



13/07/2018

Newsletter #5

What you have to know before your holidays

Newsletter's opening: Introductory words from Onoph Caron, CEO of ElaadNL

Tests of SGH is a success: June 26th of 2018, InterFlex has successfully completed the second phase of testing of the Smart Grid Hub engine at the heart of the German Demo.

Simris islanding rewarded: The local energy system in Simris, Österlen, Skåne, has been appointed winner by an international jury as an example of using smart power grids in energy conversion.

Smart PV inverter tests: Smart functions were first successfully tested at the laboratory of the Austrian Institute of Technology (AIT). The next step is the ongoing installation and commissioning of PV systems equipped with above-mentioned functions.

PASLIER Enora



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement n°731289

ONOPH CARON

The third electricity revolution!

A world without electricity is nearly impossible to even imagine.

Electricity has been in our homes for most of us for more than a century. In the early 20th century light bulbs started replacing gas lights in our homes, adding much safety and comfort to our lives and the first power production and electricity grids were introduced...

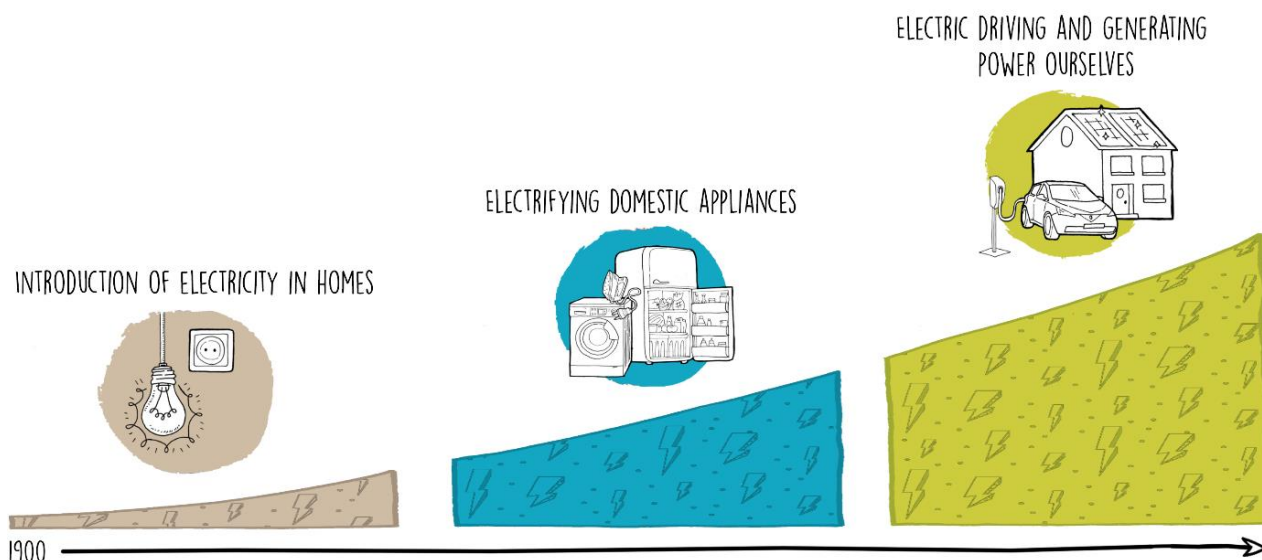
It was the first electricity revolution and it changed the world!



Halfway down the 20th century all kinds of domestic appliances were electrified or invented and also entered our homes and lives: refrigerators, irons, washing machines and more. The impact of the second e-revolution on the lives of people was also huge, saving much time in domestic work. And now, we are in the middle of the third e-revolution. We're starting to generate our own sustainable power with solar panels on our roofs and our mobility is rapidly becoming electric. And by connecting those with smart charging, we can accelerate this very necessary revolution. Finding the right form of smart charging fulfilling the needs of all the relevant stakeholders seeking for flexibility respecting the comfort level of the prosumer.

And, a very interesting note in this regard: the Dutch Interflex project is located at Strijp S in Eindhoven at the site where Philips once produced its lightbulbs and other electric devices. The first, second and third e-revolution are coming together in Interflex!

Onoph Caron, CEO ElaadNL



SECOND PHASE OF TESTS OF SMART GRID HUB AT AVACON COMPLETED SUCCESSFULLY!

On June 26th of 2018, InterFlex has successfully completed the second phase of testing of the Smart Grid Hub engine at the heart of the German Demo.

After completing tests in a lab environment with simulated field devices and interfaces, this second phase has included the mobile network communications via 4G / LTE and the smart meter access procedures to comply with the smart meter framework in Germany. To account for the delay in the smart meter rollout in Germany, InterFlex has developed an intermediate solution that correctly mimics the procedures on a prototypical system.

The Smart Grid Hub, currently located with the development team in Munich, received switching requests from a simulated supervisory control (SCADA)-system located in Avacon's grid control room in Salzgitter and automatically derived the individual commands for flexible devices in the field. It then carried out these control schedules via mobile network communications, a smart meter gateway and control box. To make this demonstration visible the project team set up a test bed with different light bulbs to visualize different command signals.



InterFlex will now continue to equip pilot customers with smart meter and control box to enter the third phase of testing with customer owned devices beginning in August 2018.

THE SIMRIS ISLANDING PROJECT WINS AN INTERNATIONAL PRIZE!

The local energy system in Simris, Österlen, Skåne, has been appointed winner by an international jury as an example of using smart power grids in energy conversion. The prize was awarded by the Swedish Energy Minister, Ibrahim Baylan, at the International Energy Ministers meeting in Copenhagen CEM9 in connection with the Nordic Clean Energy Week. #NCEW2018

"Our local energy system in Simris has attracted much attention in Sweden, but also internationally. We are of course very proud that the project has now won this very fine price in fierce competition with projects from around the world. This is also a great recognition for the project team, followed by successively Jennie Sjöstedt, Staffan Sjölander and now Peder Kjellén. Congratulations to you and everyone else who has been involved", says Johan Mörnstam, Director of Energy Networks.



"It is interesting to note that the entire project has been driven out of a customer initiative, where a wild life facility in Northern Sweden wanted entirely renewable locally produced energy, while ensuring that electricity supplies were safer. For practical reasons, we have chosen to locate the test facility in Skåne, but remote villages and facilities are a possible field of use for this technology in the future", says Johan.

The local energy system in the village of Simris is a pilot project that tests to make a small rural town self-sufficient for electricity from solar and wind power for limited periods. The project also includes controlling power output in a number of households, by offering a number of customers to participate by installing solar panels together with batteries and / or control heat pumps and water heaters. The test phase was initiated in October 2017 and every fifth week, the 150 households in Simris are self-sufficient for electricity and not connected to the national grid.

Stina Albing, customer communications manager in the project, receiving the award from the Swedish Energy Minister, Ibrahim Baylan during the International Energy Ministers meeting in Copenhagen.



CONGRATULATIONS SIMRIS - AGAIN! THIS TIME IT IS THE LOCALS OF SIMRIS, OUR CUSTOMERS, WHO RECEIVED THE AWARD "SKÅNES VINDKRAFTSPRIS 2018"!

Karin Lefvert, second from the left, received the award during the yearly assembly of the local organization. Karin was representing the whole village of Simris. The locals granted the prize due to their positive attitude and commitment. The motivation was:

"The residents of Simris on Österlen are committed and have had a positive attitude to Sweden's first local energy system with renewable energy sources being tested in the village. With wind power, solar energy and energy storage, the goal is to cope entirely with locally produced electricity and provide weather-dependent production facilities to provide stable and reliable electricity to the approximately 150 villagers, both private individuals and companies. An inspirational initiative!"



Skåne's wind power award is awarded to a person, organization, facility or the like that has contributed significantly to increasing the exchange of knowledge and experience between different players in Skåne. The prize was awarded during Skåne Energiting Tuesday, 19 June in Malmö.

Read more at [Skånes Vindkraftsakademi](#)

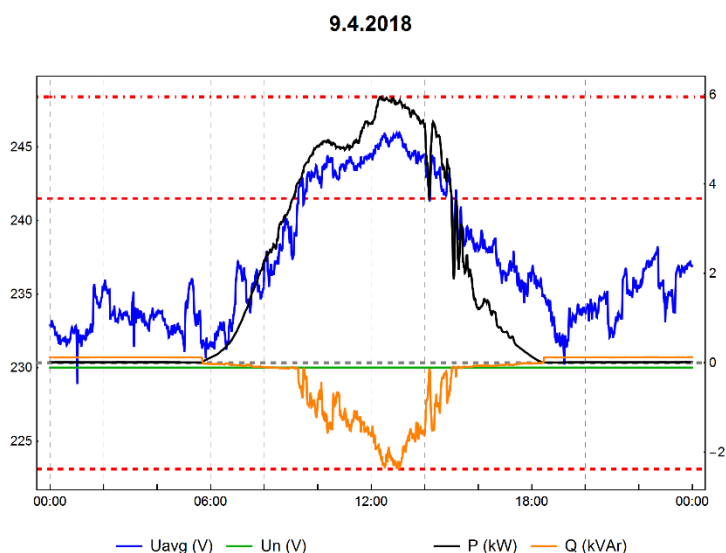
SMART PV INVERTERS ARE TESTED IN FIELD:

CEZ Distribuce, the biggest Distribution System Operator (DSO) in the Czech Republic aims at field demonstration of smart PV inverters, which are equipped with advanced autonomous Volt/VAr and Volt/Watt control functions. Smart functions were first successfully tested at the laboratory of the Austrian Institute of Technology (AIT). The next step is the ongoing installation and commissioning of PV systems equipped with above-mentioned functions.



Rooftop PV system 9,81 kWp with smart PV inverter equipped with autonomous Volt/VAr and Volt/Watt control functions

Some PV systems have already been installed and the first results are available. Based on the data provided by power quality measurement, smart PV inverters are able to actively stabilize voltage levels in distribution grids and thus increase the hosting capacity for distributed renewable generation.



Example of voltage stabilization through reactive power thanks to autonomous Volt/VAr control function (PV inverter works in under-excited mode in case of the voltage rise caused by PV production - this reduces the voltage level).

Thank you very much for your interest in our project!

This is the end of our 5th Newsletter!

Next one in two months!

Do not forget to visit our website:

<http://interflex-h2020.com/>

And to stay tuned by following us on twitter:

https://twitter.com/InterFlex_H2020



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