

Before the  
Maharashtra Electricity Regulatory Commission

Comments, Suggestions and Objections on  
Reliance Infrastructure Limited (Distribution business) petition  
for Multi-Year Tariff for FY 2016-17 to FY 2019-20

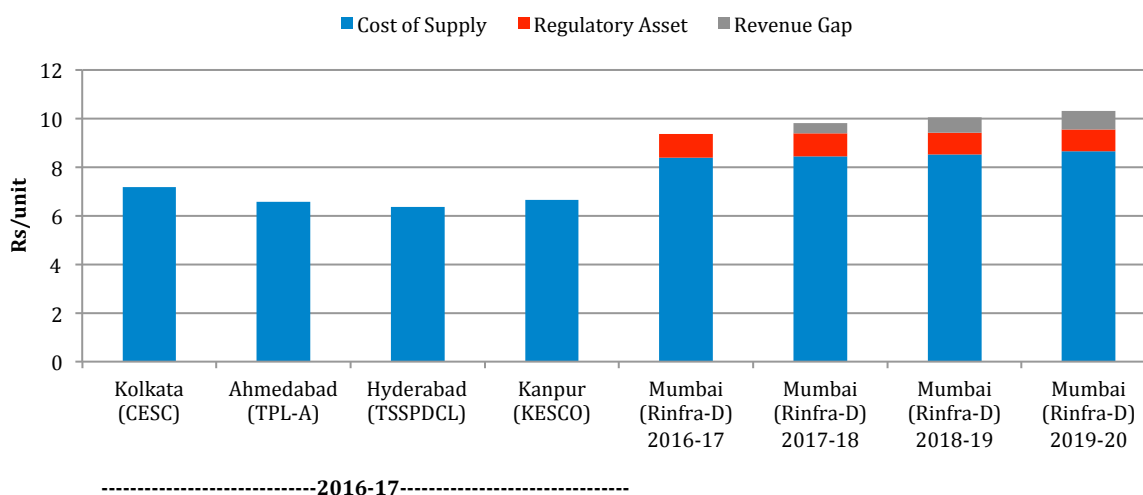
By  
Prayas (Energy Group), Pune  
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## Summary of observations

The operationalization of parallel licensees in Mumbai is a unique experiment in the annals of India's electricity sector. It set high expectations of increasing efficiency and prudent expenditures. Competition was supposed to help counter the inherent incentive for overspending in a 'cost-plus' tariff approach. However, nothing of the subsequent Mumbai experience met these expectations. Instead, the story of parallel licensing in Mumbai is one of litigious utilities, ineffective regulation and tariff-burdened consumers.

Figure 1 shows the average cost of supply for Reliance Infrastructure Ltd.-Distribution Business (RInfra-D) in comparison with that of distribution utilities in a few other cities; RInfra-D's cost of supply (excluding regulatory assets and revenue gap) is higher by about 17% than that in these cities; including regulatory assets and revenue gaps it is higher by more than 30%.

Figure 1: RInfra-D's cost of supply vs. that in other cities in Rs/unit



Note: Proposed tariff taken for all utilities. The ARR ('Cost of Supply'), Regulatory Asset and Revenue Gap have been converted into per unit figures using appropriate sales figures from RInfra-D's MYT petition.

Given this context, we submit that the problems plaguing Mumbai's power sector have their roots in regulatory failures on the following fronts:

### 1. Power purchase planning

As far back as 2005, MERC had directed RInfra-D to enter into firm arrangement for power procurement. This never materialized and instead RInfra-D relied on the short-term power market to meet its power purchase gap. Thus, share of short-term power purchase increased from 5% in 2006-07 to 38% in 2010-11. In spite of such actions being a clear case of planning failure, the regulator allowed all the costs arising out of such short-term power purchase, even in FY 2010-11 when it accounted for 53% of the total power purchase cost.

This high cost power resulted in revenue gaps, and later on regulatory assets. In fact, even before RInfra-D's tariffs were frozen by MERC, by the end of FY 2008-09 it was already claiming a revenue gap of Rs. 1376 crore. RInfra-D signed medium-term PPAs in 2010 but had to be compelled by the MERC to honor them. It finally signed a long term PPA in 2012-13 with VIPL (a sister concern) at a

'cost-plus' tariff, which has already increased by around 60% in the second year of the PPA itself. Even in the proposed MYT period RInfra-D continues to rely on the short-term market for around 20% of its power, which is of concern given the uncertainty of supply and tariff in the short-term market.

## **2. High costs: creation of regulatory assets**

The failure to rein in costs combined with the inability to enforce prudent planning has led to the creation of regulatory assets. The regulatory asset to be recovered at the beginning of FY 2013-14 was Rs. 3866 crore. With a carrying cost of around 14.5% for past six years, the total amount that would be recovered was Rs. 5548 crore (which is 1.6 times the original Regulatory Asset and was higher than the ARR for RInfra-D of 2013-14!). This also explains why despite recovering Rs. 2241 crore in the past three years, the regulatory asset for RInfra-D still stands at Rs. 3257 crore; which along with carrying cost would be Rs. 3972 crore and will be recovered in this third MYT period. However, given the uncertainties regarding RInfra-D sales, under-recoveries are expected to continue and hence also the regulatory asset charge.

## **3. Clarity on tariffs**

Every tariff order of the MERC for TPC-D and RInfra-D since 2008 has been challenged in the Appellate Tribunal for Electricity (APTEL). This has led to a situation where there is no finality and no clarity regarding Mumbai tariffs. In addition, deferring and staggering recoveries (whether of regulatory assets or revenue gap) makes it difficult for consumers to understand their tariff structures and make optimum decisions regarding electricity supply. Delayed decisions by MERC have also contributed significantly towards this information asymmetry. Thus, the present state of things renders it impossible for a concerned citizen to inform herself and participate effectively in the regulatory process.

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## 1. Multi-Year Tariff Petition

### 1.1 Key demands and claims made by the licensee

In its petition for the third control period, Rlnfra-D has claimed aggregate revenue requirement, which increases from Rs. 7227 crore in 2016-17 to Rs. 8083 crore in 2019-10. This implies a revenue gap of Rs. 1326 crore along with unrecovered regulatory asset of Rs. 3257 crore. These amounts would be recovered over the next four years.

Table 1 below lays out the revenue requirement being sought, the average cost of supply, proposed recovery for cumulative revenue gap and of the regulatory asset in the third Multi-Year Tariff (MYT) period (including carrying cost). As can be seen from Table 1, tariff per unit (including recovery) will increase to Rs. 10.31 per unit by the end of the control period. This is without accounting for fuel cost adjustments and any other costs arising out of litigation or other such factors.

**Table 1: Summary of ARR, RAC, revenue gap and sales from Rlnfra's MYT petition for third control period**

Particulars	Notation	Proposed 2016-17	Proposed 2017-18	Proposed 2018-19	Proposed 2019-20
<b>Aggregate Revenue Requirement (Rs. cr)</b>		<b>7227</b>	<b>7465</b>	<b>7742</b>	<b>8083</b>
ACoS (Rs/unit)	A	8.40	8.44	8.52	8.65
<b>RAC recovery (proposed)</b>		<b>993</b>	<b>993</b>	<b>993</b>	<b>993</b>
RA recovery (Rs/unit)	B	0.96	0.94	0.91	0.89
<b>Recovery of revenue gap up to 2015-16</b>			<b>351</b>	<b>550</b>	<b>686</b>
Revenue Gap recovery (Rs/unit)	C		0.42	0.63	0.77
<b>Tariff per unit (Rs/unit)</b>	<b>D=A+B+C</b>	<b>9.36</b>	<b>9.80</b>	<b>10.06</b>	<b>10.31</b>
Own Sales (MUs)	E	8229	8446	8674	8909
Changeover Sales (MUs)	F	2068	2099	2132	2166
Open Access Sales (MUs)	G	73	74	74	75
<b>Total Sales (MUs)</b>	<b>H=E+F+G</b>	<b>10370</b>	<b>10619</b>	<b>10880</b>	<b>11150</b>

As can be seen from Table 2, Rlnfra-D's average cost of supply is already one of the highest in the country even in comparison to other similar urban city areas, some of which are also managed by privately owned distribution companies such as CESC in Kolkata and Torrent Power in Ahmedabad. Rlnfra-D's cost of supply (excluding regulatory assets and revenue gap) is higher by about 17% than that in these cities; with regulatory assets and revenue gaps it is higher by more than 30%.

**Table 2: Average Cost of Supply (ACoS) for other cities**

Rs/unit	Kolkata (CESC)	Ahmedabad (TPL-A)	Hyderabad (TSSPDCL)	Kanpur (KESCO)
FY 2016-17 (petition)	7.19	6.58	6.35	6.66

Note: ACoS has been taken from tariff petitions for 2016-17. TPL-A is Torrent Power Limited-Ahmedabad; TSSPDCL is Telangana Southern Power Distribution Company Limited; KESCO is Kanpur Electricity Supply Company Limited.

## **1.2 Failures at the heart of the Mumbai power sector**

The operationalization of parallel licensees in Mumbai is a unique experiment in the Indian electricity sector. It set high expectations of increasing efficiency and prudent expenditures. However, nothing of the subsequent Mumbai experience met these expectations. In fact, as this submission highlights, things seem to have moved from bad to worse. Seven years since the experiment, Rlnfra-D has an unrecovered revenue gap of Rs. 4583 crore (including the regulatory asset), which is close to 65% of its ARR for FY 2016-17, and it continues to purchase around 20% of its power from short-term sources.

This submission brings out the key issues in planning and regulation that continue to remain unaddressed. It argues that so long as the regulator fails to ensure proper power purchase planning and continues to assure full recovery (with carrying cost!) for all expenses claimed by the licensees; the consumers will continue to bear the burden of very high tariffs, in spite of competition and in spite of technical and commercial losses being low.

This also provides an important lesson for the sector's policy makers who often emphasize on reduction in AT&C losses as the means for improving financial health of distribution companies. The Mumbai experience, however clearly shows that failure in power purchase planning can turn even a low distribution loss business into a financially unviable one.

## 2. Failure to plan for power purchase

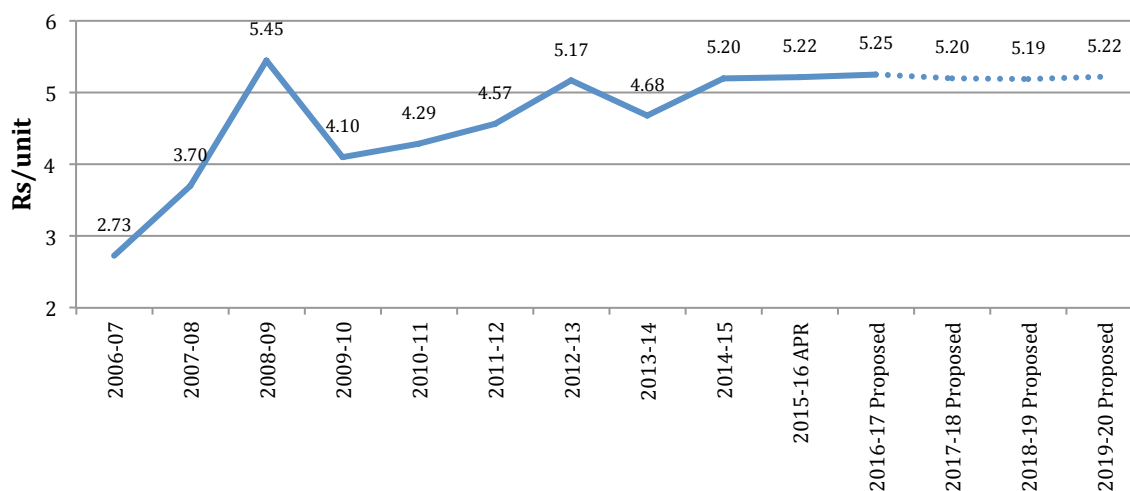
In a well-planned utility operation, power purchase accounts for around 60-70% of the total cost and hence, is one of the biggest factors that influences consumer tariff. Apart from the cost implication, it also plays a major role in ensuring good quality of supply. In this context, it is useful to understand how RInfra-D has dealt with this key issue.

### 2.1 A brief history

The MERC had directed RInfra-D to sign a PPA as far back as 2005; no long-term contract was entered into by RInfra-D till FY 2012-13. In June 2009 Tata Power Company Ltd. (TPC), one of the major generating companies supplying the Mumbai region, decided to withdraw supply from RInfra-D because of failure of the two companies to enter into a contract for this purpose. At this point of time RInfra-D had no firm contracts for power purchase except from its own generating station at Dahanu, which accounted for only 500 MW out of its total demand of about 1500 MW. The refusal to supply power by TPC rendered RInfra-D's power purchase situation highly precarious. Since the rates of short-term power were very high during this period, it also made RInfra-D's tariff significantly higher than that of other licensees in Mumbai. Sensing the huge impact on consumer tariff, the state government was forced to intervene and direct TPC to supply to RInfra-D for at least another year, till it manages some alternate arrangement. In addition to this, a separate set of events led to the operationalization of the "changeover mechanism" in October 2009, which gave consumers the option of choosing supply from TPC-D or RInfra-D.

In such a scenario, one would hope that the licensee and the regulator would ensure proper power purchase planning and more efficient operation. One would also expect the competitive environment ushered in through parallel licensee mechanism to further reduce costs. Unfortunately, none of this has happened.

Figure 2: Changes in average power purchase cost of RInfra-D



Note: True-up figures as approved by the MERC. Dotted lines depict MYT projections.

It can be seen from Figure 2 above that the average cost of power purchase doubled between FY 2006-07 to FY 2008-09 and, barring a few exceptions, has remained at more than Rs. 5 per unit for most of the past two control periods. This has had a huge impact on both consumer tariffs as well as regulatory assets.

## 2.2 Power Purchase Planning by RInfra-D

### Medium Term Power Purchase

As mentioned earlier, in June 2009, TPC-G informed RInfra-D that generation would be unavailable to it starting April 1, 2010. In July 2009, the MERC approved procurement under medium term power purchase via competitive bidding for RInfra-D. Table 3 provides the quantum for medium term power purchase as approved by MERC and as contracted by RInfra-D<sup>1</sup>. As the table shows, in none of the years has the licensee ever contracted the entire quantum that was approved by the Commission. Thus, in 2010-11, its short-term power purchase accounted for 38% of the total quantum and 53% of the power purchase cost.

**Table 3: Medium term power purchase-quantum approved and signed by RInfra-D**

Period	Approved by MERC (MW)	Capacity contracted (MW)	Balance un-contracted quantum (MW)
Oct 2009 to Mar 2010	850	Nil	850
FY 2010-11	1000	Nil	1000
FY 2011-12	1000	315	685
FY 2012-13	1200	449	781
FY 2013-14	1200	449	781

During the medium term bidding process, RInfra-D discovered generators willing to supply from April 1, 2012 at a levelised tariff of around Rs 4.8/unit. While still having no long-term contracts, in 2010 RInfra-D signed medium term PPAs with Wardha Power Company Limited (WPCL), Abhijeet MADC Nagpur Energy Pvt. Ltd. (AMNEPL) and Vidarbha Industries Power Limited (VIPL)<sup>2</sup>.

By December 2010, it was seeking to terminate these PPAs, and planning to buy power from Global Energy Private Ltd. (GEPL) and an increased quantum from VIPL. However, this was not allowed by the MERC since this would have violated the bidding process norms, and the original medium term PPAs were continued. The MERC directed RInfra-D to sign PPAs for the balance of the approved quantum (almost 781 MW in FY 14), but this was also not done.

### No long term PPA till FY 12-13

As mentioned above, the MERC had directed RInfra-D to sign a PPA as far back as 2005; no long-term contract was entered into by RInfra-D till FY 2012-13. Already by 2008-09, with reduced TPC-G supply, RInfra-D's short-term power purchase had increased to 18% and it was buying this power at a

<sup>1</sup> Order in Case 94 of 2008 dated July 21, 2009.

<sup>2</sup> RInfra-D came to MERC for approval of a long-term PPA with its own plant at Dahanu (DTPS) in March 2008. DTPS had been supplying power to (only) RInfra-D since 1995 and this approval was more of a compliance measure and not the addition of any new source of power.



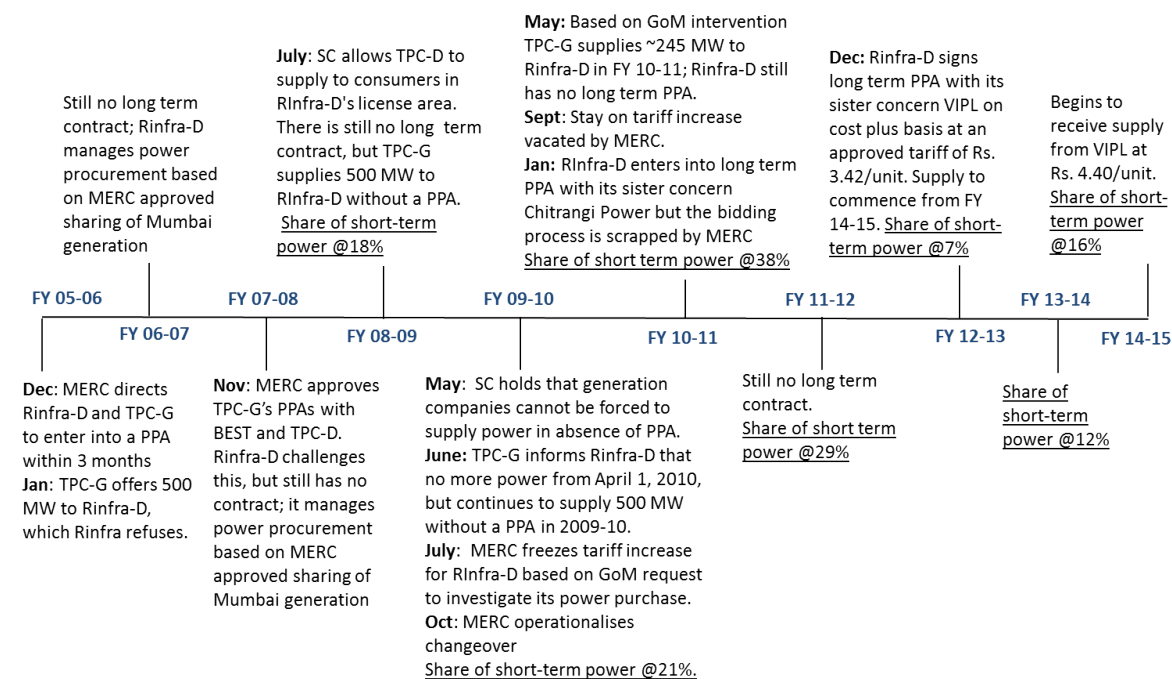
cost of Rs. 8.7/ unit. As Figure 3 below shows, this failure to contract long-term power increased its dependence on short-term power, which at that time was very costly.

Between FY 2007-08 to FY 2011-12 the share of short-term power purchase in Rlnfra’s total power purchase basket increased from 5% in 2007-08 to 38% in FY 2010-11, as shown in Figure 4.

Interestingly, during this same period the Maharashtra State Electricity Distribution Company Ltd. (MSEDCL), which is the state-owned licensee in the same state, contracted more than 5000 MW of capacity on long term basis through competitive bidding under section 63 at levelised tariffs in the range on Rs. 2.5 - Rs. 3.5 per unit.

The following figure provides a timeline of long-term power purchase for Rlnfra-D:

**Figure 3: Timeline of events up to Rlnfra-D signing a long-term PPA**



Note: TPC-G is Tata Power Company Ltd.-Generation Business; TPC-D is Tata Power Company Ltd.- Distribution Business; PP is power purchase; PPA is power purchase agreement; SC is the Supreme Court and GoM is Government of Maharashtra<sup>3</sup>.

Eventually, Rlnfra-D initiated competitive bidding for long-term power purchase for the first time in FY 2009-10 for supply from 2014-15 onwards. It discovered tariff between Rs 3.4 and Rs 4.5 per unit. The bidding round was however cancelled by the MERC on account of process violations. Finally, Rlnfra-D signed a 25 year PPA with VIPL starting from April 1, 2014. This PPA was not based on competitively discovered tariff, but on ‘cost-plus’ basis.

Rlnfra-D claimed at the time of the approval of the PPA that VIPL tariffs were competitive<sup>4</sup>, but as Table 4 shows the tariff has already increase by almost 60% in just the first two years of the PPA.

<sup>3</sup> Orders in the following cases were referred to: Case no. 87 & 88 of 2006, 30 of 2007; Case 137 of 2008; Case 94 of 2008; Case 53 of 2010; Case 11 of 2011; Case 42 of 2011; Case 29 of 2011; Case 2 of 2013;

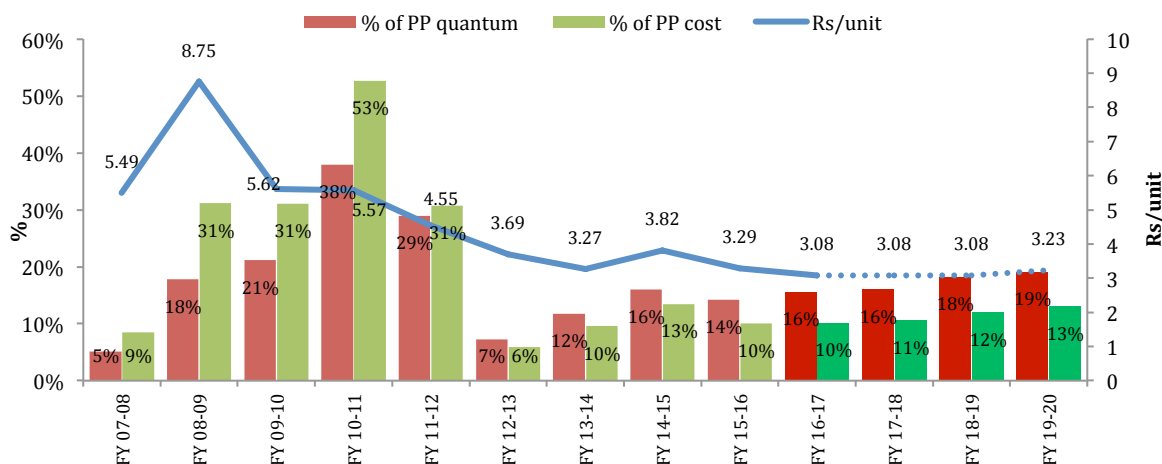
<sup>4</sup> “Rlnfra-D, while submitting the rationale for procurement of power from VIPL, mentioned that it has undertaken the competitive bidding process for procurement of long-term power on two different occasions, but, for the specific reasons as

**Table 4: VIPL tariffs (Rs/kWh)**

Source	Notation	FY 2014-15	FY 2015-16
From MYT Order in Case 9 of 2013	A	3.42	3.46
As claimed by Rlnfra in MTR Order in Case 4 of 2015	B	5.94	4.41
As approved in MTR Order in Case 4 of 2015	C	4.38	4.12
As claimed in present MYT petition	D	4.40	5.53
<b>Per cent increase in tariff</b>	<b>E=(D-A)/A</b>	<b>29%</b>	<b>60%</b>

Thus, for a period of almost ten years, Rlnfra-D did not have any firm arrangement (except with its Dahanu plant) for procuring power at economical rates. When it finally entered in to one such contract, it was not based on competitive discovery of tariff, but on a cost-plus tariff basis; and that tariff too has been increasing ever since. On account of this power being at higher rates, Rlnfra-D is now forced to back down VIPL while having to pay for the fixed costs. All this in turn is contributing towards further increases in costs and hence regulatory assets, as explained in the following section.

**Figure 4: Short term power purchase by Rlnfra-D**



Note: The last 6 years are from the present MYT petition. All the figures up to FY 2013-14 are approved true-ups by MERC.

**Short-term power purchase**

Short-term power purchase from FY 2008-09 to FY 2011-12 resulted in high costs and the creation of regulatory assets. This dependence was largely on account of failure to contract long-term power at economical rates, though during the same period other companies such as MSEDCL and GUVNL contracted significant long-term capacities at very economical rates. Curiously, even after contracting capacity on long-term basis in FY 2012-13, Rlnfra-D continues to rely heavily on short-term market, because its long-term procurement is also at very high rates. While currently short

*communicated to the Commission, Rlnfra-D was not able to successfully sign a PPA with any developer...Rlnfra-D submitted that given the numerous challenges, the overall bidding scenario for power procurement is in turmoil and the prices are likely to be higher if the bidding is conducted on a long-term basis under the present industry circumstances...Thus, the twin objectives of reliability of receiving the power and affordability of the cost are unlikely to be realized in the competitive bidding process. Rlnfra-D submitted that in view of the foregoing, Rlnfra-D has accepted the offer of VIPL for procurement of power on long-term basis... Rlnfra-D submitted that it strongly believes that the VIPL offer is competitive compared to the Case-1 tariffs recently discovered in India and is in the best interest of the consumers” Case no. 2 of 2013*

term market rates are lower than that of VIPL (Rs. 3.3/unit vs. Rs. 5.5/unit for VIPL in 2015-16), this is not a certainty and the consumer will anyway have to bear the fixed cost of VIPL.

### **2.3 Transmission Constraint**

Ever since the 2009 crisis emerged, one of the issues that were raised in the context of bringing power into Mumbai was transmission capacity. The licensees in Mumbai claimed that there was a physical constraint regarding the quantum of power that can be brought into Mumbai and this naturally limited the power procurement options. In addition to this, islanding of Mumbai power system is also one of the factors that have implications for power purchase planning. At one point of time, it was claimed that if the transmission bottleneck is not resolved there would be load shedding in Mumbai. However, some transmission capacity was eventually added and Mumbai demand did not grow at the rates that were anticipated and hence the bottleneck never turned into a full-fledged crisis. However, whether these issues are limiting power procurement options even today and whether the concerned agencies are taking necessary steps in this regard, is an area that the regulator has never fully explored.

Presently, the aggregate maximum capacity that can be transmitted to Mumbai through inter-connecting network is 1710 MW (without safety margin) and 1430 MW (with Transmission Reliability Margin). Thus, there is a constraint on how much capacity can be brought into Mumbai. This has resulted in several problems, most recently in summer 2014, when the Mumbai system's power requirement from outside was 1893 MW<sup>5</sup>, due to shutdown of TPC-G Unit 6 and forced outage of Unit 8. This led all three distribution licensees buying power from TPC-G Unit 6 which is otherwise extremely expensive. This transmission constraint has also limited the ability of the distribution licensees to sign economical PPAs.

Had the Mumbai licensees and the regulator undertaken a thorough exercise to evaluate all possible power purchase options, the transmission issues could have been resolved in a timely manner and the concerned agencies could have been held accountable for their actions. The MYT exercise was an opportunity to explore this issue. However, this again seems to be an area where both licensees and regulator seem to be waiting for another crisis to emerge.

### **2.4 Power Purchase Plan**

The earlier section has elaborated on the importance of power purchase planning and its significance in the Mumbai context. Acknowledging this importance, Regulation 19.9 of the 2015 MYT regulations requires all distribution licensees to submit a ten year demand-supply forecast. Given the possibility of migration, continued high reliance on short term market for power procurement, increase in open access and rapid reduction in renewable energy prices, it becomes crucial to develop a plan that factors in these uncertainties. In the absence of such realistic projections there is a danger of underestimating costs that would arise on these accounts and would lead to false representation of sales and demand.

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<sup>5</sup> Order in Case no. 89 of 2014 dated March 20, 2015.

In this context, it was suggested that Rlnfra-D should present a few scenarios for projecting its demand and power purchase plans based on various factors (migrations, open access, net metering, etc.), under various assumptions such as the transmission constraint, islanding requirements, etc. in case the same has any impact on the power procurement options. However, this was not provided. Such scenarios would have been instrumental in helping consumers understand how each of these issues can impact the licensee's sales, power purchase and hence, its revenue requirement.

### 3. Failure to control costs

As seen in the previous section, from 2007-08 to 2010-11, RInfra-D relied heavily on short-term power purchase; this also led to high costs for the utility. Power purchase costs were very high and though the regulator was critical about this aspect at times, all costs were eventually allowed. This section highlights the impact on costs due to inefficiencies being passed on to consumers as tariff.

#### 3.1 From high cost power purchase to regulatory assets

MERC stayed RInfra's tariff increase in FY 2009-10 in response to a Government of Maharashtra letter asking it to conduct an investigation into RInfra-D's power purchase and capital expenditure. The delay in tariff revision on account of the investigation is frequently cited as one of the major reasons for the creation of regulatory assets. However, this is only the half-truth as by the end of FY 2008-09 itself the licensee was already claiming a revenue gap of around Rs. 1376 crore<sup>6</sup>. Lack of tariff increase in FY 2009-10 only added to this existing asset. Further, the regulatory asset was created in the first place as a result of the complete mismanagement of power purchase planning, which resulted in extremely high power purchase costs. When the regulatory asset was finally calculated, it took into account all unrecovered amounts and revenue gaps up to 2011-12, including under-recovery during the period when on account of the MERC investigation no tariff increase was allowed.

The consumer, thus, has been burdened with all the years of extremely high power purchase cost, which was incurred on account of lack of planning and timely actions by utilities and the regulator to ensure procurement of power at reasonable rates. Thus, the inability to plan the power purchase has directly led to creation of regulatory asset.

Had RInfra-D managed to secure power at reasonable rates by 2009-10, the impact of the tariff freeze would not have been as large. In fact, perhaps the tariffs would not have been frozen at all if the power purchase had been well managed, since one of the main reasons for the investigation ordered by the MERC into RInfra-D's affairs was the high cost of short term power purchase and the inability to sign a long term PPA.

#### 3.2 Regulatory assets – an unending saga

In the last MYT order, cumulative regulatory asset with carrying cost to be recovered at the beginning of the 2013-14 was **Rs. 3866 crore**. This recovery was to be spread over 6 years, from FY 2013-14 to FY 2018-19, and Rs 924 crore was to be recovered every year from the consumers connected to RInfra-D wires. With the carrying cost of around 14.5% for six years, the total amount that was to be recovered from 2013-14 onwards was **Rs. 5548 crore** (this is 1.6 times the original Regulatory Asset and was higher than the ARR for RInfra-D of 2013-14!).

This also explains why despite recovering Rs. 2242 crore in the past three years, the regulatory asset for RInfra-D still stands at Rs. 3257 crore; which is to be recovered in this third MYT period. Table 5 provides the RAC recoveries by RInfra-D for the last three years:

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<sup>6</sup> MERC Order in Case no. 121 of 2008 dated June 15, 2009.

**Table 5: Regulatory Asset allowed and recovered**

<b>Particulars</b>	<b>FY 13-14</b>	<b>FY 14-15</b>	<b>FY 15-16</b>	<b>Total</b>
RA Recovery Allowed	925	925	925	2774
Actual RA recovery	498	885	859	2242
Under recovery	427	40	66	533

RInfra-D in the present petition has asked for the recovery to be spread over the next 4 years of the, i.e. the third control period. Along with carrying cost, this would amount to Rs. 3972 crore to be recovered in this third MYT period. However, with the uncertainties regarding its consumer base due to open access, solar rooftop and RInfra-D's unwillingness to realistically estimate such loss of sales, under-recoveries are expected to continue and hence also the regulatory asset charge..

## 4. Regulatory failure

### 4.1 The “pass through” phenomenon

It is the responsibility of the regulatory commission to ensure that costs claimed by the licensees are a result of ‘prudent expenditure’ since these will be recovered from the consumers through tariff. The increasing cost of supply in Mumbai clearly shows that MERC has not been successful at reigning in the costs. The legal precedent of recovering the costs (not limited to past losses) even from consumers choosing to migrate has rendered the option of changeover meaningless. Additionally, allowing all expenditures of distribution companies, without any regard to planning failures or efficiency improvement, has meant that the benefits of competition have been out of reach for the consumers. Assured of regulatory assets, the licensees have continued their ‘business as usual’ approach, and notably none of the Mumbai licensees have made any changes in their power procurement strategy.

### 4.3 Failure to insist upon compliance with regulations

#### Separation of Accounts and Accounting Statements

As in previous years, RInfra has provided only an allocation statement, which allocates expenses and revenue between its Generation, Transmission, Distribution and other unregulated businesses. This is in spite of the regulations mandating that separate Accounting Statements be prepared for each licensed business.<sup>7</sup> Such separation is crucial to ensure that no costs arising out of any other business activity are being imposed on the consumers of the regulated business. It is also important for correctly estimating income tax and any other expenses such as say employee costs, which can be shared across businesses.

In this regard, a demand for submitting the separate accounting statements was made during the Technical Validation Session, but the same has not been provided. It must also be noted that the regulations empower the MERC to reject the petitions if the separate Accounting Statements are not submitted for each licensed business. The Commission however, has neither explicitly exempted R-Infra from the applicability of regulations in this regard, nor has it insisted on compliance.

#### Data Gaps

The MYT regulations require the Commission to undertake the Technical Validation Sessions (TVS) in the presence of the consumer representatives for all tariff related matters. The main purpose of the TVS is to scrutinize the completeness of the petition, so that it can facilitate an effective and informed public process. During the TVS conducted for the present petition, Prayas (Energy Group) had sought data on several important issues, such as a power purchase plan (See section 2.4) and

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<sup>7</sup> Regulation 2.1 (1) defines Accounting Statement and states “*Provided that separate Accounting Statements shall be prepared and submitted to the Commission for each licensed Business in accordance with the Licence conditions, and for each regulated Business : Provided further that, in case separate Accounting Statements are not submitted for each licensed Business in accordance with the Licence conditions and for each regulated Business for the Financial Year (FY) 2016-17 onwards, the Petitions filed by the Generating Company or Licensee or MSLDC, may be rejected by the Commission after giving the Petitioner a reasonable opportunity of being heard*”.

In addition, Regulation 5.2 states “*The Petitioner shall submit separate audited Accounting Statements along with the Petition for determination of Tariff or Fees and Charges and Truing-up under these Regulations.*”

sales/revenue, but this was not made available. This included critical data that the licensee must maintain in order to run the business.

For example, quarterly data on category-wise changeover, migration, open access and new consumers, and their impact on the licensee's revenue for the past MYT period were asked for. This data is important to understand the sales migration and the changeover/switchover phenomenon, especially its impact on the revenue as well as sales projection for this control period. Given the current context, it is even more important since the claims of regulatory assets, revenue gaps and loss of cross subsidy are based on this data, but the data is spread across different petitions/orders and is not easily accessible. While this data should ideally be maintained on the licensees' websites, nevertheless it should have at least been made available to the consumers during the tariff determination process.

It must also be noted that the request for all the above mentioned data was made to RInfra-D in front of the MERC. While the licensee has not provided the information on its own, the Commission has also failed to insist on compliance.

#### **Escalation factor for O&M expenses**

Regulations 72 and 81 provide the formula for calculating the escalation factor to be used for escalating the Operation and Maintenance (O&M) expenses for the duration of the MYT. The same formula is to be used to calculate the escalation factor for generation companies. RInfra-D has not used this formula; however it has provided the calculation of the escalation factor and the consequent O&M expenditure using the methodology of the MYT regulations. From a comparison of the calculation of the O&M escalation factor as provided by RInfra-D and Maharashtra State Power Generation Company Ltd. (MSPGCL), one can see that the "actual point to point inflation" of the regulations has been interpreted differently by the two.

While RInfra-D has taken the average of the monthly inflation from April to March to arrive at inflation for the previous year, MSPGCL has taken the Year-on-Year inflation for March 2015 (i.e. change in index in March 2015 over March 2014) as the inflation for the previous year. These give two very different values: using the same regulations, RInfra-D has calculated an escalation factor of 2.75%, while MSPGCL has calculated it as 0.11%.

The Commission could have easily avoided such confusion by clearly spelling out the methodology assumed in its regulations and by directing the licensees to provide calculations based on the same. However, the same was not done leading to different assumptions.

#### **4.3 Failure to provide clarity on tariffs**

##### **Lack of monitoring and reporting of changeover sales**

Mumbai is the only city in the country to have operationalized parallel licenses. Given the uniqueness of this experiment, one would expect that the Commission would share all the data along with important regulatory and legal decisions. In fact, ideally, the Commission should publish reports explaining such developments for the benefit of the consumers and the sector at large.



More importantly, such an arrangement offers different choices to consumers and hence, the Commission should also be tracking and actively monitoring how consumers are responding to such initiatives. It goes without saying that since changeover/switchover affects consumer tariffs, it is imperative that such data be made more easily accessible, rather than it being shared, if at all, only through tariff petitions and orders.

In this regard, it must be stated that Prayas (Energy Group) had demanded such data, but the same was not made available (See section 4.2). Thus, neither is the commission monitoring such crucial developments, nor is it directing the licensees to make such crucial information public.

### **Deferring recovery to avoid tariff shock**

“The Regulatory Asset Charge is an outcome of regulatory asset, which is approved by the State Commission<sup>8</sup>”. The tariff increase necessary to cover the revenue required is usually deferred by MERC if considered too large, i.e. if it likely to cause a ‘tariff shock’. Protecting consumers from a ‘tariff shock’ could be seen as a laudable objective. However, creation of regulatory assets shrouds the failure of the Commission in controlling costs and holding the licensees accountable for their planning decisions. In addition, it not only allows for full recovery of such costs but also adds the burden of carrying cost. The average consumer is, thus, unaware of the real impact of this deferment and is also unaware of the tariffs he will have to pay in the future. Understanding the impact on tariff is made all the more difficult due to the many different components of Mumbai tariffs.

### **Applicability of CSS and RAC- delayed decision**

Via its interim order in October 2009, MERC operationalised changeover, allowing consumers to be connected to the wires of one licensee while receiving supply from another<sup>9</sup>. Even before operationalising changeover, MERC had estimated savings savings to the tune of 13-41% for consumers moving from Rlnfra-D to TPC-D. This was done since *“for the consumers in the Mumbai licence area to benefit from the parallel licensee situation prevailing now, the shift of consumers from one licensee to another needs to be facilitated. Illustrations are provided on the mechanism of levy of base tariff, wire charges and wheeling losses for use of Rlnfra-D’s wire network by TPC-D for supply to different consumer categories in the Annexures to this Order, so that the consumers can take appropriate decision to their benefit.”*<sup>10</sup>

By June 30, 2011, 1.59 lakh consumers had migrated from Rlnfra-D to TPC-D; of these, 1.54 lakh were connected to the Rlnfra network but receiving supply from TPC-D. In July 2011, MERC decided that Regulatory Asset Charge (RAC) for recovery of regulatory asset of Rlnfra-D and Cross-Subsidy Surcharge (CSS) will be payable by changeover consumers<sup>11</sup>.

Thus, almost 21 months after the MERC encouraged consumers to ‘benefit’ from the tariff differential, it decided that additional charges will be payable by changeover consumers. While CSS

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<sup>8</sup> APTEL Order in appeal no.294 of 2013, appeal no.299 of 2013, appeal no.331 of 2013 and appeal no.333 of 2013 dated November 26, 2014.

<sup>9</sup> Interim Order in Case 50 of 2009 dated October 15, 2009.

<sup>10</sup> Clarificatory order in Case 121 of 2008 dated July 22, 2009.

<sup>11</sup> Order in Case 72 of 2010 dated July 29, 2011.

became applicable immediately, RAC becomes applicable from 2013-14, with regulatory asset calculated up to FY 2011-12. Thus, while consumers knew a RAC would have to be paid, the uncertainty over the amount continued well into 2013-14. It must be noted here that Rinfrac-D had brought up the problem of recovery of CSS and RAC before MERC in April 2010, but the Commission delayed the decision<sup>12</sup>.

### **Litigation**

In the case of Mumbai, almost every tariff order for TPC-D and Rinfrac-D since 2008 has been challenged in the APTEL<sup>13</sup>. In fact, if one were to consider all APTEL judgments for two years (2013-14 and 2014-15), one would find that appeals from MERC form the single biggest chunk of appeals from a state commission, and of these appeals almost a third come from Mumbai's private distribution companies. In a regulatory forum where decisions are taken after giving all stakeholders due opportunities to present their case and where reasoned orders factoring in all objections and suggestions are issued, it is expected that there would be greater acceptance for such decisions. Hence, such a high rate of dissatisfaction with the regulatory decisions brings into question the effectiveness of the regulatory forum in its adjudicatory role. These appeals by the distribution companies also lead to significant costs for consumers, not only in terms of the legal fees (which is recovered from consumer tariff), but also on account of uncertainty and reversal of many regulatory decisions.

Public participation is enshrined in the Electricity Act; however, for effective public participation there needs to be adequate information available in a clear language, in the form of orders, datasets, etc. The situation in Mumbai is such that there is no finality, no information and no clarity regarding the fate of Mumbai tariffs. Thus, the present state of things renders it impossible for a concerned citizen to inform herself and participate effectively in the regulatory process.

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<sup>12</sup> Order in Case 7 of 2010 dated September 10, 2010.

<sup>13</sup> Only the Order in Case no. 113 of 2008 has not been challenged.

## 6. Conclusion

Competition was to be the panacea for inefficiency- it was supposed to counter the inherent incentive for over spending in a “cost plus” tariff approach. It was also expected to improve supply and service quality as suppliers try to attract consumers by offering better services. With low distribution losses, near universal metering and coverage and no share of highly subsidized consumers categories such as LT agriculture, the stage was set for ushering in competition in Mumbai. However, close to seven years of parallel licensee operation, the changeover mechanism has failed to improve services or reduce tariffs. Thus, in spite of being an ideal candidate, competition has failed Mumbai.

As the analysis above has shown, this is largely because of regulatory failure in the following areas:

- In spite of huge cost implications, power purchase planning has not been undertaken by the licensee and not insisted upon by the regulator. In fact, past failures in power purchase planning have been condoned by allowing them to be recovered through tariff, and when tariffs became too high, such costs have been passed through as regulatory assets.
- Regulations are not followed by licensees and not insisted upon by the regulator.
- Recoveries are allowed to be deferred and key regulatory decisions are taken with much delay, both of which result in unclear signals to consumers regarding the fate of their tariffs.
- There is no incentive for licensees to undertake prudent expenditure in a model where all inefficiencies are deemed ‘pass-through’ by the regulator and made recoverable through tariff.
- Endless litigation on Mumbai tariff orders has meant that there is no finality and no clarity. This has made effective participation for consumers not only difficult but almost impossible.

The key learning of the Mumbai experiment is that the regulator is unable to manage distribution companies, make them follow the regulations, rein in their costs or hold them accountable for the inefficiencies. Given the flux in the sector with increasing role of renewables, open access, etc., the electricity sector is on its way to becoming even more complex. Thus, the already difficult task of regulation is set to become even harder, though the present regulatory institution seems far from being ready for dealing with such challenges.