

Electricity Tariff Determination

A Citizen's Guide

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January 2016



Consumer Rights Education and Awareness Trust

Karnataka Electricity Governance Network

Bengaluru-India

PREFACE

For the past few years citizen participation in governance is being debated in various forums. There is a growing concern that unless citizens, the ultimate beneficiaries, are not considered while formulating any policy or taking a decision, such policies are bound to be resisted. Besides, the increasing demand for transparency and inclusiveness in public affairs, there is a need to create sufficient spaces for civil society to participate. Electricity regulation is one area which needs effective civil society participation. More particularly, the electricity regulatory authorities are under legal duty to involve the public in all its activities like Rule making and Rate making.

Electricity Tariffs is a sensitive issue involving a host of factors and every regulatory authority is bound to find it difficult to balance the interests of several stakeholders. Regulators will benefit immensely by the inputs brought by the civil society. Effective participation of civil society in matters related to tariffs hinge on their capacity to articulate before the regulatory authorities. Further, information, data and other resources are to be presented in a form acceptable to the regulatory authorities. In this context there is a need to inform, educate and empower civil society groups. However it is observed that not many efforts are made by regulatory authorities or public institutions to assist civil society. The **Electricity Tariff Determination -A Citizen's Guide**, is an attempt to bridge that gap.

This guide is written keeping in view the requirements of a common citizen for him/her to appear before the regulatory authorities and put forth their views about electricity tariffs and ensure a balanced rate making process. The author will be happy to receive comments and suggestions to improve the quality of this guide.

Bengaluru
January 2016

Electricity Tariff Determination – A Citizens’ Guide

Introduction

Whenever the electricity supply companies make an announcement about its intention to approach the Electricity Regulatory Commission to hike electricity tariff, there is a hue and cry among the public. Hundreds of letters and articles pour into the press opposing the hike. Organisations representing the interests of their members hold meetings, conferences and even protest marches opposing any increase in electricity tariffs. This is understandable. Nobody would like to pay more for a service without corresponding improving either in quality or quantity. With increasing power cuts and poor service, any increase in the price of electricity is bound to result in stiff opposition. Though this sort of speaking up against tariff hike has its own effect, time has come wherein electricity users have to adopt a different approach to achieve desired results. This calls for understanding the electricity sector.

Tariff determination—the process of determining the price of electricity to consumers—has far-reaching impacts throughout the electricity sector. It not only affects the financial viability of the sector and the quality and affordability of consumer services, but it also raises social and environmental concerns. This guide about Electricity Tariffs attempts to capture some of the critical dimensions of tariff determination.

Electricity users in general are not aware of the changes that have happened in the sector in the last decade. Unlike in the past electricity tariff is not determined either by the electricity supply companies or the Government, but by an independent quasi-judicial body known as the Electricity Regulatory Commission. Secondly, any decision relating to the electricity sector, including tariff matters is taken through a transparent process with the involvement of all stakeholders, including consumers. The regulator follows a set procedure and hears the views of the public and the utilities before the tariff is determined. It is essential that electricity users make use of these forums. This guide is an effort to inform, educate and empower the electricity users about the various aspects of tariff, its determination process, the legal requirements and how they can prevail upon the Regulators.

What is Tariff?

In simple language tariff is a term used to denote the cost of a service, which the user has to pay to avail that service. For example when a person wants to travel he has to buy a ticket. The cost of the ticket represents tariff. In relation to electricity service, tariff consists of two parts i.e Fixed Cost and Variable Cost. It is also called as Two Part Tariff.

Fixed cost consists of financing cost - interest, depreciation, return on equity (profit) and tax liabilities of power generation, transmission and distribution network. The Variable cost consists of fuel cost, operation and maintenance cost, cost of electricity purchased from other utilities, cost of power lost in transmission & distribution and State levies such as surcharge, tax etc.

Legal Provisions of Tariff

Electricity tariff is determined based on the provisions contained in (a) Electricity Act 2003 and (b) Tariff Policy notified by the Government of India. In case of central generating stations and where two or more states are involved, the Central Electricity Regulatory Commission determines the tariff. In case of generating stations within a state, tariff is determined by the respective State Electricity Regulatory Commissions.

Electricity Act 2003 and Tariff

According to Section 61 of the Electricity Act 2003 the Appropriate Commission shall, subject to the provisions of this Act, specify the terms and conditions for determination of tariff and in doing so, shall be guided by the following namely:

- The principles and methodologies specified by the Central Commission for determination of tariff applicable to generating companies and transmission licensees
- The generation, transmission, distribution and supply of electricity are conducted on commercial principles
- The factors, which would encourage competition, efficiency, economical use of the resources, good performance and optimum investments
- Safeguarding of consumers' interest and at the same time, recovery of the cost of electricity in a reasonable manner
- The principles rewarding efficiency in performance
- Multiyear tariff principles
- That the tariff progressively, reflects the cost of supply of electricity, and also, reduces and eliminates cross-subsidies within the period to be specified by the Appropriate Commission
- The promotion of co-generation and generation of electricity from renewable sources of energy
- The National Electricity Policy and Tariff Policy

Tariff Policy

In January 2006 the Government of India notified the Tariff Policy. The objectives of the Tariff Policy is to:

- *Ensure availability of electricity to consumers are reasonable and competitive rates*
- *Ensure financial viability of the sector and attract investments*
- *Promote transparency, consistency and predictability in regulatory approaches across jurisdictions and minimize perceptions of regulatory risks*
- *Promote competition, efficiency in operations and improvements in quality of Supply*

How tariff is determined?

The procedure for determination of tariff is contained in Section 62 of the Electricity Act 2003. The Appropriate Commission shall determine the tariff in accordance with these provisions. Besides, the Commission may prescribe certain rules, regulations in this regard. While determining the tariff the Commission shall not show undue preference to any consumer of electricity. But tariff differentiation may be made in the following cases:

1. Consumer's load factor, power factor, voltage and total consumption
2. The time of supply,
3. The geographical position of any area
4. The nature of supply and the purpose for which the supply is required

No tariff or part of any tariff may ordinarily be amended, more frequently than once in any financial year, except in respect of any changes expressly permitted under the terms of any fuel surcharge formula as may be specified.

Tariff Proceedings

The Karnataka Electricity Regulatory Commission has specified the KERC (Tariff) Regulations, 2000 (Published in the Karnataka Gazette on 14.6.2000), which contains the procedure of tariff proceedings. It also gives various formats/specimen in which the Licensees are required to submit the information. The tariff proceedings are summarized below:

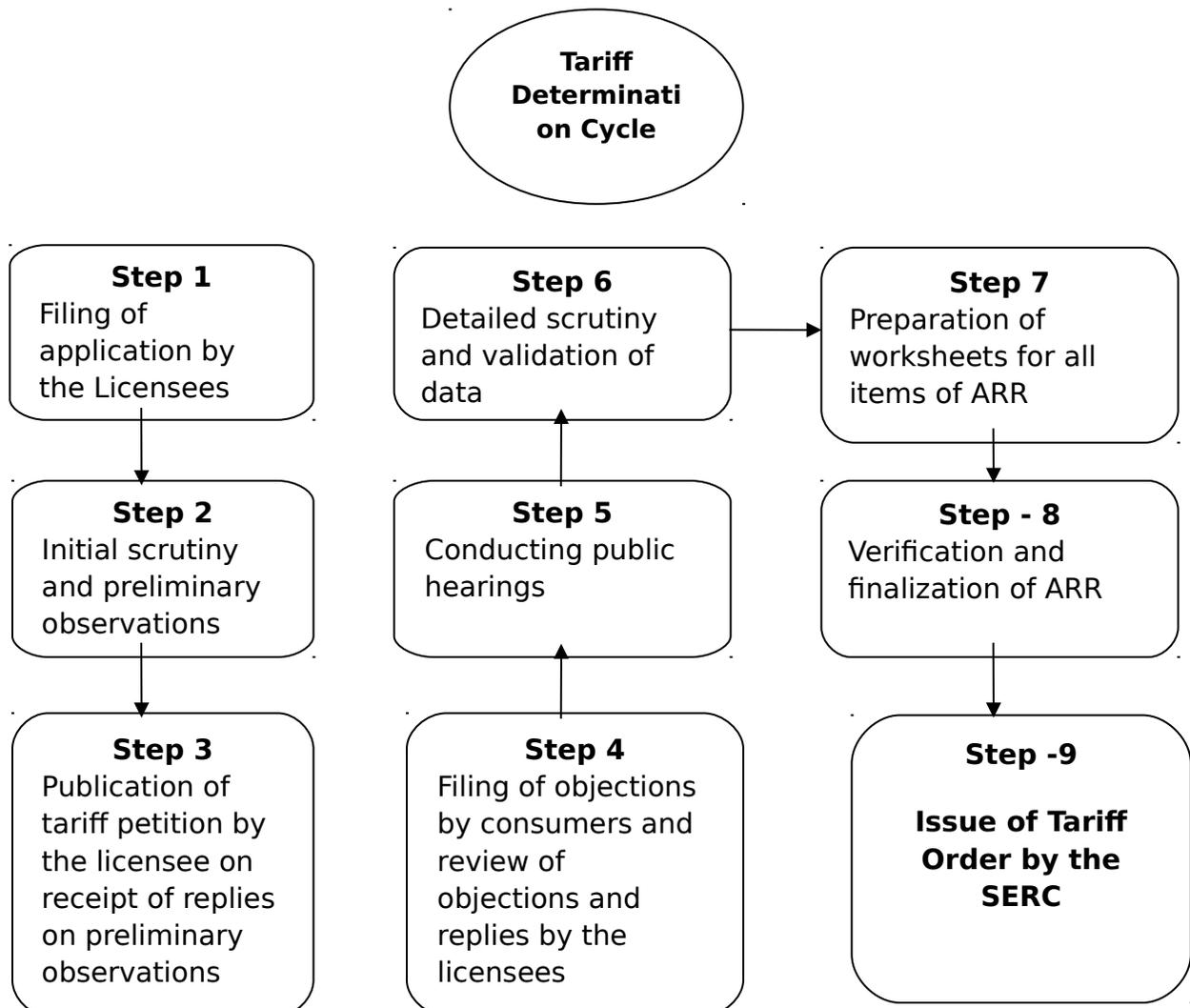
Every licensee shall provide to the Commission full details of its calculations for the ensuing financial year of the Expected Revenue from Charges (ERC) not later than four months before the commencement of any financial year.

The details of the proposed investments, calculations of the ERC in the formats prescribed by the Commission have to be filed by the Licensee in SIX sets, signed by an authorized officer of the licensee who shall be responsible for verifying and certifying the correctness thereof.

The formats will be scrutinized by the Commission and may request the Licensee to provide further information and clarifications it may require. The Commission shall ask additional information within 15 working days after the licensee has filed the

ERC. The ERC formats filed by the Licensee are treated as a petition. The ERC shall contain the following details/information:

- A statement of current tariffs and charges that are proposed to be amended, together with all applicable terms and conditions
- A statement of amendments proposed, with the proposed tariffs and proposed terms and conditions
- A statement of the estimated change in the annual gross revenue that would result in the ensuing financial year from the proposed amendments
- Change in annual revenue should be shown for the licensee as a whole and for each tariff category affected
- An embedded cost study showing the cost of service of supply of electricity to each consumer category
- An analysis of the effect of the proposed tariff changes
- A statement of any proposed cross subsidy
- A comparison of the percentage of cost of service expected to be recovered
- A written explanation of the rational for the proposed tariff changes
- A statement of any subsidy committed by the Government of Karnataka, the consumer to whom it is directed and the way in which such subsidy is proposed to be reflected in the proposed tariffs applicable to these consumers





After verifying the details furnished by the Licensee and further information sought, the Commission will direct the Licensee to publish the summary of the petition in such format as may be prescribed by the Commission.

The Licensee shall arrange to publish the details in two successive issues of each of two daily newspapers in English language and two daily newspapers in Kannada language having a circulation in the area of operation of the Licensee. The advertisement should invite interested persons to file their objections, supported by an affidavit in six copies within 30 working days of the first advertisement and also indicate whether they would like to be heard in person by the Commission

The Licensee shall also specify in the advertisement that interested persons may inspect the copies of the petition at specified offices of the Licensee during normal working hours within 10 working days of the publication of the notice and also obtain the salient feature of the petition at such specified place on payment of cost of photocopying.

The Licensee shall also mention in the advertisement that the full set of the application together with supporting materials would be made available to any interested person who may as for it on payment of cost of photocopying.

The Commission may arrange for public hearings in places as it may decide. The object of hearings is to give the people an opportunity to place their views about the ERC and the working of the Licensee before the Commission. A public hearing is an opportunity for consumers to speak directly to the Commission concerning the Licensee and its working. After completing the hearings and also taking into account the objections received by it, the Commission will pass the Tariff Order. The Commission shall pass the Tariff Order within 120 days from the date the Licensee has filed its ERC.

What consumers need to do?

As soon as the ERC is published in the newspapers, purchase a copy of ERC by paying the prescribed cost. It is put on the website. Download it.

Study the document and collect additional information, if necessary.

Enlist the support of technical, economic and financial experts who can go through the ERC and comment upon it. There are some civil society organizations and consumer groups who have been filing objections and analyzing the tariff /ERC. You can seek their guidance. The list of consumer groups can be obtained from the SERC or on the website.

Prepare your objection along with an affidavit and file it before the Commission. For the format of Affidavit See Annexure - B

Though you file your objections in writing, you can also attend the public hearings organized by the SSERC/KERC. Remember that public hearings are not to be used for expressing individual grievances and complaints. Stick to matters related to ERC.

What to look for in the ERC?

It is difficult to explain the technique of analyzing an ERC. It needs enormous study, collection of data, collation and arriving at some sensible conclusions. Besides, the information collected from various sources is to be linked so that you can put forth your argument effectively. You need to write to the ESCOM/SERC and collect additional information. For instance the Financial Statement, Annual Report, Audit report of the Comptroller Auditor General etc. are good sources of information. Besides, you can also use the Right to Information Act 2005 for obtaining information that is not in public domain. Nevertheless some of the important issues which need consideration are:

- Power Purchase Cost
- Capital Investment
- Aggregate Technical and Commercial Loss
- Implementation of the Directives issued by the Commission
- Administration and General Expenses
- Operation and Maintenance expenses
- Interest & finance charges

Ten Questions to Ask on Tariffs

The Electricity Governance Initiative of the World Resources Institute has come out with a set of Ten Questions on various issues related to the power sector, including electricity tariff. These questions are intended to help stakeholders to raise relevant issues before the regulatory authorities, electricity supply utilities and policy makers. A summary of the Ten Questions to Ask on Tariffs is given below.

1. What is the tariff determination process?

- a) How are tariff rates determined?
- b) Which agencies are involved?
- c) How do they interact with each other?
- d) When and how are tariffs revised?
- e) How can consumers and others participate in the process?

2. What are the objectives of the tariff determination?

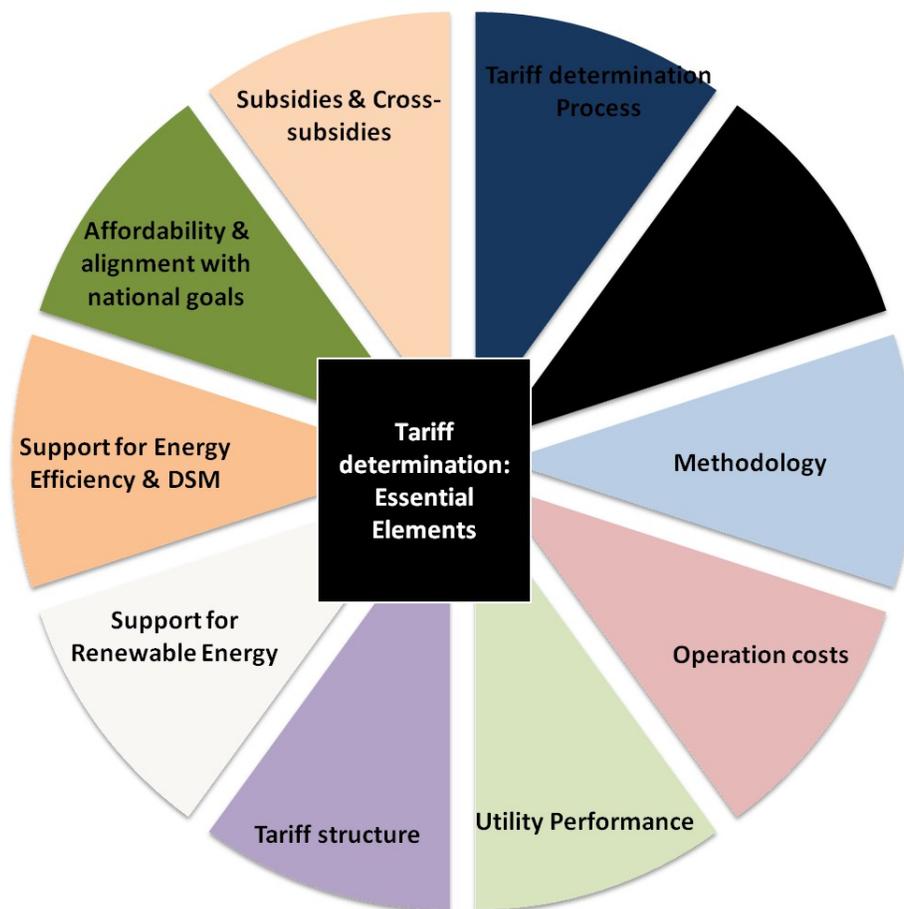
- a) Clearly defined objectives and priorities (e.g., promoting investment, expanding service, improving service)
- b) Specific, measurable, achievable, realistic and time-bound (SMART) targets to achieve objectives
- c) Helps assessment of options
- d) Essential for evaluating outcomes and ensuring accountability
- e) Mechanisms to monitor achievement of objectives

3. What is the methodology for tariff determination?

- a) Various methodologies (cost plus, performance based, price cap, etc.)
- b) Transparency about methodology to assess strengths and weaknesses of the chosen methodology
- c) Mitigation measures to overcome weaknesses of the chosen methodology for achieving objectives of tariff determination

4. How are different operation costs considered?

- a) Various operation costs based on tariff methodology
- b) Availability of adequate, and reliable information about different costs of utility
- c) Transparency about loans, taxes, surcharges and other such components that affect tariff
- d) Clarity about nature of costs (i.e. internal and external to utility)



5. How does utility performance affect tariff?

- a) Transparency of utility performance metrics is important
 - i. Technical: Energy performance of utility depends on various factors – plant fuel, technology, vintage, load factor, frequency of refurbishment, etc.

- ii. Financial: Efficiency of managing working capital, cost of capital etc.
 - iii. Operational: T&D losses, metering efficiency, network reliability etc.
 - iv. Environmental and social: Pollution control & waste water treatment mandates, labor influx costs, etc.
- b) Assessment of potential utility improvement in performance norms

6. How is the tariff structure determined?

- a) Various options (single-part or 2-part tariff; block tariff, time of day tariff, seasonal tariff or combinations of these)
- b) Key is to have clarity and simplicity of tariff structure
- c) Tariff structure ensures accountability and adequate recovery of revenues
- d) Appropriateness of tariff structure to achieve objectives of tariff determination

7. How does the tariff support RE?

Supply side (FIT, net metering, RPOs, etc.) and demand side (incentive of purchase of RE, self-RE generation etc.) elements of tariff that support renewable energy.

Transparency about cost impact of RE supportive tariff elements

- Overall
- By consumer category
- Availability of data that documents different cost impacts

8. How does the tariff support EE & DSM?

- a) Tariff structure to promote end use efficiency improvements and demand side management (TOD tariff, inclining block tariffs etc.)
- b) Clearly quantified and explained costs and benefits of EE and DSM measures covered in the tariff
- c) Measures to separate utility profit & government revenue due to improvement in efficiency/DSM

9. How does the tariff support the poor and align with broader national goals?

- a) Analysis of adverse impacts of tariff determination on the poor and other marginalized sections of population
- b) Analysis of options and implementation of specific measures for supporting the poor and marginalized sections
- c) Tariff structure to achieve broader national goals (e.g. energy access for all, employment generation, food security)
- d) Case studies of tariffs supporting national goals

10. What subsidies and cross-subsidies are in the tariff?

- a) Transparency about various subsidies and cross-subsidies embedded in tariff
- b) Periodic analysis and review of beneficiaries, benefits and outcomes of subsidies
- c) Specific measures to prevent excessive perverse impacts of subsidies and cross-subsidies on different stakeholders

[Source: www.wri.org]

ANNEXURE -1

EXTRACT OF THE RELEVANT PROVISIONS RELATING TO TARIFF IN THE ELECTRICITY ACT 2003

TARIFF

Section 61 (Tariff regulations)

The Appropriate Commission shall, subject to the provisions of this Act, specify the terms and conditions for the determination of tariff, and in doing so, shall be guided by the following, namely:-

- the principles and methodologies specified by the Central Commission for determination of the tariff applicable to generating companies and transmission licensees;
- the generation, transmission, distribution and supply of electricity are conducted on commercial principles;
- the factors which would encourage competition, efficiency, economical use of the resources, good performance and optimum investments;
- safeguarding of consumers' interest and at the same time, recovery of the cost of electricity in a reasonable manner;
- the principles rewarding efficiency in performance;
- multiyear tariff principles;
- that the tariff progressively reflects the cost of supply of electricity and also, reduces cross-subsidies in the manner specified by the Appropriate Commission;]
- the promotion of co-generation and generation of electricity from renewable sources of energy;
- the National Electricity Policy and tariff policy;

Provided that the terms and conditions for determination of tariff under the Electricity (Supply) Act, 1948, the Electricity Regulatory Commission Act, 1998 and the enactments specified in the Schedule as they stood immediately before the appointed date, shall continue to apply for a period of one year or until the terms and conditions for tariff are specified under this section, whichever is earlier.

Section 62 (Determination of tariff)

1. The Appropriate Commission shall determine the tariff in accordance with the provisions of this Act for –
 - a. supply of electricity by a generating company to a distribution licensee: Provided that the Appropriate Commission may, in case of shortage of supply of electricity, fix the minimum and maximum ceiling of tariff for sale or purchase of electricity in pursuance of an agreement, entered into between a generating company and a licensee or between licensees, for a period not exceeding one year to ensure reasonable prices of electricity;
 - b. transmission of electricity ;
 - c. wheeling of electricity;
 - d. retail sale of electricity:
 - e. Provided that in case of distribution of electricity in the same area by two or more distribution licensees, the Appropriate Commission may, for promoting competition among distribution licensees, fix only maximum ceiling of tariff for retail sale of electricity.
2. The Appropriate Commission may require a licensee or a generating company to furnish separate details, as may be specified in respect of generation, transmission and distribution for determination of tariff.
3. The Appropriate Commission shall not, while determining the tariff under this Act, show undue preference to any consumer of electricity but may differentiate according to the consumer's load factor, power factor, voltage, total consumption of electricity during any specified period or the time at which the supply is required or the geographical position of any area, the nature of supply and the purpose for which the supply is required.
4. No tariff or part of any tariff may ordinarily be amended, more frequently than once in any financial year, except in respect of any changes expressly permitted under the terms of any fuel surcharge formula as may be specified.
5. The Commission may require a licensee or a generating company to comply with such procedures as may be specified for calculating the expected revenues from the tariff and charges which he or it is permitted to recover.
6. If any licensee or a generating company recovers a price or charge exceeding the tariff determined under this section, the excess amount shall be recoverable by the person who has paid such price or charge along with interest equivalent to the bank rate without prejudice to any other liability incurred by the licensee.

Section 63 (Determination of tariff by bidding process)

Notwithstanding anything contained in section 62, the Appropriate Commission shall adopt the tariff if such tariff has been determined through transparent process of bidding in accordance with the guidelines issued by the Central Government.

Section 64 (Procedure for tariff order)

1. An application for determination of tariff under section 62 shall be made by a generating company or licensee in such manner and accompanied by such fee, as may be determined by regulations.
2. Every applicant shall publish the application, in such abridged form and manner, as may be specified by the Appropriate Commission.
3. The Appropriate Commission shall, within one hundred and twenty days from receipt of an application under sub-section (1) and after considering all suggestions and objections received from the public,-
 - a) issue a tariff order accepting the application with such modifications or such conditions as may be specified in that order;
 - b) reject the application for reasons to be recorded in writing if such application is not in accordance with the provisions of this Act and the rules and regulations made there under or the provisions of any other law for the time being in force: Provided that an applicant shall be given a reasonable opportunity of being heard before rejecting his application.
2. The Appropriate Commission shall, within seven days of making the order, send a copy of the order to the Appropriate Government, the Authority, and the concerned licensees and to the person concerned.
3. Notwithstanding anything contained in Part X, the tariff for any inter-State supply, transmission or wheeling of electricity, as the case may be, involving the territories of two States may, upon application made to it by the parties intending to undertake such supply, transmission or wheeling, be determined under this section by the State Commission having jurisdiction in respect of the licensee who intends to distribute electricity and make payment
4. A tariff order shall, unless amended or revoked, continue to be in force for such period as may be specified in the tariff order.

Section 65 (Provision of subsidy by State Government)

If the State Government requires the grant of any subsidy to any consumer or class of consumers in the tariff determined by the State Commission under section 62, the State Government shall, notwithstanding any direction which may be given under section 108, pay, in advance and in such manner as may be specified, the amount to compensate the person affected by the grant of subsidy in the manner the State Commission may direct, as a condition for the licence or any other person concerned to implement the subsidy provided for by the State Government,

Provided that no such direction of the State Government shall be operative if the payment is not made in accordance with the provisions contained in this section and the tariff fixed by State Commission shall be applicable from the date of issue of orders by the Commission in this regard.

ANNEXURE - 2

**FORM - 1
FORMAT OF THE AFFIDAVIT TO ACCOMPANY THE OBJECTIONS TO THE
TARIFF**

**Before the State [Karnataka] Electricity Regulatory Commission,
Bangalore
Case No.**

In the Matter of:

(Here give the gist of the purpose of the petition or application)

And

In the matter of

(Here mention the name and full address of the petitioners/applications and the names and

full address of the respondent)

**FORM - 2
Before the State [Karnataka] Electricity Regulatory Commission,
Bangalore
Case No**

In the Matter of:

(Here give the gist of the purpose of the petition or application)

And

In the matter of

(Here mention the name and full address of the petitioners/applications and the names and full address of the respondent)

Affidavit verifying the petition (specify nature of petition)

I,.....son/daughter ofaged.....residing at.....do solemnly affirms and say as follows:

I am the Director/Secretary of.....(here mention the name of the company or organization) petitioner in the above matter and am duly authorized by the said petitioner to make this affidavit on its behalf

The statements made in paragraphs.....of the petition herein now shown to me and marked with the letter 'A' are true to my knowledge and the statements made in paragraphs....are based on information received and I believe them to be true
Solemnly affirmed at.....on this day of.....that the contents of the above affidavit are true to my knowledge, no part of it is false and nothing material has been concealed therefrom.

Identified before me by:
(Note: The affidavit should be notarized)

Karnataka Electricity Governance Network

Post liberalization, the electricity sector in the country has undergone a metamorphosis. The sector, which was once a monopoly, is now open to private participation. The archaic legislations that governed the power sector are being remodeled to suit the changing circumstances. The Electricity Reforms Act and the Electricity Act 2003 has changed the basic structure of the power sector. Independent Regulatory Commissions have been set up at the national and state level. More important, the sector has created ample space for the civil society to participate in electricity governance. The two basic functions of the regulator i: e Rule making and Rate making is thrown open to public participation. It was expected that these structural changes will bring some solace to the harassed consumers.

However even after more than a decade of reforms, the electricity sector in Karnataka (as in other states), is yet to address the needs of the consumers. Except some cosmetic changes, the sector is plagued with technical and financial constraints. The inadequate quantity and the poor quality of supply is imposing significant costs to various groups of consumers in terms of lost production, foregone profits and jobs, worsening quality of life and so on. The fact that such a situation has prevailed for decades and has been deteriorating indicates a gross failure of governance in this sector. Hence the need for a strong, pro-active, systematic and continuous engagement of civil society with issues related to electricity governance.

The objective this engagement is to find long-term solutions given multiple and seemingly conflicting needs: adequacy in terms of quantity and quality, improved

and affordable access for rural areas, maintaining a certain quality of the environment, ensuring the financial viability of the utility, promoting use of cleaner energy sources and more efficient use of electricity etc.

The Karnataka Electricity Governance Network [KEGN] is an effort undertaken by the Consumer Rights Education & Awareness Trust [CREAT] to forge an alliance between electricity experts, academic and research bodies and civil society groups in Karnataka. The network aims to strengthen the relationship between the electricity service providers, consumers, the regulatory commission, media and the state. Through a series of workshops, interactions, exchange of information, research studies and surveys the network will assist the members develop a deeper understanding of the nature and magnitude of problems that need to be tackled in the sector.

The network will also focus on strengthening civil society participation in the electricity regulatory process. Eventually the network could act as a countervailing force on the service providers and the regulators. In the initial stages the focus will be on power situation in Bengaluru and will gradually cover Karnataka.



About CREAT

The Consumer Rights Education and Awareness Trust, is a registered body engaged in consumer advocacy since 1994. CREAT is managed by a team of trustees and supported by an Advisory Committee. In the initial years the focus was on consumer awareness and education. In the last fifteen years, CREAT has enlarged its activities in line with the changing circumstances and the growing demands of the civil society. CREAT is now involved in consumer and civic advocacy, research and policy analysis, besides creating a network of citizen advocates. CREAT is working in the areas of governance, public service delivery, energy, regulatory affairs and civil society participation in public policy.

For more information:

Karnataka Electricity Governance Network [KEGN]

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