

**INTERVIEW WITH ETM MÄTTEKNIK AB, SWEDEN, DEVICE SPONSOR,
OSGP ALLIANCE - EUW 2018 PAVILION 2018**



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1. What do you see as the biggest smart grid industry challenge and how does ETM MÄTTEKNIK contribute to the solutions

I believe the security aspect is the main challenge for the grid industry. Not so much related to the personal integrity but more to hacking attacks from hostile third parties. An IT attack on an electric grid could potentially completely turn off the power in a country.

ETM can provide secure encrypted communication solutions with very fast installation time and cost-effective maintenance to assist in preventing attacks.

2. Could you provide some background information on the current utility projects ETM is involved in and what is ETM MÄTTEKNIK'S contribution to the projects?

ETM is currently involved in utility projects located in Sweden, Finland, Denmark, Switzerland, Austria, USA, Malaysia, Turkey, and Australia.

We mainly focus on the cellular connectivity for meters and data concentrators. ETM provides customized hardware for cellular connection, RDM system for cellular surveillance/monitoring as well as cost effective SIM cards and subscriptions.

3. What is your view related to the Open Smart Grid Protocol (OSGP) to promote and advance the capabilities of innovative solutions for utilities?

There are many advantages of using the OSGP protocol, but I want to mention two main arguments:

- Track record: I think the current installed base speaks for itself. Large installations such as Vattenfall in Sweden and Fortum/Caruna in Finland, which ETM has been the cellular communication device supplier for, are a very strong proof of the robust and cost effectiveness of the OSGP technology.
- Open standard: The open standard philosophy assures that the protocol will improve over time due to the common will inside the alliance to meet new requirements from their customers.

4. How many times have you joined the OSGP Alliance-Pavilion at the European Utility Week and what has been your experience?

ETM has joined the OSGP Alliance-Pavilion every year since the start of EUW. The last 4 years we have also displayed our products on the wall in the OSGP Pavilion. We have extremely good experience associated with this event. During the conference we can meet all our smart meter customers, suppliers and partners from all over the world at the same time, which is very cost effective. ETM has also met many new customers at the OSGP Pavilion over the years, which is excellent.

5. What will ETM be showcasing at the EUW2018 - OSGP Alliance Pavilion and how does this contribute to the Energy transition?

ETM will show the ETM-Purple 2G/3G/4G communication unit for electricity meter/concentrator in combination with the RDM system ETM Web Office (EWO) currently in use by Vattenfall in Sweden as an example.

Quality of service parameters, such as signal quality and power failure alarms are automatically sent to the ETM Web Office (EWO) through a 2G/3G/4G network where measurements can be read in the form of graphs and tables as well as being exported to Excel or other SCADA systems.



The screenshot shows the ETM Web Office (EWO) interface. At the top, there are several status indicators: a green circle with '599', a green circle with '100%', a red bar with '28647%', and a green bar with '71%'. Below these are 'Active Sites: 189/1791' and '30651%'. The main area contains a table with columns for 'Site ID', 'Site Name', 'Status', 'Last Update', 'Signal Strength', 'Signal Quality', 'Cell ID', and 'Cell Name'. The table lists several sites with their respective IDs and names.

Site ID	Site Name	Status	Last Update	Signal Strength	Signal Quality	Cell ID	Cell Name
884610100401008	884610100401008	0	2018-08-14 10:30:20	0	10:00:18.028	407181010010001	1
884610100401008	884610100401008	0	2018-08-14 10:30:20	0	10:00:18.028	407181010010001	1
884610100401008	884610100401008	0	2018-08-14 10:30:20	0	10:00:18.028	407181010010001	1
884610100401008	884610100401008	0	2018-08-14 10:30:20	0	10:00:18.028	407181010010001	1
884610100401008	884610100401008	0	2018-08-14 10:30:20	0	10:00:18.028	407181010010001	1
884610100401008	884610100401008	0	2018-08-14 10:30:20	0	10:00:18.028	407181010010001	1
884610100401008	884610100401008	0	2018-08-14 10:30:20	0	10:00:18.028	407181010010001	1
884610100401008	884610100401008	0	2018-08-14 10:30:20	0	10:00:18.028	407181010010001	1
884610100401008	884610100401008	0	2018-08-14 10:30:20	0	10:00:18.028	407181010010001	1
884610100401008	884610100401008	0	2018-08-14 10:30:20	0	10:00:18.028	407181010010001	1

The ETM-Purple 2G/3G/4G unit together with EWO utilizes the best of cellular communication for data transmission and is an effective tool to supervise and quality assure the billing data acquisition, which is a core requirement for utilities in general. ETM-Purple can also be used as a stand-alone device for detecting power outages for all kinds of

installations.

We will also show our new hand held ETM770 cellular signal quality meter. The ETM770 is very useful device to quality assure a smart meter installation on site. The installer can connect the external antenna to the ETM770 and record important 2G/3G/4G cellular parameters like signal strength, noise ratio as well as base station, cell id and many more parameters.



5. Who from ETM will be attending EUW this year?

It will be myself and Christian Leierer (VP Development) that will join the fair. The two of us form a good team with deep knowledge in the market, customer requirements and IoT technology in order to provide the most cost-effective utility solutions for our customers.