Central Government would assist the States in the attainment of this objective. It would be playing a supportive role in fresh capacity addition and a major role in development of the National Grid. The State Governments need to ensure the success of reforms and restoration of financial health in distribution, which alone can enable the creation of requisite generation capacity. The Regulatory Commissions have the responsibility of ensuring that the regulatory processes facilitate the attainment of this objective. They also have a developmental role whose fulfillment would need a less formal and a consultative process.

The Electricity Act, 2003 also provides for mechanisms like "Coordination forum" and "Advisory Committees" to facilitate consultative process. The Act also requires the Regulatory Commissions to ensure transparency in exercise of their powers and in discharge of their functions. This in no way means that the Regulatory Commissions should follow formal judicial approach. In fact, quick disposal of matters would require an approach involving consultations with stakeholders.

6.2 Under the Act, the Regulatory Commissions are required to perform wide-ranging responsibilities. The appropriate Governments need to take steps to attract regulatory personnel with required background. The Govt. of India would promote the institutional capability to provide training to raise regulatory capacity in terms of the required expertise and skill sets. The appropriate Governments should provide financial autonomy to the Regulatory Commissions. The Act provides that the appropriate Government shall constitute a Fund under section 99 or section 103 of the Act, as the case may be, to be called as Regulatory Commission Fund. The State Governments are advised to establish this Fund expeditiously.

AJAY SHANKAR, Addl. Secy

Printed by the Manager, Govt. of India Press, Ring Road, Mayapuri, New Delhi-110064
and Published by the Controller of Publications, Delhi-110054.

No.23/23/2018-R&R [243044]
Government of India
Ministry of Power
**

Shram Shakti Bhawan, Rafi Marg,
New Delhi, 12th April, 2021

ORDER

Subject: Constitution of expert committee to prepare draft National Electricity Policy 2021.

The Central Government, from time to time, in consultation with the State Governments and the Central Electricity Authority, reviews or revises, the National Electricity Policy and Tariff Policy under Section 3 (3) of the Electricity Act, 2003. In compliance of section 3 of the Electricity Act 2003, the Government of India had notified the National Electricity Policy on 10th February, 2005. The Working Group on Power for 12th Plan had made recommendation for amendment in National Electricity Policy (NEP) in addition to Electricity Act, 2003 and Tariff Policy.

2. In this regard, with the approval of Hon'ble Minister of State (IC) for Power & NRE, the Ministry of Power hereby constitutes a Committee to prepare and recommend National Electricity Policy (NEP), 2021 with following composition:

i. Shri Gireesh Pradhan – Ex-Chairperson, CERC --- **Chairman**
ii. Shri Rakesh Nath, Ex-Chairperson CEA and Ex-Member APTEL
iii. Chairperson, CEA
iv. Representative of MNRE
v. Representatives from the States of West Bengal, Andhra Pradesh, Uttar Pradesh, Assam & Gujarat
vi. Representative of NITI Aayog
vii. CMD, NTPC
viii. CMD, NHPC
ix. CMD, POSOCO
x. CMD, PGCIL
xi. CMD, SECI
xii. Joint Secretary (R&R), Ministry of Power - **Convenor**

3. The committee may co-opt any other member and shall submit the suggested draft NEP 2021 in two months.

4. The committee may call representative from IPP, FICCI, CII, Wind Association, Solar Association, Storage Association etc. as special invitee for the above said committee meetings.

(D. Chattopadhyay)
Deputy Secretary to the Govt. of India
Tel: 2371 5250

To

All the Members of the Committee.

Contd.....2/-.

Copy to with the request to nominate a suitable officer at appropriate level for the aforesaid Committee:

1. Secretary, MNRE, New Delhi
2. CEO, NITI Aayog, New Delhi
3. Principal Secy/Secy, Energy/Power Deptt. of the States of West Bengal, Andhra Pradesh, Uttar Pradesh, Assam and Gujarat.

Copy also to:

Sr. PPS to Secretary (Power), Sr. PPS to JS (R&R), PS to DS (R&R), Ministry of Power

MINISTRY OF POWER

RESOLUTION

New Delhi, the ....th February, 2021

NATIONAL ELECTRICITY POLICY 2021

No. .....-R&R (Vol-..)

1.0 INTRODUCTION

1.1 Section 3(1) of the Electricity Act, 2003 requires the Central Government to formulate, inter alia, the National Electricity Policy (NEP) in consultation with the Central Electricity Authority (CEA) and the State Governments. This provision is quoted below:

> *"The Central Government shall, from time to time, prepare the National Electricity Policy and tariff policy, in consultation with the State Governments and the Authority for development of the power system based on optimal utilization of resources such as coal, natural gas, nuclear substances or material, hydro and renewable sources of energy".*

1.2 The National Electricity Policy was first notified on 12thFebruary 2005. Section 3 (3) of the Electricity Act enables the Central Government to review or revise the National Electricity Policy from time to time. In exercise of the powers conferred under this Section, the Central Government hereby notifies the revised National Electricity Policy. Notwithstanding anything done or any activity undertaken or purported to have been done under the provisions of the National Electricity Policy notified in the year 2005, the same shall, in so far as it is not inconsistent with that Policy, be deemed to have been done or undertaken under provisions of the revised National Electricity Policy 2021.

1.3 Since the notification of the National Electricity Policy in the year 2005, a lot of ground has been covered in many areas such as generation capacity addition including from renewable resources, transmission network expansion, rural electrification, grid operation, electricity markets etc. Additional power generation capacity of 2,51,681 MW, inclusive of renewables has been added up to 31.3.2020 since the year 2005 and the per capita consumption of electricity has increased to 1,208units in the year 2019-2020 from 631.4units in the year 2005-2006. Further, about 2,52,112ckt-kms of transmission lines (above 220 kV) have been added up to March 2020 since the year 2005 which has enhanced interregional transmission capacity from 10,150MW (March 2005) to 1,02,050 MW (March2020). The process of village electrification has been completed in the month of April 2018.There has been

significant improvement in the quality of power and grid management; the average grid frequency now hovers between 49.98 Hz to 50.02 Hz for most of the time. The share of renewable generation in the year 2019-20was 9.96% of the total electricity generation compared to share of only 0.75% in the year 2004-2005. A number of regulations have been made by CERC and the SERCs, which has brought discipline in the grid operations, introduced efficiency in generation, transmission and distribution of power and enabled development of Power Markets through operation of Power Exchanges in the country. CEA has also issued several Technical Standards such as Grid Standards, Grid Connectivity Standards, connectivity of Distributed generation Resources, installation and operation of meters, measures related to safety and standards for construction and O&M.

1.4 While the growth in the sector is visible, further work needs to be done to enhance accessibility of electricity 24x7, especially in the rural areas and to the lowest strata of society. The financial health of distribution companies has become a primary concern since the regulatory regime has not been able to provide remunerative tariffs reflecting the true cost of supply and the AT&C loss levels continues to remain substantially high except certain areas, despite the fact that substantial investments have been made towards metering and on other distribution infrastructure.

1.5 Government of India has set a target of having renewable capacity of 1,75,000 MW by the year 2022.Further, India's Nationally Determined Contributions (NDC) includes commitment to achieve about 40 percent cumulative electric power installed capacity from non-fossil fuel based energy resources by the year 2030. Such large scale integration of renewables is expected lead to increased balancing and ramping requirements. However, the falling share of hydro generation and shortage of domestic natural gas, has led to difficulties in meeting fast ramping requirement during peak hours. This flexing of generation is therefore, being attempted through coal based thermal generation. The balancing and ramping requirement shall further increase significantly as more renewable capacity comes into the grid.

1.6 The aim of the revised National Electricity Policy 2021 is to find policy interventions to address the issues being faced particularly those mentioned in para 1.4 and 1.5 above.

2.0 AIMS & OBJECTIVES OF NATIONAL ELECTRICITY POLICY 2021

The National Electricity Policy 2021 aims at achieving the following objectives:

i) Promote clean and sustainable generation of electricity

ii) Development of adequate and efficient transmission system

iii) Revitalization of Discoms

iv) Development of Efficient Markets for electricity

v) Supply of reliable and quality power of specified standards in an efficient manner.

vi) Move towards light touch regulation

vii) Promotion of manufacturing of goods and services in India in the Generation, Transmission and Distribution segments of the power sector under the Make in India initiative and Aatmanirbhar Bharat Abhiyan.

3.0 NATIONAL ELECTRICITY PLAN

3.1 Section 3 (4) of the Electricity Act,2003 requires the Central Electricity Authority to frame a National Electricity Plan once in five years and revise the same from time to time, in accordance with the National Electricity Policy. According to Section 3(5) of the Electricity Act, the Authority may review or revise the National Electricity Plan in accordance with the National Electricity Policy. Also, Section 73(a)of the Electricity Act, 2003provides that CEA shall formulate short-term and perspective plans for development of electricity system and coordinate the activities of various planning agencies for optimal utilization of resources, keeping in view the interests of the national economy and to provide reliable and affordable electricity to all consumers.

3.2 One of the primary components for preparation of the National Electricity Plan is the estimation of power demand in the years to come, which is done in Central Electricity Authority (CEA) periodically every five years by way of 'Electric Power Survey'.The exercise of Electric Power Survey needs to be carried out in consultation with the State Governments and other state utilities. Increasing thrust of Government of India on improving efficiency, deployment of electric vehicles, adoption of newer technologies like storage etc are likely to affect the electricity demand in future; therefore, CEA should carry out mid-term review of the Electric Power Survey and may make appropriate modifications in the projected demand, if required and accordingly also revise the National Electricity Plan.

4.0 AREAS ADDRESSED

4.1 The National Electricity Policy covers the different areas as given below:

i) Optimal Generation mix

ii) Transmission

iii) Distribution

iv) Grid operation

v) Power markets

vi) Regulatory Process

vii) Research and Development (R&D) and adoption of new technologies

viii) Power Quality

ix) Energy Conservation & Energy Efficiency

x) Environmental Issues

xi) Skill building and Human Resource Development

xii) Coordinated Development

xiii) Creation of Electric Vehicle Charging Infrastructure

xiv) Make in India initiative and Aatmanirbhar Bharat Abhiyan

xv) Disaster Risk Reduction

These areas are further elaborated in the following paragraphs.

5.0 OPTIMAL GENERATION MIX

5.1 The installed capacity in the country as on 31.03.2020is about 3,70,106 MW, including about 87,028MW (as on 31.03.2020) of renewable sources of energy, which comprises of 37,694 MW wind, 34,628MW solar,9,875MW biomass power(co-generation),148 MW Waste to Energy and 4,683 MW small hydro and contributes about 19% of the total installed capacity. Currently there is about 75 GW of captive generating capacity in the country. While there has been an appreciable increase in total installed capacity, the share of hydro generating capacity has reduced from 26.12% in March 2005 to 12.35% in March2020.

5.2 Adequate hydro capacity with storage or pondage including pumped storage hydro power plants /combined cycle power plants, battery storage and other emerging technologies such as Hydrogen Storage, which are capable of relatively quick ramp up and ramp down and store energy with higher efficiency for long duration, are options for meeting the peak demand in the country in an efficient manner. In future, coal based stations may have to resort to two shift operation and may have to be operated at reduced generation levels to provide flexibility to cope with variable generation from renewable energy sources. Further, to make the existing coal based plants more flexible, retrofitting of existing coal based stations and combined cycle gas stations, coupled with adoption of suitable operating practices may be explored to achieve higher degree of flexibility.

5.3 Differential tariffs between peak and off-peak hours for consumers and generating stations by CERC/SERCs, as envisaged in the Tariff Policy, should be introduced expeditiously in order to appreciate the value of peaking power. SERCs need to frame a scheme whereby consumers willing for curtailment in their demand, part or full load, get the benefit of a lower tariff.

5.4A regulatory framework for determination of adequate (national, regional and state level) primary, secondary and tertiary reserves should be developed by CEA so that demand can be met at all the times even with planned outage/tripping of generating