

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.

List of items not eligible to be covered under NSGM: The following works/ items shall not be eligible for coverage:

- (i) Works already sanctioned under other schemes of Govt. of India (like R-APDRP/RGGVY/ IPDS/ DDUGJY/NEF etc.). The projects for which any other grant / subsidy from Government of India has already been received / proposed to be received shall not be eligible for projects under NSGM. DRC/SLPMUs shall ensure this.
 - (ii) Civil works
 - (iii) Service lines to new consumers
 - (iv) GIS survey of consumers
 - (v) Cost of land
 - (vi) Office equipment / fixtures
 - (vii) Spares (other than mandatory spares prescribed by manufacturer)
 - (viii) Tools and Plants (T&P)
 - (ix) Vehicles
 - (x) Salaries and Establishment Expenditure of utilities
 - (xi) Facility Management Services (FMS) charges beyond 1 year
3. **Eligible Entities:** All Discoms including private sector Discoms and State Power Departments (referred to as Utilities) will be eligible for financial assistance under NSGM. In case of private sector Discoms where the distribution of power supply in urban areas is with them, projects under the scheme will be implemented through a concerned State Government Agency and the assets to be created under the scheme will be owned by the State Government / State owned companies. These assets will be handed over to the concerned Discom for their use during the license period on mutually agreed terms and conditions. The responsibility of operation and maintenance of these assets would be of the concerned Discom. The areas under franchisee shall be covered under the scheme subject to compliance with the terms & conditions of their respective agreements. Further, all proposed projects must be recommended by the DRC/SLPMUs.
4. **Submission and Approval of DPRs:** The DPRs shall be prepared by the utility and recommended by Distribution Reforms Committees (DRCs)/SLPMU once it is in place. DRC/ SLPMUs shall ensure that the works covered under RAPDRP/IPDS scheme shall be excluded from the scope of DPRs under NSGM. The utility shall submit a hard copy, duly recommended by the DRC/SLPMU and duly signed by Utility, and soft copy of the DPR to the NPMU and also upload it on web portal (once the portal is in place). NPMU shall examine the DPRs and submit the recommendations to the Empowered Committee. The eligible projects (DPR) will be approved by the Empowered Committee.
5. **Eligible Cost for determining Grant:** The project cost approved by the Empowered Committee or award cost of the project, whichever is less, shall be the eligible cost for determining the Grant.

6. **Tripartite/ Bipartite agreement:** A Tripartite agreement will be executed between NPMU on behalf of Ministry of Power, the State Government and the Discom for undertaking and agreeing to their stipulated roles/responsibilities as per provisions of the scheme guidelines. Bipartite agreement will be executed in case of State Power departments. The format for agreement shall be issued separately by NPMU.
7. **Mode of Implementation:** The contract shall be awarded by the concerned utilities in accordance with their prescribed Procurement Policy. The projects have to be awarded within three months from the date of approval by the Empowered Committee.
8. **Implementation Period:** Projects under NSGM shall be completed within 18months from the date of approval by the Empowered Committee. In case the DISCOMs/Power Departments are not able to complete the project within stipulated time period due to circumstances beyond their control, the Empowered Committee shall have the full power for granting time extension based on merits in exceptional cases on a case to case basis.
9. **Dedicated team for Project Implementation:** Utilities shall create a dedicated team for implementation of projects including requisite infrastructure and logistics etc. to ensure smooth implementation and redressal of grievances of public and public representatives of the project areas. The details of the dedicated team shall be mentioned in the DPR. An officer of the rank of Chief Engineer/General Manager or above, will be designated as Nodal Officer heading the dedicated team at utility/ state level. The Nodal Officer shall be responsible for implementation in accordance with the prescribed guidelines, providing all necessary information including physical & financial progress related to the projects, arrange to get relevant orders/clearances from the State Government, enhance level of awareness and redress grievances of public & public representatives in the project areas.

III- Stakeholders - Roles and responsibilities

"National Smart Grid Mission" (NSGM) is housed under MoP considering the fact that most of the prominent stakeholders (DISCOMs, Regulators, Electrical Manufactures, CEA etc.) for Smart Grid are associated with MoP. Other concerned Ministries like MNRE and MoHI would also be associated with the mission.

- I. NSGM shall have a 3 tier institutional frame work and would work under the overall guidance of Minister of Power with dedicated manpower and resources to implement Smart Grid activities on a large scale in the country. The 3 tier would consist of a Governing Council headed by the Minister of Power, an Empowered Committee headed by Secretary (Power) and supported by Technical Committee headed by Chairperson (CEA) and NSGM Project Management Unit (NPMU).

- II. **Governing Council** among other functions shall approve the administrative and financial procedures for effective functioning of NSGM, annual budget of NSGM, review the implementation of NSGM's policies and programmes etc. **Empowered Committee** shall provide policy input to Governing Council, approve specific Smart Grid projects, procedures / guidelines for Smart Grid projects, monitor implementation of Smart Grid projects, approve procedures / guidelines for recruitment, funds allocation etc. **Technical Committee** shall be responsible for development of standards, technology selection guidelines, technical review of projects / activities / documents, preparation of guidelines and procedures for training & capacity building etc.
- III. NPMU will be the implementing agency for operationalising the Smart Grid activities in the country under the guidance of Governing Council and Empowered Committee.
- IV. NPMU will be housed at POWERGRID. ISGTF Secretariat will be merged with NPMU, to be headed by an Executive Director level officer, who will be designated as the Director NPMU. This body will be set up in POWERGRID exclusively for NSGM. NPMU reports directly to the Empowered Committee and Governing Council of NSGM through MoP. Director NPMU will report to Empowered Committee through the concerned Joint Secretary, MoP.
- V. NPMU will have all necessary resources including requisite manpower and financial autonomy to function effectively and achieve the approved work plan/targets of NSGM. For faster and efficient implementation of smart grid projects, suitable experts, consultants and agencies may be appointed by NPMU with the approval of the Empowered Committee. The performance of NPMU will be reviewed by the Empowered Committee.
- VI. The operational charges for smooth functioning of NPMU which include salary, perks & allowances, performance incentives etc of the deployed manpower along with other administrative & establishment expenditure like tour, travel etc, for Smart Grid activities would be paid to NPMU from the funds of NSGM and modalities for the same will be finalized by the Empowered Committee of NSGM. In respect of officers and staff on deputation/secondment basis to NPMU, their entitlements in the parent organizations will be fully protected.
- VII. Corresponding to the NSGM, each of the States will also have a State Level Mission which would be chaired by the Power Secretary of the State. The administrative / operation and maintenance expenses in this regard would be borne by respective States. NSGM will provide support for training & capacity building to SLPMUs for smart grid activities.
- VIII. The Smart Grid Knowledge Center (SGKC) shall be developed by POWERGRID with funding from MoP and will provide support to the Mission in all technical matters, including development of technical manpower, capacity building, outreach, suggesting curriculum changes in technical education etc. Head of SGKC shall report to Director, NPMU.
- IX. The NPMU will submit monthly progress report indicating both financial and physical progress on the implementation of the projects to Ministry of Power.

IV–FUND DISBURSEMENT GUIDELINES

1. Funding Mechanism

The total estimated cost for all the projects and NSGM activities for 12th Plan is Rs 980 crore including a budgetary support of Rs 338 crore. Details are as follows:
(Figures in Rs crore)

SN	Activity	Estimated Cost	Budgetary support
A.	Development of smart grid in Smart Cities	Rs 890 crore	267 (30%)
B.	Development of micro grids	Rs 27 crore	8 (30%)
C	Training & Capacity Building (Funding for SGKC etc)	Rs 8 crore	8 (100%)
D.	Consumer Engagement++ (Funding to State owned Discoms ~60)	Rs 30 crore (20 lakhs p.a. for each Discom)	30 (100%)
E.	NSGM Establishment, O&M etc	Rs 25 crore	25 (100%)
	Total Outlay	Rs 980 crore	338

30% cost of the smart grid projects will be provided as grant from the NSGM budget. For certain selected components such as training & capacity building, consumer engagement etc, the funding will be 100% grant from NSGM. The extent of funding from NSGM budget will be finalized by the Empowered Committee of the NSGM. The balance project cost (hardware, software applications, erection testing commissioning, integration etc.) is to be funded through innovative financing models which may include PPP model.

The grant support from budget of Ministry of Power shall indicatively be released as follows:

Installment No.	Condition for release	Release of Grant Component of Gol
1	Sanctioning of the project	10%
2	I. Placement of letter of Award (LoA) by the Utility. II. Updating of web portal regarding award details and the KPIs.	20%
3	Utilization of 90% of 1 st installment and release of equivalent Utility contribution	60%
4	After completion of works	10%
	Total	100%

However, Empowered Committee shall have full powers to alter the proportion of above installments on case to case basis.

2. Flow of Funds

- 2.1 Utilities will request NPMU for release of funds. The necessary budget outlay in this regard shall be submitted by the utility in advance (Quarterly and Annual Basis).
- 2.2 NPMU shall submit proposal to Ministry of Power for release of funds for further release to Utility when all the formalities for release to utilities are completed.
- 2.3 On request from NPMU and after satisfying that the conditions specified for release of particular installment have been complied with, Ministry of Power shall release fund against that particular installment directly to NPMU's dedicated bank account.
- 2.4 Releases by NPMU
 - 2.4.1 On request from Utilities, NPMU shall release funds to the dedicated bank accounts of utilities.
 - 2.4.2 In order to receive fund under NSGM each utility shall open separate dedicated bank account in nationalized banks having e-banking facility. The nature of Programme account shall be current account with CLTD (Corporate Liquid Term Deposit) facility.
 - 2.4.3 Eligible fund for execution of the project shall be released to Programme account and all due payments related to execution of project(s) shall be made by Utilities from this account. Utilities shall maintain books of accounts both for receipt of fund from NPMU and release to Contractors for each of the project.

2.5 Mechanism for release of final tranche of grant:

Release of 10% of eligible Grant component (**final tranche**) shall be done upon completion of works and on submission of following:

- (i) Project Completion Certificate, duly recommended by the Head of Utility, in the stipulated format.
- (ii) DRC/SLPMU report regarding Project Completion and expenditure incurred along with recommendation in accordance with the guidelines.

3 Fund Utilization

- 3.1 Inter Project Utilization of funds shall not be allowed. Fund released/ earmarked for a particular project shall have to be utilized for that project itself.
- 3.2 Within the same project, merit based reallocation of fund, for increase/ decrease of scope of the sanctioned functionalities or for addition of new functionality, within the overall sanctioned cost may be considered subject to approval by the Empowered Committee.

4 Fund Management by Utility

- 4.1 All project related payments to the contractors (and others) by Utility shall be done directly from the dedicated bank account and in no case, Utility shall open any other bank account(s) under NSGM. NPMU shall have the view right of Utility account.
- 4.2 All payment (to contractors & others) shall be made directly from the dedicated bank account as per the established procedure through e-banking only.

5 Utilization Certificate

Utility shall submit utilization certificates (UC) for the funds released during the financial year and the utilization thereof in prescribed format, latest by 30th April of succeeded year. Release of further fund to the state utilities will be subject to submission of UC in the prescribed format. The UC shall provide the physical progress/achievements also apart from financial utilization.

6 Auditing

- 6.1 The Utility will ensure auditing of accounts relating to receipts of funds from NPMU and expenditure incurred by the Utility against such receipts during the F.Y. by independent Chartered Accountant and furnishes a report to NPMU latest by 30th June of succeeding year. NPMU shall consider release of further funds on the receipt of audited report and certificate from Charter Accountant.
- 6.2 In addition to above, the works and any other aspects like quality, quantity, financial etc. under NSGM would be open to audit by the office of the Comptroller & Auditor General of India (C&AG) as well as Internal Audit Wing, Office of Controller of Accounts, Ministry of Power.

7 Monitoring of Programme

- 7.1 The requisite details of project(s) as prescribed by the NPMU from time to time shall be entered by the Utility in relevant module of NSGM portal.
- 7.2 It shall be the responsibility of the Utility to ensure placement of all Master Data for the constant updating and accuracy of data relating to the progress of NSGM works, record of Quality control tests as well as the payments made.
- 7.3 Fund releases to Utility would be affected in case of failure in updation of data on web portal.
- 7.4 NPMU can depute officials to assess the works of projects for which cooperation shall be extended by the utilities

8 Public Financial Management System (PFMS)

- 8.1 NSGM being a Government of India program, the release of funds to utilities shall be done through PFMS and utilities shall be using PFMS for funds flows.
- 8.2 The Utilities shall mandatorily enter details like receipts, expenditures, etc in PFMS portal. In case of non entering desired details in PFMS portal, banks may not consider release of funds to Contractors.
- 8.3 Utilities receiving funds under NSGM are to be registered / mapped in PFMS.
- 8.4 Utilities shall submit status of unspent Capital subsidy/grant lying with them to NPMU/ Ministry of Power on quarterly basis.

- 9 **Quality Assurance and Concurrent Evaluation Mechanism:** The utility shall be solely responsible & accountable for assuring quality in NSGM works. Accordingly, a comprehensive Quality Assurance (QA) and Inspection Plan shall be an integral part of the contract agreement with turnkey contractor or equipment supplier/vendor and erection agency as the case may be.

10 Completion of works:

A Project Completion Certificate shall be furnished by the utility, signed by Head of Utility, which shall contain the information regarding date of completion, details of major items of works approved and completed, justification for non-completion or shelving of any project component, expenditure against the project with item wise breakup certified by a practicing Chartered Accountant (CA) etc. The project completion certificate needs to be submitted to NPMU through DRC/ SLPMU for release of final tranche of grant component. A format for project completion certificate will be made available in the web portal.


11 Pre Closure/Recall of Grant:

- 11.1 In case the utility fails to submit the Project Completion Certificate within a period of one year from the approved project completion date (approved by Empowered Committee), or not completed project within project completion date due to poor progress, the NPMU shall send a team suo moto to assess the works and expenditure and submit its recommendation to the Empowered Committee for closure and also refund of excess grant by utility if any released against the project.
- 11.2 In case the utility fails to award the project within three months of approval by Empowered Committee the project will be deemed as closed/cancelled. However, Empowered Committee shall have the full power for granting time extension based on the merits of case.

12 Miscellaneous

Ministry of Power/NPMU may, from time to time, issue such directions for compliances of Utilities as may be necessary for smooth implementation of the projects under NSGM.

13. These guidelines are issued with the approval of Secretary (Power).


(Vishal Kapoor)
Director (Distribution)

To

1. Chief Secretaries of all States
2. Energy/Power Secretaries of all the State Governments
3. CMDs of State Power Utilities
4. Chairman & Managing Director, Power Finance Corporation Ltd., New Delhi.
5. Chairman & Managing Director, PGCIL, Gurgaon.

Copy forwarded to:

1. Director, Cabinet Secretariat, Rashtrapati Bhavan, New Delhi.
2. Ministry of Finance, Department of Expenditure (DS, Plan Finance Division-II), North Block, New Delhi.
3. Ministry of Finance, Department of Economic Affairs, North Block, New Delhi.
4. NITI Aayog, Yojana Bhavan, New Delhi.
5. Chairperson, Central Electricity Authority, R.K. Puram, New Delhi.
6. Finance/Budget Section, Ministry of Power, New Delhi.
7. Controller of Accounts, Ministry of Power, New Delhi.
8. Principal Director of Audit, Economic & Services Ministries, AGCR Building, I.P. Estate, New Delhi.
9. 13th Finance Commission, Ministry of Finance, Jawahar Vyapar Bhavan, New Delhi.
10. Department of Programme Implementation, Sardar Patel Bhavan, New Delhi.

Copy to:

1. PS to Minister of State for Power (Independent Charge)
2. PPS to Secretary (Power)
3. PPS to AS(BNS) / PPS (BPP)
4. PPS to Joint Secretary (Dist) / JS&FA / All JSs/
5. PPS to Dir(Distribution)

No.27/3/2016-NSGM
Government of India
Ministry of Power
Shram Shakti Bhawan, Rafi Marg, New Delhi – 110001

Dated: 7th April, 2016

Subject:- Approved minutes of the 1st meeting of the Empowered Committee of NSGM held on 29/03/2016 under the Chairmanship of Secretary (Power).

I am directed to enclose herewith the approved minutes of the 1st Meeting of the Empowered Committee of NSGM held under the Chairmanship of Secretary (Power) on 29.03.2016 at the Conference Hall, Ministry of Power, Shram Shakti Bhawan, New Delhi.


(G. Swan Za Lian)

Under Secretary to the Government of India

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Email: lianmop2011@gmail.com

To,

- ✓ The Director (NPMU),
Power Grid Corporation of India Limited (POWERGRID)
Plot No. 2, Sector 29, Gurgaon-122001
(Email: prabhu.ns@nic.in) (Fax: 0124-2571695) - With a request to circulate the minutes to all members of Empowered Committee of NSGM

Copy to:

1. PPS to Secretary (Power), Ministry of Power
2. PPS to JS(Dist.), Ministry of Power
3. PPS to Director(Dist.), Ministry of Power
4. GM, APDRP Cell, Ministry of Power

Agenda Item No. 4: Approval of guidelines for implementation of NSGM

Director, NPMU mentioned that MoP issued the Guidelines for implementation of NSGM on 18th November 2015 vide letter no 27/07/2015-NSGM with approval of Chair of Empowered Committee. However, as per OM of NSGM, the Guidelines require approval of Empowered Committee. He further stated that in the Guidelines of NSGM under Section IV: 'FUND DISBURSEMENT GUIDELINES' in table on release of instalments of grant support from budget of Ministry of Power at page no. 6, there is an error in the condition of release for instalment No.3. The condition of release should be read as "Utilization of 90% of 1st and 2nd instalment and release of equivalent Utility contribution".

Empowered committee granted ex-post facto approval for Guidelines for Implementation of NSGM issued by MoP vide letter no 27/07/2015-NSGM dated 18th November 2015 and also for the modification of table on release of the grant support from budget of Ministry of Power as below:

Instalment No.	Condition for release	Release of Grant Component of GoI
1	Sanctioning of the project	10%
2	a. Placement of Letter of Award (LoA) by the Utility b. Updating of web portal regarding award details and the KPIs	20%
3	Utilization of 90% of 1st and 2 nd instalment and release of equivalent Utility contribution	60%
4	After completion of works	10%
	Total	100%