

CITIZEN'S CHARTER  
OF  
CENTRAL ELECTRICITY AUTHORITY  
MINISTRY OF POWER  
NEW DELHI

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## **CITIZEN'S CHARTER**

### **1 Address of the Office with Title**

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### **2. Organization of CEA**

The Central Electricity Authority (CEA) is a statutory organization originally constituted under section 3(1) of the repealed Electricity (Supply) Act, 1948 since substituted by section 70 of the Electricity Act, 2003. It was established as a part-time body in the year 1951 and made a full-time body in the year 1975. Considering the pivotal role of CEA in the development of power sector of the country, the CEA has acquired ISO:9001:2000 quality system certification to improve the quality and efficiency of organization working.

As per section 70(3) of the Electricity Act, 2003, the Authority shall consist of not more than 14 Members (including its Chairperson) of whom not more than eight shall be full-time Members to be appointed by the Central Government.

CEA is headed by a Chairperson who is the Chief Executive of the Authority and who oversees the development of Power Sector in the country. A Secretary, appointed by the Authority with the approval of the Central Government under section 72 of Electricity Act 2003, assists him in the discharge of CEA's statutory functions. The Secretary also assists the Chairperson in all matters pertaining to administration and technical matters including human resource development and concurrence to hydro power projects. Presently, there are six(6) wings in CEA namely Planning, Hydro, Thermal, Grid Operation & Distribution, Economic & Commercial and Power System, each headed by a Member of the Authority. Under each Member, there are technical divisions each headed by an officer of the rank of Chief Engineer. At present, there are twenty-seven divisions in CEA headquarters at New Delhi. The Co-ordination Division reports directly to the Chairperson.

### **3. Functions of CEA**

The functions and duties of the Authority are delineated under section 73 of the Electricity Act, 2003. Besides, CEA has to discharge various other functions as well under sections 3, 8, 53, 55 and 177 of the Act.

As per Section 73 of the Electricity Act, 2003, the Central Electricity Authority shall perform such functions and duties as the Central Government may prescribe or direct, and in particular to –

- a) advise the Central Government on the matters relating to the national electricity policy, formulate short-term and perspective plans for development of the electricity system and coordinate the activities of the planning agencies for the optimal utilization of resources to subserve the interests of the national economy and to provide reliable and affordable electricity to all consumers;
- b) specify the technical standards for construction of electrical plants, electric lines and connectivity to the grid;
- c) specify the safety requirements for construction, operation and maintenance of electrical plants and electric lines;
- d) specify the Grid Standards for operation and maintenance of transmission lines;
- e) specify the conditions for installation of meters for transmission and supply of electricity;
- f) promote and assist in the timely completion of schemes and projects for improving and augmenting the electricity system;
- g) promote measures for advancing the skill of persons engaged in the electricity industry;
- h) advise the Central Government on any matter on which its advice is sought or make recommendation to that Government on any matter if, in the opinion of the Authority, the recommendation would help in improving the generation, transmission, trading, distribution and utilization of electricity;
- i) collect and record the data concerning the generation, transmission, trading, distribution and utilization of electricity and carry out studies relating to cost, efficiency, competitiveness and such like matters;
- j) make public from time to time the information secured under this Act, and provide for the publication of reports and investigations;
- k) promote research in matters affecting the generation, transmission, distribution and trading of electricity;
- l) carry out, or cause to be carried out, any investigation for the purpose of generating or transmitting or distributing electricity;

- m) advise any State Government, licensees or the generating companies on such matters which shall enable them to operate and maintain the electricity system under their ownership or control in an improved manner and where necessary, in coordination with any other Government, licensee or the generating company owning or having the control of another electricity system;
- n) advise the Appropriate Government and the Appropriate Commission on all technical matters relating to generation, transmission and distribution of electricity; and
- o) discharge such other functions as may be provided under this Act.

In addition to above functions and duties, CEA has to perform the following functions in terms of the under mentioned sections of the Electricity Act, 2003:-

### **Section 3 -National Electricity Policy and Plan**

- (1) 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 materials, hydro and renewable sources of energy.
- (2) The Central Government shall publish the National Electricity Policy and tariff policy from time to time.
- (3) The Central Government may, from time to time, in consultation with the State Governments and the Authority, review or revise the National Electricity Policy and tariff policy referred to in sub-section (1).
- (4) The Authority shall prepare a National Electricity Plan in accordance with the National Electricity Policy and notify such plan once in five years:

PROVIDED that the Authority while preparing the National Electricity Plan shall publish the draft National Electricity Plan and invite suggestions and objections thereon from licensees, generating companies and the public within such time as may be prescribed;

PROVIDED FURTHER that the Authority shall –

- (a) notify the plan after obtaining the approval of the Central Government;
  - (b) revise the plan incorporating therein directions, if any, given by the Central Government while granting approval under clause (a).
- (5) The Authority may review or revise the National Electricity Plan in accordance with the National Electricity Policy.

### **Section 8 - Hydro-Electric Generation**

- (1) Any generating company intending to set up a hydro-generating station shall prepare and submit to the Authority for its concurrence, a scheme estimated to involve a capital expenditure exceeding such sum, as may be fixed by the Central Government, from time- to time, by notification.

(2) The Authority shall, before concurring in any scheme submitted to it under sub-section (1) have particular regard to, whether or not in its opinion-

- a) The proposed river-works will prejudice the prospects for the best ultimate development of the river or its tributaries for power generation, consistent with the requirements of drinking water, irrigation, navigation, flood-control, or other public purposes, and for this purpose the Authority shall satisfy itself, after consultation with the State Government, the Central Government, or such other agencies as it may deem appropriate, that an adequate study has been made of the optimum location of dams and other river-works;
- b) The proposed scheme meets the norms regarding dam design and safety.

(3) Where a multi-purpose scheme for the development of any river in any region is in operation, the State Government and the generating company shall co-ordinate their activities with the activities of the person responsible for such scheme in so far as they are inter-related.

### **Section 53 - Provision relating to Safety and Electricity Supply**

The Authority may, in consultation with the State Government, specify suitable measures for:-

- a) protecting the public (including the persons engaged in the generation, transmission or distribution or trading) from dangers arising from the generation, transmission or distribution or trading of electricity, or use of electricity supplied or installation, maintenance or use of any electric line or electrical plant ;
- b) eliminating or reducing the risks of personal injury to any person, or damage to property of any person or interference with use of such property;
- c) prohibiting the supply or transmission of electricity except by means of a system which conforms to the specifications as may be specified;
- d) giving notice in the specified form to the Appropriate Commission and the Electrical Inspector, of accidents and failures of supplies or transmission of electricity;
- e) keeping by a generating company or licensee the maps, plans and sections relating to supply or transmission of electricity;
- f) inspection of maps, plans and sections by any person authorized by it or by Electrical Inspector or by any person on payment of specified fee;
- g) specifying action to be taken in relation to any electric line or electrical plant, or any electrical appliance under the control of a consumer for the purpose of eliminating or reducing the risk of personal injury or damage to property or interference with its use.

### **Section 55 - Use, etc., of Meters**

For proper accounting and audit in the generation, transmission and distribution or trading of electricity, the Authority may direct the installation of meters by a generating company or licensee at

such stages of generation, transmission or distribution or trading of electricity and at such locations of generation, transmission or distribution or trading, as it may deem necessary.

### **Section 177- Powers of Authority to make Regulations**

- 1) The Authority may, by notification, make regulations consistent with this Act and the rules generally to carry out the provisions of this Act.
- 2) In particular and without prejudice to the generality of the power conferred in sub-section (1), such regulations may provide for all or any of the following matters, namely:-
  - a) the Grid Standards under section 34;
  - b) suitable measures relating to safety and electricity supply under section 53;
  - c) the installation and operation of meters under section 55;
  - d) the rules of procedure for transaction of business under sub-section (9) of section 70;
  - e) the technical standards for construction of electrical plants and electric lines and connectivity to the grid under clause (b) of section 73;
  - f) the form and manner in which and the time at which the State Government and licensees shall furnish statistics, returns or other information under section 74;
  - g) any other matter which is to be, or may be, specified;
- (3) All regulations made by the Authority under this Act shall be subject to the conditions of previous publication.

## **4 Vision and Mission Statement**

### **4.1 Vision**

To develop an efficient, economic, safe, reliable and self reliant power system from generation to consumer end with use of latest environmental friendly technologies, innovations in planning, design and engineering.

### **4.2 Mission**

Planning for development of power sector in the country with optimum utilization of resources to provide economic and quality power at affordable price to all.

## **5. Our Clients**

State Electricity Boards, Central/State & Private Sector Power utilities, Central /State Electricity Regulatory Commissions, and Independent Power Producers (IPPs).

## **6. Details of Business Transaction**

### **6.1 Planning for Power Development**

As per the provisions of the Electricity Act, 2003, the National Electricity Policy was notified by Central Government in February, 2005. The Electricity Act, 2003 requires CEA to frame a National Electricity Plan once in five years and revise the same from time to time. Towards optimum and coordinated development of power resources in the country and to assess the generating capacity addition requirement during 11<sup>th</sup> and 12<sup>th</sup> Plan period, CEA has formulated National Electricity Plan (NEP), which has been approved by Ministry of Power in July, 2007. The NEP has been notified in the Gazette vide Gazette No. 159 Dated 03-08-2007.

To fulfill the obligations of sub-sections (i) & (j) of section 73 of the Electricity Act, 2003, CEA brings out an annual document titled as 'All India Electricity Statistics' giving all important parameters/statistics concerning generation, transmission, distribution and trading of electricity and the associated fields. This document is widely referred to internationally and within India.

The Electric Power Survey Committee is constituted periodically with an objective to forecast the electricity demand of the country on short and long term basis so as to incorporate the impacts of changes in the Government policies affecting electricity sector and trends of growth of consumption due to socio-economic and other requirements on electricity demand. The report of the Committee is widely referred to by the international and country's experts/scholars/agencies for various purposes. The report on 17<sup>th</sup> Electric Power Survey of India containing forecast of electricity demand year-wise, state-wise, region-wise and all-India for major consumption categories upto year 2011-12 and perspective forecast up to the end of 13<sup>th</sup> Five Year Plan (year 2021-22) has been published in March, 2007.

### **6.2 Power System Planning & Development**

6.2.1 CEA carries out transmission planning exercises to identify all India and regional grid systems required for evacuation, transmission and disbursement of power to load centers and also to evolve perspective transmission system plan with various technology options. System planning studies are carried out with the ultimate objective of realizing integrated system operation for economic generation dispatch on all India basis and for optimal development of National Grid in a phased manner and its realization by 2012. The exercise has identified the need for increasing the inter-regional transmission capacity from its present level of 17450 MW to 38650 MW by 2011-12. During the planning process, various studies are undertaken to provide adequate margins in transmission system for secure and reliable operation of grid and also to support open access regime. The Government of India in 2000-2001, launched the Accelerated Power Development and Reforms Programme (APDRP) to improve sub-transmission and distribution network with the objective of improving financial viability of SEBs, reduction of T&D losses, and improving quality and reliability of power supply to the consumers. CEA is assisting Ministry of Power in achieving the objective of APDRP. CEA carries out study, in order to protect human life and interference on telecommunication line due to Extra High voltage Power Lines.

6.2.2 New methodology of transmission cost sharing has been evolved by CEA for ATS and System Strengthening for Mundra UMPP (4000 MW) in Gujarat and Sasan (4000 MW) in MP of which Western and Northern Regions are the beneficiaries. This methodology provides the concept of dividing

the total transmission system requirement into generation specific and common purpose components where, the transmission charges for the generation-specific-component is to be shared only by beneficiaries of the generation projects in ratio of their respective shares and those for the common-purpose-component is to be pooled with the regional system along-with considering additional generation (share of generation in the region) while working out revised transmission charge sharing ratios. Accordingly, WR beneficiaries would share the transmission charges for the specific system of the respective project and for the WR pooled system; power allocation to WR constituents from Sasan and Mundra would be considered in working out revised ratios for sharing of WR pooled transmission charges. For Sasan, NR beneficiaries would utilize specific transmission system of Sasan and share no charges for WR and for Mundra, they would utilize NR regional pooled system and specific system of Mundra plus WR regional pooled system.

6.2.3 As Ministry of External Affairs (MEA) entrusted to CEA with the work for verification of the price escalation bills for 220 kV Pul-E-Khumri transmission line and 220/110/20 kV S/S at Kabul in Afghanistan, which was awarded to PGCIL for implementation, CEA carried out the detailed examination and scrutiny of the work.

6.2.4 As WAPCOS sought the technical assistance from CEA on the adequacy of 110 kV S/C transmission line from Salma Dam HEP (3x14 MW) in Afghanistan for power supply to load center and for scrutiny of its estimated cost, CEA recommends specific reinforcements needed for reliable transmission of power and scrutinized the cost estimate.

6.2.5 CEA has rendered assistance in the preparation of the Standard Bid Document brought out by MoP for selection of Transmission Service Provider on competitive tariff bidding route identifying the requirement of specific technical data component viz. description of the scheme, scope of works, conductor specification of transmission lines, completion target etc. Accordingly, three transmission schemes which are in the process of development through private sector competitive tariff bidding route were provided to the two nos. Special Purpose Vehicles (SPV) through Power Finance Corporation (PFC) and Rural Electrification Corporation (REC). These three schemes are (i) Augmentation of Talcher-II transmission system, (ii) System Strengthening in NR for import of power from North Karanpura and other projects outside NR and System Strengthening in WR for import of power from North Karanpura and other projects outside Western Region and also for projects within Western Region, (iii) Scheme for enabling import of NER/ER surplus by NR.

6.2.6 CEA has evolved a master plan for power evacuation system for various river basin based hydro power projects from Satluj Basin, Beas Basin, Chenab Basin and Ravi Basin in Himachal Pradesh. Also, a master plan for power evacuation from various river basin based hydro power projects from Sarada Basin, Alaknanda Basin, Bhagarathi Basin, Yamuna Basin in Uttarakhand in Northern Region was evolved by CEA. CEA has evolved a master plan for power evacuation and utilization from various hydro power projects to be developed by IPPs in Teesta and Rangit river basins.

6.2.7 CEA renders consultancy services to Power Development Department, Govt. of J&K, for the Transmission Projects under Prime Minister's Reconstruction Program, cost of which is about Rs.1350 crore. The works cover preparation of technical specification, evaluation of tenders, design, engineering, inspection, erection, testing & commissioning and project monitoring for 11 Nos. of 220 kV/ 132 kV Substations and 17 Nos. of 132 kV/ 33 kV Substations with total transformation capacity of about 3100 MVA, 220 kV transmission lines of 440 circuit kms and 132 kv transmission lines of 400 circuit kms.

A standing Committee in CEA investigates Power System Equipment failures and carry out post-fault analysis for high voltage substation equipments failures and transmission line tower collapse at 220 kV & above voltage levels, and recommends technical solution and remedial measures to avoid such failures in future.

6.2.8 CEA examined and reviewed the insulation requirement of EHV Transmission lines in the light of frequent tripping of No. of 400 kV transmission lines in the Northern Region during winter season due to impact of pollutants in presence of fog. To facilitate design, operation and maintenance of high voltage transmission lines under increased pollution levels, CEA has reviewed the insulation requirement of high voltage transmission lines of various voltages and has recommended revised parameter to be adopted at the design stage of transmission lines.

6.2.9 Power exchange modalities between India and Nepal is determined and reviewed through power exchange committee meeting held periodically under the initiative of CEA/MoP/MEA. CEA renders assistance to MoP relating to formation of interconnecting grid between SAARC countries and related issues.

6.2.10 Chief Electrical Inspector assisted by Five Regional Inspectorial Organizations carry out statutory inspections of new and existing electrical installations to provide safety to human beings, animals and property under I.E. Rules, 1956.

### **6.3 Grid Operation & Distribution**

CEA monitors the power supply position all over the country. It also monitors all aspects of Grid Operation and Management. In order to expedite the power development in the country, CEA is facilitating formation of National Power Grid through inter-connecting of all the regional grids in the country with strong inter-regional and back-up Transmission system. All the Regions except Southern Region have already been inter-connected through AC lines and operating in synchronism. Southern Region exchanges power with the neighboring regions through HVDC systems and in radial mode on 220 KV AC lines. CEA in association with the Regional Power Committees (RPCs) and Regional Load Despatch Centers (RLDCs) carries out the coordination work for integration of the regional grids by taking up and sorting out the various issues involved in the same. CEA also recommends to MoP allocation of power from unallocated quota of Central Generating Stations to meet specific requirements of the States in contingencies. CEA prepares all India Monthly Power Supply Position Report giving details of requirement, availability and shortages of various States/ Regions in this respect. It also prepares operational planning programme for the next year in the form of Load Generation Balance Report.

CEA renders technical advise to Union Territories (UTs) viz. Andaman & Nicobar Islands, Lakshadweep Islands, Dadra & Nagar Haveli, Daman & Diu, Pondicherry, Chandigarh & Delhi including NDMC for over all power development in UTs. It accords technical clearance of Generation, Transmission & Distribution Schemes of UTs & render technical assistance to the UTs in project formulation, vetting of NITs/acceptance of tenders, preparation of specification for procurement of equipment, advise to UT Administration/MOP on specific technical, organizational and staff matters as and when referred to etc.

CEA also renders technical advise to Ministry of Development of North Eastern Region (DONER) for technical examination of power development schemes for North Eastern States proposed to be funded under NLCPR. It is also assisting NCRPB for preparation of report for Study Group for preparation of functional Plan for Power – 2021 for NCR area.

CEA monitors the progress of state wise village electrification, pump set energization and outages number & duration at 11 KV feeders level as well as consumer level.

CEA also render technical advise to various utilities on distribution planning & development, issuing guidelines & regulations, identifies best practices for refraction etc.

CEA has taken the following R&D projects on distribution:

- Design, manufacturing, testing and commissioning of 630 KVA super conducting transformers.
- Design, manufacturing, testing and commissioning of Static War compensator for IT Park at Trivandrum by M/s. C-DAC.
- Design, manufacturing, testing and commissioning of Static War compensator for Bhilai Steel Plant by M/s. BHEL.

Standard specifications for single phase and three phase outdoor oil filled Distribution Transformers have been prepared by the Central Electricity Authority to act as Guidelines for the utilities for selection and procurement of energy efficient Transformers

#### **6.4 Hydro and Thermal Power Development**

- i) CEA carried out assessment studies of hydro-electric potential in the country and had identified feasible hydro- electric schemes for various basins. In order to accelerate the pace of hydro development, CEA provided assistance to various central/state agencies in the matter of survey & investigation and preparation of Detailed Project Reports (DPRs). It also works for cooperation with neighbouring countries for development of water resources in their countries.
- ii) CEA having carried out hydro-electric survey in the country, developed the criteria for ranking of the balance hydro sites in all the river basins in the country. As per the criteria the schemes totaling about 400 in number and aggregating to an installed capacity of 1,07,000 MW have been graded in A,B & C categories.
- iii) 162 hydro-electric projects spread in 16 states considered attractive in the ranking study have been further taken up for the purpose of preparation of Preliminary Feasibility Reports (PFRs) under the 50,000 MW initiative in the year 2003-04 by CEA as nodal agency with CPSUs/ State agencies as Consultants. The PFRs were completed in September, 2004 for all these projects with capacity of 47,930 MW.

As a follow up of preparation of PFRs, it has been decided to select and take up for preparation of DPRs and implementation of attractive schemes thereby providing a shelf of projects for execution in the near future. Out of 162 schemes (47930 MW) for which PFRs have been prepared, at first instance, based on their preliminary techno-economic analysis, 77 schemes (33952 MW) whose first year tariff works out below Rs. 2.50/kWh have been considered as low tariff schemes and selected for taking up of detailed survey & investigation, preparation of DPR

and implementation by central/state PSUs/ IPPs. Out of these, as on 31.10.2008, DPRs for 18 schemes (7060 MW/revised capacity 6540 MW) have already been prepared. The work of survey and investigation is under progress for another 18 schemes (9548 MW) and their DPRs are likely to be prepared by March'10. The work on balance 41 projects (17343 MW) is held up due to change in agency/non-allotment by the respective State Govts., Statutory clearances and other such issues.

- iv) As per Section 73 (f) of Electricity Act, 2003, Thermal Power Monitoring Division has been assigned to closely monitor the thermal power projects under construction in the country for timely commissioning. Various milestone norms have been formulated for pro-active monitoring of the thermal projects. Regular review meetings are held with project authorities and implementing agencies besides visit to power project sites, based on which monthly/quarterly review reports are being generated, which helps the project authorities in timely completion of the project avoiding time and cost over runs. This also assist in lowering the gestation period and help in achieving the plan target for capacity addition. CEA is closely monitoring the construction of Hydro Projects in the country and assist in their timely commissioning. Remedial measures are suggested to mitigate various bottlenecks in achieving the milestones and thereby assisting the project authorities in avoiding time and cost overrun and also lowering the gestation period and thereby achieving the plan targets for capacity addition.
- v) CEA is carrying out on regular basis assessment and review of various advanced technologies related to thermal generation for possible adoption giving due consideration to economics, efficiency and environmental issues. Requisite steps are being taken to induct coal based units of higher size (660 and 800 MW) with supercritical technology in the grid to improve efficiency and reduce GHG emissions. For this purpose, international manufacturers are being encouraged to set up manufacturing facilities in India.
- vi) .CEA is undertaking an exercise to identify sites for large thermal power projects near coal pitheads as well as on the sea coasts for optimum development of thermal power projects in the country with a view to develop environment friendly thermal generating capacity under "1,00,000 MW Initiative".
- vii) CEA is engaged in the activity of monitoring the fly ash generation and utilization by coal/lignite based thermal power plants.
- viii) CEA closely monitors the thermal generation with respect to annual targets and any slippages occurred and reasons thereof are discussed in Quarterly action plan meetings and corrective actions planned to achieve the targets set.
- ix) Ultra mega Power Projects (UMPPs) – The Government has taken an initiative for facilitating the development of Ultra Mega Power Projects (UMPP) of 4000 MW capacity each under tariff based international competitive bidding route. Presently, nine locations in various states have been identified for setting up of UMPPs. Four (4) UMPPs are to be located at pithead locations and five (5) UMPPs are to be located at coastal locations. Project specific Shell Companies as 100% subsidiaries of Power Finance Corporation Limited have been created for carrying out developmental work consisting of tie up of inputs/ clearances and the bidding process for selection of developers for the UMPPs. CEA is involved in selection of sites for these UMPPs

and providing technical support to the Shell Companies for the development of UMPPs. The power generation units to be set up at UMPPs will be of Super Critical Technology to derive maximum thermal efficiency resulting in saving of fuel and reduced emissions to the atmosphere. Large size projects would lead to production of power at cheaper rate and each UMPP will cater to the power needs of more than one state. Four UMPPs viz. Sasan in MP, Mundra in Gujarat, Krishnapatnam in Andhra Pradesh and Tilaiya in Jharkhand have been awarded to the developers and are at different stages of construction. Joint Monitoring Committees under the chairmanship of Member (Thermal), CEA has been constituted to monitor the progress of the UMPPs. For UMPP at Cheyyur in Tamil Nadu, the activities of tying up of inputs, site related studies and preparation of DPR has been taken up by the Shell Company of M/s PFCCCL. Similar activities for Orissa UMPP and Chhattisgarh UMPP will be taken by the respective Shell Companies after the availability of water is confirmed by State Governments. The UMPPs in Karnataka and Maharashtra are held up due to resistance by local people.

Additional UMPPs, one each, have been proposed by the Govt. of Andhra Pradesh and Gujarat during the meeting of Chief Secretaries of States held on 19.2.2008. Team of CEA /PFC engineers has already visited the potential sites in Andhra Pradesh and suitable site will be finalized after receipt of certain information from Govt. of A.P. The response from Govt. of Gujarat is still awaited for the second UMPP in Gujarat. In addition to above, two more UMPPs are proposed in Orissa utilizing coal blocks allocated for the purpose. CEA/PFC are in discussion with Govt. of Orissa and the sites in Orissa will be visited after receipt of their confirmation on availability of water for the UMPP and program to visit sites for Ultra Mega Power Project at coastal & pithead locations.

- x) A committee has been set up under the Chairmanship of Member (Thermal), CEA giving recommendation to Ministry of Power for allocation of coal linkages and coal blocks based on preparedness of developers.
- xi) CEA is carrying out planning, formulation, implementation and monitoring of Renovation and Modernization/Life Extension (R&M/LE) programmes for thermal power stations/ units, in the country. Further, CEA is facilitating generating companies to undertake renovation & modernization of thermal power stations with focus on overall plant performance optimization through identification of optimal R&M technology options to result in substantial improvement in the efficiency, capacity and reliability in a cost effective manner. The R&M scheme of Hydro Power Stations are also being monitored.
- (xii) CEA has brought out Standard Technical Specification for Main Plant Package for coal based sub-critical thermal power plant with units of 500 MW or higher rating with a view to reduce the time for pre-award activities, design & engineering and the manufacturing by equipment manufacturers. An exercise to bring out similar document for Balance of Plant packages has been initiated.
- (xiii) As per tariff policy, the Central Electricity Regulatory Commission is required to notify operating norms from time to time for generation and transmission in consultation with the Central Electricity Authority. Accordingly, CEA has furnished recommendations to CERC for operation norms of coal & gas based power plants to be applicable for the period commencing from April' 2009 onwards.

## **6.5 Concurrence to Hydro-electric Schemes**

For Hydro Electric Projects, CEA shall accord concurrence to a scheme estimated to involve a capital expenditure exceeding such sum, as may be fixed by Central Government, from time to time under Section 8 of the Act.

Central Government had issued a notification u/s 8 of the Electricity Act, 2003 specifying the capital expenditure of hydro project for accord of concurrence by CEA, vide notification dated 18.4.206 which is reproduced below:

S.O.550 (E) – In exercise of the powers conferred by sub-section (1) of Section 8 of the Electricity Act, 2003 (hereinafter referred to as the Act), the Central Government hereby notifies that the schemes for setting up hydro generating stations by any generating company involving an estimated capital expenditure exceeding the following sum shall be submitted for concurrence of Central Electricity Authority (hereinafter referred to as the Authority), namely:-

1. Rupees two thousand five hundred crores, provided that –
  - (a) the scheme is included in the National Electricity Plan (NEP) as notified by the Authority under sub-section (4) of Section 3 of the Act and the scheme conforms to the capacity and type (run-of-river/storage) as mentioned in the NEP; and
  - (b) the site for setting up the hydro generating station has been allocated through the transparent process of bidding in accordance with the guidelines issues by the Central Government under Section 63 of the Act.
2. Rupees five hundred crores for any other scheme not covered by clauses (a) and (b) of para 1 above.

## **6.6 Design & Engineering Consultancy Services**

CEA renders consultancy services for detailed design & engineering for thermal, hydro, load despatch & telecommunication and power system projects under execution in Central/State System Sector. It has pioneered the indigenous design and engineering of thermal, hydro and power projects. Besides, CEA has been providing state-of-art design and engineering services for the projects in neighboring countries. It also provides technical assistance to power utilities in the areas of plant performance, R&M and life up-gradation, failure investigation, retrofitting, efficiency improvement and energy auditing. The Hydro Projects for which design and Engineering services are being rendered are Koteshwar HEP 4x100 MW, Uttarakhand/THDC, Rampur HEP 6x68.66 MW Himachal Pradesh/SJVNL, Punatsangchhu St. –I HEP Bhutan/PHPA (Neighbouring Country).

## **6.7 Economic & Commercial Aspects of Power Sector**

CEA has been entrusted with the important functions of evaluation of financial performance of SEBs and undertaking studies concerning the economic and commercial aspects of power industry, including analyzing of tariff structure and publication of data relating to Power Sector.

The officers of CEA have been nominated to the following Committees:

- a. CEA's nomination as a member of the expert committee for the bid evaluation of Bara (3x660 MW) & Karchhana (2x660 MW) Power Projects, of UPPCL, in Uttar Pradesh.
- b. CEA's nomination for evaluation and negotiating bids committee set up under the Chairmanship of Chief Secretary (Govt. of Maharashtra) in regard to 2000 MW Power Purchase by MSEDCL (Maharashtra State Electricity Distribution Company Ltd.), under Case-I.
- c. CEA's Nomination to the committee for scrutinizing the bids for Bhaiyathan TPP (1200-1500 MW) of Chhattisgarh State Electricity Board under case-II.

## **6.8 Technical Standards, Rules and Regulations**

As per the section 177 of the Electricity Act, 2003, CEA is to make regulations consistent with the Act and the rules generally to carry out the provisions of the Act. Such regulations are to be provided for all or any of the following matters, namely:

- (a) the Grid Standards under Section 34;
- (b) suitable measures relating to safety and electric supply under section 53;
- (c) the installation and operation of meters under section 55;
- (d) the rules of procedure for transaction of business under sub-section (9) of section 70;
- (e) the technical standards for construction of electrical plants and electric lines and connectivity to the grid under clause (b) of section 73;
- (f) the form and manner in which and the time at which the State Government and licensees shall furnish statistics, returns or other information under section 74;
- (g) any other matter which is to be, or may be, specified.

The under-mentioned regulations have been notified and published in official gazette of GOI and are also available on the web-site of CEA:-

- (i) Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 – Notified On 17.3.2006.
- (ii) Central Electricity Authority (Procedure for Transaction of Business) Regulations, 2006 –

Notified on 18.8.2006.

(iii) Central Electricity Authority (Technical Standards for Connectivity to the Grid) Regulations, 2007 – Notified on 21.2.2007.

(iv) Central Electricity Authority (furnishing of Statistics, Returns and Information) Regulations, 2007 – Notified on 10.4.2007.

Under mentioned regulations have been finalized and are under approval of Ministry of Power before notification :

- (i) Central Electricity Authority (Measures relating to Safety) – Regulations
- (ii) Central Electricity Authority (Grid Standards) – Regulations
- (iii) Central Electricity Authority (Safety Requirements for Construction, Operation and Maintenance of Electrical Plant and Electrical Lines) – Regulations.
- (iv) Central Electricity Authority (Technical Standards for Construction of Electrical Plants and Electric Lines) – Regulations.

Apart from above the amendment to Central Electricity Authority (Installation & Operation of Meters) – Regulations, 2006 has been finalized and submitted to Ministry of Power for approval.

## **7 Services provided to each Client:**

- CEA provides Consultancy in the field of Supervisory Control and Data Acquisition (SCADA) System used for real time power system monitoring & control, information system and telecommunication schemes for power sector.
- CEA carries out the processing of Power & Telecommunication Coordination Committee (PTCC) cases for Transmission Lines of 220 kV & above and assists power utilities for cases of 132 kV for getting issued the route approval for the transmission lines.
- To carry out the Techno-economic appraisal of hydroelectric power projects and accord concurrence. Well defined guidelines and procedures have been framed for appraisal of hydro projects which are made available to all the utilities.
- To provide assistance to various Central/State agencies in the matter of survey & investigation and preparation of DPRs of hydro projects. The proposals received from States/SEBs for utilizing foreign assistance for Survey & Investigation activities are also examined.
- To carry out inspection of power training institutes/centres of various SEBs/Utilities for ensuring the development of the training infrastructure for advancing skills of personnel in the Power Sector.
- To encourage thermal power stations to generate more by keeping in view the reduction of heat rate, Secondary Fuel oil consumption, Auxiliary Power consumption resulting in improvement of their overall performance, annual awards are given to power stations. Necessary norms and criteria are in existence in CEA for all these awards.

- To encourage Power Distribution companies to improve the efficiency of electricity distribution system in their area, annual awards are given to the distribution companies to promote, encourage and recognize their efforts. Necessary norms and criteria are in existence in CEA for all these awards.
- To encourage conservation and efficient use of energy on demand side (user end), Energy Conservation Schemes/demonstration-cum-pilot projects etc. pertaining to all sectors of economy viz. agriculture, industry, domestic and commercial. Monitoring/Physical verification/inspection of energy conservation schemes as sanctioned by MOP/projects are carried out by taking up the matter with the implementing agencies.
- To create an environment that would spur industries in achieving excellence in efficient end use of energy, national recognition through annual awards is given to industrial units that have made special efforts to reduce the energy consumption while maintaining their production. An Energy Conservation Award Committee is set up under the Chairmanship of Secretary (Power) for deciding the award winners. CEA is one of the members of the award committee for providing necessary administrative and technical support in the finalization of the awards. CEA is also engaged in the activity of monitoring the environmental emission parameters at thermal power stations in the country. CEA has established the baseline for CO<sub>2</sub> emissions from power stations in the country for availing benefits of Certified Emission Reduction (CER) under Clean Development Mechanism (CDM) and is updating the same on yearly basis.
- CEA is Advisor-cum-Consultant for implementation of accelerated power development and reforms programme for the State of Jammu & Kashmir.
- Facilitates integrated operation of Regional power grids for economic, safe and secure operation of the grids. Since the organizations in the power sector are getting corporatised and there is a trend towards accountability subsequent to the enactment of the Electricity Act, 2003, the players, particularly in the grid operation, look towards CEA, a neutral body for solving their problems in an amicable way. Government of India has already established five Regional Power Committees (RPCs) with membership from State Power Utilities, Central PSUs, Distribution Companies/Traders/Independent Power Producers (IPPs) and Central Electricity Authority. This would enable all players in the power sector to participate in evolving consensus decisions on all issues relating to economy and efficiency in the operation of the power system. The Secretariat to the RPCs is provided by CEA.
- Preparation of Regional Energy Accounts – The Secretariat of Regional Power Committees, under CEA have been carrying out Regional Energy Accounting (REA) on monthly basis and Unscheduled Interchange (UI) Energy Exchange Account and Reactive Energy on weekly basis as per Availability Based Tariff (ABT) provisions. In the monthly REA, the capacity charge and energy charges payable by each beneficiary as per schedule are indicated, according to which the bills are raised by Central Power Sector Undertakings (CPSUs). REAs also indicate the energy exchange for inter State/inter regional power transfers. The weekly UI bills indicate the amount payable/receivable by each constituent, based on the actual over-drawal / under-drawal against the schedule by each State during every 15 minute block and the frequency dependent UI tariff during that time block.

- Advise the Ministry of Power on allocation of power from unallocated quota of Central Generating Stations to meet specific requirement of the states in contingencies, and on various other issues relating to grid management.
- Advise Regulatory Commission on tariff and grid related issues to enable them to regulate the tariff of the generating companies and Inter-state Transmission of Electricity, including the Transmission tariff.
- Advice to any State Government, licensee or the generating companies on grid related matter which shall enable them to operate and maintain the electricity system under their ownership or control in an improved manner and where necessary, in co-ordination with any other Government, licensee or the generating company owning or having the control of another electricity system.
- Assist the Union Territories and states in formulating and implementation of their electricity development schemes to carry out distribution system improvement studies and set-up a path for distribution reforms in the country. CEA also monitors the rural electrification and reduction in transmission and distribution losses.
- Examination of technical aspects of power exchange with neighbouring countries for mutual benefits is also carried out. There is regular exchange of electric power between India and Bhutan/Nepal. Also, planning and coordination activities for some projects in Nepal, Bhutan and Myanmar are presently being carried out by CEA.
- For reducing the time and cost overruns, the Government has approved a 3- stage clearance procedure for hydel projects to be executed by CPSUs in consultation with Ministry of Finance and Ministry of Environment and Forests. The proposals received from CPSUs under this procedure are appraised in CEA and concurrence accorded.
- To bring out many important Reports viz. Daily Management Information Reports (MIR), Annual Performance Review of Thermal Power Stations, Monthly overview (18 col. Report on Energy Generation Programme & PLF), Monthly Performance Review of Thermal & Hydro power stations, Monthly Summary Report on power supply position, etc. These reports are regularly sent to MOP and other Govt. Departments.
- Chief Engineer (Electrical Inspectorate), CEA is the Electrical Inspector for electrical installations of Central Government Organisations and some of the designated Union Territories/States. The Electrical Inspector is assisted by five Regional Inspectorial Organisations located in New Delhi, Mumbai, Kolkata, Chennai and Shillong. The Electrical Inspectorate performs the main function of enforcement of safety rules related to electrical installations and equipments.
- Advise Regulatory Commissions as a Consultant for examination of power purchase agreements between Generating Company and Distribution Company.
- To promote energy efficiency & its conservation through improvement in the availability & efficiency of Power Plants.

## **8 Standard of Services including time frame as expected by the Clients**

CEA stands firmly committed to providing the best of services to its clients and the tasks are done within reasonable time limit. Time frame generally depends on the nature of jobs handled to suit the technical requirements. A time limit of 90 days has been fixed by CEA from the date of receipt of completed DPR for the concurrence to hydro-electric schemes. However, no specific time limit can be specified for services like design and consultancy, coordination of R&D and undertaking of various studies etc. as they may differ in type of assessment, scope of work and supply of data etc. However, well defined guidelines/procedures are available in the form of published material, and these have been made available to all the utilities/clients. All the power stations which were provided consultancy services by CEA are performing exceeding well and have won performance awards. Because of people of long technical experience and application of quality checks at different level of hierarchy, the Authority is providing services conforming to international standards.

CEA also brings out the All India Monthly Power Supply Position by the 5<sup>th</sup> of the following month.

## **9. Expectations of CEA from various stakeholders in power sector.**

- To furnish the Feasibility Report/Detailed Project Report (DPR) for the proposed power schemes complete in all respects as per the guidelines issued by CEA from time to time.
- The clients also need to submit the proposal to CEA giving full details such as problems being faced, its feasible remedial measures, estimated cost, benefits expected, etc. to cut down processing time.
- Under Section 74 of the Electricity Act, 2003, it shall be the duty of every licensee, generating company or person generating electricity for its or his own use to furnish to the Authority such statistics, returns or other information relating to generation, transmission, distribution, trading and use of electricity as it may require and at such times and in such form and manner as may be specified by the Authority.
- To strictly comply with various regulations issued by the authority under the Electricity Act, 2003.
- Upgrading and modernizing of the data collection and forwarding mechanism by the utilities/corporations/Independent Power Producers to reduce the time gap in bringing out various reports.
- To provide feed back on various services provided by CEA so as to improve quality of services.
- To provide free access to various systems/departments/documents pertaining to various on going schemes for effective monitoring
- To provide updated data on fly ash production and utilization by coal/lignite based thermal power stations expeditiously.

## **10. Access to Information**

- 10.1 Details and information on the activities of the Authority as well as services provided and data analysis, performance indices in the field of generation, transmission and distribution are available in various present publications brought out by the Authority from time to time. These may be obtained from the Electric Power Information Society (EPIS) Counter in Sewa Bhawan on payment.
- 10.2 CEA is bringing out various monthly and quarterly reports highlighting physical and financial status of on-going power projects in the country and identifying major critical areas requiring immediate attention of concerned implementing agencies. Also Quarterly status report is being brought out in regard to the development. The past data for various milestones of the projects already commissioned (best achieved) is also incorporated in the report to help authorities in taking necessary steps to expedite the execution of the projects of coal mine blocks allotted to the various utilities.
- 10.3 The status of power development schemes submitted to CEA, daily generation report indicating generation overviews and monthly over view –energy generation, programme and plant load factor and Annual Performance Reviews of Thermal & Hydro Power stations are also available on CEA's Website – [www.cea.nic.in](http://www.cea.nic.in).

## **11 What could go wrong**

There could be a possible delay in providing various services, be it on the part of internal procedures or delayed response or non-receipt of matching data from the clients. However, the internal delays are addressed promptly as and when noticed.

## **12 Right to Information (RTI) Act, 2005**

As a public authority, CEA has designated an officer of the rank of Additional Secretary as Appellate Authority and 8 officers in the rank of Chief Engineer as Public Information Officers (PIOs) and 15 officers of the rank of Director / Deputy Director as Asstt. Public Information officers (APIOs) for its headquarters at New Delhi and other regional offices located at Mumbai, Kolkata, Chennai, Bangalore and Shillong.

Member (E&C) has been designated as Appellate Authority for CEA. Shri S.K. Thakral, Chief Engineer and Shri P.D. Siwal, Director have been designated as PIO and APIO respectively for CEA headquarters. A collection counter has been set up beyond the security zone on ground floor in Sewa Bhawan, R.K. Puram, New Delhi. The details of PIO and APIOs have also been displayed in front of the counter. Receipt of applications along with necessary fee and disposal of replies along with the applicable fee under section 6 of the Act are also collected at this counter.

Name, address and other details of the Appellate Authority, all the PIOs and APIOs at CEA headquarters and its sub-ordinate offices have also been uploaded on the CEA website.

Since the enactment of RTI Act, 2005 a number of applications are being received at the collection counter directly at the office of PIO along with necessary fees from various quarters. These applications are being properly processed in consultation with various formations of CEA and suitable

reply is being sent to the concerned person after collecting the applicable fee within the time stipulated under the said Act.

### **13 Grievance Redressal**

The authority has very well qualified and dedicated personnel to look after various services. The clients can expect prompt response including the details of any formalities required to be fulfilled by them. A grievance redressal system headed by a Chief Engineer, designated as Director (Grievance) (Incharge of every specific service), is functional in CEA. Staff grievance officers have also been appointed in all the subordinate/regional offices. Further, in case of non-fulfillment of commitment, they can approach Director (Grievance) and/or Secretary, CEA. The address of Secretary, CEA and Director (Grievance) are given are as under:

**Shri K.P. Singh,**  
**Secretary**  
**Central Electricity Authority,**  
**2<sup>nd</sup> Floor, Sewa Bhawan, R.K. Puram,**  
**New Delhi – 110066.**  
**Tel. No. 26108476,26105619**  
**Email –kpsingh52@hotmail.com**

**Shri S.K. Thakral,**  
**Chief Engineer and Director (Grievances),**  
**Central Electricity Authority,**  
**West Block-II, 1<sup>st</sup> floor, Wing-V,**  
**R.K. Puram, New Delhi-110066.**  
**Telefax: 26178835**  
**E-mail – [ceicea@yahoo.com](mailto:ceicea@yahoo.com)**

Director (Grievance) will acknowledge the grievance application within two weeks. He will try to settle the issue within three months, otherwise a suitable reply will be sent to the complainant, if the complaint is rejected.

### **14 Performance Audit by an Outside Agency:**

The authority is subject to regular audit by government auditors. Although there is no provision for performance audit committee but there are various checks and balances within the organization to ensure timely and quality response.

**15 Feedback from Clients/ On-Line Suggestions:** CEA's Website home page contains item "CONTACT US" and "FEEDBACK" for getting suggestions from the users/clients. These suggestions are forwarded to Secretary, CEA who in turn takes immediate necessary action.