

**Summary Report of the Roundtable Discussion on
Renewable Energy Procurement through Competitive Bidding: Challenges and way forward**

Organized by Prayas Energy Group,

Date and Venue: 11th September, 2012, 10 am- 2pm, Willow Hall, India Habitat Centre, New Delhi.

Introduction and Background: Renewable Energy (RE) has come a long way in India and one can safely say that it is well on its way to becoming mainstreamed with over 25 GW of installed capacity (12% of total) as of date. While the sector was jump started in the 90's on the basis of subsidies and incentives, the passing of the EA 2003 brought in FiTs and RPOs and the recent initiatives of JNNSM, GBI (wind) and REC have further boosted growth within RE. While the past decade witnessed a CAGR of ~22%, the absolute target for the 12th Plan at 30 GW is ambitious indeed. To put this in context, 30 GW (planned for 2012-17) is nearly 42% more than the entire conventional capacity addition of 21 GW in the 10th Plan (2002-07). Capacity addition will have to grow even further to meet the guiding NAPCC target of 15% RE by 2020.

However with 25 GW already installed and significant further growth expected in the future, the impacts of the RE sector on the retail consumer tariff, Utility finances and the physical grid can no longer be ignored. As one of the core capacity addition resources in the years to come, it is appropriate to introduce further competition in the RE sector. There are several reasons to move towards procurement of RE power through Competitive Bidding (CB), namely (1) that it is mandated by the EA 2003 and several policies (NEP,NTP, NAPCC), (2) the limitations of the FiT mechanism, specifically the absence of any digression rates dis-incentivizing cost reductions, possibilities of wind fall gains and the inherent difficulty in determining appropriate FiTs.

The experience of CB in the solar procurements under JNNSM and some State Govts has been largely positive resulting in discovered prices being substantially lower than FiTs. Additionally there is rich experience in competitive bidding worldwide with regard to RE procurements which can provide important learnings for India in providing a balanced and appropriate framework for CB to enable fast growth and cost reduction simultaneously. No pricing option, be it FiT or bidding is perfect, but as a recent report notes *"auctions or competitive bidding may be considered as preferred alternatives to FITs where concerns over FIT costs are present."*¹ Going further, "in order to yield a functionally competitive auction, the marketplace must be liquid and homogenous".¹ Both these conditions are satisfied in India, since there is already very healthy competition in the solar and wind sectors and since bidding is to take place within particular resources, homogeneity is also ensured.

The urgency for CB is further corroborated since some states have been considering moving towards CB in the RE sector for a while. However, a recent order from RERC² has noted that section 62 of the EA 2003 only allows for the ERC to adopt a competitively discovered tariff if it is in accordance with the guidelines issued by GoI. Hence the approval of the bid documents for selection of developers through tariff based competitive bidding process can be done only after the GoI comes out with SBDs and bidding guidelines.

¹ Kreycik et al, *Innovative Feed-In Tariff Designs that Limit Policy Costs*; Technical Report NREL/TP-6A20-50225, June 2011.

² <http://www.rerc.rajasthan.gov.in/Orders/Order148.pdf>

Competitive Bidding, if designed and implemented well, can be an effective way to procure the required renewable power at the least cost. CB will incentivize higher energy generation (higher CUFs) eventually leading to lower tariff impacts and higher capacity addition targets. This is gravely important for India, given the financial health of our public utilities which puts added onus on policy makers and regulators to facilitate cost reduction. Given the success of CB in the solar sector in India, the dynamic nature of the RE sector (rapid technological and cost developments) it would be appropriate to go in for reverse bidding with the state regulated FIT acting as the ceiling tariff. MNRE has already issued drafts for discussion with regard to CB. Framing of bidding guidelines and SBDs should be done carefully and with active public stakeholder consultation to understand the specificities/peculiarities of different RE technology project development cycles and is crucial for the successful operationalisation of the mechanism.

With this background, the Prayas Energy Group held a roundtable discussion on 11th September, 2012 with the objective of understanding the challenges, roadblocks and way forward towards adoption of Competitive Bidding procurement in the Renewable Energy sector. The event was attended by over 40 senior participants from the Ministry of New and Renewable Energy, Planning Commission, State and Central Electricity Regulatory Commissions, Renewable Energy Industry, State Nodal Agencies, Utilities, Academia, Consultants and Media.

The event began with a welcome note from Mr Shantanu Dixit, Coordinator, Prayas Energy Group. He then explained the purpose and the objective of the roundtable discussion which was to understand the challenges, roadblocks and way forward towards adoption of competitive bidding procurement in the renewable energy sector. This was followed by three presentations. The first one was by Mr Ashwin Gambhir from Prayas Energy Group, whose background presentation was titled, 'Renewable Energy Procurement through Competitive Bidding: Challenges and way forward'. He was followed by Mr Mahesh Vipradas from Suzlon who gave an industry perspective on issues and concerns in competitive bidding and the final speaker was Mr Ajit Pandit from ABPS Infra who elaborated the challenges and implications of enabling competitive bidding for renewables. After the formal presentations, the chairperson of the roundtable, Shri Alok Srivastava, Joint Secretary, MNRE made opening remarks which was followed by an extensive discussion between all participants. Closing remarks were made by Shri Rajiv Bansal, Secretary, CERC and Shri Anil Jain, Advisor (Energy), Planning Commission.

Presentation Summaries:

Ashwin Gambhir: The presentation began with noting the significant growth in the renewables sector in the past (CAGR of 22% in the last 10 years), and the even higher growth in relative and absolute terms expected in the future (~ 200 GW of RE by 2030). This shows that the RE sector is effectively mainstreamed and cannot remain isolated from the core issues plaguing the power sector. Similarly the power sector too can no longer ignore the tariff impacts and the need for reliably integrating high amounts of variable RE into the grid. This was followed by noting the legal and policy mandate for competitive bidding (the main spirit of the EA 2003 being competition) and the limitations of the present form of feed-in tariffs in India. On the other hand, if implemented well, competitive bidding can have significant benefits in terms of least cost discovery leading to lower tariff impacts and driving further growth and competition in the sector. This has been borne out by the solar bidding experience in India and in some other countries as well. Hence the need to move towards a

regime of competitive bidding based procurement in the RE sector in India, a market which is both liquid and homogenous, an essential pre-requisite for a functionally competitive auction. When moving towards bidding the policy should allow multiple procurement mechanisms during the transition period and in the long term bidding should replace FITs. It is advisable to begin with wind and solar with bidding at regular intervals to ensure long term govt commitment to bidding. Bidding guidelines could also incorporate non-price parameters like dispatch ability, storage, peaking supply etc in the selection process. Going forward, procurement through Reverse Competitive Bidding (with SERC tariff as ceiling) is a must for price discovery, promoting competition, lowering costs, thereby increasing targets. MNRE/MoP should finalize CBG (which have realistic norms which can precisely defined and monitored and firmly enforced with an effective M&V framework) and other SBDs, and notify only after comprehensive public stakeholder consultation. Lessons learnt from past CB processes (state/national/international) should be used while drafting CBGs, and should be open for continuous improvement.

Mahesh Vipradas: The presentation began by noting the legal and policy provisions for competitive bidding, however it laid emphasis on the recent MoP clarification issued on 19th April 2011 which reiterated the need for RE procurement through preferential tariffs depending on the circumstances at the time of procurement. He noted that recent policy-regulatory changes like discontinuing of incentives of GBI and AD, the policy uncertainty, reduction in RPO by some states, RPO non-compliance and the requirement of scheduling of wind power when weighed together have slowed down investments in the wind sector significantly. Hence the timing for competition bidding may not be appropriate. With regard to competitive bidding, some states like Karnataka, MP and Rajasthan had initiated some processes in the past and the issue is also under active discussion in MNRE and MoP. Multiple players (MNRE, MoP, some ERCs and Utilities) have initiated some discussion on CB, however lack of clarity is adding to uncertainty and slowing investments. The enforcement of RPO is very critical to the success of the bidding mechanism and till now, there has been no example of any penalties being imposed on the obligated entities. The draft MNRE guidelines (2010) are heavily drawn from the MoP guidelines for conventional power and need to be more sensitive to specifics of renewable energy. Similarly the recent MNRE draft RFQ document is premature in the absence of competitive bidding guidelines. Open Access is crucial for access to the market and competitive bidding should not lead to a situation of single buyer. Similarly CB could also be detrimental to the REC market. As a way forward, Govt needs to decide on an appropriate and uniform time for introduction of CB beginning with a pilot stage. Additionally a consultative process and transparency is extremely critical for the development of comprehensive technology specific/sensitive bidding guidelines.

Ajit Pandit: The high growth witnessed by the Indian RE sector in the past decade was possible due to strong policy support in the form of FITs and other favourable policies. The presentation highlighted the learnings from biddings experiences of various countries and Indian states and how they can be applied to India. With respect to competitive bidding, there are some initial legal hurdles as is seen from Karnataka and Rajasthan Commission experiences. India has had a good experience with solar bidding under the JNNSM but was also helped in the form of few sweeteners (payment security, equivalent bundling of conventional power etc). Internationally, UK and Scotland were successful as far as price discovery was concerned but getting actual projects on the ground was far lower than expected. This was mainly due to lack of penalties for non-performance and lengthy development periods. Brazil enjoyed reasonable success at both, price discovery and

getting projects on the ground. Keeping in mind these experiences, the key considerations for bidding guidelines include appropriately defining the scope of guidelines, the bidding framework, its objective, bidding parameters and evaluation, and most importantly, adequate risk allocation and mitigation framework to tackle underbidding and attrition issues related to bidding. While bidding supports the idea of moving to market based price discovery, the co-existence of three procurement mechanisms (FiTs, CB and REC) raises some questions on their efficacy and objectives which the government is trying to meet. Going forward, stringent RPO M&V framework with RE technology specific targets along with enforcement standards would be pre-requisite to ensure competitive bidding to be successful. Market readiness or preparatory work in terms of site identification, resource assessment, land availability, clearances, evacuation arrangement which not only addresses information asymmetry but also mitigates development risk would yield maximum benefit of bidding process with wider participation. Similarly guidelines may be formulated with pilot/demonstration bidding in few cases to garner investor confidence and address regulatory/policy gaps, if any.

Discussion highlights:

- Competitive bidding works best in a symmetric market and conditions in India may not be fully appropriate for its introduction immediately. India is the only country to have all three mechanisms (FiT, REC, CB) operating simultaneously and the world awaits to see its outcome. Policy clarity and long term financing are the need of the hour.
- Competitive bidding is being actively considered by the GoI and bidding guidelines would be finalized soon. Introduction of competitive bidding in wind power may not result in very high prices reductions as was seen in the solar sector. Similarly the additional incentives for JNNSM solar projects (payment security, bundling of power) may not be possible for wind power.
- Before proceeding with competitive bidding, clarity over the following issues is essential, namely (a) interaction of the three procurement mechanisms (FiT, REC and CB) which should not be viewed in isolation, framework of one state bidding for projects in another state, evolution of the RRF mechanism and its interaction with bidding, how the shortcomings of bidding process would be tackled, local manufacturing content requirements if any, incentives for innovative technologies like CSP with advantages like storage.
- Data asymmetry, land acquisition (especially for Case-I bidding) and financing are important concerns that need to be addressed before moving towards bidding. Site assessment, especially for wind power takes time and hence the bidding process should not get limited to developers who have a head start with respect to obtaining land and doing the necessary assessment. Land hoarding by some players can lead to unfair advantage in case of Case I bidding. Hence Case-II bidding may be a better option to create a level playing field for the participants. Comparison between wind and solar power may not be appropriate in India since there are a very high number of developers and technology providers in the solar sector as opposed to the vertically integrated wind sector in India with additional restrictions on entry of international technology providers.
- Removal of some incentives like AD and GBI for wind power actually brings in much needed clarity. Instead of requesting for reconsideration of such incentives, it would be better to move towards competitive bidding which would also reflect true full costs.
- Competitive bidding is a better way to procure renewable energy than the REC mechanism and can also provide some visibility to the RPO target. Similarly one has seen that Indian and international wind power

developers have successfully taken part in competitive bidding based procurement mechanisms outside India (ex: California, Brazil etc), hence there should not be any hesitation on their part for a similar process in India.

- Competitive bidding as a procurement mechanism in the Indian RE sector is already being practiced with respect to small hydro, waste to energy and solar power. Additionally bidding has the potential to address other issues like grid connectivity, dispatch etc. If the country needs a successful bidding mechanism in place 2 years from now, preparations (in the form of bidding guidelines, standard bidding documents, pilot projects etc) must begin now as is evident from the waste to energy bidding experience in India.
- Bidding creates a level playing field for developers and can in fact address some of the information asymmetry issues as was seen in the solar experience in India. The main support for successful bidding should be the enforcement of the RPO targets and timely removal of emerging bottlenecks in the bidding process.
- Reverse bidding with FiTs as the ceiling price may turn out to be detrimental to the sector since some SERC FiTs are not reflective of present costs. Concerns with bidding must be properly addressed and bidding documents must be prepared very carefully considering the complexities of the RE sector. Case I and Case II bidding have their own advantages. Case-I bidding could start quite fast considering that most developers have land banks with them but Case-II puts everyone on a level playing field and long term leasing might be a good way forward. However generalising the experience of a few pilot projects may not be a good idea.
- While wind power prices have come down significantly in the West, the same has not happened in India. High cost RE can have a high tariff impact on debt ridden utilities. Given the rationale of supporting RE with preferential tariffs till grid parity is reached makes the future of the REC mechanism rather bleak since tariff parity of renewables wind new conventional supply is very close.
- Competitive auctions may not work well if there is only one buyer, the utility. Similarly with the new OA regulations, the high paying consumers might shift outside the utility's purview thus reducing the RPO requirements of the utilities.
- The bidding framework must be appropriately designed to address concerns of FiTs and prevent common pitfalls such as collusion, land hoarding and underbidding. Competitive bidding is not only about price discovery and reductions but also about transparency, removal of information symmetry etc. However given the complexity of the problem it is difficult to balance the needs of all stakeholders.
- Civil society organisations and academia are more supportive of competitive bidding than industry.

Finally, to conclude, all participants agreed that competitive bidding is the way forward and that it should be gradually introduced with a clear time frame. However there were differences of opinion on what the most appropriate timing would be with regard to such an introduction. None the less, given the scale with which the RE sector has been growing, it would be foresighted to start the advanced ground work (in the form of competitive bidding guidelines and standard bidding documents) for a successful transition to a competitive bidding regime in the near future.

The three presentations made during the event can be downloaded from the following link (<http://www.prayaspace.org/peg/publications/item/185>).

For further information, please contact Ashwin Gambhir (ashwin@prayaspace.org)

For more information on Prayas' activities and its publications please see www.prayaspace.org/peg

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