BEFORE THE MAHARASHTRA REGULATORY COMMISSION, MUMBAI

Filling No:________
Case No. 05 of 2017

Date: 16th March 2017

IN THE MATTER OF

Petition filed by Reliance Infrastructure Limited (Generation) (RInfra-G) and Reliance Infrastructure Limited –Distribution (RInfra-D) under Section 86 (1) (a), 86(1) (b) of EA 2003 and Regulation 20.1 of MERC MYT Regulations, 2015 for approval of Power Purchase Arrangement between Reliance Infrastructure Limited–Generation (RInfra-G) and Reliance Infrastructure Limited–Distribution (RInfra-D) - Case No. 05 of 2017

Reliance Infrastructure Limited (RInfra) **Petitioner**

Prayas (Energy Group), Pune **Consumer Representative / Applicant**

SUBMISSION FROM PRAYAS (ENERGY GROUP) REGARDING THE MATTER MENTIONED ABOVE.

1. As per the MERC notice dated 09.02.2017 (No. MERC/Case No.05 of 2017/01525), it has been informed that RInfra-G and RInfra-D have filed a Petition on 23.12.2016 under Section 86 (1) (a), 86(1) (b) of EA 2003 and Regulation 20.1 of MERC MYT Regulations, 2015 for approval of Power Purchase Arrangement (PPA).

   The main prayers of the Petitioner are as under:
   a. Approve the Power Purchase Arrangement (Annexure-7 along with exhibit-1) relating to supply of 500 MW by RInfra-G to RInfra-D for the period 23-02-2018 to 15-08-2036;
   b. For such further and other reliefs as the nature and circumstances of the case may require;
   c. Pass any other Order as may be appropriate under the circumstances.

   A hearing in this regard was conducted on 28th February 2017. Prayas (Energy Group) was not able to participate in that hearing but had requested the commission to allow it time to make a submission. This submission is in the same regard.

2. **Demand assessment**: Power purchase planning is one of the most crucial functions of a distribution company as it accounts for more than 70% of its overall revenue requirement. 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 demand forecast plan that factors in all these uncertainties. In the absence of such planning, there is a danger of underestimating costs that would arise on these accounts and it can lead to incorrect representation of sales or demand. In this context, during the MYT process conducted last year, it was suggested that RInfra-D should present a few scenarios for projecting its demand and power purchase plans based on factors such as migrations, open access, net metering, etc., under various assumptions regarding the transmission constraints and islanding requirements. However, this was not provided. Such scenarios would have been helpful in understanding how each of these issues can impact the RInfra-D's sales, and hence its power purchase decision. Therefore, as a first step towards better planning, we request the commission to direct RInfra-D to submit such scenarios and in the context of the most realistic scenario, evaluate the need and prudence of any long term power procurement.

3. **Bidding for competitive discovery of tariffs**: RInfra-G has claimed that its tariff is competitive vis-à-vis tariffs discovered under case-1 bidding by a few state distribution companies. It is important to note that tariff discovered by a particular distribution company is influenced by that particular company's performance and constraints. Further, contrary to RInfra-G's claims, the average per unit cost of its coal-based generation is much higher than the average cost of most of the other coal-based plants for which PPAs have been signed recently. Table 1 shows the average power purchase cost for coal-based thermal capacity contracted by various states between 2012 and 2017. In case of most states, with the exception of Uttar Pradesh and Bihar, the average cost of such capacity is below Rs. 4 per unit.

Table 1: Average power purchase cost for coal-based thermal capacity added by various states between 2012 and 2017

State	Average power purchase cost approved for the 2016-17 (Rs. per unit)	Share of private capacity in the total capacity added between 2012 and 2016
Punjab	3.11	91%
Gujarat	3.11	38%
Madhya Pradesh	3.44	50%
Rajasthan	3.46	59%
Maharashtra	3.66	64%
Haryana	3.72	66%
Bihar	4.05	30%
Uttar Pradesh	4.44	70%

Source: PEG compilation from various state regulatory orders. Power purchase costs as approved by the respective commissions.

Additionally, cost-plus projects have often found it difficult to stick to tariff that they promise at the time of approval and RInfra-D's PPA with its other sister concern, Vidarbha Industries Power Ltd. (VIPL), is a case in point. RInfra-D has signed a long-term (25 year) PPA with VIPL on 'cost-plus' basis. At the time of the approval of this PPA, *'RInfra-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. RInfra-D submitted that in view of the foregoing, RInfra-D has accepted the offer of VIPL for procurement of power on long-term basis … RInfra-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 (sic)'* (MERC order dated 20th February 2013 in case no. 2 of 2013).

However, since its approval, the tariff for VIPL has increased by 60%, as shown in **Table** below.

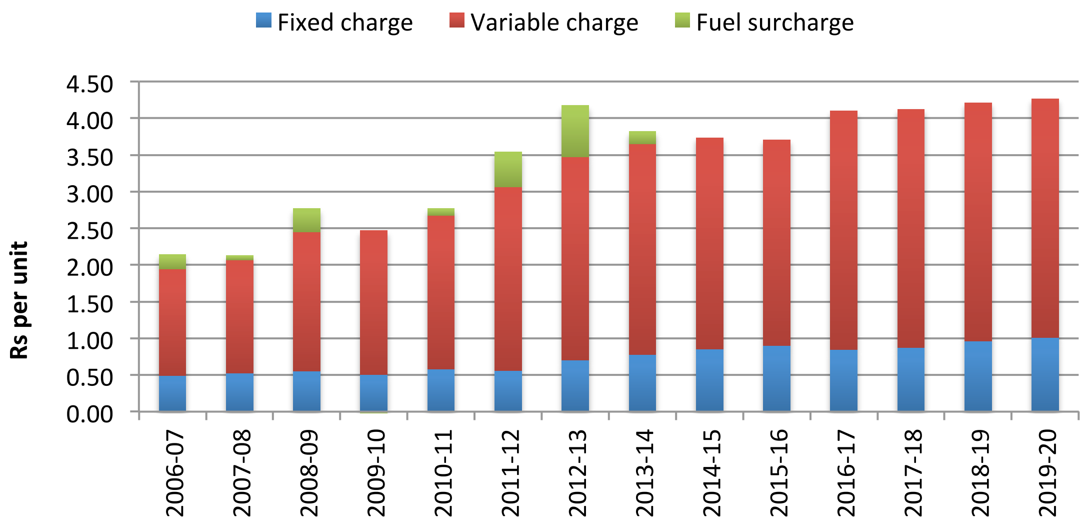
Table 2: Increase in VIPL's tariff (Rs. per unit) after signing an agreement

Source and date	Notation	2014–15	2015–16
VIPL claimed (March 2015)	A	4.06	4.32
MERC approved for VIPL (March 2015)	B	3.92	4.14
VIPL claimed (June 2016)	C	6.28	5.78
MERC approved for VIPL (June 2016)	D	4.79	4.65
Increase in tariff claimed (%)	**E=(C-B)/B**	**61%**	**40%**

Source: MERC orders in Case no. 9 of 2013, Case no. 4 of 2015, and RInfra's petition in Case no. 34 of 2016.

Further, if one looks at DTPS tariff itself, one can see that for the last decade or so, both the fixed and variable charge has constantly been rising. Figure 1 below shows how the fixed and variable charge for DTPS has varied since FY 2006-07. As can be seen from the figure, tariff for DTPS has been continuously increasing.

Figure 1: Fixed and variable charge for DTPS since 2006-07

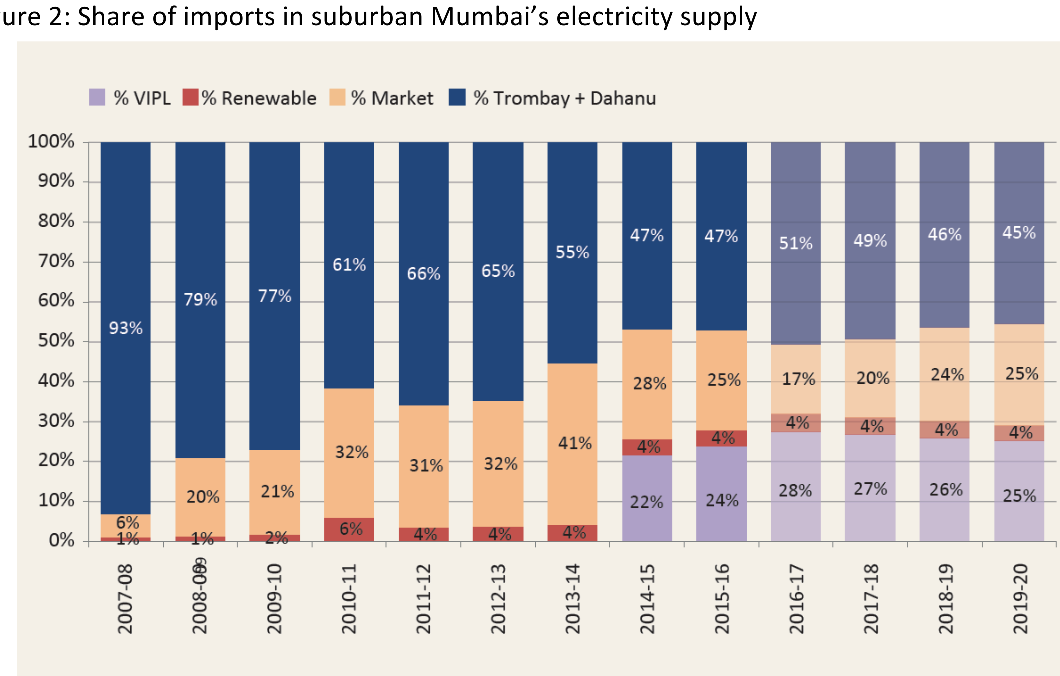


Further, the clause 5.2 of the National Tariff Policy notified on 28th January 2016 clearly states that: "*All future requirement of power should continue to be procured competitively by distribution licensees except in cases of expansion of existing projects or where there is a company owned or controlled by the State Government as an identified developer and where regulators will need to resort to tariff determination based on norms provided that expansion of generating capacity by private developers for this purpose would be restricted to one time addition of not more than 100% of the existing capacity.*"

Thus, given such policy mandate, and the difficulties in regulating cost-plus tariffs, we request the commission to direct RInfra-D to undertake any long-term power procurement only through competitive bidding. DTPS can participate in such a process and if found to be competitive can be considered accordingly.

4. **Islanding**: One of the grounds claimed for approving the proposed contract is its utility in ensuring the islanding scheme for Mumbai. For historical reasons, Mumbai had its own independent electricity grid, which is connected to the Maharashtra state grid through the transmission network. However, since many years Mumbai has been importing almost half of its power from outside. Figure 2 below shows the share of power purchase coming from outside as a percentage of total purchase undertaken by RInfra-D and TPC-D since 2007-08.

Figure 2: Share of imports in suburban Mumbai's electricity supply



Source: MERC tariff orders for multiple years. Note: Power purchase figures are audited actuals as approved by MERC; from 2016-17, they are as approved by MERC based on estimates of licensees. 'Imported from outside Mumbai' is the net electricity coming into suburban Mumbai through the transmission network, and includes VIPL, medium-term power purchase contracts, short-term market purchases, sales outside licence areas, and the imbalance pool purchases.

In light of these facts it becomes crucial to evaluate the feasibility and significance of islanding given that half of the power is anyway imported from outside. Therefore, there needs to be a public process to evaluate the feasibility, need as well as the costs of islanding. Only after such public consultation can any decision regarding power procurement to facilitate islanding should be taken.

5. **Transmission constraint**: This has been a long-standing problem in Mumbai and remains unresolved even today. It limits procurement options and helps justify pre-identified cost-plus contracts. The fact that there is a constraint on transmission capacity and that it affects the ability of the distribution licensees to sign economical PPAs, has been well known for more than a decade now. Curiously though, as the Table 3 below shows, the licensees have raised this issue only to justify signing pre-identified contracts, often with sister concerns (which are claimed to be the best option in the light of the constraints) and extending them, but never as an issue that needs to be resolved so as to allow more options for power procurement.

Table 3: The transmission constraint and power purchase planning in Mumbai

Case No.	Date	Details	Capacity	Comments
27 of 2005	July 2006	Power purchase agreement between BEST and TPC	800 MW	When asked by the MERC to substantiate that this PPA is the most cost-effective and the best option, BEST submitted that one of the reasons was 'severe constraints on transmission system for purchase power from other regions' and thus, 'it is prudent for BEST to adopt TPC as supplier of power till such time as economic and reliable alternative is identified (sic)' (page 5 of 9).
1 of 2010	September 2010	PPA between BEST and TPC	Addition al 100 MW	'BEST's move to tie-up the additional capacity of 100 MW from TPC with effect from April 1, 2010, will actually help to protect the interest of its consumers in Mumbai Island city, and shields them from the fluctuations of the power exchanges, since this power is being sold by TPC-G to BEST at regulated rates determined by the Commission. Further, had BEST not contracted this additional capacity from TPC-G, then the capacity may have become spare capacity, and may have been contracted by TPC-G to sources outside the State, which would not have been in the best interests of Mumbai city (sic)' (page 13 of 14).
76 of 2011	October 2011	PPA between TPC (G) and TPC (D)	Addition al 400 MW	'The Petitioner further submitted that if the power to the extent of 400 MW is procured through Case 1 bidding route from outside Mumbai, there will not be adequate transmission line corridor availability to bring such power. … Hence this 400 MW capacity offers a positional advantage over any other capacity outside Mumbai (sic)' (page 18 of 26).
47 of 2016	October 2016	Tariff for 2016-17 to 2019-20		TPC's PPA with its generation company will expire on March 31, 2018. TPC intends to extend the PPA further, stating that 'the transmission corridor is not sufficient to meet the overall Mumbai peak demand, utilisation of embedded generation of the Mumbai system is essential to meet the overall Mumbai peak demand' (page 187 of 458).
34 of 2016	October 2016	Tariff for 2016-17 to 2019-20		RInfra's PPA with its generation company will expires on February 23, 2018. RInfra intends to extend the PPA further, stating that 'purchase of power from DTPS is not only a commercially more viable option, but is also technically unavoidable due to the islanding requirement of Mumbai' (page 237 of 508).

As per the para 7.16 and Table 1 of the petition, it is submitted that even with DTPS Mumbai will still be short by around 220 MW of capacity in FY 2016-17. This issue was also highlighted by RInfra-D in its MYT petition last year. This clearly shows that independent of DTPS, the transmission constraint needs immediate attention and the licensee has been aware of this problem. Prayas had also raised this issue during the MYT process for all the licensees in Mumbai. Had the licensees and the commission undertaken detailed power purchase planning, the transmission constraint could have been resolved earlier.

Thus, as stated before, there is an urgent need to resolve the transmission constraint, which would also allow options for more economical power procurement. After almost a decade, transmission constraint should not be the reason to justify any pre-identified cost-plus PPA. Hence we request the commission to take immediate steps to resolve this issue.

6. **Interim arrangement**: The power sector is in a state of flux and this is particularly true in case of Mumbai. The prices of renewable energy (both wind and solar) are rapidly falling making renewable energy based open access a highly lucrative option. In case of Mumbai, the network rollout plan is yet to be finalized and that will also affect consumer migration. Additionally, issues such as transmission constraints may need some time to be fully resolved.

   Given all this uncertainty, we propose the following interim arrangement:

   a. Reject the proposal to sign a PPA relating to supply of 500 MW between RInfra-G and RInfra-D for the period 23-02-2018 to 15-08-2036.
   b. Allow RInfra-D to continue the existing cost-plus PPA (which is presently valid till February 2018) with RInfra-G at the tariff decided as per the MYT tariff regulations 2015, **only for the next three years, i.e. till the end of the current MYT period**. This would ensure continuity of supply till there is better clarity on the many issues enumerated above.
   c. While extending the existing PPA, care should be taken that there are no unilateral provisions (such as clause 12.2 of the proposed PPA dealing with Amendments). This would be essential to safeguard consumers' interest and to ensure that the extended PPA does not create any liability for the consumers beyond the three-year extension period.

7. **Way forward**: The MERC in 2003 had opined that *'… against the backdrop of a not too bright national picture, the city of Mumbai is uniquely placed: there is surplus power available, two utilities (namely, TPC and BSES) have overlapping distribution networks in many areas of the suburbs, and both are technically and financially well-equipped to enter the phase of a competitive electricity market. It would, therefore, be a very short-sighted step to select the first option of amending TPC's licenses to make them restrictive. Since Mumbai is well ahead of others on the highway of reforms in the power sector, the Commission proposes to implement the second option'* (MERC order dated 3rd July 2003 in case no. 14 of 2002). However, much to the dismay of the consumers, Mumbai electricity sector has barely managed to hobble on this road. From zero regulatory asset just a decade ago, RInfra-D today has a regulatory asset worth more than Rs. 2,300 crore, which is almost one-third of its annual revenue requirement for FY 2016-17.

   A report titled "*In the Name of Competition: The annals of 'cost-plus competition' in the electricity sector in Mumbai*" published by Prayas (Energy Group) analyses the issues with cost-plus tariff regulation particularly, in the context of Mumbai which has parallel licensees. One of the crucial learnings from this analysis is that so long as the companies are provided with regulatory certainty for recovery of all the claimed costs, there will be little incentive for them to optimise their operations. The report based on extensive data and analysis strongly advocates to move away from cost-plus tariff determination approach. We wish to draw the commission's attention to the analysis presented in the said report as we feel is extremely relevant to the issues pertaining to power purchase planning and cost-plus regulation. The report can be downloaded using this link http://prayaspune.org/peg/publications/item/333 to briefly summarise, it is extremely important for the commission to put an end to the "cost-*plus* competition" in Mumbai.

   Not just RInfra-D, but BEST and TPC-D will also approach the commission with similar proposals to renew their existing cost-plus PPAs that are also expiring next year. Hence, we urge the commission to use the PPA renewal process to fundamentally review the power purchase and transmission planning, and to move towards a system that abolishes the certainty of recovery for all claimed costs. In this context, we wish to reiterate our submission made during the public hearing conducted in June 2016 during the Network Rollout Plan of Tata Power Co Ltd. The slide numbers 12 to 20 explain our proposed solution for dealing with the multiple challenges faced by Mumbai's power sector. The proposed scheme aims at replacing the current cost-plus framework with a more competition oriented approach. It also details out the process that we wish to suggest for implementing any such solution. The said submission is attached as Annexure 1.

8. Therefore, in light of the issues highlighted above, we pray to the commission as follows:

    a. Direct RInfra-D to submit a detail scenario analysis for projecting its demand and power purchase plans for the next five and ten years based on various factors (migrations, open access, net metering, etc.), under assumptions such as the transmission constraints and islanding requirements.

    b. Reject the proposal to sign a PPA relating to supply of 500 MW between RInfra-G and RInfra-D for the period 23-02-2018 to 15-08-2036.

    c. As an interim arrangement, for the next three years (i.e. till the end of the current MYT control period) allow RInfra-D to continue to procure 500 MW from RInfra-G under the terms and conditions of the existing cost-plus PPA and at the tariff determined as per the MYT tariff regulations 2015. While doing so, the commission should ensure that the said PPA does not create any liability for the consumers beyond the extension period of three years.

    d. Initiate a suo-motu process to address the following issues:
        i. Demand-supply, islanding and transmission constraints

        ii. Device a plan to move away from cost-plus tariff regime to a more competition oriented approach. For operationalizing such new scheme / approach, the commission can consider undertaking the following steps:
            1. Publishing a whitepaper detailing all issues concerning implementation of such mechanism and to seek public comments and suggestions from all stakeholders.
            2. Based on the whitepaper and subsequent consultation, formulating new regulations for putting into effect the proposal, after undertaking due public process.
            3. Amending distribution and transmission open access regulations and any other regulations such as standards of performance, grievance redressal, etc. as may be necessary
            4. Allowing adequate time and opportunity to all stakeholders, especially the consumers and the public at large, to comment on the proposed framework.

    e. Accept this submission on record and allow us to make further submissions in this matter, if any.

Thanking you

Sincerely

Ashwini Chitnis and Saumya Vaishnava
Prayas (Energy Group), Pune