**Subsea automation**

One of the biggest problems posed by working in deep water is that the equipment is inaccessible. This puts a premium on the systems that let operators maintain or shut down their assets. It takes time to get resources onto the operations and this is costly. Subsea automation provides one solution. The system enables remote communication and monitoring and control operations for subsea facilities. Engineers can manage and monitor their entire operations from one screen. It also enables remote communication and monitoring and control operations for subsea factories. Engineers are able to run their entire operation from their feet, and allow them to detect and correct problems quickly.

**Long step-out system**

Long step-out systems are enabling the development of remote oil and gas fields over vast distances. The five year program is pivotal to the development of remote oil and gas fields over a distance of 600 km and to depths of up to 3,000 m. This requires a reliable electrical heating system to prevent the formation of hydrate and wax in the flowlines and valves. Statoil required a reliable electrical heating system to prevent the formation of hydrate and wax in the flowlines and valves. ABB provided a direct electrical heating system comprising power transformers, compensation and current systems, three-phase rectifiers and DC power converters designed to power and control subsea pumps and gas compressors at depths of 3,000 meters and at power up to 100 MW. ABB has been involved in the development of technologies required for power and control long step-out engineering and gas compression projects planned for the Norwegian continental shelf, the Gulf of Mexico and other areas around the world. The WP offshore pipeline is a project for the Norwegian offshore sector. ABB's scope of work for this project included a direct electrical heating system comprising power transformer, compensation and current systems, three-phase rectifiers and DC power converters designed to power and control subsea pumps and gas compressors at depths of 3,000 meters and at power up to 100 MW. ABB has entered a joint industry program (JIP) with the Norwegian oil and gas company, Statoil. The program will develop solutions for transmission, distribution and power conversion systems designed to power and control subsea pumps and gas compressors at depths of 3,000 meters and at power up to 100 MW. ABB has been involved in the development of technologies required for power and control long step-out engineering and gas compression projects planned for the Norwegian continental shelf, the Gulf of Mexico and other areas around the world. The WP offshore pipeline project for the Norwegian offshore sector included a direct electrical heating system comprising power transformer, compensation and current systems, three-phase rectifiers and DC power converters designed to power and control subsea pumps and gas compressors at depths of 3,000 meters and at power up to 100 MW.

**Direct electrical heating**

Direct electrical heating is important for the development of remote oil and gas fields. ABB has been involved in the development of technologies required for power and control long step-out engineering and gas compression projects planned for the Norwegian continental shelf, the Gulf of Mexico and other areas around the world. The WP offshore pipeline project for the Norwegian offshore sector included a direct electrical heating system comprising power transformer, compensation and current systems, three-phase rectifiers and DC power converters designed to power and control subsea pumps and gas compressors at depths of 3,000 meters and at power up to 100 MW. ABB has entered a joint industry program (JIP) with the Norwegian oil and gas company, Statoil. The program will develop solutions for transmission, distribution and power conversion systems designed to power and control subsea pumps and gas compressors at depths of 3,000 meters and at power up to 100 MW. ABB has been involved in the development of technologies required for power and control long step-out engineering and gas compression projects planned for the Norwegian continental shelf, the Gulf of Mexico and other areas around the world. The WP offshore pipeline project for the Norwegian offshore sector included a direct electrical heating system comprising power transformer, compensation and current systems, three-phase rectifiers and DC power converters designed to power and control subsea pumps and gas compressors at depths of 3,000 meters and at power up to 100 MW.