CASE STUDY

The Government of Turkmenistan has launched the project called TGF for the construction of a large-scale fertilizer plant in Turkmenistan in Garabogaz, northwest of the country along the Caspian Sea, as the largest urea fertilizer plant in the country. The compound will consist of an ammonia plant as well as other related infrastructure and delivery facilities.
The emergency Diesel Generator was foreseen at first as one single slow speed unit of 5 MVA at 6.9 kV operating under extreme environmental conditions (range of temperature at site from -28°C to +46°C).
After the analysis of the entire project requirements, Ausonia, along with the EPC contractor, worked around the solution by reducing cost impact of the supply by proposing 2 x 2.5 MVA installed in container for parallel operation, including also Switchgear Panel considering the final output (after derating) as required under the operational extreme environmental conditions.
With this solution, EPC contractor was able to reduce by half the previously estimated costs for the delivery, installation and maintenance of the power solution.

After the success of this job, Ausonia has become official supplier for EPCs for similar projects all around the world.

MAIN BENEFITS AND ADVANTAGES:

Extreme Environmental Conditions
- Design temperature from -28 to +46°C
- Winterization for container and all accessories (fuel tank and heat trace for piping)
- Specially designed for Ammonia atmosphere

Higher Efficiency
- Modular Parallel configuration
- Perfect fit with MV feeding line of loads
- Back synchro for no bumps at Mains return

Reliability
- IP54 container for full protection of internal items
- Full redundance of Diesel Generators in case of failure
- Standalone protection of Power Plant without any external SWGR

Monitoring
- User friendly interface
- Supervision, monitoring and internet access
- Remote command/control integrated in Switchgear room
- Event log history for all operation of plant

Operation & Maintenance
- Easier recovery and intervention on site
- Lower fuel consumption
- Long lifetime up to 30 years without downtime

Footprint
- PLUG & PLAY connection of Generators + Switchgear
- Easy installation on site without special tools for handling
- No extra footprint for heat exchangers


Anti-sand filters
MV alternator
Overall controller for plant
Container environment heaters