

POWER PLANTS

BIOMASS-MSW

Biomass-MSW
Power generation

ACTIVITY FIELDS



SOLAR THERMAL



BIOMASS



FOSSIL FUELS



Comprehensive Management of Power Plants

Ingeteam provides comprehensive and customized solutions in the field of power generation, integrating Ingeteam range of products to maximize the profitability of the projects.

EPC / turnkey projects

- Project management.
- Engineering.
- Equipment supply.
- Construction.
- Commissioning.

Services

- Feasibility studies.
- Conceptual engineering.
- Basic and detail engineering.
- Owner engineering.
- Construction supervision.
- Commissioning.
- Operation and maintenance.



SUCCESS PROJECT

Location	Reocín (Spain)
Fuel	Eucalyptus forest residue
Boiler Technology	Bubbling Fluidized Bed
Power	10 MWe
Annual Electrical generation	73 GWh/year
Avoided CO2 emissions	42.7 kt/year
Fuel saving	7,200 toe/year
Construction peak	100 staff
Operation and Maintenance staff	25 direct + 100 indirect

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Biomass-MSW: power generation

POWER PLANTS



Biomass-MSW pre-treatment



Boiler



Turbine and generator



Electrical grid

- 1. Biomass-MSW Handling and Treatment System:** the power plant has a biomass or a municipal solid waste handling and treatment system, to comply with the requirements of the combustion unit.
- 2. Biomass-MSW Storage System:** it allows to storage the biomass or the municipal solid waste before the boiler feeding system, acting as a lung of the installation.
- 3. Combustion Unit:** biomass-MSW combustion in the boiler produces superheated steam.
- 4. Steam Turbine:** the superheated steam is expanded into the turbine to generate electrical energy.
- 5. Flue-gas Cleaning System:** the flue-gas flow from the combustion is cleaned in order to guarantee the required emission limits.
- 6. Cooling System:** the power plant has a cooling system, dry or wet, depending on water availability and environmental conditions.
- 7. Electrical Substation:** It allows the electrical connection to the grid.



ADVANTAGES

- Local Content:** Biomass and Municipal Solid Waste Power Plants suppose a boost for local employment, in the operation and maintenance tasks of the plant and also in the forestry and agricultural activities associated with the management of the biomass or the collection of municipal solid wastes.
- Sustainable Management of Forest Plantations and Municipalities:** the use of biomass and municipal solid waste for energy purposes allows the development and sustainable management of forest, agricultural and municipal resources.
- Environmental Benefit:** the use of the biomass and municipal solid waste produces important environmental benefits. It promotes the cleaning and conservation of forest plantations and municipalities, thereby reducing the risk of fire and improving order and cleanliness of the public places. It also allows the valorisation of agricultural wastes and sub-products from food industry. In addition, their use replaces polluting energy sources, helping to reduce the emission of greenhouse gases.