

# Notes and news

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## **Plans for '24x7 power for all' in true spirit of cooperative federalism**

The Ministry of Power, Government of India signed the MoU for Ujwal DISCOM Assurance Yojana (UDAY) with Tamil Nadu in New Delhi, on 9th January, 2017. Also, with the signing of the '24x7 Power For All (PFA)' roadmap document with the state, the roadmap for all the 28 states, except one, and all the 7 Union Territories in the country have now been finalized and is under implementation. It is the most significant milestone in this initiative founded on the principles of cooperative federalism.

Providing access to reliable and quality power supply to all citizens/ establishments by 2019 is at the core of the Prime Minister's vision for the nation and the Ministry of Power's 24x7 PFA program is aimed at delivering on it. The programme has been instrumental in mainstreaming the Ministry's focus on energy efficiency and Demand Side Management interventions and has resulted in increased participation with speedy rollout of the UJALA/DELP and other EESL led schemes. It is important to note that UJALA has emerged as the world's largest and most successful LED bulbs programme.

Increased role of central sector agencies, such as NTPC, in addressing sectors' operational viability in the case of proposed acquisition of state owned generation assets in Rajasthan and in fast-tracking capacity addition in the case of Patratu project in Jharkhand are outcomes of the comprehensive approach adopted under 24x7 PFA Programme to resolve state specific problems.

Besides development of segment wise coordinated physical rollout plans and rigorous analysis on financial viability of state utilities under the 24x7 PFA program in two States of Rajasthan and Andhra Pradesh, the plans for which were made in first 100 days of coming of this Government, led to the formulation of the UDAY. Looking at the balance sheets of these states, it was found that unless the states are taken out of the debt trap in which they were in and made financially sustainable, all plans of 24x7 would remain unfulfilled.

The PFA Programme has also benefited several states in addressing funding gap for the investments required to ensure 24x7 power access to all. The funding gap analysis conducted as part of the exercise enabled the Ministry to assist states through innovative means of financing including

mechanisms such as additional funding under ongoing programs (like DDUGJY, IPDS), multilateral funding, additional support from FIs and PPPs etc.

Electricity being a concurrent subject and given the focus of the Government on pursuing cooperative federalism, the first task was to develop and agree on detailed roadmaps for each state. State specific roadmaps were prepared under the guidance of the Ministry of Power and Central Electricity Authority (CEA). 24x7 PFA initiative has provided the much needed platform for all-encompassing integrated planning. In addition to integrated planning at the level of vertically unbundled utilities and other state level agencies, the exercise also provided an opportunity for mainstreaming the efforts of all central level ministries and agencies, such as Ministry of Coal, MNRE, PGCIL, NTPC, BEE, EESL, REC, PFC etc., to ensure access to reliable and quality power to all households/ establishments in each and every state by 2019.

To further augment the effort of the states under the 24x7 PFA initiative, the Ministry is now formulating a scheme for funding of the investments required to ensure last mile connectivity to all households which are not already covered under DDUGJY and state schemes.

## **Budget gives impetus to priority programmes of Ministry of Power**

The Union Minister of State (IC) for Power, Coal, New & Renewable Energy and Mines, while addressing the media recently, said that the allocations have been increased for social sectors across the board including affordable housing, infrastructure, rural development. Further, the Minister added that the Budget 2017-18 promotes the 'Make in India' mission by correcting inverted duty structure in many areas the budget and has provided impetus to transformative changes happening in the Ministry of Power, Coal, New & Renewable Energy and Mines. Micro, Small & Medium Enterprises are back bone of the sector and have been made competitive with reduction of corporate tax to 25% up to turnover of Rs.50 crores, he added.

In the new and renewable energy sector, the Minister informed that the budget has affirmed target for solar power of additional 20,000 MW capacity during next year. Further, the budget has provided renewed thrust on renewables, with

- Removal/reduction of customs/excise duty on solar tempered glass

- Reduction of customs duties on various raw materials would further bring down the cost of clean energy
- Railways to contribute to solar energy by powering 7,000 stations through solar power

Regarding the allocation for Ministry of Power, the Minister said that it has been increased by 33% to Rs 13,881 crores, due to major thrust on flagship rural electrification scheme Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY). The allocation for this scheme has been increased by 44% from Rs.3,350 crores to Rs.4,814 crores, while the contribution to urban areas scheme Integrated Power Development Scheme (IPDS) has been increased by 29% from Rs.4,524 crores to Rs.5,821 crores. The budget document has confirmed that “We are well on our way to achieving 100% village electrification by 1st May 2018”.

#### **Cabinet approves enhancement of capacity from 20,000 MW to 40,000 MW of the scheme for development of solar parks and ultra mega solar power projects**

The Cabinet Committee on Economic Affairs, chaired by the Prime Minister, recently approved the enhancement of capacity from 20,000 MW to 40,000 MW of the scheme for development of solar parks and ultra mega solar power projects. The enhanced capacity would ensure setting up of at least 50 solar parks each with a capacity of 500 MW and above in various parts of the country. Smaller parks in Himalayan and other hilly states where contiguous land may be difficult to acquire in view of the difficult terrain, will also be considered under the scheme. The capacity of the solar park scheme has been enhanced after considering the demand for additional solar parks from the states.

The solar parks and ultra mega solar power projects will be set up by 2019-20 with Central Government financial support of Rs.8100 crores. The total capacity when operational will generate 64 billion units of electricity per year which will lead to abatement of around 55 million tonnes of CO<sub>2</sub> per year over its life cycle.

It would also contribute to long term energy security of the country and promote ecologically sustainable growth by reduction in carbon emissions and carbon footprint, as well as generate large direct and indirect employment opportunities in solar and allied industries like glass, metals, heavy industrial equipment etc. The solar parks will also provide productive use of abundant uncultivable lands which in turn facilitate development of the surrounding areas.

All the states and UTs are eligible for benefits under the scheme. The state government will first nominate the solar power park developer (SPPD) and also identify the land for the proposed solar park. It will then send a proposal to MNRE for approval along with the name of the SPPD. The SPPD will then be sanctioned a grant of upto Rs.25 lakh for preparing a detailed project report (DPR) of the solar park. Thereafter, Central Financial Assistance (CFA) of up to Rs.20 lakhs/MW

or 30 per cent of the project cost including grid-connectivity cost, whichever is lower, will be released as per the milestones prescribed in the scheme. Solar Energy Corporation India (SECI) will administer the scheme under the direction of MNRE. The approved grant will be released by SECI.

The solar parks will be developed in collaboration with state governments/UTs. The state governments/UTs are required to select the SPPD for developing and maintaining the solar parks.

The Ministry of New and Renewable Energy (MNRE) is already implementing a scheme for development of at least 25 solar parks with an aggregate capacity of 20,000 MW, which was launched in December 2014. As on date, 34 solar parks of aggregate capacity 20,000 MW have been approved which are at various stages of development.

#### **India's partnership with Japan in energy sector critical for a sustainable energy future**

The Union Minister of State (IC) for Power, Coal, New & Renewable Energy and Mines, Mr. Piyush Goyal recently presided over a bilateral meeting with the Japanese delegation led by H.E. Mr. Hiroshige Seko, Minister for Economy, Trade and Industry, Government of Japan. The meeting took place on the side-lines of the 7th India-Japan Energy Forum, 2017. During the day long sessions in the Energy Forum, technical discussion took place on critical subjects of mutual cooperation in the energy sector, which include enhancing renewable energy and grid stability, promoting technological cooperation in energy efficiency in industrial and commercial sectors and technological options and energy efficiency improvement in transport sector.

Speaking on the scope of India-Japan cooperation, Mr. Goyal said that this forum is a platform to engage with Japan for mutual benefit in the energy sector by working towards bringing Japanese strengths in cutting edge engineering and technology to India. This would help India in enhancing grid stability, bringing electric mobility at affordable prices to the country etc., which the Government is vigorously pursuing, he added.

The Minister also informed that during the bilateral meet with his Japanese counterpart, it was put across that India's power demand is going to expand four fold in the next 15 years to become one of the largest energy markets globally and it would open immense business opportunities for Japan in the sector in India, hence making this bilateral engagement mutually beneficial for both countries.

The Power Minister also said that India and Japan should cooperate on long term contracts for LNG with a defined cost of energy which would provide a stabilizing factor for the renewable energy thrust that India is currently giving. India being a price sensitive market cannot afford costly power and hence needs Japanese cooperation in maintaining a balance between renewable energy and conventional coal based power.

Further, Mr. Goyal said that since large number of items in the renewable energy sector come from abroad, we are working to create a sustainable framework for encouraging the manufacturing of solar equipments in India at less costs so as to make 24×7 Affordable and quality power available to each citizen in India. This will also give a fillip to the 'Make in India' mission by scaling up manufacturing sector in India with the help of cutting edge Japanese technologies in the power sector. India should leap frog the learning curve with the help of contemporary next generation technologies and should not miss out on the opportunities to provide sustainable energy future to every citizen, based on their needs, he added.

#### **National review meeting of renewable energy sector with the state governments**

The Ministry of New & Renewable Energy (MNRE) organized a two day National Review Meeting with the State Government officials of renewable energy sector from 23rd to 24th January 2017. Mobile App for Solar Rooftop Systems "ARUN - Atal Rooftop Solar User Navigator and Information Guide on Rooftop Systems" was also launched on the occasion.

Speaking at the concluding session of review meeting Mr. Rajeev Kapoor, Secretary, MNRE emphasized on the need to comply with renewable purchase obligations (RPOs) and facilitate the renewable energy installations through conducive policies and timely payments for RE power purchased. He also urged upon the states to see the RE power in the backdrop of India's commitment of raising 40% of electric installed capacity from non-fossil fuel by 2030 under INDC. It was observed that in general the compliance of RPOs needs to be ensured. The Secretary urged upon the states to formulate and modify their policies and prepare a conducive policy regime for RE.

Mr. Rajeev Kapoor gave away awards in Off-grid Solar PV Programme in 12 categories namely Solar Lantern, Solar Home Lighting Systems, Solar Power Packs, Solar Street Light, Solar Power Plant, Solar Pumps (Irrigation), Solar Mini/Micro Grid, Solar Pumps (Drinking), Bank Scheme - Solar Home Systems, Bank Scheme - Solar Pumps, Cold Storage and R.O. Systems. The Secretary, MNRE also presented the Annual Day Awards of Association of Renewable Energy Agencies of States (AREAS) to various State Nodal Agencies for best performance in different sectors of renewable energy during 2015-16.

The progress of each state was reviewed, next financial year plan were discussed and the issues raised by the States were deliberated upon in detail and efforts were made to find their solutions in this review meeting. Presentations were made by the senior officers of the Ministry on each programme and the state-wise issues were flagged.

State Power/Energy secretaries in charge of renewable energy, heads of state nodal agencies and other concerned

senior officials of states attended the Review Meeting. Senior officers of MNRE, CERC, NTPC, IREDA, SECI, NISE, NIWE, NIBE, etc. also participated in the meeting.

#### **MoU signed between POWERGRID and Abu Dhabi Water & Electricity Authority**

The Power Grid Corporation of India Ltd. (POWERGRID) has signed a Memorandum of Understanding with Abu Dhabi Water & Electricity Authority (ADWEA) and its group of companies on 25th January, 2017 in Gurgaon. The MoU was signed by His Excellency Saeed Al Suwaidi, Managing Director, Abu Dhabi Distribution Co. (UAE) and Mr. Anil Mehra, Executive Director - International Business, POWERGRID in the presence of Mr. I.S Jha CMD, POWERGRID and Senior officials from both sides.

The MoU inter alia envisages cooperation between ADWEA & its group of companies and POWERGRID to work in areas like smart grid, Transmission technology & providing capability development and training in the field of Operation & Maintenance (O&M), Asset Management, Project Management, Power Transmission & Distribution, etc. POWERGRID shall also assist ADWEA in setting up an advanced "World Class Capability Development institute" in UAE.

#### **POWERGRID RAJARHAT 400/220KV SUB-STATION**

Rajarhat 400/220kV substation, being established by Power Grid Corporation of India Limited (POWERGRID) with 1000MVA capacity, is critical to supply of power in Kolkata and surrounding areas. This substation is being connected to Farakka and Purnea so that it not only receives the power from Thermal Generating Power Stations in Farakka and Sagardighi but also hydro power from North Eastern Hydro Stations.

This substation is created with a state-of-the-art gas insulated switchgear (GIS) technology, which requires about 1/4th of the land as compared to conventional substation. GIS technology is safe, reliable and requires less maintenance. This technology is a proven technology with more than 5000 high voltage GIS installations world-wide already in use; including in developed countries like Japan, UK, China, Russia, USA etc. Even in India, more than 30 high voltage GIS installations are working as on date.

The construction works of Rajarhat 400/220 kV substation are undergoing for the last 2-3 years and is on the verge of completion. The Government of West Bengal is all along supporting POWERGRID in the early completion of this important project. Considering the advantages of the project as mentioned above, POWERGRID solicits cooperation from all stakeholders.

#### **Ministry of Earth Sciences Commissions higher resolution weather prediction model**

The Ministry of Earth Sciences (MoES) has commissioned a very high resolution (12 km) global deterministic weather

prediction model for generating operational weather forecasts. The model has been on trial since September 2016. It has shown significant improvements in skill of daily weather forecasts. This model has been made operational from January 16, 2017.

The present model replaces the earlier version which had a horizontal resolution of 25 km. It was very helpful, especially in predicting the track and the intensity of the recent very severe cyclonic storm Vardah and the cold wave over the northern parts of India.

The MoES's operational ensemble prediction system (EPS) will also be upgraded to 12 km. For this the high performance computing (HPC) system resources available with MoES is to be augmented to 10 Peta Flops from the current 1.2 Peta Flops. The operational EPS currently has a horizontal resolution of about 25 km.

The EPS is adopted to overcome the problem of uncertainties in the forecasts. It involves the generation of multiple forecasts using slightly varying initial conditions. The EPS also help generate probabilistic forecasts and quantify the uncertainties.

The Ministry of Earth Sciences (MoES) provides weather, climate and hydrological services to various users round the year and 24/7. Both operational and research aspects for these services are implemented through its constituent units India Meteorological Department (IMD), National Centre for Medium Range Weather Forecasting (NCMRWF), Indian Institute of Tropical Meteorology (IITM) and Indian National Centre for Ocean Information System (INCOIS).

In general, during the last five years, the skill of weather and climate forecasts in India has improved. The improvement is noted especially in general public weather forecasts, monsoon forecasts, heavy rainfall warnings and tropical cyclone warnings and alerts. The successes in predicting the tropical cyclones Phailin/Hudhud, heavy rainfall event in Chennai during December 2015, deficient rainfall during monsoon season of 2015 are the best examples for the improvement in prediction capability during the recent years.

Focused research and development activities have been carried out at IITM, NCMRWF and IMD on weather prediction model development and data assimilation methods. Data from the international and Indian satellites are being assimilated in the weather prediction models.

The communication of forecasts to the stake holders on time and in proper language is very important in the effective use of weather and climate forecasts and minimizing the loss and damages due to severe weather. IMD has established an effective mechanism for dissemination of weather and climate forecasts to different stake holders using different communication channels.

### **Issue of bringing water into concurrent list being discussed with States**

The Union Minister for Water Resources, River Development and Ganga Rejuvenation has recently said that centre is discussing the issue of bringing water into concurrent list with states. The Minister was inaugurating the Jal Manthan-III in New Delhi and said the Ministry was also seriously working on new acts for water use and Ganga.

Deliberating on various issues related to water resources management, the Minister said water user associations were not performing up to the mark in some states. The Minister said, "We may have to take active help from NGOs to strengthen these associations as active and performing water user associations are very important for the success of AIBP-PMKSY". Underlying the need for people's participation in water resources management the Minister said that there was a need to convert Jal Kranti into Jan Kranti.

Referring to inter-linking of rivers the Minister said the Ministry was trying its best to convert the funding pattern of Ken-Betwa Phase-I link from 60:40 to 90:10. The Ministry is very much hopeful to start the project in the first quarter of this year itself. The Minister said the project would be completed within seven years. The Minister also referred to Manas-Sankosh-Teesta-Ganga-Mahanadi-Godawari link and called it as "Mother link" of inter-linking of rivers in the country. The Minister said a section of the people in a particular state are opposed to this link and termed it as political. The Minister said that the successful completion of this link would be able to solve the drought and flood problems of the states of West-Bengal, Bihar and Odisha to a great extent. The Damanganga-Pinjal link would be able to meet the drinking water needs of Mumbai up to the year 2060. Referring to Par-Tapi link the Minister said that on completion, this link would be able to meet the drinking water needs of rural tribals of the area.

Dr. Sanjeev Kumar Baliyan, Union Minister of State for Water Resources, River Development and Ganga Rejuvenation in his address called for more attention on waste water management. He said a large amount of water is wasted in the country and proper management of the same will result into saving of this precious natural wealth. Mr. Vijay Goel, Union Minister of State for Water Resources, River Development and Ganga Rejuvenation said that there is urgent need to conserve water for future generations. He said it did not occur to us that this natural resource which was available in abundance could become scarce in future.

Dr. Amarjeet Singh, Secretary in the Ministry referred to the need of common pooling of water resources by farmers. He said we have to fix the accountability of water use to stop its wastage. Mr. Singh said there is an urgent need to develop a culture to understand the important of water conservation.