Energy for generations

ATLANTIC PROJECTS COMPANY

Corduff Generation Station Flexgen Project

24/05/2024

Corduff Flexgen development

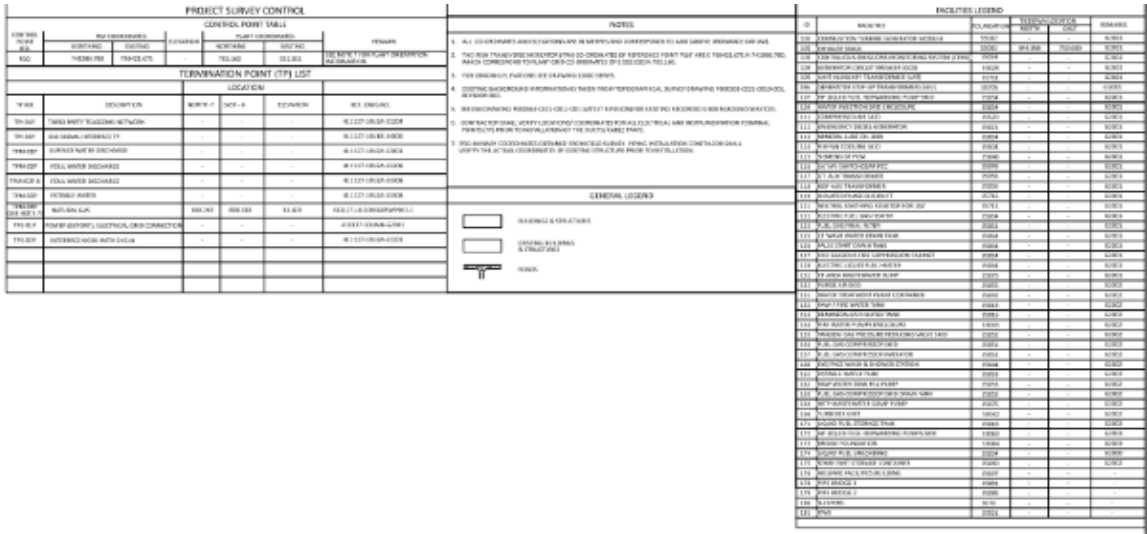
The primary reasoning for the development of the Corduff Flexgen is to provide fast response electricity generation services as required by EirGrid. This type of development will facilitate an increased level of renewable electricity generation on the Irish grid, by being available as a back-up electrical supply option during the hours of the day when demand is at its highest.

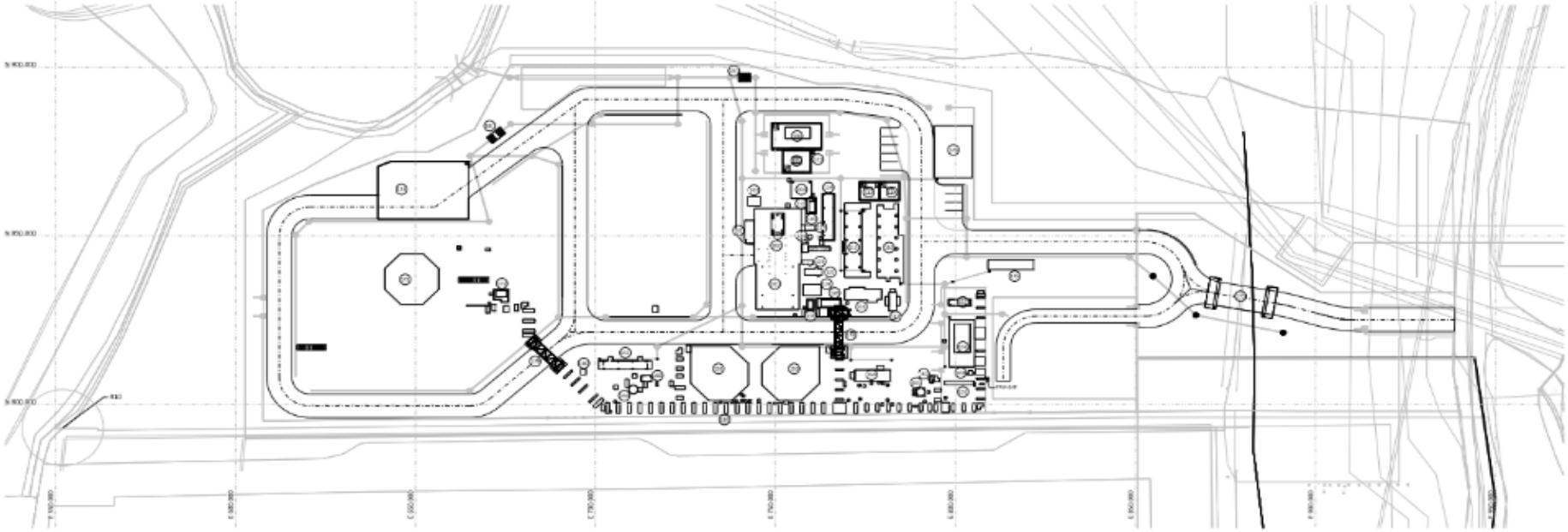
The Corduff Flexgen Unit:

- The Flexgen unit will be remotely operated
- The Flexgen unit will be monitored by ESB Distributed Generation Operation & Maintenance Team.
- Regular site visits and inspections will take place to ensure the site is appropriately managed and maintained.
- The Flexgen units will contain a protection system and control system for operating the unit along with a switchgear enclosure.
- The electricity generated will be fed to the site transformer where the voltage is stepped up for transmission into the national grid. This transmission will be via connection to the existing Corduff 220KV Sub-station, the Flexgen will connect to a 110KV bay located within the Eirgrid 220KV Sub-station.
- The Flexgen Unit will be available to operate 24-hours per day, seven days per week. The operational period for the plant will be non-continuous

Corduff Site Layout

Energy for generations





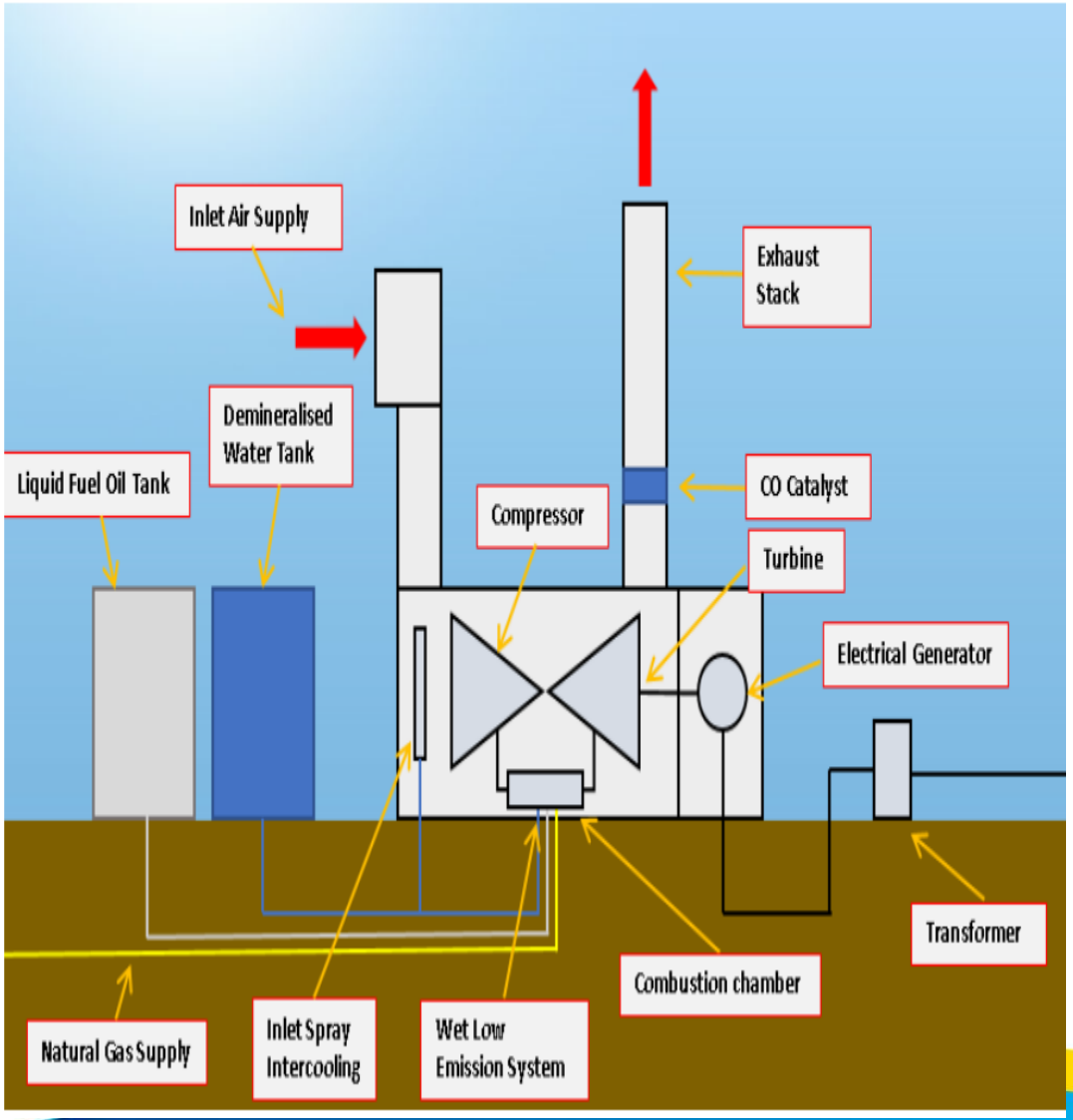
GENERAL ARRANGEMENT PLAN

APPROVED FOR CONSTRUCTION

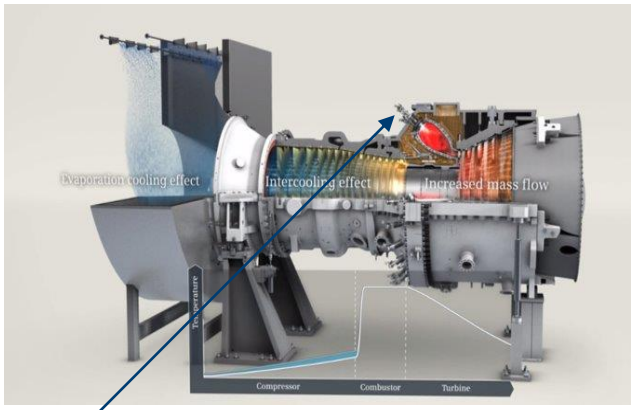
The Process

The Energy Conversion Process

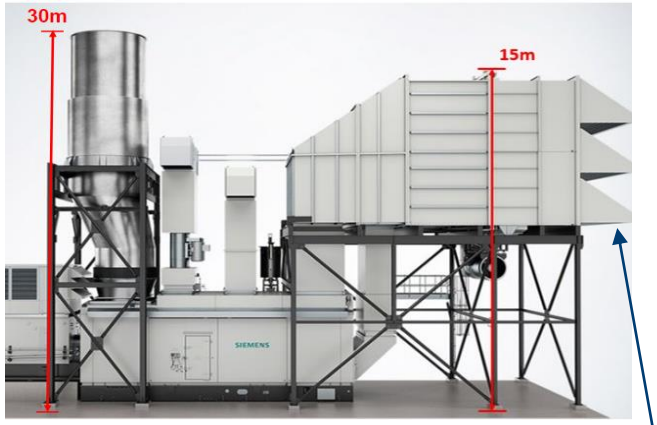
The Plant comprises 63.5 MW Siemens Aero derivative Gas Turbine. The energy conversion process converts the chemical energy contained in the natural gas or diesel to heat energy which is then expanded through the turbine causing mechanical rotation of the Turbine rotor.
The mechanical energy is then converted into Electrical energy by the Generator. Natural gas will be delivered to Corduff Flexgen site by the Gas Networks Ireland (GNI) transmission gas network system. Diesel will be delivered by Road Tankers.



GT Engine type	Unit Size (MWe)	Efficiency	No. Gas Turbine Units
Siemens SGT – A65 Aero-Derivative Gas Turbines	63.5 MW	39.5%	1



Gas Turbine

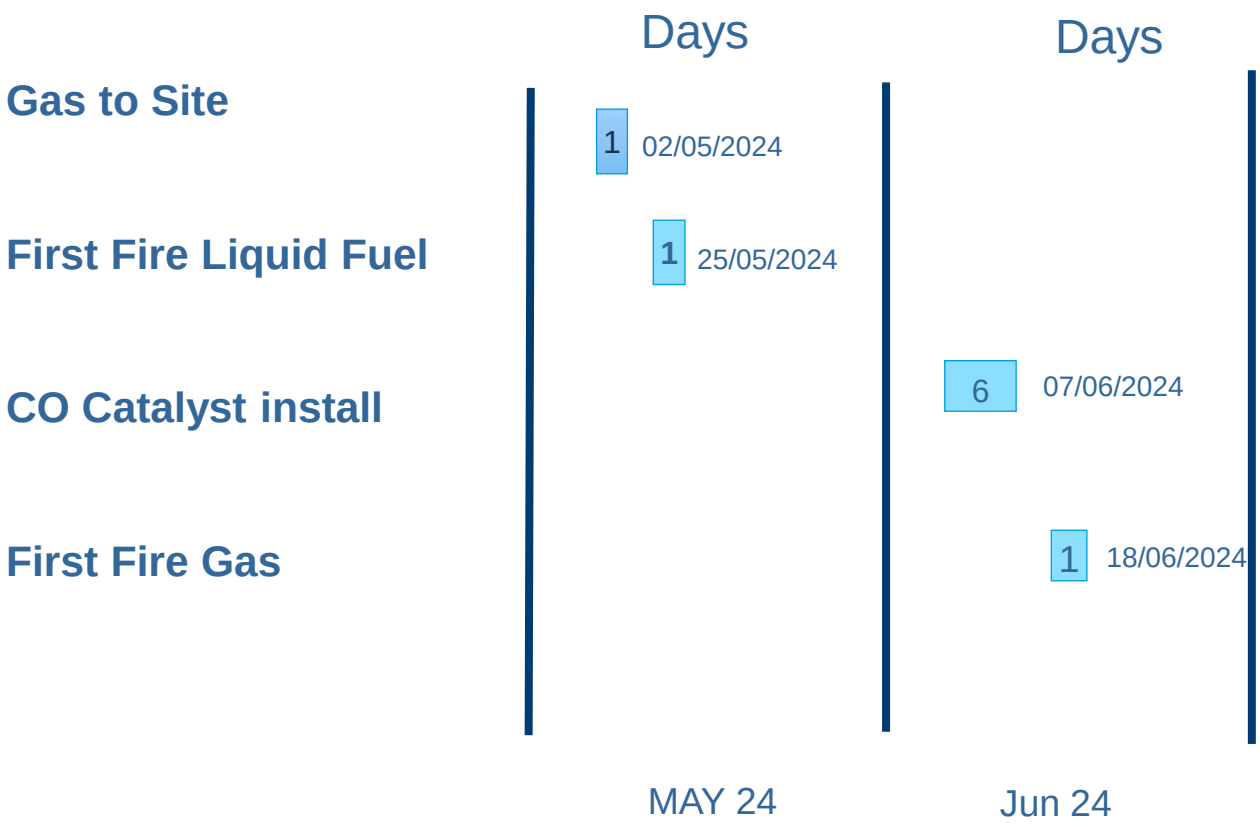


Generator

Air Intake

Site (24/05/2024)

Key Milestones



Start Up Operating Conditions

First Fire

- 24/05/2024 Back out inspections to be completed on the GT exhaust and stack to confirm high standard of cleanliness established before first fire.
- 25/05/2024 First Fire on Liquid Fuel
- 06/06/2024 Siemens commence mapping and optimization of the GT combustion system. Combustion commissioning Technical Field Advisers (TFAs) will be on site to ensure the GT combustion system is optimized and achieves compliance with the Environmental permit.
- 07/06/2024 CO catalyst filter installation will commence and will take 6 days to complete.
- 12/06/2024 CEMS emissions compliance testing

We will not be able to bypass the attenuation tank at Corduff and management of bunds will be implemented by the following:

Energy for generations

Bunds

- Bunds will be drained, to provide maximum capacity, if the level rises to point it requires action. A registered contractor will be brought to site to drain bunds and dispose of in accordance with Site waste disposal procedure.

- **Full suite of commissioning testing complete to ensure integrity of systems including:-**
  - All gas and oil pipework has been hydrostatically tested
  - Flange guard fitted to all flanges containing hazardous substances
  - Regular Oil system leak checks during commissioning
  - Site manned on a 24/7 basis during commissioning

- **Gas & Gas oil –** False Start drains will be emptied by registered waste Contractor

- **Surface Water Drainage 100**% complete (full completion and testing prior to Commercial Operations)

Questions?