

**No. 27/07/2015-NSGM
Government of India
Ministry of Power

**Shram Shakti Bhavan, Rafi Marg,
New Delhi, Dated 18th November, 2015**

OFFICE MEMORANDUM

Subject: Guidelines for Implementation of National Smart Grid Mission.

I – National Smart Grid Mission (NSGM)

1. Background:

- 1.1 Govt. of India initiated the development and deployment of Smart Grids in India in 2010. India Smart Grid Task Force (ISGTF) and India Smart Grid Forum (ISGF) were constituted thereafter under the aegis of Ministry of Power (MoP) to oversee the planning and implementation of smart grid activities. Fourteen (14) Smart grid pilot projects were sanctioned for various utilities/states by MoP in 2012 to implement the functionalities like Advanced Metering Infrastructure (AMI), Power Quality Management, Peak Load Management, Distributed Generation, Microgrids and Outage Management. Alongwith these projects a 'Smart City' project was also sanctioned for implementation by IIT-Kanpur and creation of a 'Smart Grid Knowledge Centre' was sanctioned for implementation by POWERGRID.
- 1.2 A Smart Grid Vision and Roadmap for India was approved by the Ministry of Power in August 2013 which also envisaged the launch of a National Smart Grid Mission (NSGM) having its own resources, authority, functional & financial autonomy to plan and monitor implementation of the policies and programmes prescribed in the roadmap.

2. Approval of NSGM

- 2.1 Govt. of India has approved establishment of National Smart Grid Mission (NSGM), an institutional framework with dedicated manpower and resources to implement Smart Grid activities on a larger scale in the country to make Indian power infrastructure cost effective, responsive, reliable and self-healing. The support from NSGM for implementation of Smart Grid projects would primarily consist of following (Indicative) activities:
 - Assistance in formulation of projects including pre-feasibility studies, technology selection guidelines, cost-benefit analysis, financing models etc.
 - Funding of these projects, together with State Distribution Companies (Discoms) and other financing agencies.
 - Training and Capacity Building for State Level Project Monitoring Units (SLPMUs), Utilities & Project Implementation Teams

- Technology selection guidelines and best practices
 - Facilitate Consumer Awareness initiatives
 - Project Appraisal, Approval, Implementation, Monitoring and evaluation of results post implementation etc
- 2.2 The approval has been accorded for activities listed above having cost of Rs. 980 crore including a budgetary support of Rs.338 crore from Government of India during the 12th plan period.
- 2.3 Office Memorandum No 20/13(2)/2009-APDRPdated27th March '2015 was issued by the Ministry of Power in respect of National Smart Grid Mission (NSGM) (**Appendix –A**). The Organization Structure of NSGM as approved by Gol include:
- Governing Council headed by the Minister of Power
 - Empowered Committee headed by Secretary Power and supported by Technical Committee headed by Chairperson, CEA.
 - NSGM Project Management Unit (NPMU) housed in POWERGRID for operationalizing the Smart Grid activities in the country under the guidance of Governing Council and Empowered Committee.

II Project Formulation and Implementation

1. Project formulation:

The utilities will formulate Detailed Project Reports (DPRs) with clearly defined and measurable Key Performance Indicators (KPIs).

2. Scope of Works:

The indicative/suggestive components of smart grids in 12th plan would be broadly as follows:

- *Deployment of Smart Meters and AMI.*
- *Technical upgradation with deployment of Gas Insulated Subs-stations(GIS) wherever economically feasible.*
- *Development of medium sized Microgrids upto 1 MW*
- *Development of Distributed Generation in form of Roof Top PVs.*
- *Real-time monitoring and control of Distribution Transformers.*
- *Provision of Harmonic Filters and other power quality improvement measures.*
- *Creation of EV Charging Infrastructure for supporting proliferation of EVs.*

Smart grid being a new and evolving concept, the activities presently envisaged are only indicative and during the course of implementation, further activities can be incorporated based on evolution of technology and specific needs of Discoms.

