

## NER 300 Criteria:

Assuming eligibility criteria are met, the selection is based solely on the request for public subsidy per unit energy and on the minimum of one NER300 project per Member State.

To receive NER300 funding, a renewable energy installation must feature “innovative” technology. If an installation comprises both innovative and state-of-the-art technology, only the innovative part will receive the subsidy. Article 6 (3) of the Decision takes “innovative” to mean technologies that are not “existing” or “proven”, with Annex I A II defining the number of projects that the Commission, at present, is willing to see funded and the technical specification each must meet. For some technologies, the specification is more detailed than for others. The specifications for PV, as they stand in the Decision, are too loose to be useful for the purpose of framing a proposal because installations that fit them are already operating commercially, so a proposal could get caught by the over-riding consideration of avoiding “existing” or “proven” technology.

Categories of renewable energy technology that are eligible for support have been defined (biofuels, concentrating solar power, photovoltaics, geothermal, wind, ocean, hydropower) in Annex I A II of the [NER300 Decision](#). See detailed list below:

### Bioenergy – project subcategories:

- Lignocellulose to intermediate solid, liquid or slurry bioenergy carriers via pyrolysis with capacity 40 kt/y of the final product.
- Lignocellulose to intermediate solid, liquid or slurry bioenergy carriers via torrefaction with capacity 40 kt/y of the final product.
- Lignocellulose to Synthetic Natural Gas or synthesis gas and/or to power via gasification with capacity 40 million normal cubic metres per year (MNm<sup>3</sup>/y) of the final product or 100 GWh/y of electricity.
- Lignocellulose to biofuels or bioliquids and/or to power including via directly heated gasification with capacity 15 million litres per year (Ml/y) of the final product or 100 GWh/y of electricity. Production of Synthetic Natural Gas is excluded under this subcategory.
- Lignocellulosic raw material, such as black liquor and/or products from pyrolysis or torrefaction, via entrained flow gasification to any biofuels with capacity 40 Ml/y of the final product.
- Lignocellulose to electricity with 48 % efficiency based on lower heating value (50 % moisture) with capacity 40 MWe or higher.
- Lignocellulose to ethanol and higher alcohols via chemical and biological processes with capacity 40 Ml/y of the final product.
- Lignocellulose and/or household waste to biogas, biofuels or bioliquids via chemical and biological processes with capacity 6 MNm<sup>3</sup>/y of Methane or 10 Ml/y of the final product.
- Algae and/or micro-organisms to biofuels or bioliquids via biological and/or chemical processes with capacity 40 Ml/y of the final product.

*Note:* sustainability criteria as provided in Directive 2009/28/EC of the European Parliament and of the Council ( 2 ) on the promotion of the use of energy from

renewable sources shall be met for biofuels and bioliquids within the meaning of that Directive.

Concentrated solar power – project subcategories:

- Parabolic trough or Fresnel system using molten salts or other environmentally-benign heat transfer fluid with nominal capacity 30 MW.
- Parabolic trough or Fresnel system based on Direct Steam Generation with nominal capacity 30 MW. Direct steam solar temperature to be above 500 °C.
- Tower system using superheated steam cycle (either multi-tower or combination liner collectors – tower) with nominal capacity 50 MW.
- Tower system using pressurised air with temperature above 750 °C and solar hybrid gas turbine with nominal capacity 30 MW.
- Large-scale Stirling dish power plants with solar to electric efficiency of over 20 % and nominal capacity of at least 25 MW.

*Note:* Dry cooling, hybridisation and (advanced) heat storage solution may be included in the demonstration plants.

Photovoltaics – project subcategories:

- Large-scale concentrator photovoltaics power plants with nominal capacity 20 MW.
- Large-scale multi-junction Si-thin-film photovoltaics power plants with nominal capacity 40 MW.
- Large-scale Copper indium gallium (di)selenide (CIGS)-based photovoltaics power plants with nominal capacity 40 MW.

Geothermal – project subcategories:

- Enhanced geothermal systems in tensional stress fields with nominal capacity 5 MWe.
- Enhanced geothermal systems in compressional stress fields with nominal capacity 5 MWe.
- Enhanced geothermal systems in areas with deep compact sedimentary and granite rocks and other crystalline structures with nominal capacity 5 MWe.
- Enhanced geothermal systems in deep limestone with nominal capacity 5 MWe.

*Note:* Combined Heat and Power (CHP) applications with the same electricity thresholds are equally eligible.

Wind – project subcategories:

- Off-shore wind (minimum turbines size 6 MW) with nominal capacity 40 MW.
- Off-shore wind (minimum turbines size 8 MW) with nominal capacity 40 MW.
- Off-shore wind (minimum turbines size 10 MW) with nominal capacity 40 MW.
- Floating off-shore wind systems with nominal capacity 25 MW.
- On-shore wind turbines optimised for complex terrains (such as forested terrains or mountainous areas): with nominal capacity 25 MW.

- On-shore wind turbines optimised for cold climates (compatible with temperature lower than – 30 °C and severe icing conditions) with nominal capacity 25 MW.

Ocean – project subcategories:

- Wave energy devices with nominal capacity 5 MW.
- Marine/tidal currents energy devices with nominal capacity 5 MW.
- Ocean thermal energy conversion (OTEC) with nominal capacity 10 MW.

Hydropower – project subcategories:

- Power generation with High Temperature Superconducting Generators: 20 MW.

Distributed Renewable Management (smart grids) – project subcategories:

- Renewable energy management and optimisation for small and medium-scale Distributed Generators in rural environment with predominant solar generation: 20 MW on Low Voltage (LV) network + 50 MW on Medium Voltage (MV) network.
- Renewable energy management and optimisation for small and medium-scale Distributed Generators in rural environment with predominant wind generation: 20 MW on LV network + 50 MW on MV network.
- Renewable energy management and optimisation for small and medium-scale Distributed Generators in urban environment: 20 MW on LV network + 50 MW on MV network.

*Note:* The use of active loads (electric heaters/heat pumps etc.) shall not be excluded.

Included with the above should be one additional category concerning the integration into the grid of renewable electricity capacity. These categories are split into 9 subcategories, each containing a topic eligible for funding.

The non-negotiable features of renewable energy projects are that they

- break new technological ground (e.g. by demonstrating a solution a particular technological challenge at a relevant scale – see next bullet point)
- are on the cusp of “commercial” deployment, meaning that after the NER300 project, the technology should need no further subsidy beyond the usual subsidy offered in the market(s) where the technology will be deployed. This implies that no further financial obstacles should then stand in the way of the roll-out of the technology
- produce energy (ie only energy-producing installations are eligible not, say, manufacturing facilities) or facilitate its integration into the grid (like the DRM “smart grid” subcategories in the first call)
- are installed in the EU