

ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION
Hyderabad
Dated: 27-09-2005

Present:

Sri. K. Swaminathan, Chairman
Sri. K. Sreerama Murthy, Member
Sri. Surinder Pal, Member

O. P. No. 9 of 2005

In the matter of specifying for purchase of electricity from renewable sources of energy including co-generation a percentage of the total consumption of electricity in the area of a distribution licensee.

Whereas Section 86 (1) (e) of the Electricity Act 2003 (hereinafter referred to as the Act) mandates the Commission to promote cogeneration and generation of electricity from renewable sources of energy and to specify for purchase of electricity from such sources a percentage of the total consumption of electricity in the area of a distribution licensee.

And whereas with this end in view, the Commission initiated suo-motu proceedings by means of a consultation process by publishing a discussion paper and seeking comments / suggestions from public through a public notice issued on 28-05-2005. A total of 24 persons, including Licensees, NEDCAP, social, political and professional organizations have responded to the consultation process and 13 of them made oral submissions before the Commission in person during the public hearing held for this purpose.

And whereas it has become expedient in the public interest to issue an order to enable the purchase of power from cogeneration and other renewable sources of energy (collectively referred to hereinafter as the Non-conventional energy or NCE) under section 86 (1) (e), based on the aforementioned consultation process.

Now, therefore, the title matter having come on for public hearing on 30-06-2005 in the presence of the representatives of the licensees, consumer rights activists individuals and other stakeholders at Hyderabad and having stood over for consideration till this day, the

Commission in exercise of the power conferred by Section 86 (1) (e) and all other powers enabling it in that behalf, makes the following

ORDER

Summary of the important issues raised in the responses, comments and suggestions received on the discussion paper

- 1.** The responses, comments and suggestions from Non-Governmental Organizations, individuals, NCE developers, other stakeholders, etc. (lists of the respondents enclosed vide Annexure to this Order) have been a mixed lot. Generally, the NCE developers and Non-conventional Development Corporation of Andhra Pradesh Limited (for short, NEDCAP) have asked for the purchase percentage to be fixed at 10%, while the licensees and others (excepting one institution which wanted it to be 5% to start with and to be raised to 20% by 2012 AD) are for a percentage less than the existing percentage of NCE in the total consumption and generally at 5% mainly on the grounds that the State already has a very high share of power from NCE projects when compared to other States, and the very high cost of NCE as compared to conventional energy.
- 2.** There is a consensus that the NCE power should not be purchased from sources outside the State. The majority opinion is that a uniform percentage should be fixed for all distribution licensees. On the issue of sharing the burden of additional costs, many respondents pleaded that Central / State Governments should also share the additional costs involved.
- 3.** A number of respondents mentioned that a much larger number of biomass-based power projects had been set up than could be sustained by the available bio-resources of the State. They referred to an Administrative Staff College of India report that the State biomass resources did not have potential to generate more than 220 MW of power and that NEDCAP had issued sanctions for 300 MW in excess. There were also

complaints of large-scale use of firewood and other prohibited species of wood in these plants, adversely affecting the ecology.

4. One of the Power Project Developers Associations, while advocating for a higher percentage, has also pleaded for fixing specific quotas within an overall percentage of 10% for un-tapped sources of NCE so as to prevent over-exploitation of some of the resources. Yet another Association of Power Project Developers has commented that issue of sharing of burden of additional cost of power from NCE by the users of captive power and third party power is beyond the purview of section 86 (1) (e) of the Act.
5. One Association of Power Project Developers stressed upon the relevance of Clean Development Mechanism (CDM) under Kyoto Protocol but showed unwillingness to share the benefit of Carbon Credits accruing there from with the licensees / consumers.
6. In the matter of review of the percentage, the Developers have suggested different periods of 1 year, 3 years and 5 years. Some of the other respondents on the other hand, mentioned that there was no need for any upward revision since the quantity of NCE to be procured in absolute terms would automatically go up, even with the percentage remaining static, corresponding to the year-to-year increase in the total power requirements in the State.
7. The Licensees have stated that the percentage should not be more than that already approved by the Commission in its Tariff Order, and that only a minimum percentage may be specified, and at 5% of total energy sales by Distribution Licensees, which may be made applicable from 01-04-2006. They also sought for specification of the criteria for the competitive bidding procedure to be adopted for purchase of this power. They also suggested that the Open Access users and captive generators should also comply with this requirement. They pleaded that they should not be required to procure this power from the sources outside the State and wanted inter- distribution licensees

transfer of this liability through annual financial adjustment instead of energy transfer. They suggested for review of the percentage after 5 years.

8. The Forest Development Corporation of Andhra Pradesh, a State Government undertaking suggested a percentage of 4 to 5%, stating that any higher percentage will affect environment and may lead to degradation of forests.

NCE power purchase requirement

9. The Commission after careful consideration of all these responses, comments and suggestions specifies the percentage required to be specified by it under section 86 (1) (e) of the Act (hereinafter referred to as the Renewable Power Purchase Obligation or RPPO) and the terms and procedure for its computation and procurement and the matters incidental and ancillary thereto as detailed in the paragraphs that follow.
10. Every person to whom this Order applies, shall purchase not less than five per cent (5%) of his consumption of energy from NCE sources under RPPO during each of the years 2005-06 to 2007-08 (each year commencing on 1st April of the calendar year and ending on 31st March of the subsequent calendar year).
11. One-half of one percentage point out of the RPPO specified hereinabove (one-half of one per cent of total consumption) shall always be kept reserved by the distribution licensees for procurement of Wind-based energy and shall be diverted, if necessary, to other NCE, only on a temporary basis, and also that all energy available from this source shall be purchased until it reaches the aforementioned one-half of one percentage point even if consequently, the total NCE purchase exceeds the total RPPO considering the NCE power purchase commitments made under the power purchase agreements (hereinafter, the PPAs) already entered into and consented to by the Commission:
12. Further, such obligation to purchase NCE shall be inclusive of the purchases, if any, from NCE sources already being made by concerned Distribution Licensees, etc:

13. Subject to the provisions of paragraph 20, such purchase of power to comply with this Order shall be made from amongst the categories specified in paragraph 19, from generating stations located within the State:
14. Distribution Licensees shall make all purchases, other than those committed to be made under the PPAs already entered into with the consent of the Commission, in accordance with the provisions of paragraphs 21 and 22.
15. The power purchases under the PPAs for the purchase of NCE already entered into by the distribution licensees and consented to by the Commission shall continue to be made till their present validity, even if the total purchases under such PPAs exceed the percentage as specified hereinabove.

Applicability of Renewable Power Purchase Obligation (RPPO)

16. Every Distribution Licensee, captive power consumer open access consumer and scheduled consumer (to the extent of power availed through open access) shall be required to purchase electricity at the percentage specified hereinabove of his total consumption of electricity within the area of a distribution licensee from non-conventional energy sources.
17. Any procurement of energy for sale or otherwise transmission / wheeling to places outside the State shall be excluded while computing the quantum of the total energy under paragraph 16, while any procurement of energy from outside the State but for use within the State, shall be included.
18. The consumption of a Rural Electricity Supply Co-operative Society shall constitute a part of Distribution licensees consumption and the corresponding RPPO shall be discharged by the distribution licensee in whose overall area of supply, such Society is located.

Sources of Non-conventional Energy

- 19.** The sources of energy for the purpose of complying with the percentage of NCE procurement shall be
- (a) Cogeneration (from renewable sources of energy like bagasse);
 - (b) Mini-Hydel;
 - (c) Wind;
 - (d) Municipal waste;
 - (e) Industrial waste; and
 - (f) Biomass
- 20.** In view of the NEDCAP having already issued a large number of sanctions for setting up of biomass-based power plants, no further biomass-based power shall be purchased by the distribution licensees than that already committed through the PPAs already entered into and consented to by the Commission.

Procedure of procurement of electricity from NCE sources :

- 21.** Up to and including the level of percentage specified in paragraphs 10 and 11 above, the distribution licensees can enter into long-term PPAs with the NCE developers of relevant category. The ceiling for the tariff of such purchases shall be as per order dated 20-03-2004 in R.P.No.84 of 2003 in O.P.No.1075 of 2000, as amended. In case of purchase of electricity other than through long-term PPAs, the ceiling tariffs shall be the total tariffs (fixed plus variable), as worked out for each source of energy (Co-generation, Mini-Hydel etc.) on the basis of aforementioned order of the Commission.
- 22.** A distribution licensee shall be at liberty to procure NCE from other distribution licensee(s) within the State at the weighted average cost of the latter's purchase of NCE during the year.
- 23. Reporting requirements:** Every person requiring to purchase power from NCE sources under this Order shall file before the Commission annually, by 30th November,

the details of total requirement of power under RPPO in the ensuing financial year, power presently being purchased from such sources, additional power required to be purchased from such sources to comply with this Order and action being taken to procure such power.

Effect of default

- 24.** Where any person though required to comply with this Order fails to purchase the required percentage of power from NCE sources, he shall be liable for penalty as may be decided by the Commission under section 142 of the Act. No penalty shall however be levied if such defaulter proves to the satisfaction of the Commission that there is no availability of NCE power within the State for purchase within the ceiling rates specified in paragraph 21 in spite of his best endeavors to procure it:
- 25.** The penalty if any levied under paragraph 24 shall be placed at the disposal of NEDCAP, or any other entity / entities nominated by the Government of Andhra Pradesh with the consent of the Commission for utilization towards promotion of cogeneration and generation of electricity from renewable sources of energy as also for conservation of electricity.

This Order is corrected and signed this 27th day of September 2005

Sd/-	Sd/-	Sd/-
(SURINDER PAL) MEMBER	(K. SREERAMA MURTHY) MEMBER	(K.SWAMINATHAN) CHAIRMAN

CERTIFIED COPY

Annexure

- A)** NGOs, Individuals, NCE Power Project Developers / Developers Associations, etc., who made written submissions on the discussion paper.

1	Sri. B.V. Raghavulu, Secretary, CPM, Hyderabad
2	Andhra Pradesh Forest Development Corporation, Hyderabad
3	Loksatta, Hyderabad
4	M/s. Energy Conservation Mission, Hyderabad
5	Peoples Monitoring Group on Electricity Regulation, Hyderabad
6	Sri. M.Venugopala Rao, Special Correspondent, Prajashakthi, Hyderabad
7	Sri. A. Punna Rao, Chartered Engineer, Vijayawada
8	Small Hydro Power Developers Association, Hyderabad
9	Indian Wind Turbine Manufacturers Association, Chennai
10	Indian Wind Power Association, Chennai
11	GSR Sugars Pvt. Ltd, Hyderabad
12	APTRANSCO, Hyderabad
13	NEDCAP, Hyderabad
14	Administration Staff College of India, Hyderabad
15	Sri. K.P. Rao, Former Member (E&C) CEA, Secunderabad
16	M/s. South Indian Sugar Mills Association, Hyderabad
17	APNPDCL, Warangal
18	APCPDCL, Hyderabad
19	APSPDCL, Tirupathi
20	APEPDCL, Vizag
21	M/s. Reliance Energy Ltd, Mumbai
22	M/s. Sudha Oil & Chemical Industries, Samalkot
23	M/s. Hyderabad Chemicals Supplies Ltd, Hyderabad
24	M/s. Synergy Global Pvt. Ltd, New Delhi

B) NGOs, Individuals, NCE Power Project Developers/Developers Associations, etc., who made oral submissions before the Commission in person during public hearing on 30-06-2005

1	Sri. B.V. Raghavulu, Secretary, CPM, Hyderabad
2	Sri. P. Madan Mohan Rao, Loksatta, Hyderabad
3	Sri. M.Venugopala Rao, Special Correspondent, Prajashakthi, Hyderabad
4	Sri. Sripathi Rao, Small Hydro Developers Association, Hyderabad
5	Sri. D.V. Giri, M/s. Indian Wind Turbine Manufacturers Association, Chennai
6	Sri. Sridhar Prabhu, Indian Wind Power Association, Chennai
7	Sri. T.S.E. Bose, M/s.GSR Sugars Pvt. Ltd, Hyderabad
8	Sri. K. Narayana Rao, M/s. South Indian Sugar Mills Association, Hyderabad
9	Sri. A. Punna Rao, Chartered Engineer, Vijayawada
10	Sri. Ajit, APTRANSCO / APPCC, Hyderabad
11	Sri. K. Sai Reddy, Bharatiya Kisan Sangh, Hyderabad
12	Sri. Ch. Venkateswara Rao, M/s. Energy Conservation Mission, Hyderabad
13	Sri. R.Srinivas, Bio-mass Energy Developers Association, Hyderabad