

29th April 2015

Secretary
Ministry of New and Renewable Energy
New Delhi- 110001

Sub: Comments on "Draft National Renewable Energy Act", 2015

Dear Sir,

This is with reference to the "Draft National Renewable Energy Act", 2015. I have gone through the draft and record some of my comments on the same. Some additional issues are also highlighted in the comments attached. I would be pleased to address any clarification, if required.

Thanking You.

Sincerely Yours

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- 1. Need and Purpose of the Act:** Concerns for energy security, and local and global environmental concerns are increasingly being addressed through various policy and regulatory initiatives across the country. These concerns were first reflected by setting up a separate nodal ministry for promotion of renewable energy in the country. However, the policies and programmes of the Ministry followed through various administrative mechanism, in the absence of a legislative mechanism for the same. As India enters into a new phase for sustainable economic growth, providing a legislative framework for development of renewable energy sources in the country would give it a desired impetus.

However, it is also important to acknowledge and address the fact that the energy sector in India is the one through a number of rural ministries, which have functioned rather independently. The present phase of renewable energy development in the country has primarily been driven by incentive-based promotion by the MNRE, while at the same time policy and regulatory initiatives in the power sector (Post Electricity Act 2003) have been proved to be as effective as bait with certain shortcomings in terms of absence of a credible compliance mechanism.

One of the biggest challenge would be to developed a cohesive draft of the proposed Act, that can fill the gaps currently not being addressed through the existing regulatory and policy framework. It is also important to bring in desired coordination platform for effective implementation of the desired instruments. This will be more difficult set than done. Care needs to be taken to ensure that new issues do not arise on account of ambiguity of jurisdiction as far as setting up targets for renewable energy, implementation of the targets and compliance thereof. The draft in its current form needs improvement and wider consultations.

- 2.** The cover note refers to 'business as usual scenario', 'macroeconomic considerations', 'integrated energy resource planning' etc. without providing appropriate explanation for the same.
- 3. Integrated Energy Resource Planning:** even though the interior energy policy was formulated in 2008, the planning for the energy sector has not really my the spirit of integrated energy resource planning. This would ideally require either a single ministry for the energy sector or a very high degree of coordination by the respective nodal ministry is related to the sector in developing policies, formulating plans and providing resources for effective implementation of the same. However, the experience shows that

the respective ministries have not evolved very high order of coordination towards the same. Hence, a reference to the Integrated Energy Resource Planning may not strictly follow in the spirit.

4. **Gaps in Existing Framework for Renewable Energy Development of the for you as you and Need for a Renewable Energy Law:** One of the important aspects before introducing such a legislation is to identify gaps in the existing framework for development of renewable energy, ascertain if this needs to be addressed through a new legislation and/or existing legislative instruments can be amended to address the same. It would be useful if such gaps are identified before embarking on a legislation which may or may not be able to address such gaps.
5. **Rethink on setting standards and developing accreditation program:** The proposed Act seems to give a feeling that a new set of bureaucracy would be created to implement various aspects identified therein. The process of economic reform initiated in the early 90s was aimed at reducing the interference/red tape is to promote investment in the economy. However, the multiple provisions aimed at setting standards and developing an accreditation program may, in fact, go against the philosophy of reforms itself. While the former are/could be addressed by existing entities like the Central Electricity Authority and the Bureau of Indian Standards, the later i.e. accreditation program would end up being a rent seeking activity, thus slowing down the much desired investment in the sector.

I feel that the provision of having 'approved' list of manufacturers/channel partners seems to have undermined competition in the market by leaving a lot of market power with these approved set of manufacturers/channel partners. This may itself be a barrier to effective delivery of the subsidy to reach a large number of beneficiaries in the country. This should ideally be replaced with a more effective monitoring program to deliver on the objectives of development of renewable energy in the country

6. **Preamble:** This seems to suggest that a transition from fossil fuels to '100%' renewables have been decided. It may be useful to replace 'transition' with 'gradual replacement'.
7. **Section 2 – Electricity Act 2003:** The proposed NRE Act has a number of provisions similar to those existing within the Electricity Act 2003, and policies, plans and regulations evolved thereof. It is not clear as to which of the two legislations would prevail in the case of a conflict/ambiguity arising between the two. Clause 2 of version 1 is possibly incorrect as the proposed Act covers a number of issues already covered under the Electricity At 2003. Further, Electricity Act 2003 addresses the issue of grid planning, grid operations and read Management including the cost sharing aspects through a number of subordinate instruments specially the regulations developed by various State Electricity Regulatory Commissions across the country. It will be useful in that matters related to grid planning, operation and management are kept out of the purview of the proposed Act, as these would best be served through the Electricity Act 2003 and regulations thereof.

Clause 4 - From a legal point of view, it would be desirable to identify the relevant provisions of the various legislations specially the Electricity Act 2003.

Clause 5 - The National Action Plan for Climate Change is not binding plan by its very nature (even though India is pursuing all the eight missions under the NAPCC, and some of these objectives of these missions are being pursued diligently. For example some of the aspects of the NMEEE are being implemented through the relevant provisions of the Energy Conservation Act, 2001.

- 8. Nodal Agencies and Nodal Entities:** the Act proposal to set up/modified nodal agencies and nodal entities for a variety of purposes, wherein these agencies/entities would yield a lot of power akin to the license/inspector raj. While some of these may be desirable to ensure a healthy development of the sector, it will be useful to keep these interventions which are durability nature to the bare minimum and you such agencies/entities for monitoring the implementation of the provisions of the Act. In fact, the draft seemed to create confusion as agencies/entities is being used interchangeably and definitions refer only to the 'Nodal Entity '.
- 9. Obligated Entities:** Conclusion of some of the litigations that have followed the perceived ambiguity about the definition of obligated entities in the Electricity Act 2003, have identified consumers with captive power generation being also included in the definition of the obligated entities. The draft ignores the same.
- 10. Market Based Instruments:** It would be useful to identify renewable energy certificates (REC) as one of these instruments. I'm also enclosing in two relevant papers that have shaped the implementation of REC market in the country. The RECs can be used for more effective implementation of subsidy programs of the government. The papers also proposed that this market instrument can also be used to provide benefits to development of renewable energy that is not based on generation of electricity. These include heating, cooking, processing, prime moving etc. Further, the energy efficiency savings certificates under the Perform Achieve and Trade (PAT) can also effectively be made fungible and define in terms of equivalent RECs. This will provide a more liquid platform for trading energy efficiency savings certificates.
- 11. Hydrogen as a 'new' Energy Source:** Hydrogen is expected to be an important source of clean energy in the future. At this stage, research and development for technologies related to hydrogen as a new source of energy should be promoted by the Ministry.
- 12. National Renewable Energy Policy and National Renewable Energy Plan** to be formulated under the proposed Act would have a number of provisions which are similar or overriding, or maybe overridden by those existing in the National Electricity Policy and National Electricity Plan formulated under the Electricity Act 2003.
- 13. Separation of scope of the proposed Act and the Electricity Act 2003:** The domain of the Policy and the Plan to be formulated under the proposed Act to should exclude grid interactive electricity generation from renewable energy sources else there would be two

separate legislative mechanisms regulating this. Its role can be limited to off-grid electricity generation from renewable energy or hybrid sources, and all the other non-electrical energy based applications of renewable energy sources. This would avoid any potential cross jurisdictional issues. However, there would still be a need for Ministry level coordination from the overall perspective of integrated energy resource planning for the country.

14. Definition # 23: The definition of 'renewable energy fuel' seems incomplete, and also needs correction. Crop residues, cow dung and black liquor (produced by pulp and paper industry) should be specifically included. The mix of cash produced from industrial and grow – industrial waste may not be always called 'natural gas'. Further, biogas can be produced from non-industrial and non-agro industrial wastes; for example from cow dung.
15. All the definitions pertaining to the power system and its components (if required within the scope of the Act) should be the same as that defined in the Electricity Act 2003.
16. Definition # 24 - RPO obligation is not for purchase of a electricity (generated) from renewable energy sources, rather it is a proportion of electricity consumed in the area of a distribution licensee.
17. Definition # 27: The definition of "Utility scale renewable energy" would also cover whom PV systems which can also feed electricity to the grid under a 'power purchase agreement (PPA)' unless this is specifically excluded. FurPPA further, PPA may not always 'guarantee' market for electricity for a fixed time. That may depend on the respective PPA. Hence, the rest of the sentence after all EPA may be excluded or suitably modified.
18. Definition # 25: State nodal agencies are not directly responsible for 'development' of renewable energy in the state. Rather, these agencies are engaged in 'promotion' of the same.
19. **Section 1 (2) (ii) - Planning and execution of nationwide program for deployment of renewable energy:** With the growing share of the private sector could power generation capacity reaching above 35%, and almost all the grid connected capacity based on renewable energy having been arrested by the private sector, it would be futile exercise to plan and execute deployment of renewable energy in the country. The role of the RE act, and the subsequent plan and the policy should aim at creating a conducive climate for investment while keeping in mind the issues concerning energy security and overall cost to society. Further, this should provide for effective monitoring of the impact of the policies and, deployment and performance of all renewable energy projects in the country.
20. **Section 1 (2) (iii) - Carry out research and development, and provide technical assistance:** Since most of the investment is supported by private capital, the required research and development and technical assistance for most of the large projects would

automatically be sourced and planned for by the private sector. And hence, there should be limited role of the government to carry out R&D. Research and development can be appropriately incentivised by promoting more efficient technologies. For example, this is best done through a tariff based competitive bidding, and suitably designed market for RECs. However, a number of areas like development of suitable technologies for off-grid projects may need to be promoted. I believe that they should best be done keeping in mind the operational and financial sustainability of such off grid projects. Experience from the studies conducted at Dept of IME, IIT Kanpur revealed that incorrect technologies have often been promoted for off grid projects. Many such projects fail to deliver on the intended objective due to faulty technology, lack of participation of locals and lack of technical training to locals for maintenance and operation of the projects. Failure to understand the institutional aspects while implementing the off grid projects have often contributed to failure of such public investments. Examples include biomass gasification technologies using a modified DG set and to fail into technical faults that cannot be addressed properly, thereby not only rendering the project ineffective but also additional benefits of locals in relieving such solutions. As a result, locals who tend to prefer grid-based reliable power, which is also cheaper (given the existing tariff rates).

- 21. Section 1 (2) (iv) - National RE fund:** National RE fund is not defined/described in the proposed act. An effective deployment of the nation's resources like the national RE fund should be done on the basis of criteria like efficiency, transparency and effective monitoring.

It should be imperative on the part of the government that the funds under the National RE fund are allocated on the basis of efficiency and transparency. Instead of supporting a variety of technology for similar sites, the approach to allocate funds specially for the deployment of RE based off-grid technologies for the energy access in rural and remote areas should incentivise the most efficient technology to be deployed for a particular site. An economically efficient way to support such projects would be to prepare a comprehensive list of such sites with appropriate information on scale of the project and the requirements of the beneficiary population, and then offer these projects, preferably, by pooling a large number of projects for competitive bidding by various technology developers. This would automatically ensure that the investors choose the most effective technology for individual sites. This should, however, ensure that the funds from the National RE fund are allocated over a certain lifetime of the project based on desired standards and performance parameters. This exercise would be akin to the rule out of route will tell if any in the country through use of Universal Service Obligation (USO) Fund adopted by the Ministry of Telecom/DoT in the past.

- 22. Section 1 (2) (v) - Developing standards for technologies and products:** The government should not engage itself into developing very intrusive standards and norms for resource assessment, technologies and products. While it may be justifiable to some extent to set guidelines for resource assessment of various renewable energy resources, it is best to leave development of technologies and products to the market. In my opinion, a

restrictive list of 'standards and norms' often acts as entry barrier for a number of technology developers and producers, and also leaves little room for innovation. It is likely that too much effort of industry would be wasted to ensure that the technologies and products under their portfolio fall within the 'standards and norms' to be set by the Ministry.

The Central Electricity Authority specifies certain standards only to ensure appropriate grid integration of the power equipments. The specific bid document for a project of and outlines the major performance parameter for a power project, while still leaving a room for the respective bidders to provide innovative solutions. Similarly, in the telecom sector, the Telecom Commission specifies technical standards for telecommunication equipments to ensure appropriate interconnectivity and other requirements of the telecom sector. The standard for products, if at all required, are not too detailed and are generally to ensure a minimum level of energy efficiency (as in the case of Star Labeling of appliances), or a minimum SAR requirement for the mobile handsets.

23. Section 1 (3) - Centre of Excellence: In addition to the setting up of educational institutions, Centre of Excellence can also be supported in the premier institutions across the country.