

## **ENERGY POLICY, 2011**

### **1. BACKGROUND**

Energy is an essential requirement for economic as well as overall development of the State. Availability of sufficient quality power is unavoidable for meeting the basic requirements of common people and industrial development.

Consumption of electrical energy is a universally accepted indicator of progress in the agricultural, industrial and commercial sectors, as also of the well being of the people of the State. No major economic activity can be sustained without adequate and reliable supply of power. This sector plays a critical role in employment generation, regional development and poverty eradication.

Presently inadequate availability of power is adversely effecting the overall development of the State. The demand supply gap has been widening year after year. The gravity of the situation in Jharkhand is underlined by the fact that the State's average per capita consumption is 552 units (which includes command area of DVC, JUSCO and SAIL) as against the national average of 720 units.

#### **1.1 PRESENT POWER SCENARIO IN THE STATE**

Total installed capacity of the Power Plants of Jharkhand State Electricity Board (JSEB) and Tenughat Vidyut Nigam Limited (TVNL) is 1390 MW, out of which 1260 MW is Thermal and 130 MW is Hydel. Thus the share of Hydel power is only about 9.4% of total capacity against the national average of about 24%. Average per capita electricity consumption per year is about 552 units which is very low compared to other developed States and also with national average of 720 units.

Power consumption by high tension (HT) consumers is about 45.03% of the total consumption, whereas agriculture consumption is only about 1.26%.

In order to have right course of action the government has reviewed the current state of power sector in the State and it can be summed up briefly as follows: -

- Jharkhand has a current peak deficit of power to the extent of 200 – 400 MW. This is because no new plant has come after 1996.
- The power infrastructure including transmission and distribution has also become overloaded due to increase in demand and inadequate investment in the sector in the past 10 years.
- The State has a distribution network of 50172 circuit kilometers of line network with the transformation capacity of 2490.68 MVA. State has planned an investment of Rs.700.00 Crore in the next 5 years in the distribution segment.
- The transmission network of the State consists of 2708.63 CKT Km of lines of different capacities and the transformation capacity of 3350.45 MVA. The State has plans to invest Rs. 3602.00 Crore during the next 5 years.
- Household electrification level in the State is about 50–55% as against the national average of about 60%. The Govt. of Jharkhand has kept a target of 100% rural electrification to bring the per capita consumption to the level of national average by 2012 and to improve the house hold electrification level to 100% by 2014. The State has also planned for minimum 8-10 hours supply to rural areas.
- To achieve the average per capita consumption of the country, the State would require over 2400 MW of new capacity with an investment requirement of over Rs. 12000.00 Cr.
- Jharkhand has vast reserve of Coal but capacity addition in last ten years is nil.

## 2. ENERGY POLICY

Main objective of the Energy policy is to accelerate the pace of development of the State and bring it at least at par with other developed States. This will subserve the overall goals of the State in economic development and thereby reduce the level of poverty, particularly prevailing in rural areas and among the people belonging to Scheduled Castes and Scheduled Tribes and Other Backward Classes.

Jharkhand State is fortunate that it has immense possibilities of coal based thermal power generation. Looking at abundant availability of coal in the state, Jharkhand would be developed as a 'Power Hub' of the Nation from where power would be exported to other needy States.

Jharkhand Energy Policy, 2011 is structured with consumers as the focal point & aims at fulfillment of the overall need for universal access and for providing reliable, quality & affordable power. The following are the principle objectives in this direction:

- Access to electricity to all households by 2014
- Power demand to be fully met by 2014. Energy and peaking shortages to be overcome and adequate spinning reserve to be available.
- Protection of consumers' interests
- Supply of Reliable and Quality Power in an efficient manner and at reasonable price.
- Per capita availability of electricity to be increased to over 1000 units by 2017
- Financial Turnaround and Commercial Viability of successor utilities after unbundling of JSEB, thereby reducing the financing burden on the State over a period of time while recognizing the fact that during the initial transition period, state support would be a key determinant for the success of entire exercise.

- Optimization of generation of existing plants by putting up additional units, through renovation and modernization.
- To augment the transmission and distribution capacity and refurbish the existing capacity with a view to improving efficiencies, reliability & quality of supply and reducing losses.
- Encouraging eco-friendly generating capacity
- Sourcing competitive and reliable bulk power from sources both within and outside the state
- Encouraging as a facilitator to IPPs who have entered into MoU for setting up Thermal power generating plant in the State and supply of power to the State under first right of refusal limited to 25% of the installed capacity at price to be decided by Jharkhand State Regulatory Commission (JSERC).
- Expeditious electrification and supply of electricity to all villages and households in the state.
- Augmentation of the transmission and distribution network and refurbish the existing network with a view to have improved efficiency, reliability & quality of supply and reduction of losses.
- To support the Jharkhand State Electricity Regulatory Commission with all policy and other administrative measures.
- Encourage efficient usage of electricity & facilitate energy conservation measures including demand side management.

Keeping in view the above objectives the State Government enunciates the following Energy Policy: -

## **2.1 GENERATION**

Because of abundant availability of coal, there exists a wide scope for coal-based power projects in the State. In addition, the State has very good potential for power generation through non-conventional energy sources especially through solar photovoltaic system and mini/micro Hydel projects. Presently the installed capacity of the State from Jharkhand State Electricity Board's

(JSEB) power stations is 1390 MW as against an average demand of 1400-1500 MW. It is estimated that maximum demand by the year 2016-17 would be about 3500 MW. Keeping in view the projected demand of 7000 MW of the State in the next 15 years, following steps would be taken to enhance generation in the State: -

- (a) Renovation & Modernization (R&M) of JSEB owned thermal power units which are very old, will be undertaken to improve their PLF and thereby enhance power generation. By the year 2016 - 17, the PLF to the extent of 70-80% shall be achieved.
- (b) Looking to the immense potential for coal based power generation in the State JSEB envisages to set-up 3 x 660 MW thermal power project at Patratu under competitive tariff bid route. After meeting requirement of the State, the surplus power could also be sold to other States and State Government shall extend all possible help in this regard.

Expansion of Tenughat Vidyut Nigam Limited (2x660 MW) linked with coal block has been taken up. Transaction Advisor has been engaged for giving consultancy for selection of developer.

- (c) With a view to increase Hydel Power generation, sites for various projects at different locations based on water availability, feasibility shall be identified. Private investment shall also be welcomed for Hydel Power Projects. Non-Governmental Organisations and local bodies shall also be encouraged for mini/ micro hydro projects wherever feasible.
- (d) Apart from Hydel Power, generation through other Non- Conventional Energy Resources such as Solar, Wind, Geo-Thermal, Bio-Mass etc., would also be encouraged and all possible help shall be extended.
- (e) The Govt. of India has formulated policy guidelines for procurement of power through competitive bidding route under case I and Case II methods. The State would continue to follow this route and power would also be

procured through MoU route . Generation projects through MoU route shall be set up by IPP on its own or jointly with central or state-owned utilities or its successors anywhere in the State of Jharkhand. The tariff for such projects would be determined by the JSERC.

## **2.2 RENOVATION, MODERNISATION AND MANAGEMENT OF EXISTING POWER PLANTS**

The state owned Patratu Thermal Power Plant's units have outlived their useful life. Because due attention has not been paid to scheduled maintenance, renovation and modernization of the existing plants which has resulted in unplanned outages and frequent breakdowns. As a result of the Plant Load Factor is below satisfactory level, it is proposed to increase the operating efficiency of the existing plants through introduction of professional management and renovation and modernization & refurbishment programmes. The process of refurbishment, renovation and modernization involves substantial investment. The State has taken up refurbishment, renovation and modernization of unit no. 9 & 10 through JSEB. This will add up approximately 200 MW to the system by 2012.

## **2.3 TRANSMISSION**

The transmission network is inadequate to cater to the expected growth in load in the State. Areas in the districts of Chatra, Simdega, Latehar, Lohardaga, Palamu and divisions of Santhal Pargana and Kolhan do not have adequate transmission connectivity. In the event of full capacity generation from Patratu and TVNL evacuation is a problem. Moreover, many independent power producers are setting up their power plants and few of them are in advance stage of completion. To overcome bottleneck in evacuation of power, setting up of grid stations and new transmission lines and strengthening of all existing power lines have been proposed. To cater overall energy requirement of 3500 MW by 2017, most of the 220 KV transmission line will have to be beefed up to 400 KV. Huge investment to the tune of 3602.00 Crores is required. This will facilitate evacuation of power besides ensuring supply of power with reduced

loss of transmission. In view of cap in borrowing limit financial assistance is required to strengthen transmission network in the State. Non government intervention/participation is required in transmission sector.

The construction of State Load Despatch Centre under the provision of the Electricity Act, 2003 has already been started through PGCIL and will be commissioned by May, 2013. Presently the Central Load Despatch Centre of the Jharkhand State Electricity Board (State transmission utility and a licensee) is functioning as State Load Despatch Centre by notification of the State Government.

## **2.4 DISTRIBUTION**

The operational parameters like AT & C losses, quality & reliability of supply need to improve significantly to address the various issues that plague the sector at present. Admittedly, the operational efficiencies are inextricably linked to the governance of the sector. In addition to reduction in system losses and improvement in profitability of the distribution business, the objective of the quality & reliable supply and also expansion of supply network especially in the rural areas has also to be achieved in an expeditious manner.

Government of Jharkhand accordingly would pursue private sector participation in the distribution business through a transparent and open process of competitive bidding. Private sector participation in distribution business may be through franchisee models in three towns namely Ranchi, Jamshedpur and Dhanbad. While reduction of the burden on Government finances is one of the most important long-term objectives of the distribution privatization exercise the distribution franchisee system is being proposed which may be one of the most powerful tools to improve efficiencies on a sustainable basis and ensure sector viability.

The need for continued support to the sector at least during the transition period till the distribution entities turn around and become financially viable & self sustaining. Government of Jharkhand is prepared to commit the necessary

transition period support to ensure a successful turnaround of the state power sector and for this would involve central sector financial institutions and Ministry of Power, GoI in funding of transitional finance requirement.

The Electricity Act, 2003 facilitates introduction of competition in the distribution sector through mechanisms such as open access and multiple licensees through creation of own distribution network. The State Government is of the view that such mechanisms would introduce competitive pressure on various players in the power distribution sector to improve quality of supply and service at competitive prices as well as enhance consumer choice. The State Government is committed for implementation of non-discriminatory provision for the use of transmission lines or distribution system or associated facilities with such lines or system by any licensee or consumer or a person engaged in generation in accordance with the regulations specified by the Appropriate Commission as per provisions of the Electricity Act, 2003.

## **2.5 ROLE OF PANCHAYAT IN DISTRIBUTION**

As per provision of Section 5 of the Electricity Act, 2003, the Government is committed for Panchayat's participation in power distribution in rural areas.

## **2.6 BACHAT LAMP YOJNA**

Under 'Bachat Lamp Yojna' in coordination with Bureau of Energy Efficiency (BEE), Ministry of Power, Government of India, it is proposed that each BPL connection will be provided with one CFL of 14 W and two CFLs of 14 W will be given to each APL connection free of cost.

## **3. RURAL ELECTRIFICATION**

The key endeavour to provide access to electricity to all areas including villages and hamlets through rural electricity infrastructure and electrification of house holds as mandated in Section 6 of the Electricity Act, 2003 for which Government of Jharkhand is committed. Determined efforts shall be made to ensure that the task of rural electrification for securing electricity access to all



households and also ensuring that electricity reaches to poor and marginal sections of the society at reasonable rates. Accordingly, the Transmission & Distribution network shall be strengthened. Looking to the problems in electrification due to dense forest coverage, remote villages will be electrified through non-conventional energy resources where ever necessary.

#### **4. ENERGY FOR AGRICULTURE**

Keeping in view the important role of agriculture in the State's economic development and low irrigation percentage, priority shall be accorded to energization of agriculture pump sets. For this purpose, where power lines exist and the required formalities are completed by the farmers, energization of their agriculture pumps shall be done within a fixed time- limit. Where lines do not exist, transmission and distribution infrastructure shall be developed for energizing agriculture pumps. Procedures for energization of agriculture pump sets would be further simplified. Electricity shall be made available on priority to Lift Irrigation Schemes (LIS) also.

At places where grid connectivity is not available, power supply through renewable sources of energy such as Solar Power Plant/ Biomass co-generation is proposed.

#### **5. ENERGY FOR INDUSTRIES**

For giving impetus to industrial investment in the State, it is absolutely essential that industries get quality power at affordable price. State Government resolves to make reliable power available to industries at affordable price so that in the present competitive scenario, new industries get attracted to the State.

#### **6. CAPTIVE POWER PLANT FOR INDUSTRIES**

Normally Captive Power Plant (CPP) is required by industries when availability of power is not assured. Presently Jharkhand State is not surplus

in power, but looking to the future load growth in the State Government's policy for captive power plants is as follows: -

- (a) Keeping in view the State Government's resolve to make Jharkhand 'Power Hub' of the nation, State Government would encourage power generation through captive power plants.
- (b) Captive power plant owners would be allowed to sell power to their sister concerns and meeting their demand surplus power will be given to the Government of Jharkhand as first right of refusal. In case of purchase of power from captive plant by JSEB, the rates of purchase shall, as far as possible, be decided by mutual agreement or as approved by JSERC.

## **7. RENEWABLE ENERGY/GREEN ENERGY OPTIONS**

The Renewable Energy options are as follows:

- Biomass projects by utilizing agriculture residues and animal waste.
- Mini, Micro and Small Hydropower projects (up to 25 MW).
- Solar energy based power projects. Government intends to create a Lank Bank for setting up Solar Power Generation Projects at suitable locations.
- Energy power projects based on municipal sewage , solid waste and Industrial Waste

The State will encourage above renewable energy projects wherever feasible. The power will be purchased at the tariff approved by JSERC.

## **8. ENERGY CONSERVATION AND DEMAND SIDE MANAGEMENT**

Government of Jharkhand realizes the importance of energy conservation as a major thrust of the energy policy. There is need to have a system that encourages energy conservation and provides disincentives for inefficient use of energy. Government of Jharkhand would promote measures for economy and efficiency in energy consumption.

Government of Jharkhand would in consultation with the State Regulatory Commission formulate a comprehensive Demand Side Management policy covering the tariff measures.

- a) As per guidelines of Bureau of Energy Efficiency, MoP, Government of India energy audit will be made compulsory for all major industrial and large commercial establishments.
- b) Government of Jharkhand would initiate measures to improve efficiency of agricultural pump sets and all electrical installations.
- c) Through suitable directives and fiscal incentives/disincentives, Government of Jharkhand will actively promote use of energy efficient equipments and launch of bachat lamp yojna.
- d) A communication campaign would be launched for consumer guidance and education programme for spreading mass awareness about energy conservation measures.
- e) Energy efficient buildings would be encouraged.

Looking to the importance of energy and its high generation cost, it is not only essential to stop misuse of energy but also to conserve energy by way of demand side management. Effective measures for creating awareness about energy efficient appliances like agriculture pump sets, energy efficient bulb tube lights etc, shall be taken by State Government.

## **9. POWER SECTOR REFORMS**

Due to long monopoly of State Electricity Board in energy sector and due to defective policies, the JSEB has become financially unviable with the result that required investments in generation, transmission and distribution sector. This situation cannot be allowed to continue for long and therefore, reforms in power sector has now become inevitable. Keeping in view the national policy for power sector reforms, State Government shall take following steps:-

- (a) To bring down line losses in Transmission and Distribution (T&D), effective metering at all levels of T&D shall be done, so that proper energy audit can be under-taken and accountability is fixed.
- (b) With a view to avert energy theft, cent-percent metering of all consumers is essential. Due to the large quantum of this work, it shall be done in a phased manner.
- (c) To curb the increasing tendency of energy theft, effective steps shall be taken by State Government. Surprise checks by flying squads will be conducted and strict legal action will be taken against those found indulging in theft. Informers of energy theft shall be rewarded. Services of judicial officers will also be obtained as per requirement for the special courts constituted as per Section 153 of the Electricity Act, 2003.
- (d) Keeping in view the experience of other States in the process of power sector reforms and considering local situations, all-possible efforts shall be made to make JSEB/successor companies more efficient.
- (e) Private investment and participation shall be encouraged in transmission sector under PPP mode.
- (f) There is an immediate need for unbundling of Jharkhand State Electricity Board and it shall be done at the earliest.
- (g) If any policy of the State Government for fulfillment of social objectives of the State results in financial loss to JSEB/successor companies, then the loss shall be compensated by State Government by making suitable provision in the Budget.

## **10. CONSUMER SATISFACTION**

State Government is of clear opinion that in energy sector, consumer satisfaction is supreme. Therefore, for speedy Redressal of complaints of all category of consumers viz -agriculture, industry, domestic and others, a

system shall be devised by which Redressal is ensured within a fixed time limit. Electricity bills will be simplified and services of Banks and Information Technology (IT) shall be availed to improve the process of payment of energy bill.

**11. PERIOD OF VILAIDITY**

State Government has declared above energy policy for the State of Jharkhand vide Notification dated ..... This Energy Policy would be valid for five years w.e.f. date of notification of the policy.