

**ORISSA ELECTRICITY REGULATORY COMMISSION  
BIDYUT NIYAMAK BHAWAN  
UNIT-VIII, BHUBANESWAR – 751 012**

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Present : Shri D.C.Sahoo, Chairperson  
Shri B.C. Jena, Member

**Dated the 23<sup>rd</sup> day of April, 2005**

**Case No.151 of 2004**

1. M/s. Greenpeace India Society  
New No.47, (Old No.22), II Cross Street, Ellaiyamman Colony,  
Chennai – 86 ..... **Petitioner**  
- Vrs -

1. Energy Secretary, Govt. of Orissa, Bhubaneswar 2. Managing Director, GRIDCO, Janpath, Bhubaneswar 3. CEO, SOUTHCO, Court Peta, Berhampur, Ganjam 4. CEO, WESCO, Burla, 5. CEO, NESCO, Januganj, Balasore, 6. CEO, CESCO, IDCO Tower, Janpath, Bhubaneswar 7. Managing Director, OREDA, Mancheswar Industrial Area, Bhubaneswar	<b>Respondents</b>
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For the petitioner - Shri K. Srinivas

For the respondents - Shri J. M. Mohanty, Advocate for CESCO &  
Shri R. K. Pattnaik, GM, CESCO  
Shri A. K. Choudhury, Dy. Director, OREDA  
Shri Debasis Das for SOUTHCO  
Shri K. C. Nanda, D.M.(Finance) WESCO  
Shri K. C. Mohapatra for IREDA

**ORDER**

The petitioner M/s Greenpeace is an independent, campaigning organization that uses non-violent, creative confrontation to expose global environmental problems, and force solutions for a green and peaceful future. Greenpeace's goal is to ensure the ability of the Earth to nurture life in all its diversity.

2. M/s Greenpeace was set up in India as a Society, under the Tamil Nadu Society Registration Act, on the 22<sup>nd</sup> July of 2002, vide registration

No.377/2002. M/s Greenpeace in India has embarked on for major campaign areas, namely, 'Toxics Free Future', 'Choose Positive Energy', 'Say No to GMOs', 'Save our Seas'.

3. M/s Greenpeace is of the firm belief that one of the major causes for climate change is the increase in the burning of fossil fuel. Fossil fuel is one major source of electricity generation in the country and India accounts for over 56% of electricity generation from fossil fuel. Hence, in order to mitigate the ill-effects of climate change on the environment and the society at large, M/s Greenpeace has undertaken a campaign to promote the extensive use of renewable energy for electricity as an alternative to electricity generated from fossil fuel. In tune with this objective, M/s Greenpeace India has filed this petition with a prayer to the Commission to pass an order to the distribution companies to explore the possibilities of purchase of power from renewable energy at least to the tune of 10% (to start with) of the total purchase of power from various existing sources.
4. This petition has been submitted under Sections 86(1)(e) and 181 of the Electricity Act, 2003, read with Rules 9 & 10 of the Conduct of Business (2004) of the Orissa Electricity Regulatory Commission.
5. 86 (1)(e) of the Electricity Act 2003 mandates the Commission to promote co-generation and generation of electricity from renewable sources by providing suitable measures for connectivity with the grid and sale of electricity to any person, and to specify for purchase of electricity from such sources, a percentage of total consumption of electricity in the area of a distribution licensee. Further, the National Policy on Electricity envisages consumption of electricity from Renewable sources to the tune of 10% of total consumption of electricity in the country by 2012. An order by the Govt. of India, Ministry of Non-Conventional Energy Sources, (Order No.61/1/2003-RVE, dated 16.12.2003) directs that the Govt. of India has sanctioned a programme for electrification of remote Census Village and remote hamlets through non-conventional energy sources. The order states that the objective of the programme would be to electrify 100% villages by

2007 and all un-electrified household by 2012 through renewable energy sources such as solar, small hydro-power, bio-mass, wind energy, co-generation and hybrid systems.

6. In a landmark judgment pertaining to Article 51-A of the constitution, the Supreme Court in a case : AIR 1996 SC 149, State of Himachal Pradesh Vs. Ganesh Wood Products, stressed the need for sustainable development and intergeneration equity to be followed by the state while exploiting natural resources. The Supreme Court in its judgment also emphasized the importance of Article 51-A, the duty of every citizen to protect and improve natural environment, including forest, lakes, rivers etc.
7. Karnataka Electricity Regulatory Commission (KERC) (Power Procurement from Renewable Sources by Distribution Licensee) Regulations, 2004: Section 3.1 of the order states that 'Each Distribution Licensee shall purchase a minimum quantum of 5% and a maximum quantum of 10% of electricity from renewable sources expressed as a percentage of its total consumption during a year.

The Maharashtra Electricity Regulatory Commission in its Order of 24.11.2003 para 2.4.9, has made it compulsory for the distribution companies to procure power from renewable sources, but has not stated any specific percentage of procurement. In its order, the commission states that "at a later date, the commission would specify a percentage of total consumption of electricity for purchase from renewable sources of energy in the area of distribution licensee under section 86(1)(E) of the Electricity Act.

Para 3.1 of the Draft Regulation for power procurement from Co-generation and Renewable sources has fixed the target of 2% of procurement of power from renewable sources for 2004-05. The amount of purchase will increase by 0.5% every year, aggregating 5% of purchase of power from renewable sources by 2009-10.

The Gujarat Electricity Regulatory Commission has come out with a draft regulations for 'Power Procurement from Co-generation and Renewable Sources Regulations' specific the mandatory quantum of purchase of power from renewable sources and for the year 2004-05, the mandatory quota for purchase of power from renewable sources is 2%. The amount of purchase increases by 0.5% every year, totaling to 5% of purchase of power from renewable sources by 2009-10.

8. National Rural Electrification Policy : Outlines Rural Electrification Plans of the Government and fixes targets for rural electrification in the country. The policy states that the targets would be achieved through renewable energy sources. Further, the Draft National Electricity Policy dated 30<sup>th</sup> June 2004 stresses the need to push for renewable targets to achieve the overall electrification targets.
9. Out of 2776 MW of power generated in Orissa, 880 MW is from thermal and 1896 MW from large hydel projects, both of which are environment unfriendly.
10. Orissa Renewable Energy Development Agency (OREDA) is the nodal Agency which promotes, propagates, facilitates and implements non-conventional energy projects. According to OREDA, at present there are very few green power projects, though the state has huge potential to produce green energy from wind, bio-mass and solar sources.

OREDA has estimated the technical potential of wind energy in Orissa at 700 MW with a gross potential of 1700 MW. Unfortunately, there is no wind energy project functioning in the State. A decade back there was a windmill project along the Puri seas beach in which windmills were installed to generate electricity to power the street-lighting system. But the project collapsed within a year due to faults in planning and implementation. The OREDA renewed its effort to identify sites where wind mill projects will be executed.

## Prayer before the Commission

- To pass suitable Regulations to Promote Generation of Power from Renewable Energy as laid down in Section 86(1)(E) of Indian Electricity Act, 2003.
- To pass an order to the Electricity Supply Companies to procure at least 10% of electricity from renewable energy sources.

11. The Chief Executive, Orissa Renewable Energy Development Agency (OREDA), the respondent No.7 stated that the petition vehemently advocates increased off-take of electricity from renewable energy sources in Orissa, in near future. The petitioner inter alia, outlines the following standpoints.

1. The Renewable Energy Potential of the State and the insignificant levels of exploitation of the same.
2. The draft Renewal Energy Policy of the State has been vetted by the Energy Department, Industry Department, Finance Department and the OERC. The same has again been revised in the light of the Electricity Act 2003 and is in the process of submission to the Govt. for approval.
3. The cost of installation, the cost of generation per KW and pattern of investment by Govt. of India and State Govt. for harnessing renewable energy under 4 segments are given in the table below :-

Sl, No.	Renewable Energy Technology (RET)	Cost of installation per MW (Rs. crore)	Cost of generation per kWh (Rs. crore)	Financial Incentives of GOI (Rs. crore)	State's Share (Rs. crore)
1	Wind Power	4.5	2.50	3.5	1.0
2	Small Hydro Power	4.5	1.50	1.75	2.25
3	Biomass Power	4.0	2.00	1.0	3.0

4	Solar Power	35.0	16.00	20.0	15.0
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If we intend to augment 10% of the total power consumption in the State from renewables, the quantum of power to be harnessed comes to about 1111.6 i.e. say 1000 Million Units as estimated below :-

### **Current Power Generation in Orissa**

Orissa Hydro Power corporation Hydro	4700 MU
Orissa Power Generation Corporation Thermal	2840 MU
Talcher thermal Power Station Thermal	2036 MU
Eastern Regional Electricity Board (Central sector)	890 MU
Captive Power Plants	650 MU
Total	11116 MU

To generate this quantity of power, we need to opt for suitable technology mix based on the available resources. Solar being very expensive and Biomass Resource Map being still in inchoate stage we may opt for Wind and Small Hydro to start with as the resources have already been identified.

4. The thumb rule is that 50 MW of Wind Power and small Hydro installation contribute 120 MU and 200 MU per annum, respectively. Both put together can only provide 3% of the total energy consumption. Even if we intend to start with only 3% that the State government has to put in an investment of Rs.150 crore.
5. Given the precarious financial position of the State, additional mobilization of resources to the tune of Rs.150 crores would be, had through imposition of green cess. If a green cess of Rs.0.1 per unit is collected on the current consumption the total amount that could generated would be of the order of Rs.100 crores and this can set the ball rolling in the direction of renewable energy power augmentation in the State.
6. All sad and done for meeting power deficit, providing future energy security or eco-environmental concerns, the importance of

augmenting power from renewables has been felt world wide. It should also be understood by all concerned that, prima facie renewable power complements the general power scenario with due regard to environmental concerns and does not compete with the conventional power sector. It should also be realized that power augmentation from Renewable couldn't happen only on the initiatives of State Nodal Agencies. Thus, it is imperative that an investment friendly atmosphere has to be created so that private sectors will pump in more money for generating renewable energy.

12. Sri K.C. Mohapatra, representative of M/s IREDA corroborated the statements of M/s Greenpeace Ltd., SOUTHCO, NESCO and WESCO welcomed the proposal of the petitioner. They further stated that since they are purchasing power only from GRIDCO it may not be possible on their part to purchase 10% of the total consumption from renewable sources. CESCO also stated that they are not free to directly purchase from renewable sources as they are purchasing the entire requirement from GRIDCO.

#### **Commission's observation**

13. No comments were filed by the Principal Secretary, Department of Energy, GoO and M/s GRIDCO.
14. Section 86(1)(a) of the Electricity Act, 2003, among other things, requires the State Commission to promote co-generation and generation of electricity from renewable sources of energy by providing suitable measures or connectivity with the grid and sale of electricity to any person. The relevant provision is quoted below:-

*86(1)(e) The State Commission shall discharge the following functions, namely,*

*Promote cogeneration and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person, and also specify, for purchase of electricity*

*from such sources, a percentage of the total consumption of electricity in the area of a distribution licensee;*

The Electricity Act, 2003 clearly mandates to fix a certain percentage of total consumption of electricity from the renewable sources of energy.

15. Section 61(h) also states as below:-

*“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:-*

*(h) the promotion of co-generation and generation of electricity from renewable sources of energy.”*

16. These points have been well taken by the petitioner. Till now, no concrete proposal regarding setting up of power stations through renewable sources has ever come to the Commission. The petitioner, representatives of OREDA, IREDA and Mr. R. P. Mohapatra were of the opinion that once the Commission sets apart a quantum of energy to be purchased from renewable sources, the developers would be interested to set up the plants.

17. Taking into consideration the facts and provisions of the Act, the Commission decides that for the FY 2006-07, 200 MU of power will be purchased by GRIDCO/Distribution Licensee/State Trading Co. depending upon on the then prevalent situation. The unit cost of the renewable energy should no exceed the highest generation cost of thermal stations of the eastern region. Having arrived at decision, the Commission would like to state that the tariff of the renewable sources of energy is to be determined by the Commission in accordance with the provisions of Section 62(1)(a) of the Electricity Act, 2003 where the cost of generation will be determined by the Commission.

The petition is disposed off with orders as above.

Sd/-  
**(B. C. JENA)**  
**MEMBER**

Sd/-  
**(D. C. SAHOO)**  
**CHAIRPERSON**