

The Jindo 3MW (Korea) Story.....

The Change of Climate

Without greenhouse gases (GHGs) the world would be about 33°C colder, so in this sense GHGs are life-supporting. The issue is not their presence but the concentrations at which they occur. As concentrations increase, the earth's surface temperature may rise, leading to global warming.

The likely effects of global warming include a greater frequency of extreme weather conditions; droughts, heat waves and floods caused by rising sea levels.

BP is committed to a range of zero and low-carbon energy options to reduce greenhouse gas emissions and mitigate the potential impacts of climate change. In response to increasing demand for Energy with a lower carbon footprint, BP has made a major commitment to develop low-carbon sources of energy.

The Jindo 3MW Project

In May 2009, as part of an agreement between BP Solar (Australia) and JA Solar (China), this project was developed, resulting in a 3MW solar tracking power plant that would be constructed in the Jindo region of South Korea, maximizing the government provided feed-in tariff (Fit). In order to qualify for this Fit, construction, commissioning and handover has to be completed before end August 2009.

Both companies BP Solar and JA Solar have very strong balance sheets, and are able to support this project and investment over the 15 years of operation of this power plant.



Jindo 3MW Project

Detailed Design:

In collaboration with Conergy Korea, BP Solar ensured that both the structural engineering and electrical design of this power plant was of the highest quality, and to meet the local Power Authorities strict compliance guidelines.

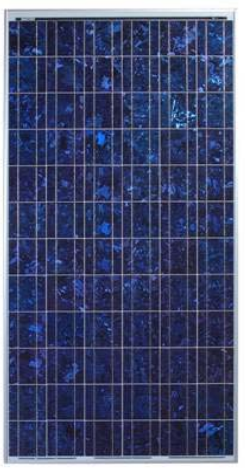
These designs were completed by Conergy Korea, and verified by BP Solar.

The life of the power plant has been designed for a 15 year operational life.

Major System Components:

1. Solar Modules:

A quantity of 17,800 BP Solar modules of type BP3170N manufactured in the USA plant, were shipped to the project site during the months of June and July 2009. Not only do these modules meet the stringent BP Solar quality requirements, but the additional certification from KEMCO was required to qualify for the Fit.

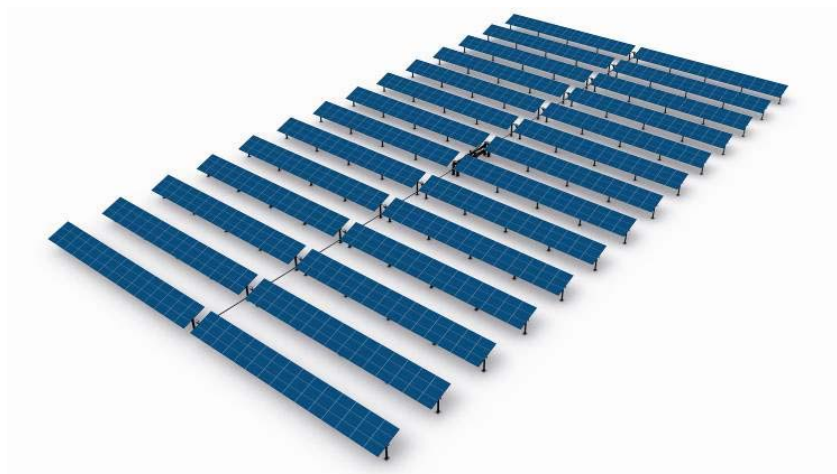


2. Solar Trackers:

BP Solar has access to a wide range of tracker options (single axis, dual axis, tilted trackers) primarily through its use and experience in Europe.

The Single Axis horizontal tracker was chosen for this project for the following key reasons:

- Robust design with proven reliability
- Relatively low upfront cost compared to other systems
- Modular design (quantity of 12 off 250kW blocks)
- Rapid deployment
- German designed, manufactured locally in Korea
- Low ongoing O&M costs



3. Solar Inverters:

The initial design called for the use of SMA inverters. However, due to the extremely tight timeframe of this project, a quantity of 12 off Central Inverters manufactured by Conergy Germany have been substituted as they were available ex-stock.



Project Management:

The project is being managed by the BP Solar (Australia) project management team, with the co-operation of the BP Solar (Korea) project team. A local consultancy firm has been appointed to manage the day to day and technical aspects of the project.

Key tasks include:

- Certification of modules
- Delivery of modules to site
- Design verification
- Subcontracting
- Scheduling
- Technical auditing
- Reporting

Construction Phase:

Conergy Korea was appointed as the EPC provider. The combination of their local solar plant installation experience, along with the fact that they are the solar tracker supplier, made them a certain choice.

The following photo sequence provides a graphical illustration of the progress to date.



Project Site prior to commencement of construction (early Jun-09)



Installation of foundations and pillars to support the tracking system



Installation of the LV cabling



Installation of tracker steel posts on the concrete pillars



Panoramic view of the project site midway through construction (mid Jul-09)



Installation of the base components of the tracking system



Installation of the tilt axis and linkage components of the tracking system



Installation of the module support components of the tracking system



Delivery of the solar modules to site



Installation of the solar modules commences



Installation of the solar modules



Panoramic view of the project site two thirds of way through construction (late Jul-09)



Installation of the Tracker Drive Units



Substation under construction



Main Combiner Box (MCB) Connection



Inverter Connection (380VAC connection)



Electrical (22.9KV Cable connection) to Switchboard Panel



Electrical (22.9KV Cable connection) to Pole



Panoramic view of the project site towards the end of construction (early Aug-09)

Progress Reporting, Knowledge and Lessons learnt:

Progress reporting, knowledge and lessons learnt are being shared on a weekly basis via a weekly Site Report which is distributed amongst the key stakeholders of the project.

Support from our BP Solar European colleagues has always been welcomed, with their vast experience and knowledge from the many installations that they have completed in Europe.

Timing and duration:

The project was first aired in May 2009. By early June, all permits had been obtained, the land purchased, and by mid June, site leveling and construction commenced. The project is on schedule to be commissioned and handed over by end August 2009.

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