

The project activity ‘Manal, Chandni and Timbi Small Hydroelectric Projects of HCPL’ has received 4 requests for review. Reason for Request is same for all the 4 requests.

Request for review 1, 2, 3, 4

Reason for Request

The use of OECD default efficiencies for coal and gas fired power plants is not acceptable under approved baseline methodologies, as no deviation has been allowed for India so far

Reply from Project Participant (Himalayan Crest Power Ltd.)

No efficiency value has been used for coal based plants in our grid emission factor calculation. Efficiency for gas based plants has been used as given at page number 156 of "Emission Baselines-Estimating the Unknown", which is an OECD document. However, the value taken is specific for India and not a world-wide default value. Page number 156 of the document is enclosed for reference. The complete document is available at following link:

www.iea.org/textbase/nppdf/free/2000/embase2000.pdf

Further the Project Participant wish to emphasize that the value used is a very conservative value and is 5 % higher than that used by most of the projects that have been already registered from India. List of few registered projects from India with the efficiency value used and source of information is given below:

S.No.	Project Title	Ref	Station Heat Rate of gas based plant considered (kcal/kWh)	Efficiency of gas based plant considered (%)	Source of information
1	Aleo Manali 3 MW Small Hydroelectric Project, Himachal Pradesh, India	0244	2062	42	Annexure 2a as given by "Baselines for Renewable Energy Projects under Clean Development Mechanism" by The Ministry of Non-Conventional Energy Sources, Govt. of India. http://mnes.nic.in/baselinerept.htm
2	14.8 MW small-scale grid connected wind power project in Jaisalmer state Rajasthan, India by	0243	2062	42	Annexure 2a as given by "Baselines for Renewable Energy Projects under Clean Development Mechanism" by The Ministry of Non-Conventional Energy Sources, Govt. of India. http://mnes.nic.in/baselinerept.htm

	RSMML				
3	TSIL – Waste Heat Recovery Based Power Project	0274	2000	43 ¹	Order by Central Electricity Regulatory Commission (CERC), Govt. of India, against petition no. 22/99; IA No.27/1999 AND IA No.18/2000 http://www.cercind.org/pet22002407.html

To maintain the conservativeness in the grid emission factor calculation, Project Participant would request EB to register the project with existing efficiency value i.e. 50 %, used for gas based generation in India.

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¹ 45 % efficiency has been considered for calculation of grid emission factor

Enclosure

SUSTAINABLE
DEVELOPMENT

Emission Baselines

ESTIMATING
THE UNKNOWN

SUSTAINABLE DEVELOPMENT



OECD



INTERNATIONAL ENERGY AGENCY

ANNEX C

Table C3-1

Recent (operation started after 1994) electricity generation plants
and plants under construction: Assumptions for load factors and efficiencies

	Brazil	India	Morocco
Steam turbine (boiler)			
- Efficiency**	35%	32**%	35%
- Load	75%	70**%	75%
Hydro ¹			
- Load	50%**	40%	32%***
Nuclear			
- Load**	69%	46**%	n.a.
Gas turbine in combined cycle			
- Efficiency**	50%	50%	50%
- Load	75%	75%	75%
Internal combustion (reciprocating engine or diesel engine)			
- Efficiency	33%	33%	33%
- Load	50% ²	35%	35%
Gas/combustion turbine (peak load)			
- Efficiency**	35%	35%	35%
- Load	50% ²	35%	35%
Wind turbine generator			
- Load	25%**	25%	25%

* Lower values for India are due to poor maintenance and low quality coal in India.

** Based on IEA (1998a) assumptions.

***African average, as per IEA (1998a)

¹ Hydro performance is site specific, but to facilitate calculations, an average figure is used here, based on IEA (1998a) assumptions.

Other figures based on recommendations from electricity experts at the IEA.

² A load of 50% is assumed for the North Isolated region (all internal combustion engine plants are located in that region and 10 out of the 12 gas/combustion plants are located in the North Isolated region). The load factor is assumed to be 0.35% for these types of plants located in other regions.