



**PRESS INFORMATION BUREAU**  
( Research Unit )  
**Ministry of Information and Broadcasting**  
**Government of India**



## **National Smart Grid Mission**

(Ministry of Power)

June 21, 2022

### **Introduction**<sup>1</sup>

[National Smart Grid Mission \(NSGM\)](#)<sup>2</sup> was established by the Government of India in 2015 to plan and monitor the implementation of policies and programmes related to smart grid activities in India. NSGM also envisages capacity-building initiatives for the Distribution Sector personnel in the field of smart grids.

### **Why NSGM?**

[Smart Grid](#)<sup>3</sup> is an electrical grid with automation, communication & IT systems that can:

- Monitor, measure, and control power flows in real-time
- Identify losses and take appropriate actions to manage the losses.
- Make electrical grids [amenable to renewable energy inputs](#)<sup>4</sup> through distributed generation.



**National Smart Grid Mission**  
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During the implementation of Smart Grid pilot projects in the state utilities, it was felt that **smart grid efforts required urgent concerted focus**. For this, it was necessary to create a comprehensive institutional arrangement capable of dedicating the manpower, resources, and organizational attention needed to take it forward.

NSGM has been formed with its own dedicated team, resources, authority, and functional & financial autonomy to plan and monitor the implementation of the policies and programs related to Smart Grids in the country.

### **NSGM Structure**<sup>5</sup>

NSGM is housed under the Ministry of Power. Other concerned Ministries like the Ministry of New and Renewable Energy and Ministry of Heavy Industries are also associated with the mission.

<sup>1</sup> [MOP Annual Report Eng 2021-22.pdf \(powermin.gov.in\)](#)

<sup>2</sup> <https://www.nsgm.gov.in/>

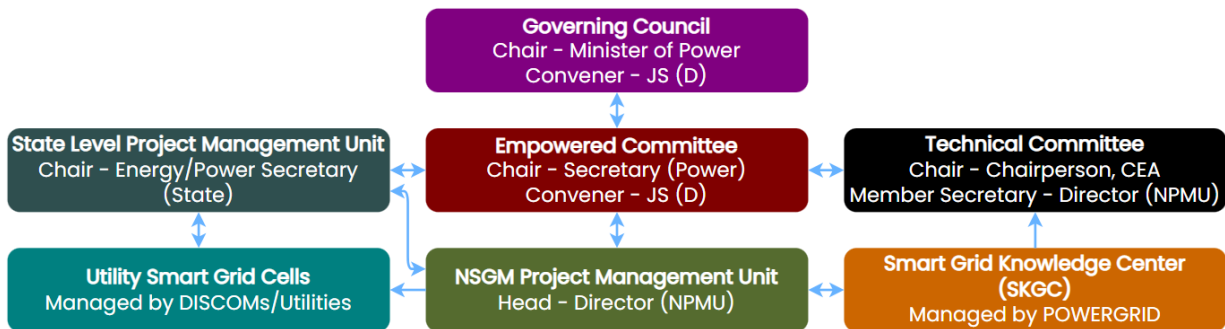
<sup>3</sup> <https://www.nsgm.gov.in/en/smart-grid>

<sup>4</sup> <https://pib.gov.in/PressReleaselframePage.aspx?PRID=1809289>

<sup>5</sup> <https://www.nsgm.gov.in/en/nsgm>

NSGM functions with a three-tier hierarchical structure as follows:

- **1st Level** – [Governing Council](#)<sup>6</sup>, headed by the Union Minister of Power.
- **2nd Level** – [Empowered Committee](#)<sup>7</sup>, headed by Secretary (Power).
- **3rd Level** – [NSGM Project Management Unit](#)<sup>8</sup>.



### Smart Grid Projects under NSGM<sup>9</sup>

So far, the following projects have been sanctioned under the National Smart Grid Mission:

- Sub Division 5 under Chandigarh Electricity Department (CED), Chandigarh
- Complete City excluding Sub Division 5 under CED Chandigarh
- Six Towns under Jaipur Vidyut Vitran Nigam Limited (JVVNL), Rajasthan
- Ranchi City under Jharkhand Bijli Vitran Nigam Limited (JBVNL), Jharkhand



### Status of Smart Grid Projects under NSGM<sup>10</sup> (as of May 2022)

#### 1. CED, Chandigarh (Sub Div-5)<sup>11</sup>

- Area of implementation - **Sub Division 5 of Chandigarh.**

<sup>6</sup> <https://www.nsgm.gov.in/en/governing-council>

<sup>7</sup> <https://www.nsgm.gov.in/en/empowered-committee>

<sup>8</sup> <https://www.nsgm.gov.in/en/npmu>

<sup>9</sup> <https://www.nsgm.gov.in/en/sg-projects>

<sup>10</sup> <https://www.nsgm.gov.in/sites/default/files/SG-Projects-Status-May-2022.pdf>

<sup>11</sup> [SG Projects | National Smart Grid Mission, Ministry of Power, Government of India \(nsgm.gov.in\)](#)

- Project covers about **30,000 consumers** with a good mix of residential and commercial consumers.
- Till date, **24,149 smart meters installed** in the field.
- **Functionalities adopted** – Advanced Metering Infrastructure (AMI), Substation Automation including Supervisory Control and Data Acquisition (SCADA), Integration of Rooftop Solar, Distribution Transformer Monitoring (DTM).
- **Benefits envisaged** - Reduction in Aggregate Technical & Commercial (AT&C) losses, improvement of availability, reduced peak load, improved billing and collection efficiency.
- Approved Project Cost: ₹28.58 Cr; GoI Support: ₹8.57 Cr.

## 2. **CED, Chandigarh (Complete City Excl. SD-5)**<sup>12</sup>

- Area of implementation - **Complete Chandigarh City excluding Sub Division 5.**
- Project covers about **1.84 lakh consumers** with a good mix of residential and commercial consumers with a peak demand of 435 MW.
- **Functionalities adopted** - AMI, SCADA / Advanced DMS, metering, billing and collection, geographical information system, call centre establishment.
- **Benefits envisaged** - Reduction in AT&C Losses, increased operational efficiency, reduction in peak load power reduction.
- Revised Project Cost: ₹131.14 Cr. (Revised). GoI Support: ₹39.34 Cr.

## 3. **JVVNL, Rajasthan (Six Urban Towns)**<sup>13</sup>

- Area of implementation - **Six Towns of Rajasthan (Baran, Bharatpur, Bundi, Dholpur, Jhalawar and Karauli).**
- Project covers about **1.5 lakh consumers** with a good mix of residential and commercial consumers.
- Till date, **1,15,608 smart meters installed** in field.
- **Benefits envisaged** - Reduction in AT&C losses, reduction in short-term/peak power purchase cost, increase in the ratio of energy consumption to peak load.
- Approved Project Cost: ₹87.43 Cr. GoI Support: ₹26.23 Cr.

## 4. **Ranchi City Under JBVNL, Jharkhand**

- Area of implementation – **Ranchi city.**
- Project covers about **3.6 lakh consumers** with a good mix of residential and commercial consumers.
- **Functionalities adopted** - AMI, DTM, mobile-based consumer portal
- **Benefits envisaged** - Reduction in AT&C Losses, improved billing and collection efficiency, better consumer relationship management, increased operational efficiency
- Approved Project Cost: ₹228.69 Cr. GoI Support: Rs.68.61 Cr.

<sup>12</sup> [SG Projects | Page 2 | National Smart Grid Mission, Ministry of Power, Government of India \(nsgm.gov.in\)](#)

<sup>13</sup> [SG Projects | National Smart Grid Mission, Ministry of Power, Government of India \(nsgm.gov.in\)](#)

## Smart Grid Knowledge Centre<sup>14</sup>

The Smart Grid Knowledge Centre (SGKC) is a state-of-the-art platform for the demonstration and outreach of smart grid technologies. Established by the POWERGRID, with support from the Ministry of Power and the NSGM, the SGKC showcases smart grid technologies through demonstrations and provides training and capacity-building support to power distribution companies. Now, SGKC is being developed as one of the leading Centres of Excellence (CoE) under the guidance of the Ministry of Power to foster partnerships, innovation and entrepreneurship in Smart Grid technologies and create capacities in the power sector.



## Smart Meter (SM) Statistics Dashboards<sup>15</sup>

NSGM Project Management Unit (NPMU) has developed multiple dashboards on Smart Meters deployment statistics and hosted the same on the NSGM website. The dashboards are updated on a regular basis with inputs from multiple stakeholders viz. utilities, implementation agencies, and manufacturers.

All India Status of NSGM Smart Meters (SM)*			
Agency	Sanctioned	Installed SM	In stock
NSGM	7,23,433	1,38,950	34,526

*\*Data as on 17 June 2022*

## **Future of NSGM in India**

It is important to note that smart grids are a dynamic and evolving concept due to constant technological innovations. Therefore, the objectives, structure and functioning of NSGM is sketched so as to allow sufficient freedom and flexibility of operations without needing to refer the matter to different Ministries / Agencies frequently.

<sup>14</sup> <https://sgkc.powergrid.in/>

<sup>15</sup> <https://www.nsgm.gov.in/en/state-wise-map>

## References:

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