has come a long way in India. It's share in total generation capacity has increased from 3.2%¹ in 2002 to 23% as of FY 19-20 (Prayas (Energy Group), 2016, p. 5; CEA, 2020, p. 1). Similarly, RE generation as a percentage of total electricity generation has increased from 3.5% in FY 07-08 to 11% in FY 19-20 (Prayas (Energy Group), 2016, p. 22; CEA, 2020, p. 22). This trend is only likely to accelerate in the coming years.

While RE and thermal capacity addition in FY 16-17 was almost equal, at 11.3 GW and 11.5 GW respectively, RE capacity addition in FY 17-18 and FY 18-19 has been 40% higher than that of thermal capacity.² In FY 19-20 too, 8.7 GW RE capacity addition exceeded the 7 GW thermal capacity addition (MNRE, 2020; CEA, 2020). Hence, given these trends and the policy push to achieve a RE installed capacity of 175 GW by December 2022, RE based generation is expected to contribute ~ 20% (CEA, 2018, p. 182). Further, the country now has an even more ambitious long term target of 450 GW by 2030. The regulatory and governance framework will play a vital role in enabling this transition. Thus, as the RE share in the electricity mix increases steadily it becomes important to understand the extent and nature of RE specific regulatory matters and litigation across various RE rich states.

Such an analysis is likely to be very timely and of potential value for policy makers and regulatory officials, especially given how dynamic the RE sector has been. It can throw light on various questions such as

- What is the rate at which RE related regulatory issues have been increasing in the sector?
- Whether newer issues are coming to the fore or are long identified and recurrent issues still a cause for concern, even considering the changing sector?
- What is the pendency to resolve such RE specific matters?
- What are the teething troubles with new regulatory frameworks and operational problems for the sector?
- What are state specific substantive issues and which are cross-cutting?
- What are the gaps between the state RE policy vision vis-à-vis state regulatory mandates and Central Govt goals and guidelines.

Understanding these regulatory complexities will allow for arriving at a more robust, fair and enabling regulatory framework for the RE. Keeping this in mind, we have made a modest start with analysing one state, namely Maharashtra in some detail. This state was chosen given its high share in the national generation and consumption of electricity as well as its high RE targets. Additionally RE growth in Maharashtra has also followed the national trend, where its share in generation capacity increased from 4.4% in FY 05-06 to a substantial 22% in FY 19-20 (CEA, 2006, p. 2; CEA, 2020, p. 3).

1. Not including captive capacity. Also, large Hydro is not counted in Renewable Energy.

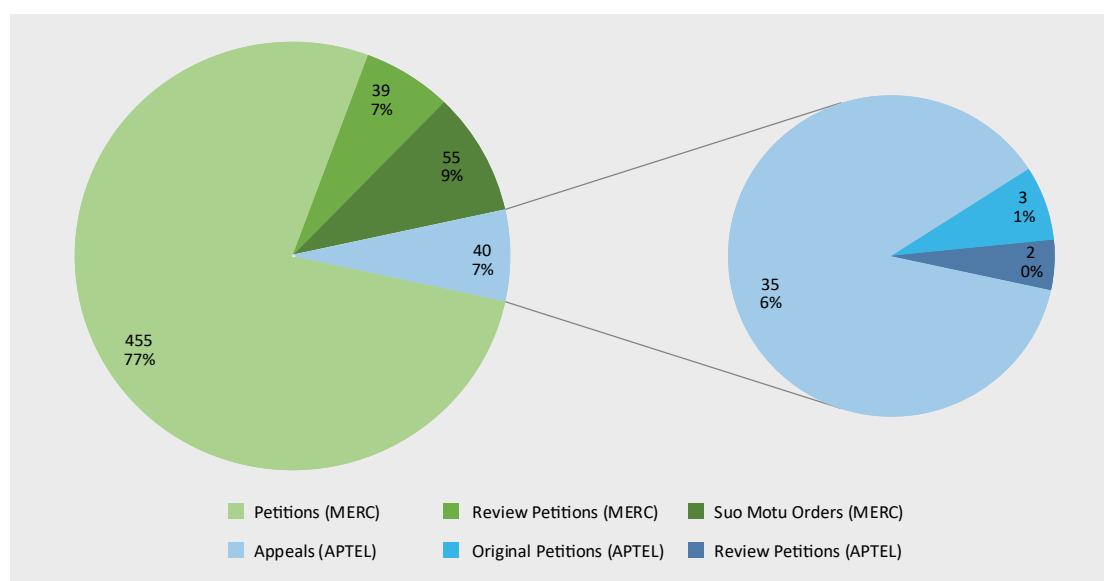
2. According to data from CEA and MNRE, thermal capacity addition was 8.7 GW in FY 17-18 and 5.7 GW in FY 18-19. In comparison, RE capacity addition in the same years was 12.4 GW and 8.5 GW.

2. Methodology and process

The broad aim of this analysis is to ascertain how the regulatory treatment of renewable electricity has evolved in Maharashtra over the last decade and use that understanding in informing future policy and regulation. This study was limited to analysing **only** renewable energy related orders and judgements³ that were issued between 1st April 2010 and 31st March 2020. Only those orders and judgements were considered which were passed by the Maharashtra Electricity Regulatory Commission (MERC) and Appellate Tribunal of Electricity (APTEL) respectively in this period. The division of these orders and judgements is as follows:

- At the MERC, there were a total of 408 orders. These included 55 suo motu orders and 353 orders (including 1 interim order) based on the 494 petitions and review petitions filed. The number of petitions is more than the number of orders due to common orders on petitions concerning a similar topic. A total of 38 common orders were issued on 179 petitions.
- At the APTEL, a total of 36 judgements were passed in relation to the 40 appeals and petitions filed. These included 33 judgements on 35 appeals, 1 judgement on 3 original petitions and 2 judgements on 2 review petitions filed.
- Thus in total, there are 444 orders and judgements. Of these, 55 are suo motu MERC orders. The rest (389) cover 494 petitions and review petitions and the 40 appeals and petitions filed at MERC and APTEL respectively. Hence there are a total of 589 separate proceedings (55+494+40) as described above. A graphical representation of these 589 proceedings which were initiated as various petitions, appeals and suo motu orders is shown in Figure 1.

Figure 1: Break-up of the all 589 proceedings which initiated as petitions, appeals and suo moto orders between FY 10-11 and FY 19-20



Source: Prayas Energy Group's Maharashtra Renewable Energy Regulatory database as compiled from MERC and APTEL websites.

3. Daily orders were not included for analysis and only reportable orders and judgments were tracked. In the absence of the petition date in the final orders and judgements, the same was ascertained from daily orders to calculate pendency of final orders and judgements.

Further, all the 444 orders and judgements were analysed based on the prayers and decisions noted therein. Based on this we created a database wherein each document was assigned 17 tags as described in Table 1. This would allow critical statistical analysis of these orders and judgements. Important among these are the tags of topic and sub topic. A total of nine topics were identified. Further, sub topics were assigned after taking into consideration the nature of topics covered in these orders and judgements. Details of the methodology used for creation of the database and description of all the tags have been provided in **Appendix**. A brief description of these 17 tags is given in the Table 1 below.

Table 1: Description of tags used for creation of the regulatory database

Tags	Description
Jurisdiction	The authority under whom the proceedings took place that is, MERC or APTEL.
Document Type	The type of document that was finally passed by adjudicating authority. It was tagged as Order for MERC and Judgment for APTEL.
Document Reference No.	Case Number, Appeal Number, Original Petition Number or Review Petition Number as the case may be.
Proceedings initiated as	All final orders and judgments for which the proceedings were initiated under the following names: Original petition, Appeal, Review petition, Suo Motu order, Petition.
Topic and Sub Topic	All orders and judgements were analysed on the basis of the prayers that were stated in the petitions and the final decision issued by MERC and APTEL. The tags assigned were as follows: Evacuation, Forecasting and Scheduling, Miscellaneous, Net Metering, Open Access, Power Purchase Agreements (PPAs), Renewable Energy Certificates (RECs), RPO (Renewable Purchase Obligation), Tariff. Further segregation under each of the topics was done on the basis of: Regulations, Principles and Procedures and others. For more details please see Appendix.
Energy Source	Source-wise categorization was done on the basis of which renewable energy source the order and judgement pertained to. For orders which related to all RE sources, the tag is assigned as RE.
Petitioner / Appellant Type	Categorisation was done based on the following types – Association, Captive Generator/Consumer, Central Railways, Distribution Licensee (includes Deemed Licensee), Distribution Licensee Consumer, EPC/Manufacturer, IPP, MERC, Open Access Consumer, Trader, suo motu, Transmission Utility, Generation Utility.
Primary Respondent	Categorisation was done based on the following types – Association, Distribution Licensee (includes Deemed Licensee), IPP, SERC, SLDC, SNA, Transmission Utility, Generation Utility.
Other Respondents	All respondents apart from the primary respondent were identified under this tag.
Section of Electricity Act, 2003 or MERC Regulations under which petition or appeal is filed or can be read with	For all orders under the jurisdiction of the MERC, the regulations were noted from the prayers of the petitions. For all APTEL related appeals and original petitions, the only information related to regulations that was captured was in relation to whether they were filed under Section 111 or 121 of the Electricity Act, 2003.

Decision	The information on the final decision by MERC or APTEL was taken from the final part of the order. The tags assigned were as follows: Allowed, Dismissed, Disposed, Partly Allowed, Withdrawn. For more details on how this was done, please see Appendix.
Date of Petition/ Appeal	The date on which the petition/appeal was filed by the petitioner/ appellant, or the process for a suo motu order was initiated by the MERC/ APTEL.
Date of Order/ Judgement	The date on which the order or judgment was issued by the authority.
Petition/Appeal description	A concise description of the case and its prayers.
Common Order/ Judgement	This identified the petitions for which the MERC or APTEL issued a common order or judgement respectively.
On non-compliance of a previous Order	This was identified on the basis of whether a petition at MERC was filed on account of non-compliance of a previous order issued by the authority.
No. of Days until Final Order/ Judgement	Calculated from date of order and date of petition.
Notes	Interesting observations and caveats for each of the orders and judgements were listed under this heading.

This database has been used in the analysis described in this report. The report broadly comprises of two parts. First, it looks at some statistical aspects of the data that was captured from the orders and judgements. Second, it also scrutinises in greater detail a few crucial issues related to sector development that came to light from statistical analysis.

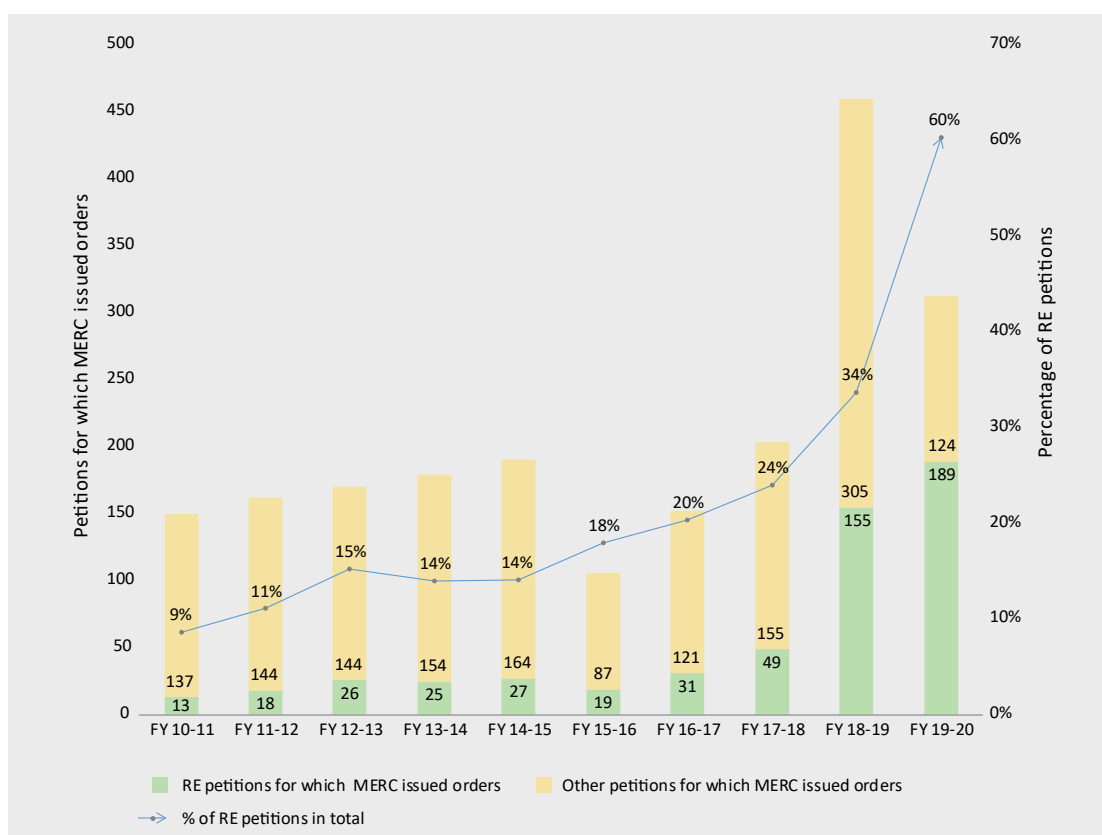
Though Prayas (Energy Group) has taken several measures to ensure accuracy and completeness of the data captured in the database, it is created mainly for research purposes and hence should be used appropriately. We hope to improve this database over time by periodically updating it when data becomes available in the public domain. We welcome contribution from all stakeholders to address any errors/data gaps as well as pointers to any new data which can be integrated in the database. All comments and suggestions are welcome at re@prayaspune.org.

3. A statistical overview

In Maharashtra, RE related orders have gradually started forming a substantial part of the total MERC orders passed since 2010. Figure 2 depicts this increase clearly with the RE share of total petitions exponentially rising from 9% in FY 10-11 to 60% by FY 19-20. In the same period the renewable energy installed capacity almost tripled from 3.4 GW to 9.7 GW⁴ (MERC, 2019; CEA, 2020). In absolute terms, the number of RE petitions concluded at MERC in FY 19-20 (189) and FY 18-19 (155) was on average more than five times the number of RE petitions (~30) that the Commission concluded annually on average in the earlier five years (FY 13-14 to FY 17-18). MERC issued 14 combined orders for 93 of the 189 petitions, indicative of the similarity in nature of litigation that petitioners brought to the fore. Figure 3 elucidates the gradual increase in common orders issued by both MERC and APTEL especially between FY 16-17 and FY 19-20. Between these years 33 orders covered a total of 166 petitions.

Figure 4 highlights the topic-wise breakup of the common orders. The most recurring topic has been that of payment delays. Further in FY 19-20, there have been common orders for matters in Open Access that are procedural in nature as well as regulatory issues in the forecasting and scheduling related petitions.

Figure 2: Share of RE related petitions in all petitions for which MERC issued orders from FY 10-11 to FY 19-20

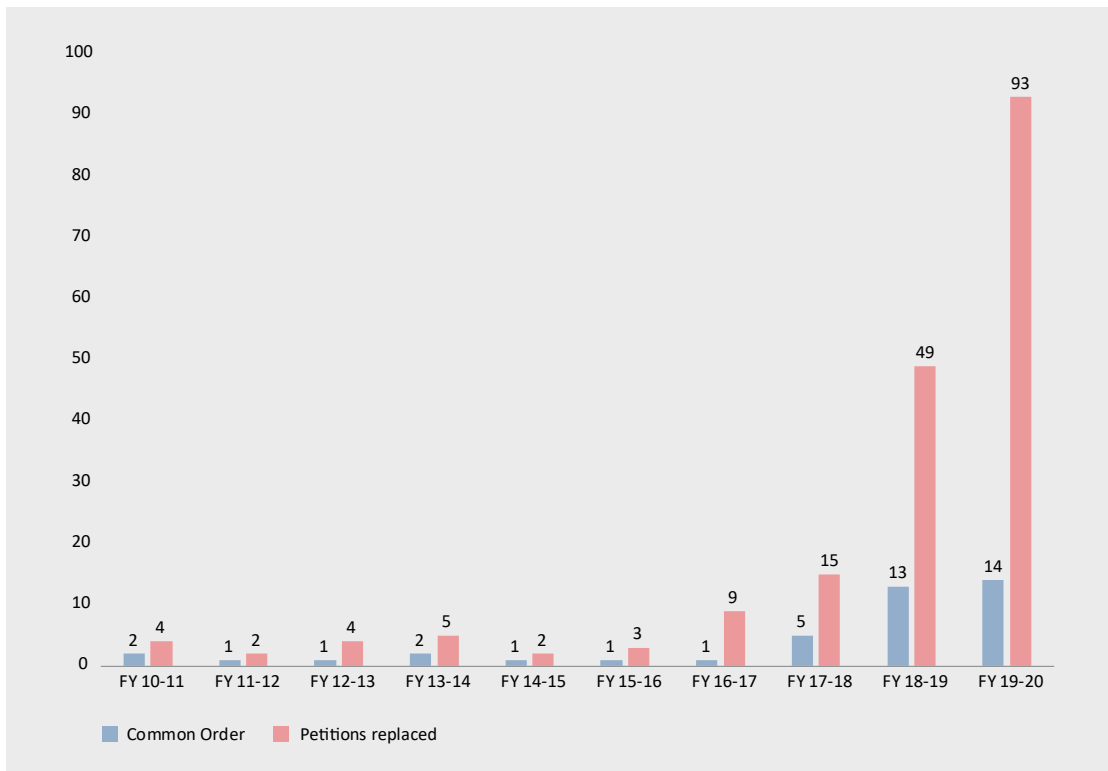


Source: MERC annual reports, Prayas Energy Group's Maharashtra Renewable Energy Regulatory database and MERC website.

Note: This includes the total number of petitions, as MERC notifies orders separately corresponding to each petition in its annual reports, irrespective of issuing common orders for some of these petitions.

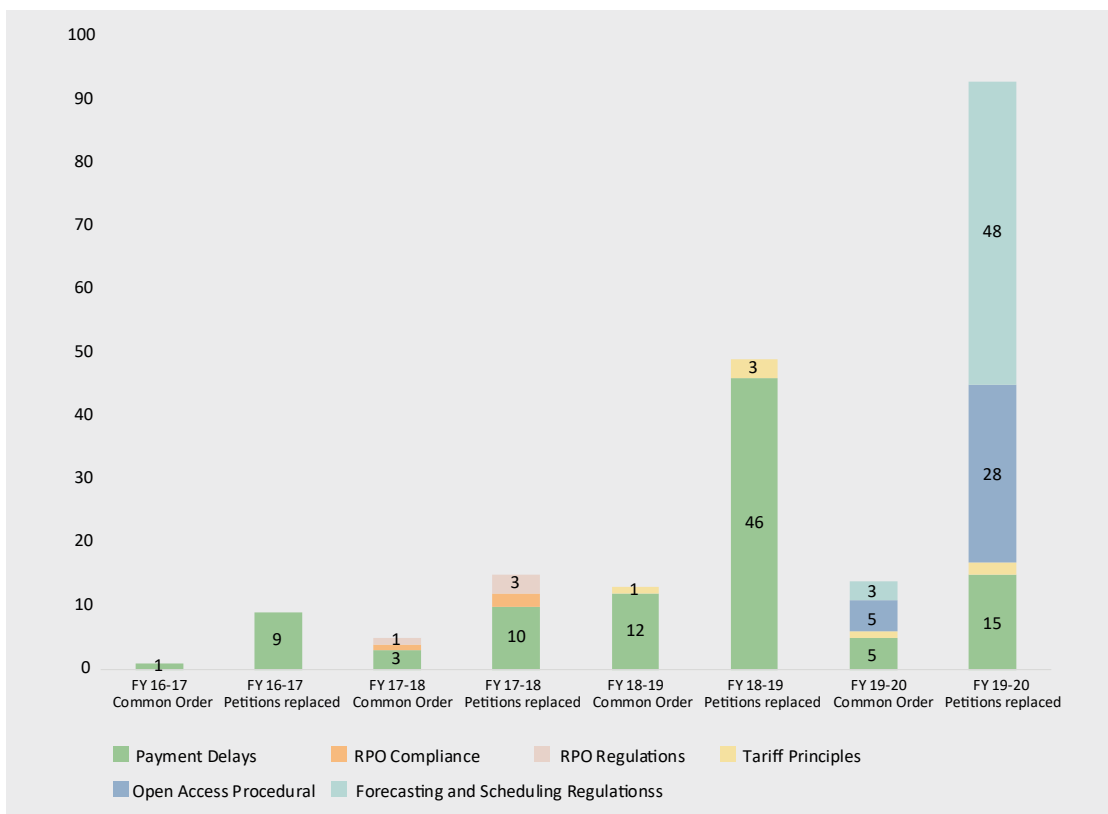
4. MNRE excel as of 31.01.2019 and MOSPI for FY 10-11.

Figure 3: Common RE Orders/Judgements issued by MERC and APTEL from FY 10-11 to FY 19-20



Source: MERC annual reports, Prayas Energy Group's Maharashtra Renewable Energy Regulatory database and MERC website.

Figure 4: Topic-wise breakup of common RE Orders/Judgements issued by MERC and APTEL between FY 16-17 and FY 19-20

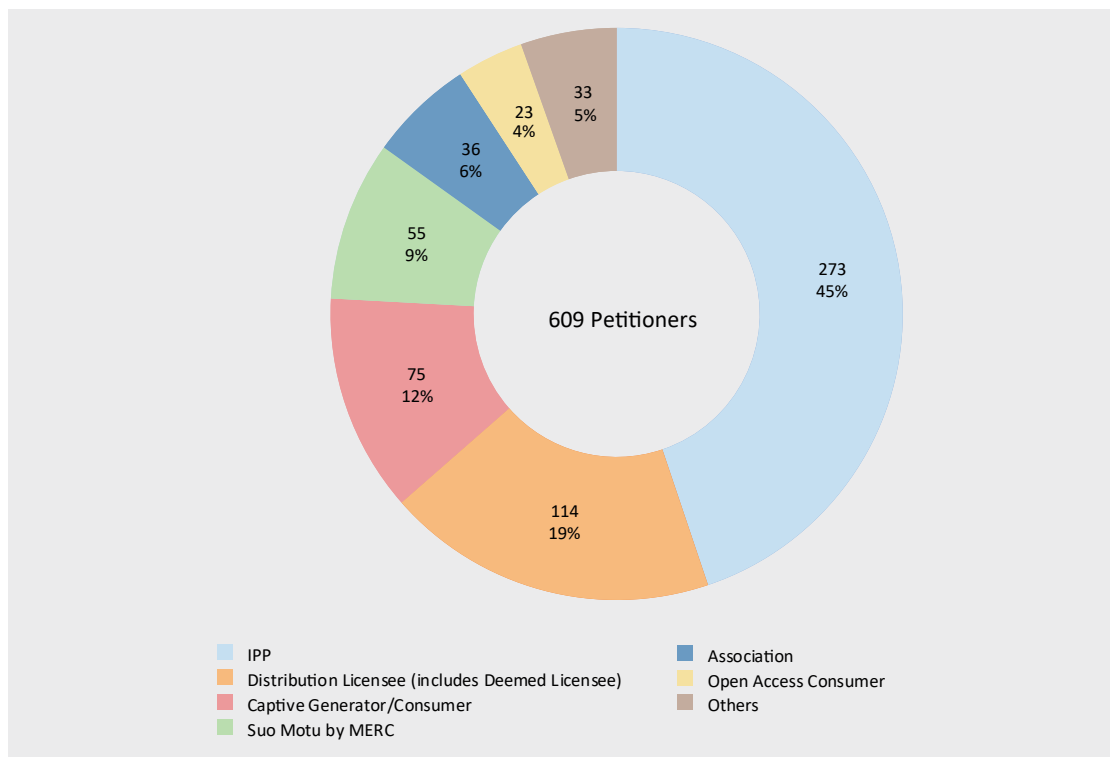


Source: MERC annual reports, Prayas Energy Group's Maharashtra Renewable Energy Regulatory database, and MERC website.

3.1 Petitioners and Respondents

Figure 5 illustrates a varied mix of stakeholders who filed the 534 petitions and appeals at MERC and APTEL and the 55 suo motu orders as initiated by MERC itself. A lion's share of the petitions and appeals was filed by Independent Power Producers (IPPs), forming 45% of the total, followed by distribution licensees and deemed licensees with 19%. Captive generators and/or captive consumers filed 12% of petitions in the period considered. Suo motu orders that MERC issued were treated as a separate category and comprised of 9% of the total. A few other types of petitioners were associations, open access consumers, utility generators, distribution licensee consumers, Engineering, Procurement and Construction (EPC)/manufacturers and transmission utility which formed the remaining 13%.

Figure 5: Breakup of petitioners between FY 10-11 and FY 19-20



Note: 1. The 'Others' category includes generation utility, distribution licensee consumers, EPC/Manufacturer and transmission utility.

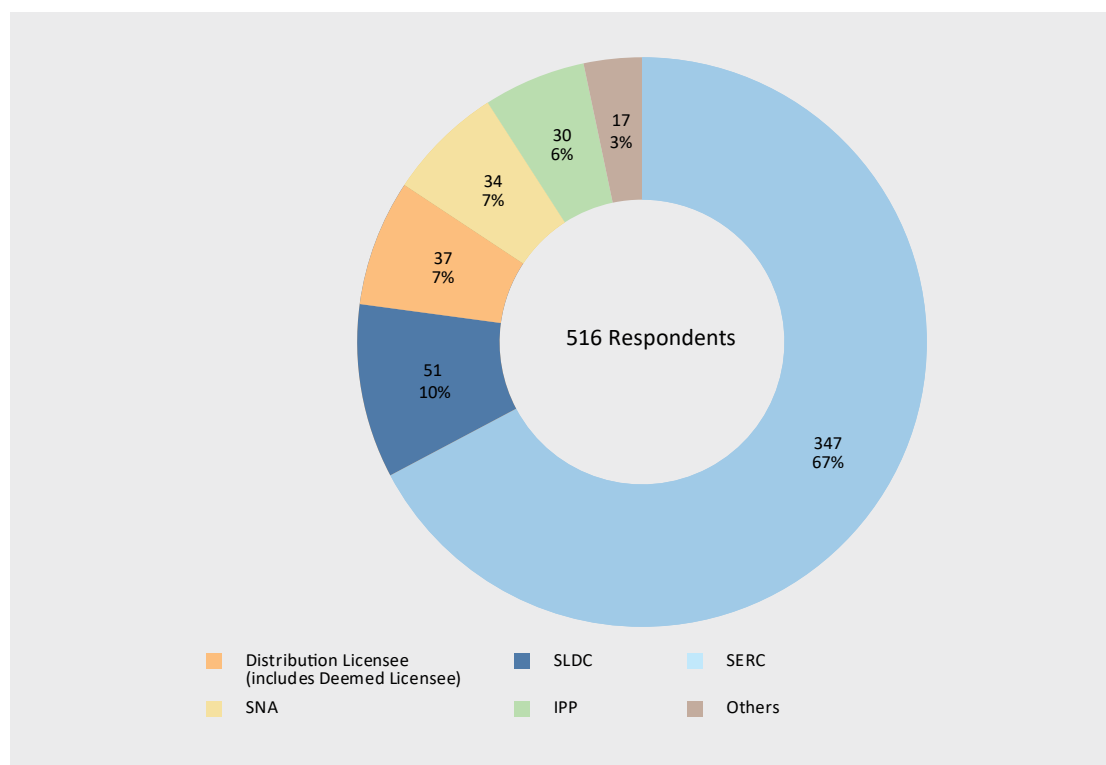
2. This includes petitions filed jointly by Associations and IPPs, Generation Utility and distribution licensees. Thus, the total number of petitioners in this figure add up to be more than the total number of petitions and appeals and their corresponding orders and judgements.

The respondents in all these petitions and appeals ranged from

- Distribution licensees like MSEDCL, Reliance Infra (now Adani Electricity Mumbai Limited), Tata Power Corporation Limited and BEST;
- Independent power producers, captive generators/consumers and generation associations like Wind Independent Power Producers Association (WIPPA) and Indian Wind Energy Association (IWEA);
- State nodal agencies like MEDA, state and central government authorities like Department of Energy, Government of Maharashtra and Ministry of Power, GoI.
- Civil Society Organisations like Prayas (Energy Group) and Mumbai Grahak Panchayat

As shown in Figure 6, of all the petitions and appeals which had primary respondents - distribution licensees formed a substantial part 67%. Not all petitions and appeals have a primary respondent, there being 54 such instances. Similarly, many suo moto orders issued by MERC (19) were not listed with any respondent. Hence a total of 516 petitions and appeals are considered. MERC was a primary respondent in almost all the judgements passed by the APTEL. The State Nodal Agency (SNA), MEDA formed a comparatively smaller proportion of 7% of the total.

Figure 6: Types of primary respondents in all cases filed between FY 10-11 and FY 19-20



Note: The 'Others' category includes IPPs, transmission utility, SLDC, associations and generation utility.

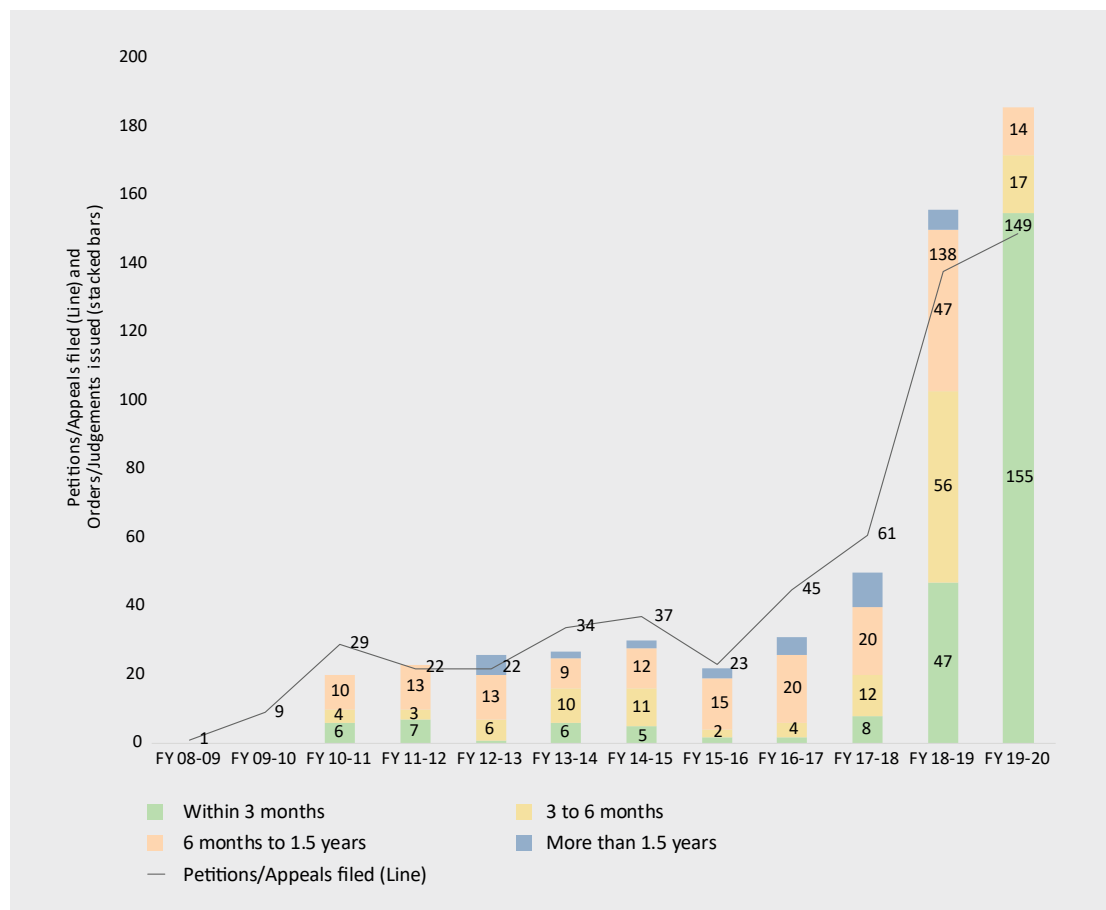
3.2 Pendency

One aspect of the effectiveness of the regulatory process is the timeliness with which petitions and appeals are resolved. Figure 7 illustrates the number of petitions and appeals that were filed as well as the suo motu process initiated over time on an annual basis. It also shows the number of petitions and appeals for which proceedings were completed in the same time period. These are further categorized in four bands (within 3 months, 3-6 months, 6 months - 1.5 years, more than 1.5 years) in terms of the time taken to complete the proceedings and issue an order/judgement from the date of filing the petition/appeal.

It is clear from the figure that the two indicators were comparable and increased at more or less similar rates over the years. From FY 12-13 to FY 14-15 one sees that the time taken to issue orders increasing with each year, while that trend seems to have reversed in the last five years from FY 15-16 to FY 19-20 with 69% of the proceedings for filed petitions and appeals being completed within 6 months. In FY 18-19 a total of 47 orders and judgements were concluded after more than 6 months but less than 1.5 years. This is indicative of the difference between the number of proceedings initiated in FY 16-17 and FY 17-18 each and the number of orders and judgements that were issued in FY 18-19. In FY 19-20 in

comparison to the 149 petitions and appeals that were filed, MERC disposed 170 orders and APTEL disposed 2. This too alludes to gradual increased rate of disposal of orders and judgements. Further analysis of the time taken for conclusion of cases shows that most cases irrespective of the topic was concluded in less than a year.

Figure 7: The time taken to settle petitions and suo motu orders by MERC and petitions and appeals by APTEL and number of petitions filed between FY 10-11 and FY 19-20

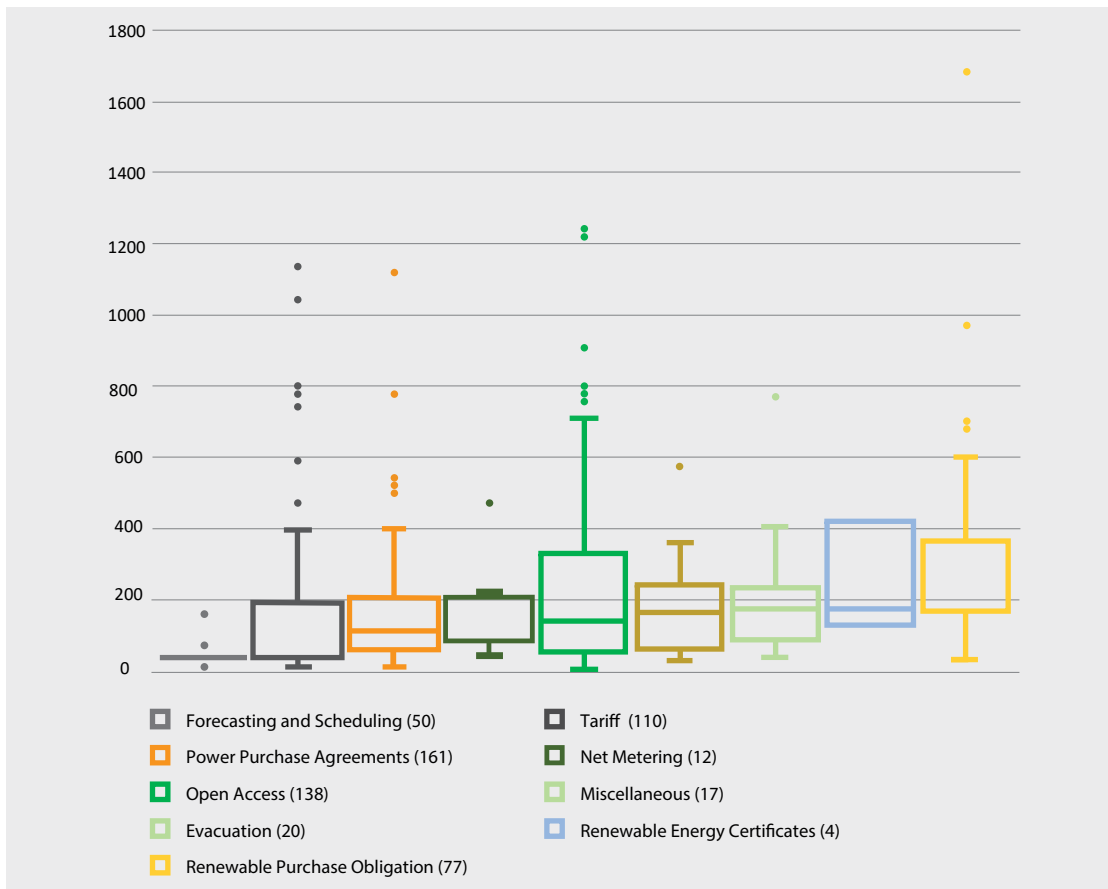


Note: 1. There were 18 petitions, appeals and suo motu orders for which no date was available for the process of initiation of regulatory proceedings.

2. The time taken to settle petitions and appeals by MERC and APTEL is based on all the orders and judgements that were issued by the two authorities (not considering common orders for more than one petition and appeal, but considering each order or judgement as a conclusion for each petition or appeal filed, respectively).

Figure 8 shows that most cases related to Power Purchase Agreements (PPAs), Open Access and tariff were concluded in four months. In fact, PPA related cases which comprised more than one fourth of the total cases took approximately between 63 and 186 days (2-6 months). In comparison, Open Access related cases were substantially lesser in number, however given the contentious nature of some of the matters raised in the petitions, took between 57 to 328 day (2- 11 months). The figure also shows the statistical outliers which are indicative of the petitions and appeals which were concluded in less than or more than the time taken by the Commission and APTEL in most other cases for each of the topics.

Figure 8: Time taken by MERC and APTEL to conclude cases, topic-wise between FY 10-11 and FY 19-20



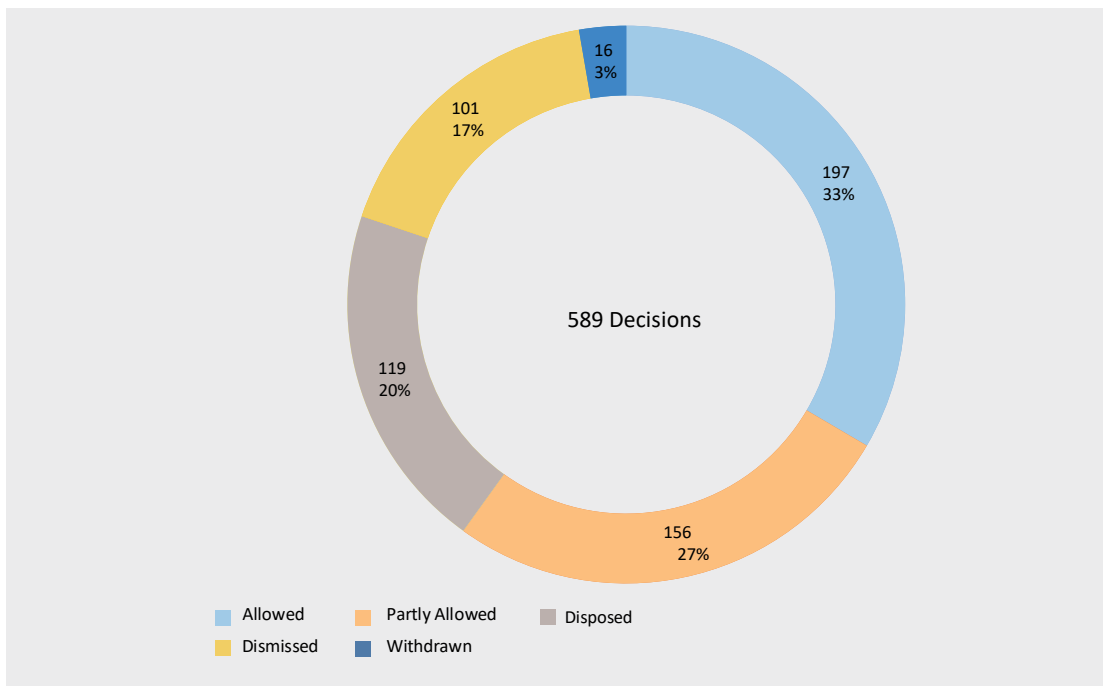
Note: The median values indicate the number of days taken to conclude most cases for that topic. The bar indicates the number of days (from the 25th percentile to the 75th percentile) taken to conclude the petitions, appeals and suo motu orders for that topic by MERC and APTEL. The legend shows the topic with the number of orders for each topic being indicated within the parenthesis.

3.3 Decision on all cases

The information on the final decision by MERC or APTEL on all the 444 orders and judgements that have been issued between FY 10-11 and FY 19-20 was taken from the final part of the order/judgement. The 55 suo motu orders by MERC were all stated to be disposed. As per the detailed description in the methodology, the tags assigned were as follows: Allowed, Dismissed, Disposed, Partly Allowed, Withdrawn. This tag is for the entire petition and not for individual prayers within the petition. Figure 9 shows this break up. 60% of the orders and judgements either fully or partly allowed the prayers, while in 3% of the instances, the cases were withdrawn. In 17% of the orders and judgements, the case was dismissed either because MERC found no merit in the petition, or did not allow the prayers of the petition or due to 'Res Judicata' i.e. the matter had been addressed by a competent court and need not be pursued again. Figure 10 highlights the break up of decision according to the petitioner. A comparison of the two largest petitioners, namely the IPPs (268) and the DISCOMs (106) shows that both have a very similar share (~ 40%) of their petitions in which their prayers were allowed. However, DISCOMs only had 17% of their petitions wherein prayers were partly allowed while for IPPs this was as high as 37%. Finally, while 24% of the petitions were dismissed in the case of DISCOMs, this was only 12% in the case of IPPs.

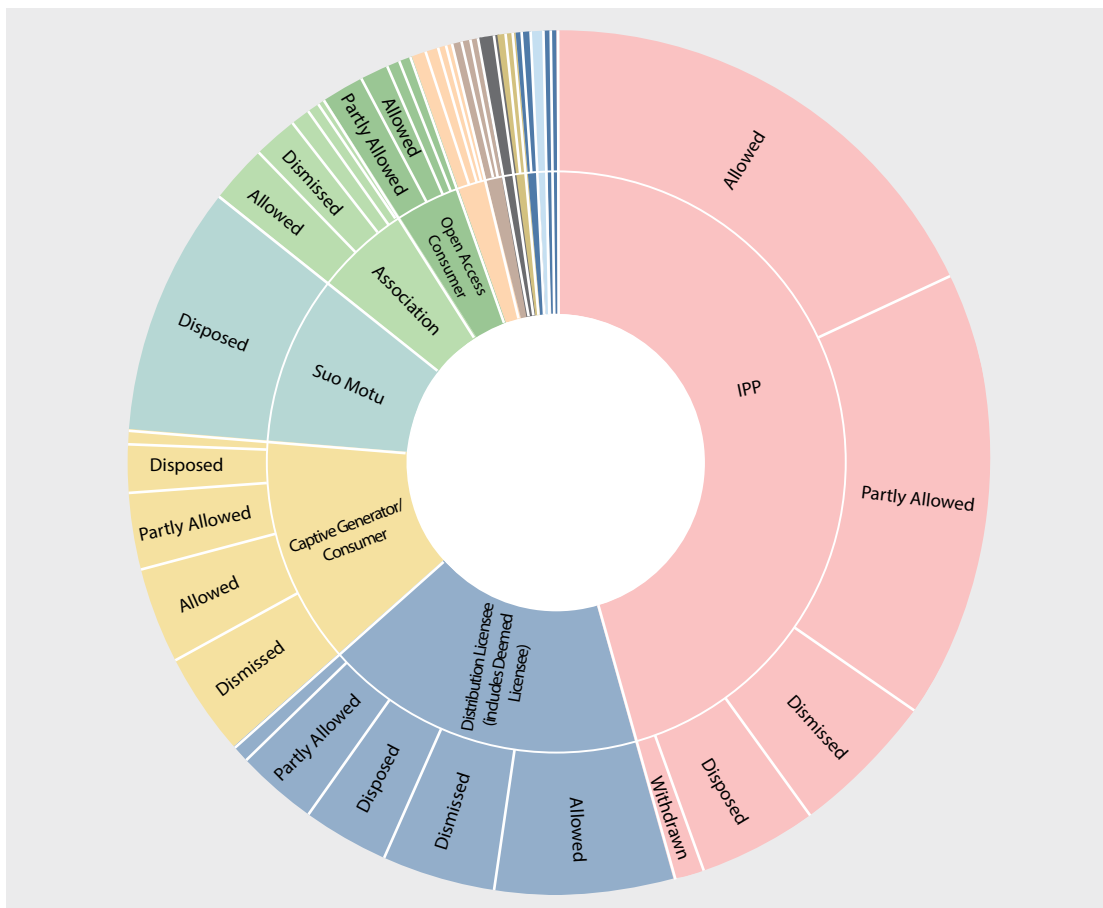
Out of the total of 40 appeals and original petitions at the APTEL, a total of 19 were appealed and petitioned by DISCOMs followed by 16 by IPPs, and generation associations.

Figure 9: Decision on all orders and judgements that were issued between FY 10-11 and FY 19-20



Note: The detailed description of what the decisions imply have been provided in the Appendix.

Figure 10: Petitioner-wise break up of decisions on all judgments and orders that were issued between FY 10-11 and FY 19-20



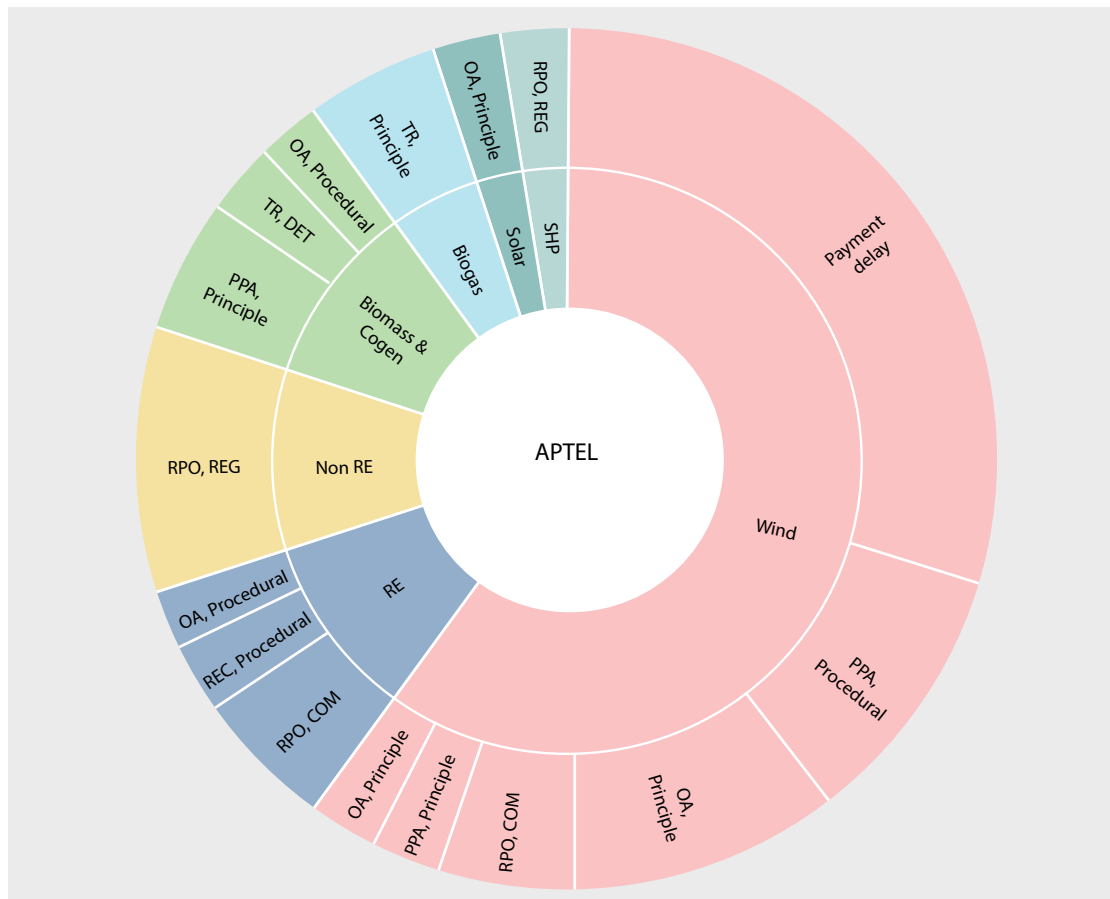
3.4 Energy source and Topic/sub-topic

All petitions and appeals and suo motu orders were analysed on the basis of the prayers that were stated and the final decision issued by the corresponding authority (MERC or APTEL). Figure 10 shows the source-wise and sub topic-wise break up of all petitions and appeals for which proceedings have been completed at MERC (549) and APTEL (40) between FY 10-11 and FY 19-20. In both quasi-judicial courts, the patterns are comparable. Petitions and appeals related to payment delays for wind-based electricity were the most common in APTEL and MERC. With 116 such cases, these form close to one fifth of the total. Surprisingly the number of payment delay cases have increased each year between FY 16-17 to FY 18-19 and have been substantial even in FY 19-20, pointing to the continued weak financial health of the distribution companies.

The second most commonly occurring topic in wind energy cases was related to Open Access. While a lot of these cases that were adjudicated at APTEL were contested on the grounds of principles of Open Access as outlined in the regulations, in the MERC many of the process related matters were raised.

As expected, RPO compliance was another important topic with ~ 63% of the RPO proceedings being suo motu orders issued by the MERC on verification of RPO compliance by distribution licensees and deemed licensees. Tariff determination was a recurrent theme for biomass and cogeneration-based cases and orders. Proceedings related to solar and rooftop solar have started to come up in the last few years.

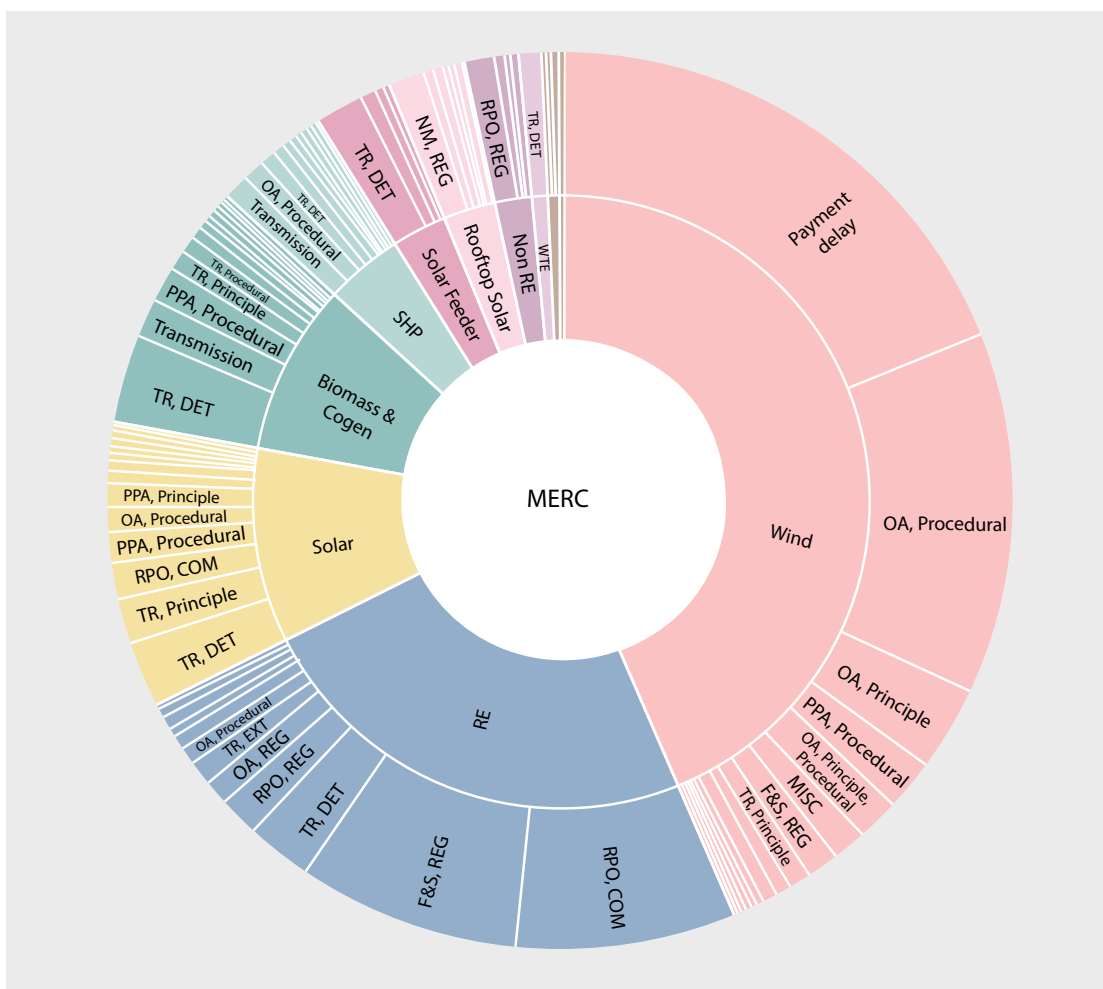
Figure 11: Source-wise and sub topic-wise break up of all petitions and appeals concluded at APTEL between FY 10-11 and FY 19-20



Note: The description of all full forms of the abbreviations like TR, DET, RPO, COM etc. can be found in the Appendix.

All the petitions filed on the topic of forecasting and scheduling were in conjunction with the Forecasting and Scheduling regulations of 2018 and were filed in FY18-19 and FY 19-20 alone. All these petitions raised procedural and operational issues like the lack of clarity in modalities related to functioning of Deviation Settlement Mechanism (DSM) regulations to concerns over the must run status of renewable energy generators and additional DSM charges. At the conclusion of the proceedings the Commission took cognizance of all the issues at length and allayed the concerns of the petitioners in all these cases by condoning a grace period of six months to IPPs to ease implementation of these regulations.

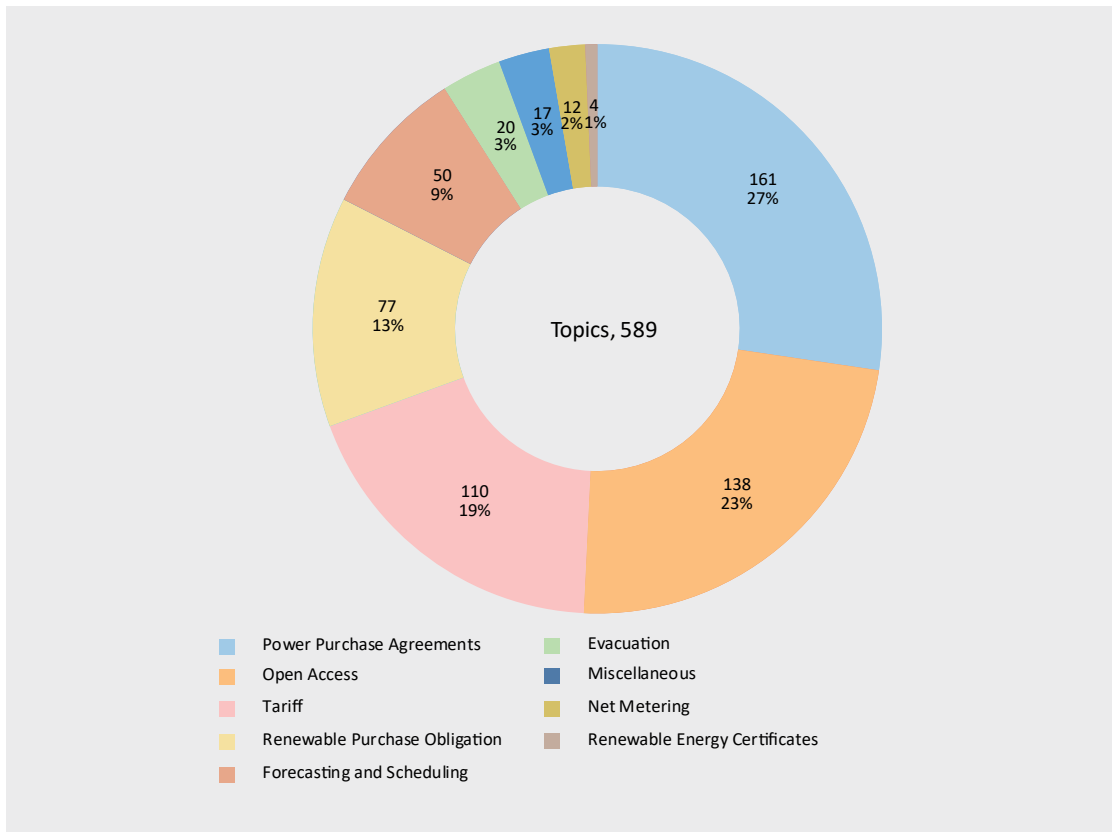
Figure 12: Source-wise and sub topic-wise break up of all petitions and appeals concluded at MERC between FY 10-11 and FY 19-20



Note: The description of all full forms of the abbreviations like TR, DET, RPO, COM etc. can be found in the Appendix.

Figure 11 and 12 illustrate the types of renewable energy related topics that have been encountered in Maharashtra between FY 10-11 and FY 19-20. As mentioned earlier, delays in payment was the most raised topic followed by Open Access, tariff, RPO and forecasting and scheduling. These four topics form nearly 90% of the total number of orders and judgements. Three of these have been analysed in more detail in the following section.

Figure 13: Different types of substantive topics of the orders and judgements that were issued between FY 10-11 and FY 19-20



4. Substantive Issues

4.1 Power Purchase Agreements

The sub topics within this topic ranged from approval of PPAs, request for removal of certain PPA clauses, clarifications related to metering installation to delay in payment of dues to generators by distribution licensees. Of all these PPA related orders and judgements, 119 (74%) were in relation to delay in payments. More importantly, 83% of these payment delay petitions and appeals were filed between FY 17-18 and FY 19-20 alone. Practically all (116 of the 119) payment delay cases were related to delay in payment for sale of electricity from wind generators. Of the total 119 petitions, 22 were filed by IPPs on non-compliance of previous orders issued by the Commission on interest and payment delays by the distribution licensees for energy sale. Of these 22, 10 were filed in FY 19-20 alone. These 119 orders and judgements, 80 of which were disposed through 21 common orders were further analysed to put forth certain observations.

In these cases, the petitioners requested that the Commission direct the licensees to comply with the PPAs in letter and spirit by ensuring that timely payments are made to the generators. A payment is said to be delayed if energy payments are not disbursed by the distribution licensee even after the credit period⁵ as per the PPA, is over. In such a case the distribution licensee is liable to pay an additional Delayed Payment Charge (DPC) or Late Payment Surcharge (LPS) at a pre-determined interest rate. All these cases were filed under Section 86(1)(f) of the Act which empowers the Commission to adjudicate upon disputes between licensees and generating companies.

It is important to note that almost all⁶ the petitions were filed on account of delay in payment by MSEDCL. During the proceedings of one of the cases, MSEDCL responded that since FY 15-16 its revenue gap had been increasing.⁷ An increasing expenditure, without a comparable increase in revenue,⁸ restatement of distribution losses and therefore disallowance of agricultural sales,⁹ lesser than expected increase in sales to subsidising consumer categories¹⁰ have all been claimed by MSEDCL to play a role in adversely affecting its financial condition. In many cases MSEDCL underscored its dire financial condition by stating that it was taking care of its loan liabilities through working capital or deferring payments and was paying for its energy bills through short term borrowings. However, given its cash strapped circumstances, at times banks have refused to provide loans.¹¹ Given the persistent financial constraints of MSEDCL, it also consistently requested the petitioners for waiver of interest charges on the delayed payments¹² or condoning of passing on the

5. This period is stipulated in the PPA as time period after date of receipt of invoice from the generator.

6. The only other respondent against whom such cases of delay in payments were filed, was Global Energy Private Limited, a trader.

7. Case No. 157, 166 of 2016 and 18 of 2017.

8. Case No. 157, 166 of 2016 and 18 of 2017.

9. Case No. 79 and 125 of 2018.

10. Case No. 79 and 125 of 2018.

11. Case No. 79 and 125 of 2018 and Case No. 157, 166 of 2016 and 18 of 2017.

12. Case No. 157, 166 of 2016 and 18 of 2017 Case No. 77, 81, 90 and 91 of 2017 and Case No. 53, 62, 68, 74, 75, 79, 135, 136 and 144 of 2016.

DPCs/LPSs onto the consumers.¹³ As on 5th March 2016, MSEDCL had a total outstanding payment of Rs. 9,261 crore which increased to Rs. 12,730 crore by January 2017.¹⁴

On average the petitions and appeals had a pendency of 163 days (a little more than 5 months). The case which was concluded fastest was completed within 18 days, while the case which took the longest needed 531 days (approximately 1.5 years).

The MERC has been strict in its adjudication of most such cases. The Commission has consistently stated that MSEDCL must pay the DPC/LPS dues in addition to its energy payment dues without such relief like pass through of the DPC onto the consumers. An interesting observation was that in many cases that were disposed in 2017, the Commission provided a time limit of 30 days from the issuance of the order, to pay the DPC dues.¹⁵ Based on all these repetitive cases, the Commission advised¹⁶ MSEDCL to plan a time bound mechanism for payment of all dues in consultation with generators. MSEDCL took due note of this and chalked out a plan to pay the outstanding claims in a timely manner. Hence in 2018 and 2019, taking cognisance of this plan, the Commission issued orders in almost all the cases, doing away with the time limit of 30 days to pay DPC dues.¹⁷ However irrespective of this development, there has been a consistent inflow of petitions filed for delay in payments in FY 19-20 as well. An interesting early emerging trend of the termination of contracts as approved by the Commission on grounds of delayed payments as requested by generators has translated to an increase in requests for self-use of energy generated. Some examples of this are Case No. 22 of 2019, 43 of 2019 and 260 of 2019. However, in these particular cases the requests for open access were denied by MSEDCL.

There were a total of 22 petitions on non-compliance of previous orders. Interestingly, 11 of these petitions were filed in FY 19-20 alone. In the 22 petitions on non-compliance of previous orders, 10 of them were concluded without any further regulatory processes since the two parties had reconciled. In the remaining 12, the Commission dealt with the non-compliance in the following ways. In one of them it issued a show cause notice to MSEDCL on why no penal action should be taken against it under Section 142 of the Act,¹⁸ while in another it sounded a final warning to MSEDCL for compliance of the previous order such that the inability to do so would lead to actions under Section 142.¹⁹ In another order, it concluded that MSEDCL was unable to pay the dues and that there was no malafide intention on MSEDCL's part and hence MERC was not inclined to take any penal action against it.²⁰ In some others, the Commission directed MSEDCL to reconcile and make payments within two weeks of the issuance of the order. An inability to honour this would lead to further levy of DPC or other stringent actions.²¹

13. A. No. 75 of 2017.

14. Case No. 150 of 2015 and Case No. 157, 166 of 2016 and 18 of 2017.

15. Case No. 53, 62, 68, 74, 75, 79, 135, 136 and 144 of 2016 and Case No. 157, 166 of 2016 and 18 of 2017 and Case No. 77 of 2017, 81 of 2017, 90 of 2017 and 91 of 2017.

16. Daily Order dated 17 June, 2018 in Case No. 128 and 134 of 2018, Daily Order dated 18 June, 2018 in Case No 28 of 2018 and Daily Order dated 20 June, 2018 in Case No 101 of 2018.

17. Case No. 243 of 2018, 257 of 2018, 259 of 2018, 267 of 2018, 229 of 2018, 230 of 2018, 231 of 2018, 256 of 2018, 223 of 2018 and 245 of 2018.

18. Case No. 77 of 2017, 81 of 2017, 90 of 2017 and 91 of 2017.

19. Case No. 356 of 2018 and 358 of 2018.

20. Case No. 187 of 2017.

21. Case No. 43 of 2019, 91 of 2019, 127 of 2019, 128 of 2019, 155 of 2019, 157 of 2019, 169 of 2019, 170 of 2019 and 171 of 2019.

The disputes related to delays in payment have been recurrent and may continue to be prevalent on account of the financial distress of DISCOMs. Assured and timely payments are imperative to ensure that such delays do not adversely impact future investments in RE or lead to a mark up in prices due to the risks involved. The Ministry of New and Renewable Energy (MNRE) has acknowledged this problem and is considering setting up a web portal that discloses details of DISCOMs' delay in payments to RE players (Mishra, 2019). Such a web portal can be one step in increasing DISCOM accountability for timely payments and help maintain RE project viability.²² The Ministry of Power is also considering various options²³ to address this issue.

4.2 Open Access

Open access related cases comprised 23% (138 petitions and appeals) of the total. 75% of these 138 petitions and appeals were filed in relation to wind based Open Access. IPPs and captive generators/consumers each formed more than 60% of the petitioners who filed cases. 21 cases were also filed by Open access consumers.

65% of the 138 cases were related to matters that were procedural and operational in nature. These included denial or delay in permissions for OA after termination of PPAs with MSEDCL, delay in issuance of Generation Credit Notes (GCN), payment of dues for surplus energy injected into the grid, incorrect treatment of surplus units injected, installation of Special Energy Meters (SEMs), non-compliance of previous orders, revocation of trading licenses and alterations in the banking mechanism.

28 cases questioned different principles of the Open Access mechanism. These included procurement of power through multiple sources of generation under OA, matters related to reduction in contract demand, allowance of banking facility and waiving of OA charges. In addition to this, 12 cases combined procedural and principle related issues in their prayers while another 8 cases were requesting some changes or clarifications in specific sections of the OA regulations. These were cases in which petitioners requested MERC to remove difficulties in Distribution Open Access Regulations, give practice directions and allow amendments in regulations.

It is interesting to observe that the 125 cases on procedural aspects and principles of OA are recurrent through the ten years with as many as 42 (38 of these were filed soon after the introduction of the Distribution Open Access Regulations, First Amendment, 2019) cases being filed in FY 19-20 alone. On an average they comprised 24% of the total petitions and appeals filed in each financial year. All these cases, whether related to OA procedures or OA principles were disposed in 227 days (7.5 months) on average. Some of these cases have been further analysed:

Reduction in contract demand and banking facility

In September 2011, MSEDCL issued commercial circular 147 which specified modalities of the application process for OA, metering and levy of OA charges (MSEDCL, 2011). In quick

22. Prayas (Energy Group)'s Renewable Energy Data Portal illustrates a comparable summary of payment dues of state utilities towards RE generators in RE rich states like Andhra Pradesh, Tamil Nadu, Telangana, Maharashtra etc. based on data from the Central Electricity Authority (Prayas (Energy Group), 2020).

23. These include payment security through mandatory letters of credit, proposed amendments to the E Act, 2003 and the 90,000 crore liquidity infusion as part of the COVID recovery package for payments to generators and transmission companies.

succession MSEDCL issued Commercial circular 155 in January 2012 (MSEDCL, 2012). Both the circulars mentioned that contract demand for OA consumers procuring infirm power from RE sources was to be reduced by the Capacity Utilisation Factor (CUF) of the corresponding RE source. This was contested in a case filed by REDAM.²⁴ Additionally, the banking facility which was allowed for self-use in circular no. 147 was disallowed in circular No.155. Both these issues of contract demand reduction and banking facility were further taken up in Case No. 8, 18, 20 and 33 of 2012. The MERC directed that given the Universal Service Obligation of the distribution licensee to all its consumers, including consumers availing OA, no reduction in contract demand was necessary for such OA consumers, thereby directing MSEDCL to modify the clauses in Circular 155. During this period, a series of petitions were also filed by the same petitioners on non-compliance of directions set by the ERC the in daily orders of these cases.²⁵ Finally, after the prayers in Case No. 8, 18, 20 and 33 of 2012 was allowed in January 2013, MSEDCL issued Commercial Circular 194 complying with the said order, wherein providing the choice of termination or reduction in contract demand to all OA consumers who procure power from RE sources (MSEDCL, 2013). However, aggrieved by the ERC's order in this case, the MSEDCL appealed at the APTEL in A.No. 59 of 2013 and A. No. 116 of 2013. The bench concluded the case in January 2014 and upheld the ERC's order and clearly noted that, "*only the open access consumer has the option to reduce or terminate its contract demand*". Further, it found no infirmity in the ERC's decision on continuing the banking facility as before.

However, in June 2014 the MERC issued new distribution OA regulations of 2014, allowing MSEDCL to reduce contract demand after consideration of CUF and discontinued the energy banking facility. These regulations were subsequently challenged in the High Court by the Wind Power Associations. Finally, in March 2016 these regulations were amended to re-introduce the energy banking facility again and allow consumers the choice to reduce contract demand.

Choice over contract demand is a very contentious matter, especially when the consumer is willing to pay the fixed demand charges for their contract demand (MERC, 2019; Prayas (Energy Group), 2019). The first amendment to the distribution open access principal regulations that were introduced in 2019 retain the choice of contract demand with the consumer and further have provided two concessions to RE based open access transactions. First, such OA consumer's demand can be more than their contract demand with the distribution licensee. Second, the amendment has also introduced a concept of notional contract demand and incremental demand charge for non RE based open access transactions that will not be applicable to RE based transactions (MERC, 2019).

Multiple sources of generation

The original OA regulations of 2005 did not mention any prohibition in the number of sources from which power could be procured. This matter was raised by Green Energy Association (GEA) when they filed a petition in January 2014²⁶ on account of delay in issuance of OA permission by MSEDCL. The respondent (MSEDCL) stated that it had done so due to lack of clarity in procedures to be followed, for solar based OA. The ERC stated that OA was a right of a willing consumer as mandated in the Electricity Act, 2003 and directed MSEDCL to issue permissions at the earliest, along with Generation Credit Notes (GCNs) to only

24. Case No. 10 of 2011.

25. Case No. 85 of 2012, 86 of 2012 and 103 of 2012.

26. Case No. 44 of 2014.

those OA consumers who were sourcing power from “solar generators as single source”. Aggrieved by the verdict of the ERC in the Case No. 44 of 2014 GEA approached the APTEL on the matter of allowance of OA for procuring power through multiple sources. The APTEL stated that the impugned order be set aside as they concluded, “the State Commission has wrongly restricted the open access to consumer to one source in violation of its own Open Access Regulations 2005.” Further saying that, “There is no restriction on a consumer from sourcing power from more than one source in the Electricity Act or Regulations. In fact the RPO Regulations of the State Commission provides for fulfillment of Solar and non-Solar sources by the obligated entities including open access consumers and the same cannot be complied with without sourcing power from more than one source.”²⁷ This order of the APTEL was challenged by MSEDCL in the Supreme Court, but it had not been stayed as of 8th February 2016.²⁸

The APTEL upheld the possibility of OA from multiple sources of generation in line with the MERC OA regulations of 2005 but while dealing with various wind energy petitions²⁹ on the same topic, MERC noted possible operational issues in implementing this. This could be in the form of differing dates of joint meter readings and dates of issuance of GCNs and hence can make it a cumbersome process for MSEDCL to determine the monthly energy bills.³⁰ Subsequently, the new OA regulations of 2014 prohibited OA to consumers from multiple sources of generation, with the exception of purchasing energy for meeting RPO. This proviso was done away with in the OA regulations of 2016 and was also not mentioned in the DOA regulations of 2019.

Concessions on OA charges

The Commission acknowledged the need to promote RE based open access as early as 2011. In Case No 43 of 2010 the Maharashtra ERC stated, “It is mandatory on the part of the distribution licensee to provide Open Access to any eligible consumers seeking Open Access from any generator. Therefore, Open Access by a consumer from renewable sources is inevitable and needs to be permitted.” In the very same order, after a detailed analysis of exemptions in CSS in others states, the ERC redetermined the CSS and levied a 25% exemption on CSS for RE based Open Access.^{31,32} Most of the petition and appeals with regard to OA charges mainly were with respect to the highest charge, namely CSS.

In Case No. 138 of 2012, MERC stated that CSS would be levied on OA consumers in the supply area of MSEDCL. In the absence of a clear exemption of RE based OA from the CSS, MSEDCL, in March 2015, issued Commercial Circular 190 in which it removed the concession on CSS for RE based OA. On account of this change, Indian Wind Power Association (IWPA) and a wind based open access consumer filed petitions in 2013, requesting clarification in this regard and refund of excess CSS in case the concessions to RE continued.³³ The ERC upheld these cases and directed MSEDCL to modify the Commercial circular No. 190 to that extent and refund the amount of extra CSS charged. The levy of CSS without concessions was also observed for other distribution licensees namely TPC-D

27. A.No.169 of 2014.

28. Case No. 9 of 2015 pg 17.

29. Case No. 72 of 2014, 179 of 2014 and 9 of 2015.

30. Case No. 72 of 2014.

31. This excluded generators which were under the REC mechanism.

32. Case No. 43 of 2010.

33. Case No. 48 and 50 of 2013.

and Rlnfra.³⁴ The ERC discontinued this concession from FY 17-18 onwards and in both these cases the MERC directed that the licensee refund the excess CSS charged to the OA consumers till the period until which the concession would be applicable. Interestingly, in the same period a petition was also filed by Lloyds Metals and Energy Limited, a fossil fuel-based cogeneration plant, which cited Section 86(1)(e) of the Electricity Act, 2003, thereby requesting for concessions on CSS and wheeling charge in 2014 and suggesting certain alternative promotional measures such as fixing CSS at 25% of applicable CSS and fixing wheeling charge at 25% of applicable wheeling charge for OA consumers.³⁵ The ERC rejected this petition in 2018. Soon after, Lloyds petitioned again to request for the same concessions with the same result.³⁶ This is in tandem with the directives from the Commission to end allowance of concessions on CSS for renewable energy based open access transactions as specified in the Multi Year Tariff for the third control period of FY 16-17 to FY 19-20 (MERC, 2016).

This entire chronology of litigation is indicative of the fact that DISCOMs have not facilitated OA transactions in letter and spirit. Under these circumstances, the role of SERC is crucial, and it should proactively attempt to address any such gaps in implementation and to ensure a level playing field and to further competition, as expected in its own regulations and orders. Higher transparency and monitoring through some form of Market Monitoring Committee can help in addressing issues at an early stage. It also clearly points out that Open Access is a particularly contentious matter given its implications for the financial health of the DISCOM and would need some innovative, long-term and balanced risk-reward framework to avoid these continuous regulatory battles.

4.3 Renewable Purchase Obligation

There were a total of 39 petitions and appeals and 38 suo motu orders which were in connection with RPO. These were mainly of two types - those related to verification and compliance of RPO targets (77%) and those where petitioners sought amendment or clarification of regulations, exemptions or relaxation in regulations. Given annual RPO targets, petitions and suo motu orders on the sub topic of RPO compliance have been one of the most recurrent across the eight years considered. On average, 17% of the yearly petitions filed and suo moto processes initiated between FY 11-12 and FY 18-19 were in this regard. Similarly, in absolute terms, on a yearly basis, an average of 5 suo motu processes was initiated by the Commission in this regard. Interestingly, no processes or petitions were initiated in FY 19-20 in relation to compliance and verification. In comparison to RPO compliance (59), there were only 18 cases related to RPO regulations. Twelve of these were petitions by captive generators/consumers seeking to amend regulations or exemptions for non-RE captive consumers from RPO compliance. Since almost half of the RPO compliance proceedings were suo motu orders issued by MERC on verification and compliance of RPO targets, it is important to note that the nature of majority of the cases were not of adjudicating disputes, but monitoring performance of obligated entities.

34. Case No. 186 of 2014 and 104 of 2015.

35. Case No. 220 of 2014.

36. Case No. 278 of 2018.

MSEDCL RPO compliance

Suo motu RPO compliance orders for MSEDCL have been further analysed below. Table 2 tabulates the RPO compliance performance of MSEDCL and MERC's response between FY 10-11 and FY 18-19. During the vetting process for FY 10-11 and FY 11-12, MSEDCL reported a shortfall in meeting its solar RPO target. MSEDCL clarified that it was in the process of executing PPAs with solar generators under various Gol and MNRE schemes. In keeping with this, the ERC was of the view that MSEDCL had provided valid justification for efforts taken in meeting RPO targets and hence allowed shortfall for the two years. The MERC further stated that the shortfall was to be carried forward³⁷ and had to be met cumulatively by FY 15-16. Moreover, no penalty under the Regulation 12 of MERC (Renewable Purchase Obligation, its compliance and REC framework Implementation) Regulations, 2010 was levied.

The FY 12-13 RPO compliance proceedings noted that there was a solar RPO shortfall in FY 12-13 adding to the previous non-compliance. However, the Commission stated that it had dealt with this matter in the suo motu order on verification of RPO compliance for FY 10-11 and FY 11-12 and that solar RPO had to be cumulatively met by FY 15-16.³⁸ The ERC was also considerate of the attempts of fulfilling non solar targets and allowed carry forward of the shortfall in FY 12-13 to FY 13-14.

From FY 13-14, the MERC was more stringent on its stance on compliance. Interestingly this is after the conclusion of an important APTEL verdict on three original petitions that were filed on May 29th 2013. These original petitions were filed by the Indian Wind Energy Association (IWEA) and Indian Wind Turbine Manufacturers Association (IWTMA) at the APTEL. The petitions raised a very valid matter of non-compliance of RPO targets by obligated entities across the country. In response, the APTEL held the ERCs accountable and reinforced a number of functions that the ERC should undertake to make the compliance more stringent. This APTEL verdict set a precedent and emphasised the need for a more robust compliance process. This is evident from the fact that the MERC cited this verdict and directed MSEDCL to constitute a regulatory charge fund by invoking Regulation 12 of RPO regulations, 2010 for its inability to abide by its RPO targets for the year FY 13-14. It also clarified that any '*expenditure on purchase of RECs and/or actual power procurement from the Fund shall not be passed through to consumers to the extent of the shortfall not met by MSEDCL by the end of FY 2015-16*'. The amounts that would need to be deposited into the Fund would be determined by MSEDCL based on its assessment of the REC market and its RE power procurement over the remaining period of FY 15-16.³⁹

During the FY 14-15 RPO compliance and verification process MERC again found that MSEDCL had fallen short of meeting its yearly and cumulative solar and non solar targets and found no justification of the same. Just like the previous order, it directed MSEDCL to establish the RPO Regulatory Charges Fund with regard to shortfall for FY 14-15.⁴⁰ In parallel, MSEDCL filed two petitions with the MERC (First, Case No. 44 of 2016 – for removal of difficulties in implementation of the order in Case No. 190 of 2014 regarding verification of compliance of its RPO targets for FY 2013-14, and related matters relating to its RPO; Second, Case No. 70 of 2016 – for extension for time for meeting its cumulative

37. Case No. 102 of 2012.

38. Case No. 180 of 2013.

39. Case No. 190 of 2014.

40. Case No. 16 of 2016.

RPO shortfall for FY 2014-15 and related issues with regard to its RPO.) MERC rebuked MSEDCL for their 'irresponsible approach' in filing nearly identical yet separate petitions as well as the delay in filing them. The Commission found 'no merit in MSEDCL's arguments for the removal of purported difficulties in the implementation of the RPO Regulations, 2016 or relaxation in its provisions'. This included the specific prayers namely 'setting aside the ruling in Case No. 190 of 2014 regarding disallowance of expenditure on purchase of RECs and / or actual power procurement to the extent of the shortfall not met by the end of FY 2015-16' and 'carry forward of the shortfall not met by MSEDCL by the end of FY 2015-16 to the next Review Period.'⁴¹

During the verification process for FY 15-16, MERC found that non solar target (excluding mini/micro hydro) had been met for the first time for the particular year as well as cumulatively. This included 6.66 lakh Non-Solar RECs (666 MUs) amounting to Rs. 99.9 crore which were purchased for the first time in January, 2017. In fact, there was a minor surplus of 34 MUs in achieving the non-solar RPO. However, the story for solar RPO compliance and MERC's response to it remained much like before. The MERC found no justification for the shortfall given the availability of RECs and invoked Regulation 12 just like in the earlier two orders.⁴²

The FY 16-17 suo motu order noted that MSEDCL had fully met its stand alone non solar target (excl. min/micro hydro) for the year which included 18,22,000 non-Solar RECs (1822 MUs) procured in November and December of 2017. However, while noting 'MSEDCL's plan and conspicuous efforts taken by it to ramp up solar power procurement to fulfill its Solar ROP (sic) targets for subsequent years' the fact remained that 'MSEDCL's standalone and cumulative shortfall towards Solar RPO targets as at the end of FY 2016-17 has increased'. MERC specifically directed MSEDCL to 'purchase solar power and/or RECs (subject to Supreme Court decision) so as to fully meet its standalone and cumulative shortfall (as determined earlier in this Order at the end of FY 2016-17), by the end of March, 2019 instead of March 2020 as requested by MSEDCL'. This would be reviewed in the next RPO verification process for FY 17-18.⁴³

In FY 17-18 MSEDCL made substantial progress in fulfilling its non solar RPO targets. It not only achieved its stand alone non solar targets (excluding min/micro hydro) for a third time in a row, but also fulfilled its stand alone and cumulative min/micro hydro RPO targets till FY 17-18. MSEDCL's non solar RPO compliance included purchase of 22,11,000 non solar RECs (2,211 MUs) to achieve the target. The surplus in non solar RPO compliance through RECs was allowed to meet the cumulative min/micro hydro RPO shortfall. However, its solar target achievement was still considerably low with a cumulative shortfall of 2147.016 MUs till FY 17-18. For the first time MSEDCL purchased 13,78,966 solar RECs (1378 MUs) in FY 18-19 to meet its cumulative shortfall of 1359.75 MUs till FY 15-16 and remaining 19.216 Mus considered for meeting the FY 16-17 target. Additionally, it also stated that it had contracted a total of 1,527 MW of solar capacity in FY 18-19 and expected a capacity addition of 1,917 MW in FY 19-20. Given the efforts made by MSEDCL to meet its solar targets, the Commission stated that it 'appreciates the MSEDCL's plan'. MERC finally concluded the order stating that in order to fulfill its stand alone and cumulative shortfall till FY 17-18 MSEDCL 'shall purchase Solar Power and/or Renewable Energy Certificates by the end of March, 2020'.⁴⁴

41. Case No. 44 and 70 of 2016.

42. Case No. 169 of 2016.

43. Case No. 207 of 2017.

44. Case No. 36 of 2019.

The suo motu process for vetting MSEDCL's RPO compliance for FY 18-19 had not been initiated in FY 19-20. In fact, as previously highlighted, the Commission has not initiated the process for the said year for any distribution or deemed licensee. Table 2 tabulates this chronology of MSEDCL's RPO compliance in addition to MERC's directions in this regard.

Table 2: MERC's direction on RPO compliance verification for MSEDCL from FY 10-11 to FY 17-18

	Cumulative and stand alone Shortfall / (Excess)	MERC's direction
FY 10-11 and FY 11-12	Solar – 438.79 Mus	MERC allowed MSEDCL to cumulatively fulfil its shortfall by FY 15-16.
	Non Solar – (386.52) Mus	Target met.
	Mini/Micro hydro – 10.22 Mus	MERC allowed MSEDCL to cumulatively fulfil its shortfall by FY 13-14.
FY 12-13	Solar – 644.22 Mus, Standalone-205.42	MERC allowed MSEDCL to cumulatively fulfil its shortfall by FY 15-16.
	Non Solar – 298.37 Mus, Standalone – 684.89	MERC allowed MSEDCL to cumulatively fulfil its standalone shortfall for FY13 with the surplus from the previous two years and allowed carry forward of remaining shortfall to be cumulatively fulfilled by FY 13-14.
	Mini/Micro hydro – 16.60 Mus, Standalone – 6.38	MERC allowed MSEDCL to cumulatively fulfil its shortfall by FY 15-16.
APTEL's verdict in Original Petitions O.P. No. 1 of 2013 and IA No. 291 of 2013 and IA No. 420 of 2013, O.P. No. 2 of 2013 and O.P. No. 4 of 2013.		
FY 13-14	Solar – 925.96 Mus, Standalone-281.75	MERC found no justification for cumulative and stand alone shortfall Mus for FY 13-14. MERC asked MSEDCL to constitute a RPO regulatory charge fund in order to fulfill shortfalls by FY 15-16. The cost of procurement would not be passed through to consumers.
	Non Solar – 1078.13 Mus, Standalone-779.76	MERC found no justification for cumulative and stand alone shortfall Mus for FY 13-14. MERC asked MSEDCL to constitute a RPO regulatory charge fund in order to fulfill shortfalls by FY 15-16. The cost of procurement would not be passed through to consumers.
	Mini/Micro hydro – 32.65 Mus, Standalone-16.05 3	MERC noted the difficulties in procuring the same and allowed to fulfill the shortfall on a cumulative basis by FY 15-16.
FY 14-15	Solar – 1201.81 Mus, Standalone- 275.85	MERC found no justification for cumulative and stand alone shortfall Mus for FY 14-15. MERC asked MSEDCL to constitute a RPO regulatory charge fund in order to fulfill shortfalls by FY 16-17. The cost of procurement would not be passed through to consumers.

FY 14-15	Non Solar – 1724.49 Mus, Standalone-646.37	MERC found no justification for cumulative and stand alone shortfall Mus for FY 14-15. MERC asked MSEDCL to constitute a RPO regulatory charge fund in order to fulfill shortfalls by FY 16-17. The cost of procurement would not be passed through to consumers.
	Mini/Micro hydro – 50.48 Mus, Standalone-17.83	MERC noted the difficulties in procuring the same and allowed to fulfill the shortfall on a cumulative basis by FY 15-16.
FY 15-16	Solar – 1359.75 Mus, Standalone- 157.95	MERC found no justification for stand alone shortfall Mus for FY 15-16. MERC asked MSEDCL to constitute a RPO regulatory charge fund in order to fulfill shortfalls by FY 18-19. The cost of procurement would not be passed through to consumers.
	Non Solar- (34.16) Mus, Standalone- (14.49)	Target met.
	Mini/Micro hydro – 68.57 Mus, Standalone-18.08	MERC allowed purchase of non solar RECs as per new regulations and fulfill shortfall by FY 18-19, on account of difficulty in procurement.
FY 16-17	Solar - 2049.61 Mus, Standalone- 689.86 Mus	MERC noted the justification and mitigating circumstances for solar procurement. Hence it allowed purchase of non solar RECs as per new regulations and fulfill stand alone and cumulative shortfall till FY 18-17 by FY 18-19.
	Non Solar- (34.12) Mus, Standalone- 0 Mus	Target met.
	Mini/Micro hydro – 90.252 Mus Mus, Standalone-21.682 Mus	MERC noted the difficulty in procurement and hence allowed purchase of non solar RECs as per new regulations and fulfill shortfall till FY 16-17 by FY 18-19.
FY 17-18	Solar - 2147.016 Mus, Standalone- 1476.37 Mus	Allowed issuance of non solar RECs as per new regulations of 2016 and fulfill stand alone and cumulative shortfall till FY 17-18 by FY 19-20.
	Non Solar- (55.15) Mus, Standalone- 0 Mus	Target met.
	Mini/Micro hydro – 0 Mus Mus, Standalone- 0 Mus	

RPO compliance of OA and CPP consumers

Apart from distribution licensees, OA consumers and Captive Power Producers (CPP) are also designated obligated entities. While the ERC was extremely consistent in conducting suo motu proceedings for verification of RPO compliance for the four distribution licensees in Maharashtra, they have issued a total of only two suo motu orders in relation to verification

of RPO compliance for OA consumers and CPPs between FY 10-11 and FY 19-20.⁴⁵ During the first regulatory process held for the Case No. 43 of 2013 the ERC asked MEDA for compliance reports of OA consumers and CPPs for FY 10-11 to FY 13-14, but observed very poor reporting. The ERC directed MEDA to improve the methodology for timely data collection in order to ensure RPO compliance and directed them to constitute a working committee for the same. The committee discussed various modalities of RPO compliance like feasibility of a web based tool, a RPO manual to enable ease of understanding the entire process and so on. A number of gaps in the processes were identified including unavailability of an exhaustive list of CPPs and OA consumers with MEDA and lack of process in verification and validation of RPO data of CPPs and OA consumers.

On account of the lack of a robust mechanism to monitor RPO compliance for these obligated entities, the ERC relaxed or waived the solar and non-solar targets for FY 10-11, FY 11-12 and FY 12-13 and directed the obligated entities to fulfill the shortfalls on a cumulative basis by FY 13-14. The Commission also directed MEDA to form another working committee that was to meet on a bi-monthly basis with the aim to construct a mechanism for RPO compliance for all OA consumers and CPPs which were obligated entities. Additionally, MEDA was directed to inform the ERC on RPO compliance monitoring status, on a quarterly basis.⁴⁶

Finally, after three years the Commission oversaw the suo motu proceedings on RPO compliance between FY 10-11 and FY 13-14 for 680 CPPs and OA consumers, in Case No. 101 of 2017. This order, in addition to verifying the RPO compliance also clarified various doubts like, which CPPs would be exempted from being an obligated entity, how to deal with the problem of non-reporting of data etc.⁴⁷ The Commission concluded the regulatory process with noting that while the mechanism had become less cumbersome over all, it was still not without data gaps and hence was unsatisfactory. While the Commission did not invoke a regulatory RPO charge on defaulters and allowed carry forward of the shortfall to the next year, it did play a very important role in expediting the process of constructing a framework for verification of RPO compliance by obligated entities apart from the distribution licensees and deemed licensees. It is interesting to note that after this proceeding, the Captive Power Producers Association of India requested (in Case No. 68 of 2019) the Commission to allow more time so as to condone complete rollover of RPO obligation or the RPO compliance for FY 16-17 through FY 18-19 to FY 19-20, in anticipation of the result of a writ petition (original writ petition No. 269 of 2019) it filed in the Bombay High Court in relation to exemption of compliance by cogeneration captive plants. However, the Commission disposed this petition by simply directing MEDA to publish a detailed report on the list of OA and CPP (the obligated entities) as was directed in the previously mentioned suo motu proceeding.

Further, while dealing with issue of RPO compliance for fossil fuel CPPs, two recent clarificatory orders from the Ministry of Power in this regard are noteworthy. The order dated February, 2019 clarified that RPO of the CPP may be pegged at the RPO level applicable in the year in which the CPP was commissioned and that additional RPO as obligated in the year in which new capacity of the CPP is commissioned will be applicable (Ministry of Power, 2019). A further clarification from October, 2019 states that, *'For CPPs commissioned before 1.04.2016, RPO should be at the level mandated by the appropriate Commission*

45. Case No. 49 of 2013 and 101 of 2017.

46. Case No. 49 of 2013.

47. Case No. 101 of 2017.

for the year 2015-16. For CPPs commissioned from 1.04.2016 onwards, the RPO level as mandated by the appropriate Commission or Ministry of Power, whichever is higher, for the year of commissioning of the CPP shall be applicable.’ (Ministry of Power, 2019a) This points to the complex interplay of Central Govt. guidelines and SERC regulations and the uncertainty this introduces in the RPO and REC markets. Greater synergy and consensus building between the Centre and States is needed to avoid such uncertainty.

MERC has been quite consistent and methodological in terms of monitoring and verifying RPO compliance of DISCOMs. MSEDCL’s achievement of non solar RPO targets have slowly but consistently improved with yearly targets having been met in the years FY 15-16, FY 16-17 and FY 17-18 consecutively and cumulative targets met in FY 16-17 and FY 17-18. However solar RPO compliance has remained lax, though there has been a slight improvement in the last two years with purchase of solar RECs and long term solar capacity being procured. In three instances, MERC has invoked section 12 of the RPO regulations and mandated forming the RPO Regulatory Charge Fund and further not allowing these costs as pass through to consumers. Within solar RPO, another issue with regard to compliance monitoring which has to be addressed is the RPO credit available to DISCOMs from Rooftop Solar Net Metering facilities which cannot be tracked without DISCOMs accessing the Solar Meter data.

There is still significant improvement needed in monitoring and verification of OA and CPP obligated entities given the paucity of data, though a start has been made in this regard. In the short term, RPO targets are still crucial for RE promotion. This is clear from the fact that in spite of low fixed price tariffs for solar and wind being discovered through competitive bidding, RPO targets have not yet been met in totality.

5. Appendix: Detailed Methodology

This section provides an account of the process undertaken for collating the data and describes all the tags that were assigned for each of the orders and judgements. As mentioned in Section 2 this study was limited to analysing renewable energy related orders and judgements that were issued between 1st April 2010 and 31st March 2020, that is FY 10-11 to FY 19-20. Only those orders and judgements were considered which were passed by the Maharashtra Electricity Regulatory Commission (MERC) and Appellate Tribunal of Electricity (APTEL) in this period. All the 444 (408⁴⁸ orders at MERC and 36⁴⁹ judgements at APTEL) orders and judgments were analysed based on the prayers and decisions noted in their documents.

5.1 Description of process

The database was constructed on the basis of all RE related final orders and judgements that were publicly available on the websites of APTEL and MERC. Only those final orders and judgements were considered for the study whose prayers fell under the purview of RE. Petitions and appeals where prayers were primarily related to other topics with one RE related prayer were not considered. No ongoing cases and their corresponding daily orders have been tracked and studied.

For systematic construction of the database a series of internal keywords were used for the document search on the websites of MERC and APTEL. The keyword search was done on two levels. The keywords used in the first level are as follows:

- For orders on the MERC website- Renewable, Solar, Wind, Small hydro, Biomass, Municipal Solid Waste, bagasse, non-conventional
- For judgements on the APTEL website- Maharashtra

The second level of search was a deep dive into each of the cases on both the websites and thereby identifying all cases that were related to Renewable Energy.

5.2 Description of tags

The database contains a total of 17⁵⁰ tags for each of the orders and judgements. It is also important to note that the data that has been collected is of two types. There are some tags which are very objective in nature and involved collecting information from each of the orders and judgements, for example, the tags of 'Proceedings initiated as', 'Energy Source' 'Date of Order/Judgement', 'Case/Appeal description' etc. The other kind of tags are those which are subjective in nature and involved the use of some interpretation. These interpretations

48. This comprised of 55 Suo Motu orders and 353 (including 1 interim order) orders issued by the MERC on 494 petitions and review petitions filed. It is important to note that the number of petitions filed in MERC exceed the number of orders, on account of many instances when the MERC issued common orders for more than one petition.

49. This comprised of a total of 36 judgements were passed which included 33 judgements on 35 appeals, 1 judgement on 3 original petitions and 2 judgements on 2 review petitions filed.

50. The database has a total of 29 tags, some of which have a similar description and have been clubbed under the same tag while describing the methodology, thereby arriving at the final 16 tags described here.

were used in the tags of 'Topics' and 'Sub Topics' and are described in this section. The tag of 'Decision' included elements that were both objective and subjective in nature. This is because some of the decisions were straight forward and taken as is from the final orders and judgements, while there were some which required a subjective understanding. All the attributes of these tags have been described below:

Jurisdiction

This means the authority under whom the proceedings took place that is, MERC or APTEL.

Document type

This means the type of document that was finally passed by the relevant authority (MERC or APTEL). It was tagged as Order for MERC and Judgment for APTEL.

Document reference number

The Case Number or Appeal Number or Original Petition Number or Review Petition Number was stated under this tag

Proceedings initiated as

We have collected final orders and judgements, the proceedings for which were initiated as one of the five tags namely, Appeal, Original Petition, Petition, Sua Motu Order and Review Petition. These tags have been further explained below:

Proceedings initiated at MERC

- All orders issued by the Maharashtra Electricity Regulatory Commission on its own motion are tagged 'Suo Motu'
- All other cases involving disputes between two or more parties that are addressed to the MERC were tagged as 'Petitions'

Proceedings initiated at APTEL

- All cases filed under Section 121 of the Electricity Act, 2003 were tagged as 'Appeals'
- All cases filed under Section 111 of the Electricity Act, 2003 were tagged as 'Original Petitions'

Common proceedings initiated at MERC and APTEL

- All cases filed at the MERC under Regulation 85 of the MERC (Conduct of Business) Regulations, 2004 and all appeals filed at the APTEL to review its decision in a previous appeal were tagged as 'Review Petitions'.
- No Miscellaneous Application, Intervention Application and Interlocutory Application has been considered separately from the petition for which the corresponding applications were filed.

Topic and Sub Topic

All order and judgements were analysed on the basis of the prayers that were stated in the petitions and the final decision issued by MERC or APTEL. A total of six substantive issues⁵¹ were identified which were assigned the tags namely, Evacuation, Miscellaneous, Net Metering, Open Access, Power Purchase Agreements (PPAs), Renewable Energy Certificates (RECs), RPO (Renewable Purchase Obligation), Tariff.

51. There are a few petitions and appeals which pertained to more than one topic. Such petitions and appeals were categorised under the topic which was more closely related to them. They are few in number and do not affect the overall results.

The common sub-topics that each of these topics was segregated under are Regulations, Principles and Procedures. The clarification for these sub topics are as follows:

- Regulation: The orders and judgements which concerned a petitioner seeking amendments, exemption or relaxation in regulations.
- Principle: The orders and judgements which raised questions related to a substantive rationale for tariff, Open Access and Power purchase agreements were tagged as ‘Principle’ issues. All such matters that fall under this purview have been stated in the table.
- Procedural: The orders and judgements which cited procedural problems in processes related to Open Access, tariff determination, Power purchase agreements, net metering and RECs were tagged as such.
- In certain cases, both ‘Principle’ and ‘Procedural’ were tagged, as prayers of the petition or appeal and the final decision included features of both these sub topics.
- In addition to the above three there are some sub topics that are applicable to specific topics like Payment delays come under the purview of PPA and Extension of applicability of tariff orders (tagged as EXT) come under the purview of tariff.

Table 3 tabulates the details of topics and sub topics that each of the orders and judgements are associated with. The table also provides the abbreviations for each of the topics and sub topics that were used in the database.

Table 3: Description of Topics and Sub topics

Topic		Sub Topic		All matters that come under this topic
Renewable Purchase Obligation	RPO	Regulation	REG	Allowance of fossil fuel based cogeneration to be termed as ‘Renewable source’ and hence exempt from RPO, seeking amendment of existing RPO regulations so as to exempt captive cogeneration from RPO, review regulations to merge solar and non solar RPO targets, allow exemption from RPO targets.
		Compliance	COM	Verification and compliance of RPO targets.
Tariff	TR	Determination	DET	Approval of tariff on a case to case basis, determination/ redetermination of tariff by the ERC, review of tariff petitions on account of alleged error apparent in determining tariff due to consideration of different tariff components.
		Extension	EXT	Extension of applicability of tariff orders and regulations.
		Principle		Revising wind zone classification, change in law to allow pass through of tariff increase due to levy of safeguard duty, consider changes in tariff components, review of tariff petitions on account of alleged error apparent in determining tariff due to wrongful consideration of tariff principles.
		Regulation	REG	Seeking amendment in tariff regulations.

Tariff	TR	Procedural ⁵²		Allowing competitive bidding for projects, cases on non-compliance of previous orders.
Open Access	OA	Regulation	REG	Seeking amendments in OA regulations related to banking charge, non firm wind energy, and other provisions.
		Principle ⁵³		Petitions related to procurement of power through multiple sources of generation under OA, Issues related to reduction in contract demand, allowance of banking facility, condoning waivers/ exemptions on OA charges.
		Procedural		Permissions for OA, delay in issuance of Generation Credit Notes (GCN), payment of dues for surplus energy injected into the grid, incorrect treatment of surplus units injected, installation of SEMs, non-compliance of previous orders, revocation of trading licenses, alterations in the banking mechanism.
Power Purchase Agreement	PPA	Procedural		Approval of PPAs, request for removal of clauses, clarifications related to metering installation, allow shift of PPAs to JNNSM.
		Principle		Petitions on whether PPAs should be signed for promotion of certain sources of energy, petitions related to termination of EPAs.
		Payment delay		Delay in payment of dues to generators by MSEDCL.
Forecasting and Scheduling	F&S	Regulation	REG	Seeking amendments or removal of difficulties in implementation of Forecasting and Scheduling regulations.
Renewable Energy Certificate	REC	Procedural		Accreditation of generators under the REC mechanism, approval of grid connectivity.
		Principle ⁵⁴		Issues related to wrongful issuance of RECs, clarification of RPO regulations.
Net Metering	NM	Regulation	REG	Seeking amendments or relaxations in Net Metering regulations.
		Procedural		Approval for setting up a solar plant under net metering, approval of grid connectivity.

52. There is one case in relation to tariff which involve prayers related to principle of tariff determination in the case of PPAs where tariff was not determined post expiry of PPA and other procedural matters.

53. There are twelve cases in relation to Open Access which involve prayers related to principle and procedural matters.

54. Matters related to REC are also raised in cases related to RPO compliance.

Evacuation		Connectivity	Petitions requesting connectivity of RE power plants to the grid
		Transmission ⁵⁵	Petitions related to evacuation arrangements, relaxations in provision of the same, refund and reimbursement of evacuation charges
Miscellaneous ⁵⁶	MISC		Disallowance of capital subsidy payment on account of wheeling and not purchase of energy, clarification on RE policy of GoM, approval of supply of electricity under the Mukhya Mantri Saur Yojana, approval of MSPGCL's trading license, petition to pass through of RE purchase cost to pollution producing industries, petition in relation to receipt of performance guarantee amount on withdrawal of proposal to develop biomass project and cancellation of final consent agreement sent to MEDA, petition related to captive specific issues, condoning of continuation of start-up power requirement of RE plants

Energy source

Source-wise categorisation was done on the basis of which energy source the case or order pertained to. A total of 10 energy sources were identified. They are Biogas, Biomass and cogeneration, Non RE, RE, Rooftop Solar, SHP (Small Hydro Power), Solar, Solar Feeder, Solar Pump and Waste to Energy (WTE) and Wind. While almost all the tags used for energy sources are straight forward, clarifications related to some tags are provided below:

- In the orders and judgements which included matters on more than one type of source, it was termed as 'RE'. For example, cases on solar and non-solar RPO compliance, wind-solar hybrid and Suo Motu orders on RPO compliance and RE tariff orders and termed as RE.
- The orders and judgements that pertain to Waste-to-energy projects which generate electricity through conversion of waste into biogas were categorised as 'Biogas'. All other Waste-to-energy projects were tagged 'WTE'.
- In the orders and judgements in which the matters under consideration were in relation to non RE sources of generation were termed as 'Non RE', for example, condoning of RPO compliance exemption for captive cogeneration.

Petitioner/Appellant Type

- Association: All petitions and appeals filed by associations like Indian Wind Energy Association (InWEA), Indian Wind Power Association (IWPA), Green Energy Association, Maharashtra Co-Generation Green Power Producers Association, Co-generation Association of India, Renewable Energy Developers Association of Maharashtra,

55. There are two cases in relation to transmission which involve prayers on reviewing and modifying the terms of the EPA.

56. This comprised of topics which were few in number. With future updation in the database, the list of miscellaneous topics shall also be revised, as more of these issues become more common in the sector.

Maharashtra Biomass Energy Developers Association, Indian Wind Turbine Manufacturers Association (IWTMA) and Wind Independent Power Producers Association (WIPPA) were tagged as 'Association'. This category also includes cooperative societies like Jawahar Shetkari Sahakari Sakhar Karkhana Limited (JSSSKL) and Maharashtra Rajya Sahakari Sakhar Karkhana Sangh Limited (MRSSKSL)

- Captive Generator/Consumer: All petitioners and appellants who were captive power generators or captive consumers when the petition was filed were tagged thus.
- Distribution Licensee (includes Deemed Licensee): All petitioners and appellants who were distribution licensees like MSEDCL, BEST, Rlnfra, TPC, and Adani Electricity Mumbai Limited when the petition was filed were tagged as such. This category also includes deemed licensees like Indian Railways.
- Distribution Licensee Consumer: All petitioners and appellants who were consumers of the licensee and were not open access consumers in the supply area of the distribution licensee when the petition was filed.
- Independent Power Producer (IPP): Petitions and appeals filed by independent power generators like Tata Power Renewable Energy limited and Shendra Green Energy Limited were tagged 'IPP'. This category also includes traders like Global Energy Private Limited.
- Suo Motu: All orders that were issued by the MERC on its own motion under Suo Motu were termed thus.
- Open Access Consumer: Petitions or appeals filed by partial or full open access consumers situated in the supply area of one of the distribution licensees in the state.
- EPC (Engineering, Procurement and Construction) / Manufacturers: All petitioners and appellants that were EPC companies or manufacturers of parts of renewable energy power plants were tagged as 'EPC/Manufacturers'. Some examples are Cleanmax Enviro Energy Solutions Pvt. Ltd., Suzlon Energy Limited, Gamesa Wind Turbines Pvt. Ltd.)
- Transmission utility: Petitions and appeals filed by MSETCL were termed as such
- Generation Utility: Petitions and appeals filed MSPGCL and other regulated generators like TPC-G were tagged thus.

Primary Respondent

The primary respondents were assigned generic tags similar to the tags under 'Petitioner/Appellant Type'. These tags have further been described below.

- Association: Indian Wind Power Association (IWPA) and Jawahar Shetkari Sahakari Sakhar Karkhana Limited (JSSSKL) were the only two associations that were identified as primary respondents
- Distribution Licensee (includes Deemed Licensee): All primary respondents who were distribution licensees like MSEDCL, BEST, Rlnfra and TPC-D and deemed licensees like Indian Railways, Mindspace Busines Parks Limited, Gigaplex Estate Private Limited were tagged as thus
- IPP: Independent power generators and traders like Global Energy Pvt. Limited were tagged as 'IPP'
- SERC: In all appeals filed at APTEL, MERC was the primary respondent and in the original petitions OP. No.1, 2 and 4 of 2013 filed in APTEL, 27 SERCs were the primary respondents

- State Load Despatch Centre (SLDC): Maharashtra State Load Despatch Centre (MSLDC) was a primary respondent in a few of petitions and hence was tagged as ‘SLDC’
- State Nodal Agency (SNA): Maharashtra Energy Development Agency (MEDA) was a primary respondent in petitions and appeals and hence was tagged as ‘SNA’
- Transmission Utility: Maharashtra State Electricity Transmission Company limited (MSETCL) was a primary respondent in petitions and appeals and hence was tagged thus
- Generation Utility: Maharashtra State Power Generation Company limited (MSPGCL) was a primary respondent in petitions and appeals and hence was tagged thus
- There were some orders and judgements which had no primary respondents and were left blank

Other Respondents

- All respondents apart from the primary respondent were identified under this tag. There were some orders and judgements which had no respondents and were left blank

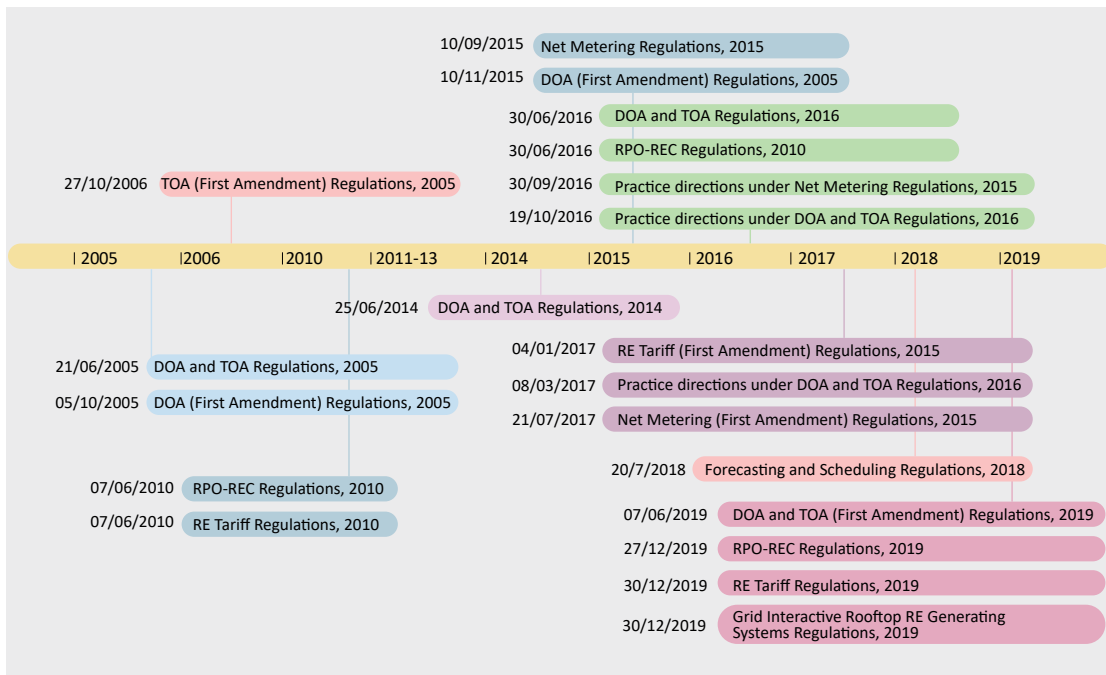
Section of Electricity Act, 2003 or MERC Regulations under which the petition or appeal is filed, or can be read with

For all orders under the jurisdiction of the MERC, the regulations were noted from the prayers of the petitions. For all APTEL related appeals and original petitions the only information related to regulations that was captured was in relation to whether they were filed under Section 111 or 121 of the Electricity Act, 2003. In the database this tag is a combination of seven tags, which are namely, Electricity Act, Conduct of Business Regulations, Tariff Regulations, RPO-REC Regulations, Distribution Open Access Regulations, Net Metering Regulations and Other Regulations. For each of the order and judgements these regulations have been stated in intuitive abbreviations. For example, ‘7 RPO-REC 2016’ implies Section 7 from the MERC (Renewable Purchase Obligation, Its Compliance and Implementation of Renewable Energy Certificate Framework) Regulations, 2016.

In the absence of any mention of a Section of the Electricity Act, 2003 and MERC Regulation blanks have been left.

Figure 12 illustrates the chronology of all RE related regulations (including practice directions) that were issued by the MERC from 2005 to 2020. While transmission and distribution open access regulations were issued as early as 2005 and further revised in 2014, 2016 and 2019, the very first RE specific regulations were issued in 2010 under the Renewable Purchase Obligations-Renewable Energy Certificate regulations and the RE specific Tariff regulations. As seen from the figure, between 2014 and 2020 the MERC announced a number of new regulations, amendments and practice directions. The first net metering regulations were issued by MERC in 2015 while forecasting, scheduling and deviation settlement regulations were issued in 2018.

Figure 14: Timeline of RE related regulations issued by MERC between 2005 and 2020



Source: MERC

Decision

The information on the final decision by MERC or APTEL was taken from the final part of the order or judgement. All these orders and judgements were assigned one of the five tags. These tags were namely, Allowed, Partly allowed, Disposed, Dismissed and Withdrawn. They have further been described below:

— Allowed:

Orders and judgements in which all the prayers were allowed by the MERC or APTEL

— Partly Allowed:

Orders and judgements in which some of the prayers were allowed by the MERC or APTEL

— Withdrawn:

All cases in which the petitioner withdrew the petition or appeal on account of various reasons like:

- An order was issued by the MERC or regulations were issued by Central authorities like CEA or a commercial circular was issued by a distribution licensee which address the prayers of such cases
- Settlement of dispute between the parties

— Dismissed:

All cases that were marked as 'Dismissed' had one of the following as their verdict:

- The authority (MERC or APTEL) 'Dismissed' the petition.⁵⁷

57. Some examples of these orders and judgements are Case No. 45 of 2012 and Case No. 63 of 2013.

- MERC found no merit in the petition, or did not allow the prayers of the petition.⁵⁸
- Res Judicata i.e. the matter has been addressed by a competent court and need not be pursued again.⁵⁹

— Disposed⁶⁰:

The proceedings for all orders passed by MERC are procedurally concluded and marked as 'Disposed' by the MERC. All other orders passed by MERC and all judgements passed by APTEL which are not withdrawn, allowed, partly allowed or dismissed but have one of the following conclusions have been tagged as disposed.

- The ERC concluded the proceedings of the case.
- The order in question was a Suo Motu order issued by MERC.
- The Commission provided certain clarifications that were sought.⁶¹
- The ERC does not find this to be a case fit for exercising its inherent powers.⁶²
- The ERC does not outright dismiss the case.⁶³
- Prayer/s were allowed subject to advice awaited by the Commission/APTEL/Judicial Court/ or any other authority (CEA etc.)⁶⁴
- Impugned order was set aside and matter remanded to the State Commission.⁶⁵
- Prayer/s can be reheard in another petition, after disposal of another case in a quasi-judicial or judicial court.⁶⁶
- On account of reconciliation between both parties.⁶⁷
- The ERC would consider the said prayers of the petition after detailed scrutiny of data directed to be submitted.⁶⁸

Date of Petition/Appeal

In almost all of the cases the date on which the petition was filed by the petitioner at the ERC was provided. However, in the case of Suo Motu orders and some cases disposed by the MERC and some appeals filed at the APTEL- due to unavailability of an exact date, an approximation was used as follows:

- For Suo Motu orders on RPO compliance, the date of filing was assumed to be the date on which MEDA sent data to the MERC on RPO compliance.

58. Some examples of these orders and judgements are Case No. 137 of 2014 , Case No. 200 of 2014 and Case No. 133 of 2016.

59. Some examples of these orders and judgements are Case No. 84 of 2013 and A.No. 267 of 2013.

60. This is mentioned in all cases.

61. Some examples of these orders and judgements are Case No. 3 of 2011, Case No. 78 of 2011 and Case No. 59 of 2012.

62. An example of this is Case No. 141 of 2014.

63. Some examples of these orders and judgements are Case No. 56 of 2011 and Case No. 80 of 2013.

64. Some examples of these orders and judgements are Case No. 35 of 2011 and Case No. 35 of 2013.

65. Some examples are A.No. 57 of 2009 and A.No. 77 of 2015.

66. Some examples of these orders and judgements are Case No. 26 of 2011, Case No. 17 of 2013, and Case No. 134 of 2013.

67. Some examples of these orders and judgements are Case No. 147 of 2017, Case No. 173 of 2017 and Case No. 177 of 2017.

68. Some examples of these orders and judgements are Case No. 220 of 2014, Case No. 65 of 2013 and MA. No. 13 of 2013 in Case No. 65 of 2013 and Case No. 55 of 2014.

- For RE tariff orders issued by MERC, the date of filing was assumed to be date of issuance of draft order or public hearing whichever date was available.
- For all other Suo Motu orders, the date of filing was assumed to be the date on which a Public Notice was issued by ERC in relation to case
- For all appeals and original petitions filed at the APTEL, and some petitions filed at the ERC the date of filing was assumed to be the first daily order or the date on which the notice for the first hearing was issued.

Based on the date of the petitions and appeals, the year of filing each petition and appeal and the corresponding financial year was derived. In the absence of both, the date of petition was left blank.⁶⁹

Date of Order/Judgement

The date of order or judgement was captured for all orders and judgements. Based on this date, the year of issuing each order and judgement and the corresponding financial year was derived.

Petition/Appeal Description

A concise description of each of the orders and appeals is provided under this heading.

On Non Compliance of a previous Order

This was identified on the basis of whether a petition at MERC was filed on account of non-compliance of a previous order issued by the relevant authority. It was tagged as either 'Yes' or 'No'. Also for Suo Motu order this head was left blank.

No of days until final order/judgement

This was calculated from date of order and date of petition. It could not be calculated for those orders and judgements which had no petition or appeal date.

Notes

All interesting observations and caveats for each of the orders and appeals were listed under this heading.

Though, Prayas (Energy Group) has taken numerous measures to ensure the accuracy of data, we do not make any implicit or explicit claims on the correctness of the same. All assumptions made for the purpose of analysis have been detailed out. Also, mentioned below are the caveats for each of the categories for which data was collected.

Please note that this is an ongoing effort to collate all final orders related to renewable energy in the state of Maharashtra. While care has been taken to ensure that the list of orders and judgements in the database is exhaustive, there may be a possibility of having missed a few orders and judgements. Hence, we welcome stakeholders to inform us of any discrepancies or data gaps that they may find and we are open to suggestions on better analysis of the data.

69. In Case No. 102 of 2018, 103 of 2018, 211 of 2018, 272 of 2018, 298 of 2018, 308 of 2018, 335 of 2018, 354 of 2018, 367 of 2018, 21 of 2019, 26 of 2019, 142 of 2019, 314 of 2019 and Appeal No. 245 of 2015 and Intervention Application No. 398 of 2015 neither any date for filing of petition was available nor could any comparable assumption be made. Additionally, details on the date of filing of petition was unavailable for a total of four Suo Motu orders. These orders are related to extension of control period for tariff applicability and net metering regulations. Out of the total 589 orders and judgements 18 (approx.3%) do not have a petition date.

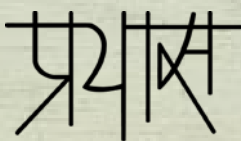
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As the Renewable Energy share in the electricity mix increases steadily, it becomes important to understand the extent and nature of RE specific regulatory matters and litigation in the sector. Such an analysis is likely to be of value for policy and regulatory officials and other stakeholders in the sector, especially given how dynamic the RE sector continues to be. While there is significant reporting and analysis of overarching governance framework of renewables, laws and regulations concerning RE, many critical decisions in the sector take place on the basis of regulatory decisions in specific orders. These need to be tracked to assess the broad trends in sector governance and the lacunae/lack of clarity in the existing legal and governance framework.

The broad aim of this study is to understand how the regulatory treatment of renewable electricity has evolved in Maharashtra over the last decade (2010-2020) and use that understanding in informing future policy and regulation.



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