



# USE61400-25

IEC 61400-25 user group

## The IEC61400-25 standard series



*IEC 61400-25 –  
A standard communication solution to get easy access to relevant data  
from wind power plants*

This is achieved by defining standardized

- data names and semantics
- data structures
- services to exchange the data
- mappings to different communication profiles  
(Web Services, OPC XML-DA, IEC61850-8-1, IEC60870-5-104, DNP3)

The use of a standardized communication solution provides possibilities to procure monitoring and control solutions as a separate part, and to use a single system to store, analyze and present wind power information. In addition the standard opens up for control and monitoring of information from different wind turbine vendors in a homogeneous manner.

The use of a standard communication solution is beneficial for all parties - vendors, system integrators and customers. The cost of developing, integrating and maintaining is reduced by using a standard communication solution.

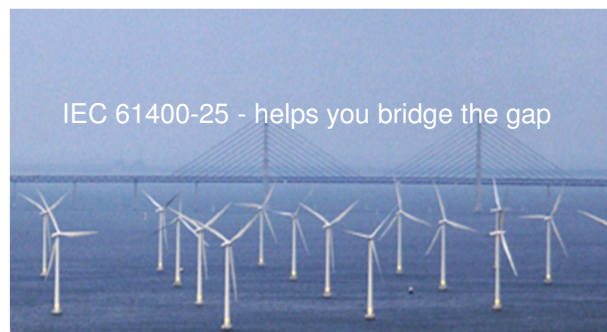
A uniform access to operational and historical data from wind turbine generation units is a prerequisite for efficient and effective operation and maintenance of wind power plants with a mix of wind turbines from different vendors.

### *Some facts about the IEC61400-25 standard series*

IEC 61400-25 defines all details required to connect wind power plant components in a multi-vendor environment and to exchange the information made available by a component. This is done by definitions made in the document or by reference to other commonly used standards, such as IEC 61850.

IEC 61400-25 consists of the following parts:

- Part 25-1 Overall description of principles and models
- Part 25-2 Information models
- Part 25-3 Information exchange models
- Part 25-4 Mapping to communication profiles
- Part 25-5 Conformance testing
- Part 25-6 Information models for condition monitoring



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## IEC61400-25 in action

### Products/services – examples

**Bachmann Electronics GmbH**  
 •Controller with client & server functionality.

**Ingeteam Technology**  
 •Engineering tools  
 •Controller with client & server functionality.  
 •SCADA system with IEC 61400-25 client.

**KEMA**  
 •Consulting, Seminars, Training and conformance testing.

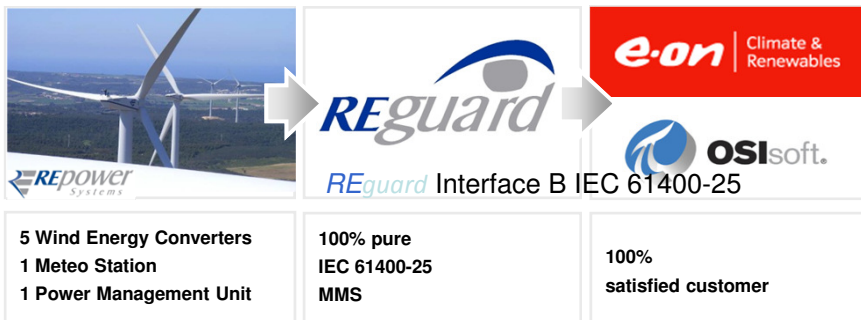
**NettedAutomation**  
 •Starter and Evaluation Kit (DLL/Windows).  
 •Consulting, Seminars and Training

**STRI**  
 •Consulting, Seminars, Training and interop. testing.

**Triangle MicroWorks**  
 •Software libraries  
 •Test Tools  
 •SCADA Data Gateway  
 •Web-based Training



### Example 1: Project in Espinhaco/Portugal



“As one of the world’s leading operators of wind turbines, we were interested in obtaining practical Uwe Fischer, Head experience with the IEC standard as soon as possible”, commented of Asset Information Systems at E.ON Climate & Renewables.  
 “Thanks to the collaboration with REpower, we found that the interface meets the requirements of even major operators ...”  
(<http://offshorenieuws.nl/2011/09/20/repower-develops-system-to-harmonise-wind-farm-management-systems/>)

### Example 2: IEC 61400-25 goes offshore

**31 x pure IEC 61400-25 (30 WEC + 1 Power Management Unit)**

Customer : Ormonde Energy Limited (subsidiary of Vattenfall)

Wind farm: Ormonde offshore wind farm

Location: Irish Sea, 35 kilometers off the northwest coast of England

Vendor: REpower Systems SE

Total Capacity: 150 MW (30 turbines)

Turbine type: REpower 5M



### Example 3: Turbine controller

**Purpose** – Implementation of IEC 61400-25 to support future open access to wind power plant data for operation and maintenance  
**Scope** – IEC 61400-25 implementation between Kenersys K100 wind turbine at Näsudden, Sweden and Vattenfall wind power data centre.



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## IEC61400-25 user group members



### Contact Information

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### USE61400-25 Management Team

Bertram Lange / Chairman    Keld Rasmussen / Technical Team Chairman    Anders Johnson / Promotional focus    Doug Taylor / Technical education focus    Knud Johansen / Treasurer