

**ODISHA ELECTRICITY REGULATORY COMMISSION**  
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## **PUBLIC NOTICE**

The Commission has prepared a Consultative Paper on Pricing of Surplus power from CGPs to be procured by GRIDCO. This available in the website of the Commission [www.orierc.org](http://www.orierc.org). All concerned including opinion makers, stakeholders, experts and others individual or organizations are requested to send their views on the consultative paper by post, email of OERC ([orierc@gmail.com](mailto:orierc@gmail.com)) or by hand by **31.10.2016** for further deliberation.

By Order of the Commission

**SECRETARY**

## **Consultative Paper on Pricing of Surplus Power from CGPs to be purchased by GRIDCO seeking suggestions / views from different stakeholders**

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### **What is a Captive Generating Plant (CGP)**

As per the **Electricity Act, 2003**, “Captive generating plant” means a power plant set up by any person to generate electricity primarily for his own use and includes a power plant set up by any co-operative society or association of persons for generating electricity primarily for use of members of such cooperative society or association;

**Section 9 of the Electricity Act, 2003** stipulates that–

- (1) Notwithstanding anything contained in this Act, a person may construct, maintain or operate a captive generating plant and dedicated transmission lines:

Provided that the supply of electricity from the captive generating plant through the grid shall be regulated in the same manner as the generating station of a generating company.

- (2) Every person, who has constructed a captive generating plant and maintains and operates such plant, shall have the right to open access for the purposes of carrying electricity from his captive generating plant to the destination of his use:

Provided that such open access shall be subject to availability of adequate transmission facility and such availability of transmission facility shall be determined by the Central Transmission Utility or the State Transmission Utility, as the case may be:

Provided further that any dispute regarding the availability of transmission facility shall be adjudicated upon by the Appropriate Commission.

Further, Rule 3 of the **Electricity Rules, 2005** stipulates as under:

### **Requirements of Captive Generating Plant-**

- (1) No power plant shall qualify as a ‘captive generating plant’ under section 9 read with clause (8) of section 2 of the Act unless-
  - (a) in case of a power plant -
    - (i) not less than twenty six percent of the ownership is held by the captive user(s), and
    - (ii) not less than fifty one percent of the aggregate electricity generated in such plant, determined on an annual basis, is consumed for the captive use:

Provided that in case of power plant set up by registered cooperative society, the conditions mentioned under paragraphs at (i) and (ii) above shall be satisfied collectively by the members of the cooperative society:

Provided further that in case of association of persons, the captive user(s) shall hold not less than twenty six percent of the ownership of the plant in aggregate and such captive user(s) shall consume not less than fifty one percent of the electricity generated, determined on an annual basis, in proportion to their shares in ownership of the power plant within a variation not exceeding ten percent;

- (b) in case of a generating station owned by a company formed as special purpose vehicle for such generating station, a unit or units of such generating station identified for captive use and not the entire generating station satisfy (s) the conditions contained in paragraphs (i) and (ii) of sub-clause (a) above including -

Explanation :-

- (1) The electricity required to be consumed by captive users shall be determined with reference to such generating unit or units in aggregate identified for captive use and not with reference to generating station as a whole; and
- (2) the equity shares to be held by the captive user(s) in the generating station shall not be less than twenty six per cent of the proportionate of the equity of the company related to the generating unit or units identified as the captive generating plant.

From the above definition/provisions of the Act & Rules, it is broadly understood that CGPs are set up by persons primarily for their own use and supply of surplus power from the CGPs, if any, to the grid shall be regulated in the same manner as the generating stations of a generating company. Further, the National Electricity Policy and National Tariff Policy stipulates that generation from captive power plants (CGPs) should be fully exploited/ utilized to meet the growing demand of power in the country.

Accordingly, as per mandate stipulates in Electricity Act,2003, National Electricity Policy and National Tariff Policy , OERC had floated a consultative paper on the Pricing of Surplus Power from CGPs and this was widely published seeking suggestions/opinions from different stakeholders. The Commission also took a public hearing. After taking into account the provisions of the Electricity Act, 2003, the National Electricity Policy, National Tariff Policy, suggestions/ feedbacks received from various quarters, the Commission had released a comprehensive pricing policy on 14.03.2008 for procurement of surplus power from the CGPs

by GRIDCO/DISCOMs of the state and also determined the ceiling price for the surplus power from the CGPs, which was reviewed and re-determined from time to time.

(A) The salient features of the Policy for pricing of the surplus power from CGPs on Dt 14.03.2008 are as follows:-

**a. Firm Power**

- Those captive generators who give a commitment for supply of power for a period of more than 3 months & upto 1 year shall be considered as supplier of firm power of electricity from their Captive Generating Plants.
- The firm supplies may be procured from CGPs by GRIDCO/ Distribution Licensees through the Competitive Bidding route as per provision under Section-63 of Electricity Act, 2003.
- To avoid cartelization of a few large CGPs artificially boosting the pricing of surplus power from CGPs, the Commission has capped that the acceptable cost determined through the competitive bidding route should be within 10% of the maximum of cost of generation which can be certified by reputed firm of CAs to be appointed & approved by the Commission for consumption by State Utilities.
- The State Utilities are free to purchase Power at a higher rate than 110 % of the cost of generation through the competitive route for purpose of trading.
- CGPs selling power to GRIDCO will have the indirect advantage of saving in transmission charge and transmission loss which at 2007-08 level will be around 34 to 35 paise/ unit.

**b. Non-firm Power:**

- Those of the captive generators who are capable of giving day ahead schedule but are not in a position to give supply continuously for a period upto three months shall be treated as non-firm supplier of electricity. As an example, if a CGP is in a position to give its day ahead schedule for 21 days, 35 days, 40 days etc. during a period of three months shall be considered as non-firm supplier of electricity in a block period of 3 months.
- Non-firm supplier of electricity has to declare at the beginning of the period of three months about the volume of energy that they would be supplying to the state grid. In case of failure to supply the declared volume, they may have

to pay penalty at double the rate so that the supplier will be in a position to provide power to the consumers even by purchase of high cost power if need arises. This rate has to be decided through the process of competitive bidding. They shall have to go through the process of competitive bidding under Section 63 of the Act where the State utilities may accept this power paying upto a maximum of 75% of the lowest cost of firm power determined through bidding for 'firm supply' of electricity from the CGPs.

**c. Inadvertent Power:**

- Other than the firm and non-firm power as stated above, any kind of injection by the Captive Generating Plants to the State Grid will be treated as purely inadvertent injection of power to the Grid. In other words power injected by the Captive Generators without giving day ahead schedule would be treated as inadvertent injection of power and would be priced equal to the pooled cost of hydro power of the State.
- d. However, there shall be no payment for any kind of injection firm, non-firm or inadvertent at frequency of 50.4 HZ or more as a matter of grid discipline.
- e. But subsisting contracts have to be dealt according to the terms of their agreements who are not covered under the ambit of this order.
- f. The CGPs are, however, at liberty to sell their power or avail Open Access as envisaged in the Act. If the CGPs are given the facilities like land at concessional rate, water supply and other benefits by the state for setting up the industries and have entered or will enter into an agreement for sale of their surplus power to the state, then the enforcements of the contractual provisions have to be addressed by the state.
- g. Once the pricing of the surplus power from the CGPs to be sold to GRIDCO which is a State Govt. designated agency is determined through transparent bidding process, this has to be placed before OERC for taking into account the same while determining the ARR for the relevant year/ years. There is no need or scope for approval for fixation of price by any other authority for supply of surplus power from CGPs to GRIDCO meant for supply to DISTCOs.
- h. The Captive Generating Plants are free to sell their power through Open Access if they do not want to participate in a bidding process for determination of tariff for sale of power inside Odisha to GRIDCO.

- i. The Commission has also decided to review the present order on Pricing of Surplus Power from CGPs at appropriate time based on feedbacks from different stakeholders and consistent with the legal provisions prevalent at that point of time.
- (B) Subsequently during January, 2009, GRIDCO Ltd. had filed an application before the Commission and stated that due to current Power shortage scenario GRIDCO was procuring high cost UI Power & power available from IEX to meet the State demand. GRIDCO further stated that the CGPs / industries intend to sell their surplus power at a reasonably incentivised price so as to sustain themselves during global melt down period. After going through the records and submission made by GRIDCO and the representative of CGPs and keeping in view the current difficult situation being faced by the State as well as the recession being experienced by manufacturers and the economy, the Commission considers it fit and appropriate at this stage to pass an interim order to enable harnessing of the available idle/bottled up capacity of CGPs at a reasonable price and keep the principal producing units in a sustainable mode while at the same time not burdening the users of electricity who are also hit badly by the recession. The Commission fixed the procurement price of CGPs in its interim order Dt.29.02.2009 vide Case No-6 to 20 of 2009 as under.
- For supply of power by the CGPs/Co-generating plants to GRIDCO for sale to DISTCOs meant for consumption by the consumers in the State, the procurement price of firm power from the CGPs will be Rs.3.00/KWh with effect from 01.3.2009.
  - However, to encourage co-generation as is mandated under the Electricity Act, 2003 the power generated by co-gen. plants may be given an incentive and shall be paid @ Rs.3.10 per/KWh with effect from 01.3.2009.
  - In order to encourage the CGP/Co-generating plants to fully utilize their bottled up capacity for generation of captive power/Co-generation power and to enable GRIDCO to access power from different sources including CGPs/Co-generating plants for meeting the demands in the State and making available a good quantum of power for trading, GRIDCO should offer a remunerative price to the CGPs in respect of power used for trading. Keeping in view the prevailing rate in the power exchanges, UI rate and price quoted in the bidding it would be just and equitable for GRIDCO and the CGPs and Co-generating plants to have an indicative rate of Rs.3.50 per KWh for procuring surplus power meant for

trading. This is merely an indicative price suggested by the Commission. However, individual CGPs/Co-generating plant and GRIDCO, if they so like, may enter into further negotiation for an agreed price above this indicative rate. However, the procurement price by GRIDCO from the Captive Generating Plants/Co-generating plants for the purpose of trading should not unduly vary from the indicative price of Rs.3.50 per KWh now being suggested by us as an interim measure. This is necessary for the benefit of the consumers of the State because the profit earned by GRIDCO from the trading will be taken as 'other receipt' to meet its revenue requirement and bridge the gap in the ARR. After bridging of the gap in the ARR, the balance of surplus gained on account of trading of CGPs/Co-generation power may be shared with the CGPs/ Co-generation plants at the year end.

- (C) In view of the scarcity situation prevailing in the State for supply of electricity in the State arising out of low generation of hydro power and other factors, the Commission on 15.10.2009 reviewed the working arrangement approved by the Commission for sale of surplus power by the CGP to GRIDCO. The cost of power procured through UI or power exchange is more than Rs.4.00 per Kwh on the average and there is increase in coal price from time to time. In order to ensure supply of surplus power from the Captive Generating Plants to the grid when the State is facing acute power shortage, the Commission in its order dt.28.10.2009 stipulates the price of CGPs power w.e.f. 01.11.2009 as under.

<b>Supply Quantum per Month</b>	<b>Power purchased from CGPs</b>	<b>Power purchased from Co-Generating Plants</b>
Supply upto 3.6 MU per month (~ 5 MW Avg. and below)	Rs.3.10 per KWh	Rs.3.20 per KWh
Incremental energy above 3.6 MU/month and upto 36 MU/month (~ above 5 MW and upto Avg. 50 MW)	Rs.3.40 per KWh	Rs.3.40 per KWh
Incremental energy above 36 MU/month and upto 72 MU/month (~ above 50 MW and upto Avg. 100 MW)	Rs.3.70 per KWh	Rs.3.70 per KWh
Incremental energy beyond 72 MU/month (above ~ 100 MW)	Rs.4.05 per KWh	Rs.4.05 per KWh

- The CGPs who draw power from the grid for either emergency or back-up power shall be charged at 105% of the maximum rate at which they are paid for their surplus power or the rate prescribed vide para 447 of the RST order dt.20.3.2009 for the year 2009-10 in case No.66, 67, 68 & 69 of 2008, whichever is higher. Accordingly, the agreement between the CGP and

GRIDCO should contain such a stipulation.

- The modified CGP pricing stipulated as above will be **applicable w.e.f. 01.11.2009** and will continue until further order.

(D) Due to crash of UI price as well as the short-term trading price in Power Exchanges, GRIDCO had filed a petition before the Commission to reduce the rate of surplus power of Captive/Co-generation Plants. The Commission heard the matter on dt.09.11.2010 vide case No. 117& 118 of 2010. After considering the then prevailing price of power through UI and the Power Exchange along with the difficulties faced by GRIDCO and the Captive/Co-generating Plants, the Commission directed and stipulated that the rates for Captive/Co-generation Plants supplying their surplus Firm Power to GRIDCO w.e.f. 10.11.2010 would be as under:

<b>Supply Quantum per Month</b>	<b>Supplying 100% surplus Firm Power to GRIDCO</b>	<b>Supplying 60% &amp; above surplus Firm Power to GRIDCO and balance export through Open access.</b>
Supply upto 7.3 MU per month (~ 10 MW Avg. and below)	Rs.2.75 per KWh	Rs.2.75 per KWh
Incremental energy above 7.3 MU/month and upto 36 MU/month (~ above 10 MW and upto Avg. 50 MW)	Rs.3.10 per KWh	Rs.3.00 per KWh
Incremental energy beyond 36 MU/month (above ~ 50 MW)	Rs.3.25 per KWh	Rs.3.20 per KWh
Any injection over the implemented schedule at a frequency of 50.20 Hz and above	Free Power to State Grid	Free Power to State Grid
who would supply inadvertent power/ infirm power within the Operating Frequency Band of 49.50 to 50.18 HZ	paid at the pooled cost of State hydel power	paid at the pooled cost of State hydel power

- The revised tariff for surplus power from Captive/Co-generation Plants mentioned above was applicable w.e.f. 10.11.2010 and have been continuing till date.

### **Present Scenario of Drawal from CGPs**

It is now observed that during last few years after implementation of intra-state ABT for DISCOMs and inter-state deviation settlement mechanism, a lot of disputes between CGPs & GRIDCO mostly on billing issues brought to the notice of the Commission, wherein the price is linked with frequency of different block period and consequently a number of cases were filed with the Commission for part payment of bills by GRIDCO to the CGPs. In addition, GRIDCO has also expressed reservation to procure power from CGPs as the state demand could be met



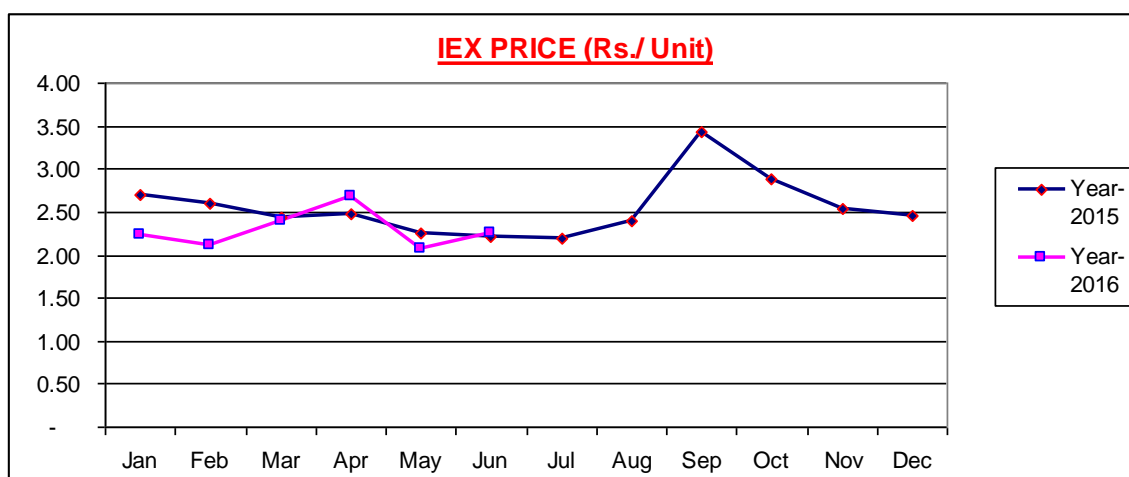
from other firm sources with whom it is contractually obligated to purchase power. However, GRIDCO is not averse to procure power from CGPs, when there is more demand of power for the state. Under such a scenario, the Commission would like to invite suggestions/opinions of the stakeholders to devise a new pricing policy for harnessing surplus power from CGPs.

In Odisha, the total capacity of grid connected CGPs is about 7,700 MW, out of which the injection to the grid is of about 240 MW at present. The injection of such a huge quantum of power to the grid needs scheduling for grid discipline. Further, on implementation of Deviation Settlement Mechanism in central sector (which is expected to be implemented shortly in our State), the price for such grid connected CGPs (more than 5 MW) need also to be linked with the frequency.

Since, the CGPs are primarily set up by persons for their own use, they will have certain surplus power only when their load is less than the generation from their CGPs. Hence, surplus power from CGPs may not be always available unless they have set up higher capacity than their requirement. Hence, injection of power from CGPs may not be always firm in nature. In view of the above, the CGP's injection to the grid may be categorized as firm power, non-firm power and inadvertent injection of power.

**IEX PRICE (Rs./ Unit)**

<b>MONTH</b>	<b>Year-2015</b>	<b>Year-2016</b>
Jan	2.70	2.24
Feb	2.60	2.11
Mar	2.44	2.40
Apr	2.48	2.69
May	2.26	2.06
Jun	2.22	2.25
Jul	2.20	-
Aug	2.39	-
Sep	3.42	-
Oct	2.89	-
Nov	2.54	-
Dec	2.45	-
<b>Summary</b>		
<b>Average (RTC)</b>	<b>2.55</b>	<b>2.30</b>
Peak	2.81	2.54
Non Peak	2.46	2.21
Day	2.78	2.37
Night	2.19	2.10
Morning	2.38	2.14



### **ENERGY CHARGES OF THERMAL STATIONS**

**Figs in Rs. / Kwh**

	<b>Avg. actual for 2014-15</b>	<b>Avg. actual for 2015-16 upto Jan, 16</b>	<b>OERC Approval for 2016-17</b>
<b>TSTPS-I</b>	1.46	1.33	1.46
<b>TSTPS-II</b>	1.46	1.33	1.46
<b>FSTPS- I &amp; II</b>	2.96	2.77	3.04
<b>FSTPS- III</b>	2.90	2.79	3.07
<b>KHSTPS-I</b>	2.58	2.44	2.68
<b>KHSTPS-II</b>	2.43	2.33	2.56
<b>Barh -II</b>	3.60	3.51	3.87
<b>TTPS</b>	1.21	1.36	1.49
<b>OPGC</b>			
<b>IPPs (around 1140MW) (provisional approved by OERC)</b>			1.46

### **PROPOSED MECHANISM OF PRICING OF THE SURPLUS POWER OF CGP TO BE SOLD TO GRIDCOIN SHORT TERM (WITHIN 1 YEAR)**

(A) FIRM POWER,

- i) The pricing of Firm Power could be in single part i.e. paise per unit. This could be based on pooled variable charge of thermal power stations from whom GRIDCO purchases power plus some percentage of the pooled variable charges as an incentive to CGP.

Or

It can be based on the highest variable cost in the system or the actual variable cost of CGP, whichever is lower, and some percentage of the variable cost as an incentive.

Or

The Commission shall approve a ceiling price and GRIDCO may purchase power through competitive bidding within the ceiling price for short term power procurement as per the guidelines notified by MoP.

(B) INFIRM POWER

- i) The rate for Infirm Power could be purchased at pooled Hydro power rate.

(C) INADVERTENT POWER

- i) The Inadvertent Power can be purchased by GRIDCO at zero price.

Henceforth CGPs shall not be treated as “MUST RUN” power plant as far as GRIDCO purchases are concerned.