

## CHAPTER – 7

### NEW DIRECTIVES AND SUMMARY OF COMMISSION'S ORDER

#### 7.1 New Directives to BESCO

As the Commission finalise this Tariff order for the financial year 2012, it is appropriate to consider measures needed to minimize the annual increases in the electricity tariff. As has been explained in detail in the earlier parts of this order, there are several costs in the electricity supply business which are uncontrollable and increase in such costs needs to be built into periodic tariff revisions. However, the Commission is of the view that there is scope for exercising greater control over some of the costs which will help in minimizing the increase in tariff in the coming years. We would like the Licensees and the State Government to earnestly take up the following measures to enhance the efficiency of supply and ensure a more equitable distribution of electricity among different sections of the population and increase consumer satisfaction. From this perspective, the Commission has identified the following aspects of electricity supply business in the State which need urgent improvement :

- 1) Reduction of a substantial magnitude in the Distribution losses;
- 2) Improving the quality and reach of service and adoption of a customer-oriented approach in business; and
- 3) Measures to improve financial viability.

In order to operationalise the above imperatives, the Commission would like to issue the following directions for compliance by the ESCOMs in the State :

#### 1) **Reduction in the Distribution Losses**

The Commission has noted that the Distribution losses of ESCOMs in the Financial Year 2011 were of the following order:

---

BESCOM	..	14.48% (3173 MU in Financial Year 2011)
MESCOM	..	11.92% (429 MU in Financial Year 2011)
CESC	..	15.48% (725 MU in Financial Year 2011)
HESCOM	..	19.85% (1626 MU in Financial Year 2011)
GESCOM	..	22.06% (1322 MU in Financial Year 2011)

Overall these losses were estimated to amount to 16.39% of the total energy injected into the distribution networks. Out of these, it has not been possible for the utilities to quantify the technical and commercial losses separately. It is the Commission's view that ESCOMs can reduce these distribution losses to an average of about 10 percent by taking up certain improvements in the existing distribution networks. The State Level Advisory Committee of the Commission has also discussed these issues on more than one occasion, and suggested specific measures, which should be taken by ESCOMs to substantially reduce the distribution losses. Achieving a reduction of even 5 percent in the present 16.39 percent of distribution losses will save over 2,500 Million Units of power annually, which will reduce the power procurement cost of ESCOMs by at least Rs.1,000 Crores per year. Moreover, this reduction in the cost will be achieved without any reduction in the quantum of power supplied to the consumers. Considering the obvious need for the ESCOMs in the State to launch a major drive in this regard, and after considering appropriate technical advice, the Commission directs the ESCOMs to take up the following measures during the current year :

**(i) Implementation of HVDS**

The high levels of technical and commercial losses in distribution can be reduced by implementing High Voltage Distribution System (HVDS) to replace a major part of the present LT distribution network. The Commission has ascertained that the LT distribution network used in

most parts of the State is capable of being upgraded to 11 kV network at very reasonable cost, as the grade of conductor required for 11 kV HVDS network is already in use in the existing system. Upgrading the network into 11 kV HVDS by installing appropriately rated transformers, etc., will reduce the network losses substantially from the present level. The quality of power supplied to consumers will also see a substantial improvement. Further, commercial losses in the distribution network will also be reduced by bringing down theft of power as the HVDS is difficult to tamper with. The technical team of the Commission which has studied the introduction of HVDS in Chittoor district of Andhra Pradesh along with the officials of CESC, has also reported that the introduction of HVDS has reduced distribution losses by over 8-10 % in that district.

In view of the obvious benefits in the introduction of HVDS in reducing distribution losses, the Commission directs that BESCO shall implement High Voltage Distribution System in at least one O&M division in a rural area in its jurisdiction during the Financial Year 2012 by utilizing the capex provision allowed in the ARR for the year.

**(ii) Demand Management in Agriculture**

For the Financial Year 2011, the energy supplied to the IP sets of less than 10 hp in the State was of the order of 12628 Million Units. The average consumption per IP set per year (excluding the MESCOM area where the use of IP sets is mainly seasonal), is 7480 units. Several studies at the national level have indicated that use of inefficient pumps by farmers is resulting in considerable waste of valuable energy. Replacing the inefficient pumps with energy efficient pump sets can save 20-30 percent of the energy supplied to the agriculture sector. This has been demonstrated in Karnataka itself in the WENEXA project implemented in Doddaballapur taluk by BESCO with USAID assistance, involving about 600 IP sets. Even a 20 percent saving in the energy used by IP sets can result in a reduction of about 2,700 Million

Units out of an estimated 13,568 Million Units proposed for supply to IP sets in Financial Year 2012. The cost of replacement of the IP sets at Rs.30,000 approximately per set roughly corresponds to the cost of energy consumed by a pump in a single year. Thus, energy efficient pumps saving 20% of the energy consumed every year will pay for themselves within a maximum of five years. Moreover, as demonstrated in the WENEXA project, the replacement of pumps can be undertaken by a private Energy Service Company (ESCO) without any cost to the farmers and with minimum cost to the ESCOM (in strengthening the network). In view of the urgent need for conserving energy for the benefit of the consumers in the State, the Commission directs that BESCOM shall take up replacement of inefficient pumps with energy efficient pumps approved by the Bureau of Energy Efficiency, at least in one sub-division in its jurisdiction during the Financial Year 2012.

**(iii) Nirantara Jyothi – Feeder Separation**

The Commission has noted that all the ESCOMs in the State (except MESCOM) have taken up separation of agricultural feeders from the feeders providing supply to rural habitations under the Nirantara Jyothi Programme approved and partly funded by the State Government. The progress of implementation of the scheme so far has not been adequate to show any substantial improvement in the quality of supply in rural areas during the Financial Year 2011. The first phase of the programme involving 269 rural feeders in BESCOM is substantially behind schedule in its implementation. The Commission is aware that the financing of the project has not been a hurdle in its implementation in view of the State Government committing itself to contributing 40 percent of the project cost as equity. It is now up to BESCOM to manage the project implementation speedily and efficiently.

In view of the above, the Commission directs that BESCOM shall take all necessary steps to complete Phase-I of Nirantara Jyothi Project in its area within the Financial Year 2012 and also complete preparations for commencing the implementation of Phase-II of the Programme. The ESCOM shall submit monthly reports to the Commission regarding the progress of implementation.

**(iv) Optimising Transformer Capacities**

In its discussions in the State Level Advisory Committee meetings and with other experts, as also in the public hearings, the Commission has been informed that sub-optimal use of transformer capacities in the distribution network is resulting in significant losses of energy. Installation of excess capacity of transformers results in avoidable iron and copper losses. Further, imbalance in the load of different phases in the network also adds to the technical losses in the distribution network, particularly in the rural areas. Effective monitoring of the load parameters of the network at the distribution transformer level and load balancing by the field functionaries can reduce these technical losses and enhance the efficiency of service.

The Commission therefore directs that ESCOMs should undertake a systematic audit of transformer loads in each sub-division on a quarterly basis and ensure that transformers installed are of optimum capacity, keeping in view the load to be serviced. BESCOM shall report the results of the audit to the Commission with effect from the last quarter of the calendar year 2011.

**2) Improving the quality and reach of service and adoption of a customer-oriented approach in business;**

During the public hearings held by the Commission, it has been forcefully brought to its notice that the quality of service provided by the ESCOMs is in need of urgent improvement to meet the expectations and needs of the consumers. The Commission has also

noted that a large number of vacancies in the field staff of the ESCOMs and non-availability of materials on a timely basis are two important factors constraining the ESCOMs in providing quality service by undertaking maintenance of the distribution network and attending to the complaints of the consumers. The Commission views the matter seriously and directs the ESCOMs to take the following measures expeditiously :

**(i) Recruitment of Field Staff**

The Commission has been informed that BESCOM has 5834 vacancies out of the 16527 sanctioned posts on its rolls, a majority of them being field staff, like Junior Engineers, Linemen and Assistant Linemen. It is essential that the staff positions are immediately augmented in order for the ESCOM to improve the quality of its service. The Commission therefore directs that the ESCOM shall fill up at least 50 percent of the vacancies in the cadres of junior engineers, Linemen and Assistant Linemen during the Financial Year 2012. BESCOM shall submit to the Commission a report on the action being taken to fill up the vacancies as above in the specified time limit.

**(ii) Service Centres for Improved Responsiveness**

The Commission is also of the view that in order to improve their service to consumers, ESCOMs must suitably reorganize their field operations, besides filling up vacancies in the field posts. The system of stand-alone Linesmen / Assistant Linesmen attending to complaints of consumers and maintenance work does not seem to be adequate in the context of the increasing number of consumers and expanding operational areas. The Commission is of the view that BESCOM should introduce a system of 'Service Centres' manned by a group of 4-5 maintenance workers with appropriate transport facility to enable them to move to the affected area quickly with necessary materials and equipment. The operational area and the level of maintenance

work and complaints that can be attended by the 'Service Centres' could also be appropriately defined. In view of the improved communication network in the rural areas, such Centres can function even in the rural areas very effectively. The maintenance crew in the Service Centres can also be utilized to keep a vigil over cases of unauthorized use of electricity and prevent theft of power by obtaining assistance from the local revenue or police authorities wherever necessary. The Commission directs that BESCO shall introduce the system of adequately equipped 'Service Centres' at least in two rural sub-divisions during the current year and report the results of its operations along with details of additional expenditure to the Commission. BESCO can introduce the proposed 'Service Centres' even with outsourced personnel, if necessary, till the recruitment of their own staff is completed.

**(iii) Customer-Oriented Approach in Service**

Improvement in the quality of service provided to the consumers also requires a certain change in the attitudes on the part of ESCOM personnel. The staff of the ESCOMs need to adopt a 'Customer Orientation' in their work. This calls for considerable change in the work culture, which can be brought about through suitably designed orientation training for the staff. We have noted that the ESCOMs need to give greater attention to the attitudinal change and skill upgradation of their staff, both operational and administrative. The Commission therefore directs that BESCO shall prepare a detailed training schedule for their operational and administrative staff, so that each field level functionary undergoes training at least once in a period of two years. The content and duration of the training programmes shall be decided in consultation with HR professionals and the details of the programme and its implementation shall be reported to the Commission on a quarterly basis.

### 3) Measures to improve financial viability

#### (i) Recovery of Arrears of Receivables

The Commission has in its successive Tariff Orders been ensuring that the various costs incurred by ESCOMs are adequately covered as per Regulations in the estimation of the Annual Revenue Requirement. The tariff for various categories as also the subsidy payable by the Government are determined keeping the above requirement in view. The ESCOMs, however, have often been facing serious cashflow problems, mainly on account of non-realisation of arrears of electricity charges from local bodies, IP set consumers (dues dating back to earlier than 2008) and also some sick industrial units. The arrears of such receivables in different ESCOMs amount to Rs. 7064.64 Crores as at the end of March, 2011 including Rs.4018.58 crores from IP set consumers and Rs.1831.54 crores from Panchayats. The following is the break-up of dues for different ESCOMs:

- (1) BESCOM - Rs. 2868.34 Crores
- (2) MESCOM - Rs. 370.60 Crores
- (3) CESC - Rs. 948.05 Crores
- (4) HESCOM - Rs. 1470.09 Crores
- (5) GESCOM - Rs. 1407.56 Crores

An amount of Rs. 2575 Crores is also due from the Government as subsidy arrears determined by this Commission for Financial Year 2008 and Financial Year 2009 as per the truing up done in the Commission's Order dated 29.11.2009. In its Order dated 6.1.2011 in Review Petition No.4/2010, the Commission has allowed payment of the above arrears of subsidy by Government over 36 months commencing from January, 2011, with a minimum of one third of the amount being paid in every block of twelve months.



The Commission is of the view that the realization of these arrears is crucial to the financial viability of the ESCOMs. The Commission therefore directs that the ESCOMs should immediately take up the recovery of these arrears with Government's assistance, so that at least 33 percent of the arrears outstanding as on 31.3.2011 are realised every year over the next three years.

**(ii) Sub-Divisions as Strategic Business Units**

The present organizational set up of ESCOMs at the field level appears to be mainly oriented to maintenance of power supply without a corresponding emphasis on realization of revenue. This has resulted in a serious mismatch between the power supplied, expenditure incurred and revenue realised in many cases. The continued viability of the ESCOMs urgently calls for a change of approach in this regard, so that the field level functionaries are made accountable for ensuring realization of revenues corresponding to the energy supplied in their jurisdiction. This will ensure that at each sub-division and feeder level, the concerned officials closely monitor the energy supplied, billing achieved and collections realised, with due regard for minimizing technical and commercial losses.

The Commission directs that BESCO shall introduce the system of Cost-Revenue Centre Oriented Sub-Divisions at least in two divisions in its operational area during the Financial Year 2012 and report results of the experiment to the Commission.

## 7.2 Summary of Tariff Order 2011

- ❖ The Commission has approved an ARR of Rs.10406.83 Crores as against BESCOM's proposed ARR of Rs.11973.02 Crores.
- ❖ The revenue gap as worked out by the Commission before subsidy is Rs. 1274.77 Crores as against BESCOM estimated gap of Rs.2326.56 Crores.
- ❖ The Commission has allowed additional revenue of Rs.576.68 Crores on tariff Revision as against the proposed additional revenue of Rs. 1614.33 Crores.
- ❖ The subsidy payable by Government to meet the tariff determined for BJ/KJ and IP sets consumers is Rs.607.09 Crores, as against Rs.679.76 Crores determined for Financial Year 2011.
- ❖ Approved increase in revenue is 6% against BESCOM's proposed increase of 16%.
- ❖ The Commission has allowed an average increase of 29.75 paise as against 88 paise sought by BESCOM for all categories of consumers other than BJ/KJ & IP Sets. This is in addition to the marginal increase of Rs.5/- per KW / HP in respect of fixed charges for most categories of consumers.
- ❖ The tariff approved for Financial Year 2012 absorbs an amount of Rs.220.78 Crores (12 Paise per Unit), which was reserved as regulatory asset for FY12 in the Commission's Order of 7.12.2010. Further, the regulatory asset for FY 13 has been reduced from Rs. 202.39 Crores to Rs. 91 Crores.
- ❖ As in the previous Order, the Commission has continued to provide a separate fund for facilitating better Consumer Relations /Consumer Education Programs.

- ❖ The cap on short-term power purchase at Rs.4 per unit is continued.
- ❖ The provision for availing the Green Tariff facility introduced in the Tariff Order of 7.12.2010 is continued. The Time of Day Tariff on optional basis for HT Industries, HT water Supply and LT industries is continued with revised rates.

### **7.3 Commission's Order**

- 1. In exercise of the powers conferred on the Commission under Sections 62, 64 and other provisions of the Electricity Act 2003, the Commission hereby determines and notifies the distribution and retail supply tariff of BESCOM for FY12 as stated in Chapter-6 of this Order.**
- 2. The tariff determined in this order shall come into effect for the electricity consumed from the first metering date falling on or after 28<sup>th</sup> October 2011. Since, BESCOM will not have the financial impact of the Order for the full duration of FY12, the actual deficit for FY12 may be carried forward to the ARR of FY13, for consideration of the Commission.**
- 3. This order is signed dated and issued by the Karnataka Electricity Regulatory Commission at Bangalore this day, the 28th October 2011.**

**(M.R.Sreenivasa Murthy)**  
Chairman

**(Vishvanath Hiremath)**  
Member

**(K.Srinivasa Rao)**  
Member