

Application for Provisional Approval for an On-grid Renewable Energy Project

Format F1

Checklist of Contents of the Pre-feasibility Study

Note: The Pre-feasibility Report should be attached to the Application

Project type: Hydro

Profile of the Applicant	
Background ¹ of the company/individual applying for provisional approval	
Site Description	
Name of the stream/ river	
Name of the village and administrative divisions	
Land use and general socio-economic background of the area	
Sketch of the catchment	
Site Survey	
Gross head from weir crest to tail water level (m)	
Location details (latitude/longitude) of the weir and powerhouse	
Stream Flow Analysis	
General description of the climate and geo-physical conditions in the region	
Rainfall data	
Catchment area (km ²)	
Daily stream flow rates or estimated FDC	
Preliminary Plant Design	
Design flow rate and gross head	
General layout of the power plant including a single-line diagram of the electrical system up to grid interconnection	
Preliminary sizing of civil works, hydraulic losses	
Net head on turbine	
Turbine selection	
Installed capacity	
Key specifications of the E&M equipment	
Gross annual or monthly generation, losses, net sales to the grid	
Environmental Considerations	
Localised social & environmental benefits likely to result due to the project	
Localised negative social & environmental impacts likely to result due to the project	
Proposed measures to mitigate negative impacts	
Project Costs	
Capital cost of the project	
O&M costs, insurance costs	
Financial Analysis	
Financing parameters	
Financial analysis including a sensitivity analysis against key variables	
Project Development Plan	
Site ownership, plans to acquire land	
Source(s) earmarked to raise the equity and debt financing	
Project implementation schedule	

¹ Current business, products,/services, proposed business plan for the project

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Project type: Biomass (grown)

Profile of the Applicant	
Background ¹ of the company/individual applying for provisional approval	
Site Description	
Name of the site	
Name of the village and administrative divisions	
Sketch of the area earmarked for the power plant	
Land use and general socio-economic background of the area	
General infrastructure facilities - access roads, nearest CEB grid substation, water supply	
Preliminary Plant Design	
Rated capacity	
Preliminary layout of the power plant including a single-line diagram of the electrical system up to grid interconnection	
Gross/ net annual electricity generation	
Biomass type earmarked as the fuel and key properties	
Heat and mass balance calculations	
Biomass demand	
Data on biomass yield, required land area	
Ash disposal arrangements	
Biomass Supply	
Method of sourcing biomass	
If biomass will be grown by the plant owner, area earmarked for biomass plantations	
If biomass will be sourced from other suppliers, information on the identified suppliers – name, location, letter of consent in principle	
Arrangements for harvesting, transport and supply of biomass	
Environmental Considerations	
Localised social & environmental benefits likely to result due to utilisation of biomass in the power plant	
Localised negative social & environmental impacts likely to result due to utilisation of biomass in the power plant	
Proposed measures to mitigate negative impacts	
Project Costs	
Capital cost of the project	
Cost of biomass supply – price payable for biomass at source, handling costs, transport costs	
O&M costs, insurance costs	
Financial Analysis	
Financing parameters	
Financial analysis including a sensitivity analysis against key variables	
Project Development Plan	
Site ownership, plans to acquire land	
Source(s) earmarked to raise the equity and debt financing	
Project implementation schedule	

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Project type: Wind

Profile of the Applicant	
Background ¹ of the company/individual applying for provisional approval	
Site Description	
Name of the site	
Name of the village and administrative divisions	
Sketch of the area earmarked for the project with coordinates	
Land ownership information	
Current land use and socio-economic background in the area	
General Infrastructure facilities – access roads, nearest CEB grid substation	
Wind Resource Analysis	
Description of the local wind climate	
Estimated average annual wind speed ² at the site	
Estimated Weibull parameters	
Estimated wind speed frequency distribution	
Preliminary Plant Design	
Rated capacity	
Wind turbine specifications and power curve data	
Preliminary plant layout including a single-line diagram of the electrical system up to grid interconnection	
Proposed 33 kV transmission line route	
Gross annual electricity generation, losses, net sales to the grid	
Transport of wind turbines – proposed route, identified bottlenecks	
Crane requirements for erection of wind turbines	
Environmental Considerations	
Localised social & environmental benefits likely to result due to the proposed project	
Localised negative social & environmental impacts likely to result due to the project	
Proposed measures to mitigate negative impacts	
Project Costs	
Capital costs	
O&M costs, insurance costs	
Financial Analysis	
Financing parameters	
Financial analysis including a sensitivity analysis against key variables	
Project Development Plan	
Site ownership, plans to acquire land	
Source(s) earmarked to raise the equity and debt financing	
Project implementation schedule	

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² If measured wind data is not available close to the site, please refer to the national wind atlas

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Checklist of Contents of the Pre-feasibility Study

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Project type: Waste (agricultural, industrial, municipal)

Note: A separate checklist is provided for the waste heat projects

Profile of the Applicant	
Background ¹ of the company/individual applying for provisional approval	
Site Description	
Name of the site	
Name of the village and administrative divisions	
Sketch of the area earmarked for the power plant	
Land use and general socio-economic background in the area	
General Infrastructure facilities – access roads, nearest CEB grid substation, water supply	
Preliminary Plant Design	
Rated capacity	
Preliminary layout of the power plant including a single-line diagram of the electrical system up to grid interconnection	
Gross/net annual electricity generation	
Waste type(s) earmarked as the fuel and key properties	
Heat and mass balance calculations	
Waste demand	
Ash disposal arrangements	
Waste Supply	
Identified types of waste(s), their moisture levels, drying methods, processing/sorting required	
Waste availability – survey method, surveyed region, available quantities, seasonal variation, etc.	
Present uses of waste, price paid by users, if any	
Information on identified suppliers – name, location, letter of consent in principle	
Environmental Considerations	
Localised social & environmental benefits likely to result due to utilisation of waste in the power plant	
Localised negative social & environmental impacts likely to result due to utilisation of waste in the power plant	
Proposed measures to mitigate negative impacts	
Project Costs	
Capital cost of the project	
Cost of waste supply –price payable for waste at source, handling costs, transport costs	
O&M costs, insurance costs	
Financial Analysis	
Financing parameters	
Financial analysis including a sensitivity analysis against key variables	
Project Development Plan	
Site ownership, plans to acquire land	
Source(s) earmarked to raise the equity and debt financing	
Project implementation schedule	

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Project type: Waste (waste heat)

Note: A separate checklist is provided for projects using agricultural, industrial and municipal waste)

Profile of the Applicant	
Background ¹ of the company/individual applying for provisional approval	
Site Description	
Name of the site	
Name of the village and administrative divisions	
Sketch of the area where waste heat is available and the site earmarked for the power plant	
Land use and general socio-economic background in the area	
General Infrastructure facilities – access roads, nearest CEB grid substation, exiting grid interconnection, water supply	
Preliminary Plant Design	
Estimates of waste heat, temperature and pressure of the waste stream	
Rated capacity of the power plant	
Preliminary layout of the power plant including a single-line diagram of the electrical system up to grid interconnection	
Gross/net annual electricity generation	
Supplementary fuel requirements	
Heat and mass balance calculations	
Source of Waste Heat	
Identified source(s) of waste heat	
Associated industrial process (product, raw material, annual output)	
Primary fuel source(s) for the existing industrial process	
Present uses of waste heat, if any	
Environmental Considerations	
Localised social & environmental benefits likely to result due to the power plant	
Localised negative social & environmental impacts likely to result due to the power plant	
Proposed measures to mitigate negative impacts	
Project Costs	
Capital cost of the project	
Cost of waste heat recovery structures and systems	
O&M costs, insurance costs	
Financial Analysis	
Financing parameters	
Financial analysis including a sensitivity analysis against key variables	
Project Development Plan	
Site ownership, plans to acquire land	
Source(s) earmarked to raise the equity and debt financing	
Project implementation schedule	

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Checklist of Contents of the Pre-feasibility Study

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Project type: Wave

Profile of the Applicant	
Background ¹ of the company/individual applying for provisional approval	
Site Description	
Name of the site	
Name of the village and administrative divisions	
Sketch of the area earmarked for the project	
Available infrastructure in the area - access roads, nearest CEB grid substation	
Socio-economic profile in the selected coastal belt	
Wave Power potential	
General climate in the region	
Technical description of the wave characteristics	
Wave power potential estimates	
Project Concept	
Global status of wave power generation	
Description of the project concept	
Principle of operation of the proposed technology & its operational characteristics	
Past experience with similar technology concept elsewhere in the world	
Maturity of the technology for commercial deployment	
Preliminary Plant Design	
Configuration of the wave power plant including on-shore, near shore and off-shore structures and power transmission	
Rated capacity	
Key specifications of wave power converters and auxiliary equipment	
Single-line diagram of the electrical system up to grid interconnection	
Gross annual or monthly electricity generation, losses, net sales, to the grid	
Environmental Considerations	
Localised social & environmental benefits likely to result due to the project	
Localised negative social & environmental impacts likely to result due to the project	
Proposed measures to mitigate negative impacts	
Project Costs	
Capital cost of the power plant	
O&M costs, insurance costs	
Financial Analysis	
Financing parameters	
Financial analysis including a sensitivity analysis against key variables	
Project Development Plan	
Site ownership, plans to acquire land	
Source(s) earmarked to raise the equity and debt financing	
Project implementation schedule	

¹ Current business, products,/services, proposed business plan for the project

