

**MAHARASHTRA**  
**ELECTRICITY REGULATORY**  
**COMMISSION**

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**ORDER**

**Case No. 17(3), 3, 4 & 5 of 2002**

**In the Matter of**  
**APPLICATION FILED BY THE (I) MAHARASHTRA STATE ELECTRICITY BOARD**  
**[MSEB], (II) SHRI PRATAP G. HOGADE, (III) RENEWABLE ENERGY DEVELOPERS**  
**ASSOCIATION OF MAHARASHTRA [REDAM], AND (IV) INDIAN WIND ENERGY**  
**ASSOCIATION [InWEA]**  
**FOR**  
**PROCUREMENT OF WIND ENERGY & WHEELING**  
**FOR THIRD PARTY-SALE AND/OR SELF-USE.**



**MERC**

**Date: November 24, 2003**

**2.2.1.B. Group III (NEW) PROJECTS**

As regards the project cost of Rs.4.0 crores/MW for new projects; the Technical Director, MSEB was of the view that the upper limit to be considered for tariff determination should be Rs.3.50 crore/MW and procurement of machines and equipment at this price was possible through competitive bidding. However, he did not submit any evidence/proof in support of his argument.

Shri Hiralal Ramdas Jadhav, is of the view that justification for the assumed project cost of Rs.4.0 crores per MW for new projects is required.

M/s Dunil Electric Saver & Maintenance Company Pvt. Ltd., Mumbai has stated that, for projects to be set up in future, there should be a provision for review of the capital cost after 3 years in view of the possibility of reduction in cost with a large number of installations.

Prayas, Pune are of the view that the cost per MW, which is crucial for arriving at cost of generation, has not been adequately justified.

Subordinate Engineers Association (MSEB) is of the view that the project cost of Rs.4.0 crore per MW for new projects, which is 20% less than the cost assumed for old projects, should also be adequately justified.

Shri S.R.Paranjpe has stated that the project cost for new projects will tend to increase with general inflation and may come down depending upon technological progress. He is of the view that the project cost for new projects is likely to be higher than Rs.4.0 crore per MW and that, at the recommended level of tariff, it is doubtful if any new wind power project will be added.

Indian Wind Turbine Manufacturers' Association, Chennai are of the view that the cost of new projects should be considered as Rs.5.0 crore per MW instead of Rs.4.0 crore per MW in view of the facts that import content of higher capacity machines is high; exchange rate is going up and that items under concessional customs duty for wind mills have been reduced.

InWEA, in their presentation, stated that the capital cost assumed, particularly for new projects, is rather low if it has to cover infrastructure development costs to be paid to MEDA and bearing other expenses.

Shri G.M.Pillai, Director General, MEDA, in his oral submission, has stated that the assumed project cost of Rs.4.0 crores/MW for new projects, though achievable, appears to be low as of now.

**Commission's Ruling**

Project cost not only includes cost of the plant and machinery but also includes other costs such as cost of infrastructure development such as access roads, cost of improvement in the EHV system for power evacuation, soft financing costs, administrative costs etc. It was brought to the notice of the Commission that since the infrastructure development is being done for all projects in the region by MEDA, per MW cost is likely to go down. It was felt that considerable scope for reduction in the cost of infrastructure development is possible.

Further, a declining trend in the cost of wind power plants is observed in the National/International markets. A copy of the article "On the Track as the Cheapest in Town" that appeared in Wind Power Monthly, January 2002 (provided as **Annexure 8** to the Detailed Tariff Proposal made available for Public Hearing) indicates that the price of machines is likely to fall by 8% for each doubling of production. Keeping these in view, the assumption of Rs.4.0 crore/MW as project cost for new projects for the Tenth Five Year Plan (2002-2007) is considered to be quite reasonable vis-a-vis Rs. 5.0 crore/MW for old projects.

The Commission further notes that the project cost is related to the machine efficiency, namely the Capacity Utilisation Factor (CUF) that it can provide, and that a higher CUF could be achieved by using machines of better efficiency but the project cost would be higher. In view of this position, the Commission has benchmarked the CUF for new projects at 20% and considers the project cost per MW for new projects commissioned from 1<sup>st</sup> April, 2003 onwards as Rs.4.0 crores/MW for the purpose of determination of tariff for sale to Utilities.