

POWER PLANTS

CHP

Cogeneration
electrical and thermal 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.

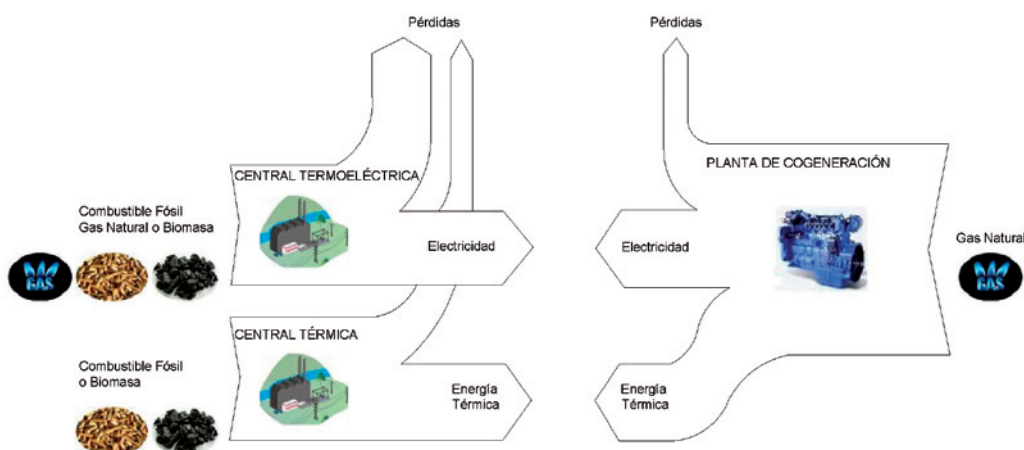
Services

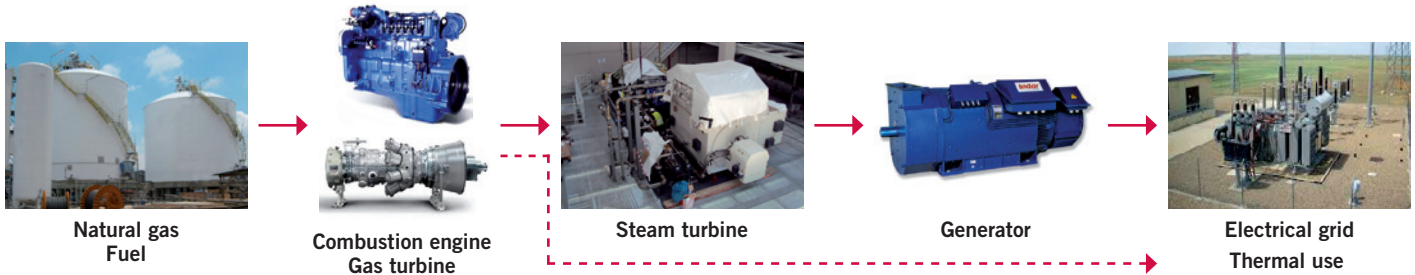
- Feasibility studies.
- Conceptual engineering.
- Basic and detail engineering.
- Owner engineering.
- Construction supervision.
- Commissioning.
- Operation and maintenance.

MAIN BENEFIT

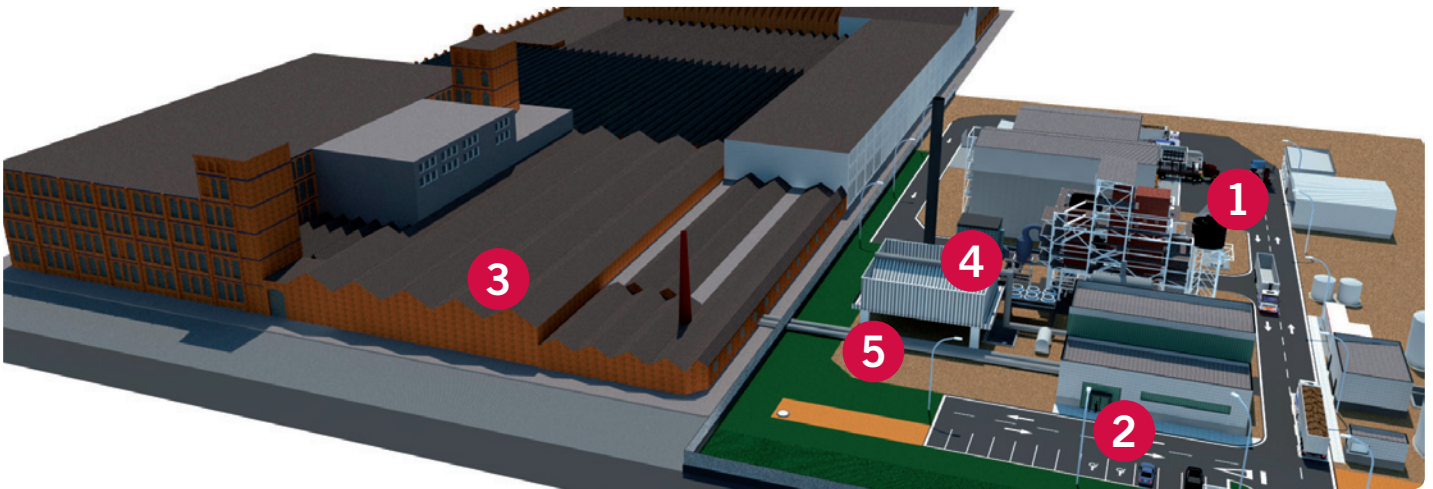
Cogeneration is a technical solution which combines the generation of electricity and thermal energy from a single fuel in an efficient way.

The construction of this kind of facilities, designed specifically to produce both thermal and electrical energy, supposes a significant reduction of fuel consumption.





- 1. Fuel System:** if necessary, fuel is treated and stored in the plant as per combustion systems requirements.
- 2. Turbine-Engine Group:** chemical energy of the primary fuel is transformed into mechanical energy, by using gas turbines or combustion engines. Then, the electrical energy is generated through a generator. For steam turbines, an additional system to generate steam is required.
- 3. Thermal Use:** in the case of combustion engines or gas turbines, the useful thermal energy in an industrial process comes from the combustion gases or cooling system of the combustion set. In the case of steam turbines, the steam can be extracted in the steam condensation stage or in the intermediate bleeds.
- 4. Gas Cleaning System:** The flue gases generated during the combustion are cleaned to ensure the emission limits required by the normative.
- 5. Cooling System:** The power plant has a cooling system, dry or wet, depending on water availability and environmental conditions.
- 6. Electrical Substation:** It allows the electrical connection to grid.



ADVANTAGES

- **High Energy Efficiency:** Combined generation of electricity and thermal energy can achieve efficiencies over 85%, far above the efficiencies of conventional power plants.
- **Distributed Generation:** Cogeneration plants can be installed close to heat and electricity consumers, allowing a more efficient use of energy.
- **Security of Supply:** Cogeneration not only provides energy, but also security of supply, offering power guarantee to consumer.
- **Energy Management:** Due to fuel used, cogeneration plants ensure a manageable energy production.