

## SIEMENS WIND POWER - CASE STUDY

Siemens Wind Power use Norphonic Heavy Duty VoIP Telephones in their offshore wind turbines



### Siemens Wind Power A/S selects Norphonic Heavy Duty VoIP Telephones to provide reliable communication at their offshore wind turbines.

Siemens, one of the largest wind turbine manufacturers in the world, is producing wind turbines for clients in many different countries, including the United Kingdom, Denmark, Sweden and the USA.

The company is the market leader in an exciting new area for the industry, namely the manufacturing of offshore wind turbines, which can produce more energy than their onshore counterparts due to the higher wind speeds available offshore.

Tonny Boesenbaek, Technical Manager at Siemens Wind Power A/S comments "There are no particular technical barriers to installing wind turbines offshore, but the products used in these large machines need to be very robust to ensure business critical operation in very extreme conditions. Wind turbines located in the North Sea are often exposed to severe storms, humidity as well as constant corrosion by the sea water".

#### Facts and Figures



Norphonic Heavy Duty VoIP Telephones installed in over 800 Wind Turbines

#### Location

United Kingdom, Denmark, Sweden and USA

#### Company

Siemens Wind Power A/S

#### Employees

5,500 people

#### Industry

Wind turbine production, installation and service



## The Challenge

Inside Siemens' offshore turbines, information related to the turbine performance is recorded by computers and transmitted to a control centre, located on the mainland. The wind turbines themselves are not physically staffed, although they have periodic mechanical checks. The onboard computers also monitor the performance of each turbine component, and will automatically shut the turbine down if any problems are detected, alerting an engineer that an onsite visit is required.

Comments Tonny Boesenbaek, Technical Manager at Siemens: "It quickly became obvious that we needed a telephone solution inside our wind turbines. First, our onsite service engineers and maintenance staff need to have the opportunity to communicate with the outside world to ensure the business critical operation of the wind turbines. Secondly, mobile telephones have limited coverage in these offshore areas, and thirdly only very robust, heavy duty telephones are able to handle the extreme temperatures and high levels of dust inside these turbines."

## The Solution

After reviewing available products on the marketplace, Siemens Wind Power selected Norphonic Heavy Duty VoIP telephones for their wind turbines. The Norphonic product was selected due to its open standard SIP (VoIP) features and robust performance, being able to withstand extreme temperatures, humid and dirty environments.

Tonny Boesenbaek comments: "Two Norphonic telephones are installed in each turbine: one at ground level and one in the nacelle. The telephones are connected to the Public Switched Telephone Network (PSTN), enabling onsite maintenance staff to connect with home-based engineers, managers or other specialists in other parts of the world".

Boesenbaek continues "In addition to the robust performance, Norphonic telephones have a number of useful VoIP features. One feature is the automatic self-monitoring and fault check functionality, which allows remote monitoring of all the telephone components. This is a great feature because the central control room can be alerted and deal with upgrades and issues via the remote network without having to invest in expensive offshore site visits. This reduces our maintenance costs and help improve overall turbine uptime. The sound quality is also very good, which means that callers can be clearly understood, even in very noisy ambient areas."

## The Results

So far, over 1600 Norphonic Heavy Duty VoIP telephones have been installed in Siemens' wind turbines in the North Sea. The telephones offer reliable communication between the offshore wind turbines and the mainland, ensuring critical business continuity.



***"Norphonic deliver technology we can rely on, and that means not having to invest in unnecessary and costly call-outs in the North Sea."***

***Tonny Boesenbaek  
Siemens Wind Power A/S***

Comments Boesenbaek: "The Norphonic Heavy Duty VoIP Telephones integrate easily with our existing systems and provide a complete communication solution that will bring economic savings to our customers".

"Norphonic deliver technology we can rely on," Boesenbaek concludes, "and that means not having to invest in unnecessary and costly call-outs in the North Sea."

Helge Rognstad, Sales and Marketing Director at Norphonic comments, "We are pleased with the success of this Norphonic installation, and now that Siemens Wind Power has recognised the value of reliable communication in their wind turbines, we look forward to working with other wind turbine manufacturers to improve communication and reduce costs at their facilities."

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**Heavy Duty VoIP Telephones**

Fjellsdalen 3, 5155 Bønes, Norway

**T:** +47 55 62 75 20, **W:** www.norphonic.com

**E:** sales@norphonic.com

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