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**ASSESSMENT OF RENEWABLE
POWER PURCHASE OBLIGATIONS
IN INDIA**

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ASSESSMENT OF RENEWABLE POWER PURCHASE OBLIGATIONS IN INDIA

An important measure of India's energy policy and its commitment to reduce carbon emission under international treaties obligations is to promote co-generation and generation of electricity from renewable sources of energy and increase the share of renewable energy ("RE") in the country's total electricity consumption. Towards this, applicable legislation and Government policy mandate renewable purchase obligations ("RPO") by obligated entities, which are briefly discussed below.

Applicable enabling legislation and Government policies

(a) Section 86(1)(e) of the Electricity Act 2003 ("EA 2003") and the National Tariff Policy 2006 provide for the Applicable Commission, to specify for purchase of electricity from RE sources, a percentage of the total consumption of electricity in the area of a distribution licensee. Thus, the RPO of obligated entities were to be fixed by SERCs across the different States. Such purchase is to take into account availability of such resources in the region and its impact on retail tariffs, and also be made applicable for the tariffs to be determined by the SERCs latest by April 1, 2006. Further, since it will take a while for RE technologies to compete with conventional energy sources in terms of cost of electricity, procurement of electricity from renewable sources could be done at preferential tariffs determined by the CERC/SERCs;

(b) The national action plan for climate change ("NAPCC") announced in June 2008 prescribed a dynamic minimum renewables purchase standard with a yearly escalation, and further suggested that starting 2009-10, the national renewables standard (excluding hydropower with storage capacity in excess of daily peaking capacity, or based on agriculture based renewable sources used for human food) be set at 5% of total grids' purchase, to

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increase by 1% each year for 10 years, till a target of 15% was reached by 2020. The NAPCC also recommended strong regulatory and policy measures to fulfill this target;

(c) The National Tariff Policy prescribed that SERCs, within the national renewables standard percentage so made applicable, also reserve a minimum percentage for purchase of solar energy which will go up to 0.25% by the end of 2012-2013 and further up to 3% by 2022. (This was revised in January 2016 from 3% to 8% by 2022 in view of the reducing cost of solar energy as evidenced by low tariff discoveries in recent reverse auctions) . Therefore, most SERCs have, by way of RPO regulations, specified RPO targets for solar and non-solar energy;

(d) Acknowledging challenges and constraints that inhibit several States in achieving RPO targets in terms of potential and availability of RE sources (for example, Rajasthan has very high potential of harnessing solar energy sources than Mizoram, Nagaland and Uttarakhand), the NAPCC introduced the concept of tradable RE certificates (“RECs”) as a policy measure to address the mismatch between availability of RE sources and the requirement of obligated entities to meet their RPOs . This would enable obligated entities to procure RECs and surrender the same to satisfy its RPO target; and

(e) While section 142 of the EA 2003 allows a penalty (not exceeding ₹100,000) to be imposed on obligated entities that contravene regulations made under the EA 2003, Renewable Purchase Obligations Regulations of SERCs, while specifying RPO targets, usually also provide that obligated entities which fail to fulfill their RPO in a year and also fail to purchase RECs to offset the default, may be directed to deposit an amount determined by the SERC into a specially created fund (to be used for the purchase of RECs/development and promotion of RE).

On the whole, the objective of Government policy and regulations, was to, over a period of time, progressively increase the share of electricity from non-conventional sources by mandating obligated entities to purchase a specified minimum percentage of their total power consumption (including transmission and distribution losses for a distribution licensee) from non-conventional sources.

Status of RPO compliance

Despite State RPO regulations requiring quarterly/half yearly status reports to be submitted by designated State nodal agencies to SERCs in respect of compliance with RPO by obligated entities, monitoring of compliance has been lax by central and State regulators. Only very few State agencies monitor or maintain data on status of RPO compliance, especially with respect to open access and captive power generating consumers. Out of 29 SERCs, only 10 have initiated proceedings to review RPO compliance status. Further, there is significant time lag in undertaking RPO compliance review processes – as of early this year, RPO compliance reporting has been done only up to financial year 2014 or in some cases, 2012. It is therefore hard to come by comprehensive and updated data with respect to compliance by States with RPO targets. Two sources on which much reliance is usually placed are Greenpeace India’s 2013 report titled “Powering Ahead with Renewables: Leaders and

Laggards”, and a December 2015 Comptroller and Auditor General (“CAG”) audit report . From these two reports and other public sources, a snapshot of RPO compliance by States is as under.

(a) *State specified RPO targets not in sync with NAPCC RPO targets.* According to the CAG report, the RPO targets set by SERCs for 2010-11 to 2019-20 in 22 out of the 24 States sampled for the audit were not keeping with NAPCC RPO targets; they were substantially lower and vary greatly from each other. Specifically, Andhra Pradesh, Gujarat, Jammu & Kashmir and Madhya Pradesh consistently set RPO targets below NAPCC RPO targets, which are stated to be the minimum. Low RE potential States also set substantially lower RPO targets. Other than 3 States, the rest of the States did not even set RPO targets for the entire 10-year period specified by the NAPCC. Some States will eventually reduce their specified RPO targets: after achieving a RPO compliance of 5.78% in 2011-12, Rajasthan reduced its earlier RPO target from 8.5% to 6%. Tamil Nadu also reduced its RPO target from 14% to 9% despite achieving a compliance of 9.59%. These States missed the point that RPO targets are minimum targets and not ceilings. Later, the Ministry for New and Renewable Energy (“MNRE”) would argue that NAPCC RPO targets are not mandatory and that SERCs are to fix RPO targets in terms of the EA 2003.

However, not all States set lower RPO targets – Himachal Pradesh and Tamil Nadu prescribed RPO targets consistently higher than NAPCC targets (though Himachal Pradesh set RPO targets for the entire period of NAPCC and also surpassed those targets consistently, Tamil Nadu had set targets only up to 2015-16).

Going by the MNRE’s stance, and given the significant disparity in RPO targets fixed by States, it is apparent that there are no clear standardized guidelines or criteria adopted by the SERCs while fixing RPO targets.

(b) *State specified RPO targets not achieved.* Despite being lower than NAPCC targets, SERC specified RPO targets between 2010-11 and 2013-14 were not achieved by obligated entities – only 6 out of 24 States fulfilled SERC mandated RPOs, of which Himachal Pradesh and Karnataka (both having high RE potential) not only fulfilled SERC mandated RPOs; they exceeded NAPCC targets. Though not having high RE potential, Tamil Nadu also exceeded NAPCC targets. Mizoram exceeded NAPCC targets from 2011 to 2014 while Arunachal Pradesh exceeded NAPCC targets from 2012 to 2014.

Failure of States to achieve specified RPO targets meant that obligated entities failed to make full use of the REC mechanism for compliance – only 6 States reported purchase of RECs towards fulfilling RPO targets, indicating the REC mechanism has not been particularly successful. It certainly didn’t help matters that the States appeared not inclined to enforce RPO targets, as discussed below.

Apart from this, as most SERCs failed to prescribe specific RPO targets for open access and captive power generating consumers, there was some confusion about the applicability of RPO regulations to such consumers, resulting in a number of them challenging the fastening of RPO regulations on them. Thankfully, this was finally laid to rest by the Supreme Court of India’s 2015 decision in [Hindustan Zinc vs. Rajasthan Electricity Regulatory Commission](#), which upheld RPO obligations for open access and captive power generating consumers.

(c) *No effective monitoring and enforcement of RPO targets.* States have displayed a lack of interest in effectively monitoring and enforcing RPO targets. Most States have failed to track RPO compliance by obligated entities. Also, the RPO targets reported in 5 States by SERCs differed from the RPO targets for those States as per the MNRE. Some States (including Bihar, Punjab, Gujarat, Andhra Pradesh and Delhi) have allowed obligated entities to carry forward shortfalls in their RPO targets in a particular year to subsequent years (though the Appellate Tribunal held that non-availability of RECs is a pre-condition for carry forward), or in some cases, seek waivers from fulfilling RPO targets. A case in point was when the Madhya Pradesh Electricity Regulatory Commission, last December, waived off solar RPO targets of certain distribution licensees for the financial year 2014-15, stating that as these licensees may exceed their solar RPO targets for the financial year 2015-16, this may mitigate the default in fulfilling their solar RPO for previous years. Also, no penalty was imposed on them. Further, in 17 of the 24 States which reported shortfalls in achieving RPO targets, none collected penalties from obligated entities though Uttarakhand had imposed a penalty of ₹20,000 on the Managing Director of its distribution licensee, while Madhya Pradesh had, in an instance, imposed a token penalty of ₹25,000 for failure to comply with specified RPO targets for 2 financial years. The CAG audit of 2015 estimates that an amount of approximately ₹42.34 billion in penalties was leviable on defaulting obligated entities.

On a positive note, it is pertinent to mention that there have been directions and orders from regulatory (i.e., SERCs and the MNRE) and adjudicative (the Appellate Tribunal for Electricity, High Court and the Supreme Court) authorities, at various times, to enforce compliance with RPO targets. The regulatory environment is also now geared towards RPO compliance.

(d) *Ineffective REC mechanism.* Due to a clear lack of enforcement of RPO targets and carry forward/waiver of RPO targets as aforesaid, the purchase of RECs for fulfilling RPO targets diminished as there was no requirement for obligated entities to incur additional costs. Only 6 States reported purchase of RECs, despite at least 17 States falling short of meeting their RPO targets. It's a different matter that the REC mechanism did not allow for inter-state sale of RECs. From the cumulative data of RPO compliance between 2010 and 2014 in terms of the electricity purchased from RE sources, only 4.77% of RPO compliance was through REC mechanism while 95.23% was through direct purchase of electricity from RE sources. Gujarat, however, met 43% of its RPO through RECs.

While a lot of RECs have been issued, there has not been substantial trading or purchase of RECs. As at August 2014, over 9 million RECs are unredeemed at the National Dispatch Load Centre, creating substantial financial exposure for REC generators. Consequently, this has impacted the cash flows of, and corresponding investment into, REC generators. The REC mechanism which could have spurred investment in new RE projects and added much required RE capacity eventually lost its appeal, leading to a decline in the accreditation and registration of RE projects under the REC mechanism. In the Indian context, if the REC mechanism is to survive, strict RPO compliance is required.

Conclusion

The availability of RE sources in India is widely dispersed and it was clear right from the outset that achieving NAPCC RPO targets would not be without challenges. However, given the RE potential of the country, overall compliance with RPO has not been encouraging. There are some bright spots in the RPO compliance narrative which can be showcased – Arunachal Pradesh, Himachal Pradesh, Karnataka, Mizoram and Tamil Nadu. SERCs and State agencies need to build on the recent regulatory and judicial support for RPO monitoring and compliance by developing standardized RPO target formulations, charting long term RPO trajectories (after thorough assessment of RE potential and corresponding retail tariffs), and undertaking effective monitoring and penal/compliance mechanism.

Feedback

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