



Case Study: Generators for Offshore Windfarms

Since 2003 **WARDPOWER** offered a variety of platform Generating Sets for use on Offshore Windfarms. And no, it requires a bit more than making it a bit more rainproof Mr Competitor!



Can you See What it is yet?

A 255KVA Offshore packaged Generating Set built into the Electrical Platform for an Offshore Wind Farm. Includes Automatic Self Test Load Bank and 120h fuel storage

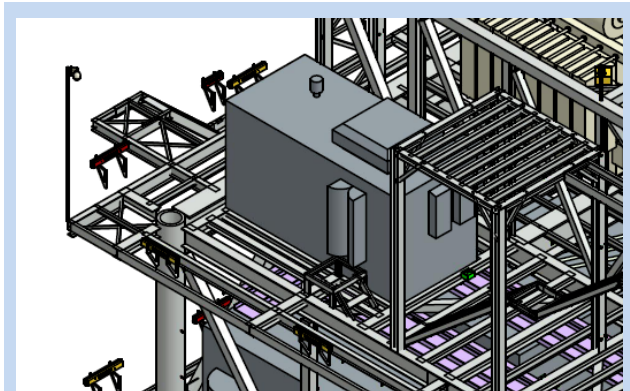
To begin with, most clients need the Generating Set to be built into the rig a LONG time before they are going to want to commission it. **WARDPOWER** offers flexible warranty and preservation packages so that the client doesn't commission it the day after the warranty expired.

And if they needed the box early, it's as nothing compared to how early they need the design information as structural steel supports on this scale are not cheap or quick! **WARDPOWER** offers the design information up to a year in advance and our engineers work in with the client's designers to come up with a system design that works in the tightest of space:

- Good Access
- Feasible Maintenance
- Safe Fuel Storage and Filling

Then there's getting it physically onto the rig:

These are tight fit environments with unusual shapes to fit around. You also have to contend with decks that twist (which must not cause bunds to rupture), weathering from EVERY direction, the set being used as the commissioning supply for up to 6 months with no auxiliary supply of it's own... And the construction contractors using them variously as tool safes, scaffolds, and main structural supports. At the end of which it still has to be good for a 25 year life. You get the idea.



More than a Bit of Meccano...
Just finding a space is a challenge.

Offshore winds don't stop at horizontal. They bounce off other plant and come upwards. We design our acoustics to withstand rain from 360°. Similarly they have offshore paint for everything (inside and out), marine grade Stainless Steel for all external fixings, internal silencer assemblies, all fittings IP65 or better, special handling in the work shop (for a paint finish better looked after than the one on the MD's Jag!).



When the Wind Blows...
It won't get in here!



Is it sad we get excited by pictures like this (ask us about the little boxes...)?

We have found that there is no such thing as a waterproof gland that can be sat on a top surface in an offshore environment so...

Cable entry for this one is designed to be via a downward facing cable box with additional reinforcing plates to mount stainless steel tray. We've done cable entry underneath with rubber coating of the bottom of the container, in fact we've done it many ways!

And when you have gone to the end of this you have to have a unit that will operate for 25 years, so...

- Built in Load Banks for Automatic Testing
- Dual redundant starter systems
- Multiple fuel fill arrangements to allow SAFE filling from tanker vessels, barrels, anything you can put fuel in
- Automatic Fire Suppression Systems
- Fuel storage of up to 168h running
- Built in second conditioning generating sets to provide true black start capability for equipment that has been off for many months
- Extended oil autonomy systems
- Full condition monitoring of the set including auxiliary supplies and switchgear to ensure that problems are not found at the critical moment
- Cellular connection for remote monitoring and interrogation when access to the platform is not possible.

Yes, there's a little more to it than making it rain proof.

Projects in Brief:

- Offshore Generating Sets since 2003.
- Units at:
 - Barrow Wind Farm
 - Robin Rig Wind Farm
 - Greater Gabbard Wind Farm,
 - Galloper Wind Farm,
 - London Array Wind Farm
- Wide variety of paint finishes and fitting levels available
- Long lead projects
- You think of an option, we can get it in the box!



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