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For more information, please visit horizon2020-story.eu/blog

STORY

STORY

STORY got the best presentation award at the EUW 2019

At the European Utility week 2019 in Paris, Prof. Andrej Gubina, University of Ljubljana and STORY partner, presented the insights of the STORY demos in the EC Storage session. Among several presentations, the STORY presentation was voted as the most interesting, and Andrej Gubina was awarded by the European Commission with a Belgian chocolate.

Among the STORY whitepapers, the new highlight report "Energy Storage – Our take on business models and regulation", was published in May 2019 and is now ready to download in the RESULTS/DISSEMINATION MATERIAL area of the STORY webpage.

Compile

COMPILE

Second solar power plant in Croatia financed by citizens started producing green energy

On the roof of the Public Library Franjo Marković in the city of Križevci, a 30-kW solar power plant, which was fully financed by the citizens under the micro-loan business model, started to produce green energy on 4th October. A total of 40 citizens have decided to support the solar power plant by giving a micro loan to the Green Energy Cooperative (ZEZ) for a period of 10 years, within which their interest will be repaid at 3 % per annum.

The required amount of HRK 172.000 (cca. € 23.000) for the installation of a solar power plant on the roof of the library was collected in a record time of 48 hours. The stakes in the solar power plant were limited to a minimum of HRK 1.000 (cca. € 135) and a maximum of HRK 7.500 (cca. € 1.000) in order to involve as many citizens as possible.

More about this topic is published on ZEZ's webpage – Citizens role in energy transition – From what is to what if! and COMPILE website.

ETIP SNET

ETIP SNET

Three new ETIP SNET "Energy Stories" on European energy transition projects released!

The European Technology and Innovation Platform Smart Networks for Energy Transition is continuing its series of short stories on successful energy transition technologies to inform citizens and facilitate their involvement in the European energy system of the future. The three new stories are on the Elsa, Dynamo and 3D Decision Support System projects. These "Energy Stories" serve as practical examples of the ETIP SNET Vision 2050.

ETIP SNET is also currently working on a new **Roadmap 2020-2030** to be published during spring 2020.

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INVADE

Launched Europe's first EV Charge Court

A consortium of energy and technology companies, research partners and a municipality are building a revolutionizing charging concept for electric vehicles in Sarpsborg, Norway, based on the INVADE model.

"This is primarily an exploitation case. It shows that what we have done in the INVADE project is appealing to others beyond the project and that the results can be industrialized," says Prof. Bernt A. Bremdal, Senior Advisor R&I at Smart Innovation Norway, the company which coordinates the large-scale EU Horizon 2020 project, INVADE.

In January, the Norwegian Minister of Trade and Industry, Mr. Torbjørn Røe Isaksen, put down the very first building block. By the end of 2019, INSPIRA Charge Court will be opened in 2020.

Read more:
https://h2020invade.eu/news/launched-europes-first-ev-charge-court/

E-LAND

Ships' zero emission in pilot Port of Borg will benefit E-LAND

Ships using electricity from renewable energy instead of burning fossil fuel is a new and important element that will add into E-LAND's pilot Borg Harbour (BIKS). Though, the financing of the ship-shore connection project is not a part of E-LAND project, the results will have a big impact on E-LAND, because it enables the project to validate the modularity and extension potential of the E-LAND toolbox. At BIKS, ship-shore connections will be available to all vessels. The total CO2 reduction from this effort is stipulated at app. 540 tons. The most impact on CO2-reductions will be gained from ships that frequent the port regularly for long period.

On the picture is the ship Nexans Skagerak. The company Nexans produce large cables for subsea use, both telecommunications and energy. Their facility close to BIKS is used when huge cables are loaded to the vessel Nexans Skagerak in preparation for laying subsea cables all around the globe. During this work, this vessel may stay for several weeks at port, and will be a large consumer of ship-shore electricity in these periods. (Photo: Smart Innovation Norway)

EU-SYSFLEX

Addressing the future power system challenges for Europe, EU-SysFlex remains determined to present and demonstrate new types of system and flexibility services. Challenges, long-term needs and technical scarcities are regularly identified in EU-SysFlex blogs authored by the project partners. The uniqueness of EU-SysFlex project is depicted in a video from Joint Horizon2020 workshop which focused on TSO-DSO cooperation in flexibility market integration. EU-SysFlex continues to present its solutions and demonstrations through technical delivarables. Mini-symposia at WESC 2019 and a workshop at SEST'19 also served to further discuss the project objectives. Read our project brochure to learn more about EU-SysFlex.

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FutureFlow

FutureFlow

The FutureFlow project helped to strengthen the role of active consumers at flexibility market

FutureFlow project brings the ultimate transparency on system flexibility, leading to the completion of until now unachieved dimensions of the energy market by reaching full control on all balancing resources at real-time, cross border and cross voltage level. The flexibility price becomes, therefore, the real price of electricity. The view on the real volume of generation and demand available to modulate the frequency signal allows sending clear market prices about how much and what generation is needed. An extensive library of VPP business cases has been created for industrial applications, thus allowing a faster inclusion of their balancing value into the electricity market.

96 prosumers (large RES, small RES, CHP generation, industrial generation, industrial load) from **4** countries (Austria, Hungary, Romania and Slovenia) with overall reserve power exceeding **50** MW took part in real-time cross-border pilot tests

60% potential of cost reduction for automatic Frequency Restoration Reserve among four countries

57% potential of cost reduction for redispatching based on Power flow decomposition

4 platforms developed and tested in real-time environment

integrid bridging the gap

INTEGRID

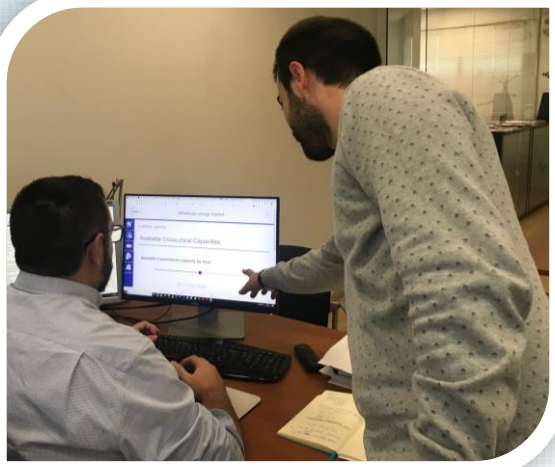
News from the Demonstrators

In the Portuguese demonstrator, using a variety of flexibility assets that come from residential to industrial consumers, this project aims at achieving an optimal functioning of the distribution grid through the optimization of flexible resources, closing the gap towards the full integration of the Smart Grid. The flexibility needs of the grid are assessed through a constant monitoring and forecast of the grid surrounding the targeted consumers in order to identify near-future possible constraints. For residential consumers – which are clustered in the same Low Voltage grids - the flexibility management will be made through smart appliances and Home Energy Management Systems (HEMS). For Industrial Consumers/Producers, the flexibility will be managed through a technical Virtual Power Plant (VPP) platform.

CROSSBOW

CROSSBOW

CROSSBOW tools are making a steady progress in reaching their goals. WAMAS (Wide Area Monitoring and Awareness System), which will be used for real-time data exchange between TSOs, DSOs, RESs and storage assets, is being integrated with other CROSSBOW products and with other external systems (TSO's SCADAS and other grid management tools), to improve its interoperability. Besides, the first version of the Wholesale and Ancillary Market toolset has been finished with the basic functionalities and the first version of the Virtual Storage Plant framework has been developed to obtaining draft results, simulation-based, with input data of real historical prices from relevant periods of time according to the simulation ran, obtained from ENTSO-E.



INTERRFACE

"The goal is clear, now it's time to define the way to achieve it"

Project manager of INTERRFACE, George Boultadakis talked in an interview about his expectations, tasks and next steps of the project.

Q: The project is over its first half of a year. How do you see the work so far?

GB: The first months of the project were quite fruitful. We managed to kick-start the work in all Work Packages that was scheduled for that period of time.

Q: What do you expect to achieve in INTERRFACE?

GB: INTERRFACE will facilitate renewable energy integration through the Interoperable pan-European Grid Services Architecture (IEGSA), which will act as the common architecture. This will connect market platforms to establish a seamless pan-European electricity exchange.

Q: What are the next steps in the project?

GB: In the first months the work was mostly around preparation and defining the needs for the future markets. The goal is clear, now it's time to define the way to achieve it; for that one of our demos already started, and the other six will start soon.

OSMOSE

OSMOSE addresses the identification and development of flexibilities required to enable the energy transition, especially at the Transmission Grid level. It combines simulations of the European power system and market in 2050 with four large scale demonstrations lead by TSOs:

1. grid forming by multiservice hybrid storage;
2. multi-services by storage and FACTS devices;
3. multi-services by grid devices, large demand-response and RES generation coordinated in a smart management system;
4. near real-time cross-border market.

After two years of project, the detailed specifications of the demos and simulations are described in deliverables and webinars available in our website. A synthesis is also downloadable.

INTERFLEX

After a 3-year-cooperation among 20 European partners, the InterFlex project is coming to an end – and November was an important month for disseminating the results of the project and its 6 demonstrators. Major highlights included the project's Closing Ceremony on November 28th in Paris, and final workshops with organisations such as the CEER and EASE Storage, as well as a joint event with the fellow Bridge project GoFlex during the European Utility Week 2019.

InterFlex investigates the use of local flexibilities in order to relieve existing and future distribution grid constraints, and to facilitate the integration of renewable energies.

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TRINITY

TRINITY

Trinity project was officially launched on 1st October 2019. The kick-off ceremony took place in Brussels (Belgium) on 3rd-4th October. Within this four-year project, the 19 partners will develop a set of solutions to enhance cooperation and coordination among the Transmission System Operators of South Easter Europe in order to support the integration of the electricity markets in the region, whilst promoting higher penetration of clean energies.

STORE&GO

STORE&GO

STORE&GO concentrated their findings from the four-year project in a roadmap on power-to-gas. They presented the document at a political dinner on 3 December in the European Parliament, inspiring a lively exchange of ideas about sector coupling and large-scale energy storage with the participants.

The partners will present details from their investigations at their concluding conference in Karlsruhe, Germany, on 17–18 February 2019. Covered topics:

- Experiences from demo site operation,
- Environmental impact,
- Discovering legal and regulatory obstacles,
- Outlook on cost and technology development,
- Benefits for operating distribution networks,
- Cost savings in transmission networks and macro-economic costs and benefits of the PtG.

MERLON

MERLON

MERLON introduces an **Integrated Modular Local Energy Management Framework** for the **Holistic Operational Optimization of Local Energy Systems** in presence of **high shares of variable renewable energy sources.**

MERLON framework includes pilot testing and validation in **real-life** conditions through a **prosumer-centric** approach in an attempt to demonstrate its techno-economic feasibility. Prosumers are the core of **MERLON Living Labs** that is actually the testbed for MERLON solution.

In **October 2019** the Living Lab stakeholders of the **Austrian pilot** have been introduced to **MERLON Demand Response Framework** through a locally organised **Living Lab workshop** in the area of **Strem**.

MUSE GRIDS

MUSE GRIDS aims to demonstrate a set of technological and non-technological solutions targeting the interaction of local energy grids (electricity grids, district heating and cooling networks, water networks, gas grids, electromobility etc.). The goal is to maximise local energy independency through optimised management of the energy production via end user-driven control strategies, smart grid functionality, storage, combined heat and power (CHP) and renewable energy sources (RES) integration.

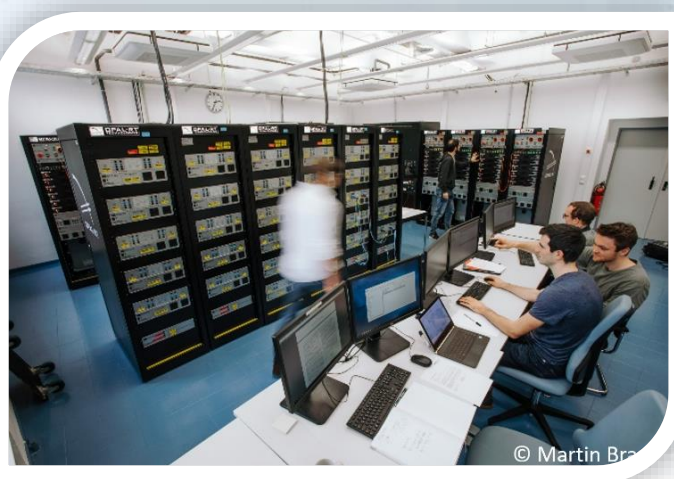
Two large-scale pilots will take place in two different EU regions, in urban (Osimo, Italy) and rural (Oud-Heverlee, Belgium) contexts with weak connections to national grids. These pilots will test and promote the main project concepts - the smart energy system and local energy community.

MUSE GRIDS will promote these two concepts not only in pilot projects but also in virtual demo-sites in India, Israel and Spain. Social and environmental aspects of smart multi-energy system transition will be investigated Osimo and Oud Heverlee where citizens will be directly involved.

INSULAE

The aim of INSULAE is to foster the deployment of innovative solutions for the EU islands decarbonization by developing and demonstrating at three Lighthouse Islands (located in Croatia, in Denmark and in Portugal) a set of interventions linked to seven replicable use cases, whose results will validate an Investment Planning Tool that will be then demonstrated at four Follower Islands (located in Spain, in Germany, in The Netherlands Antilles and in Greece) for the development of four associated Action Plans. The chosen islands are complementary in many aspects: location, size, connection with the mainland, economic development, renewable share and carbon intensity.

Read more: http://insulae-h2020.eu/



PROMOTioN

Within PROMOTioN a unique multi-terminal HVDC demonstrator – the MMC Test Bench – has been built at RWTH Aachen University. At the core of the demonstrator are eight laboratory-scaled Modular Multilevel Converters (MMCs) used to replicate monopolar and bipolar DC networks. To investigate the interactions between HVDC grids, offshore wind farms and Europe's transmission grids, the MMCs are coupled with real-time grid simulations via four-quadrant linear power amplifiers. At the picture is MMC Test Bench Demonstrator at the RWTH Aachen University.

The highly flexible demonstrator is currently used for a wide range of investigations, from the demonstration of operational strategies for HVDC grids to the analysis of harmonic interaction of HVDC and wind turbine converters.

On the picture on the left, you see the MMC Test Bench Demonstrator at the RWTH Aachen University. (c)Martin Braun

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PLATONE

“Innovation for the customers - innovation for the grid” is the vision of the recently started project Platone - Platform for Operation of distribution Networks. The objective: Defining new approaches to improve observability and exploitation of flexibility regarding volatile renewable energy sources in combination with less predictable consumption patterns. The twelve project partners will develop advanced management platforms to unlock grid flexibility and to realize an open and non-discriminatory market, linking users, aggregators and operators. The solutions will be tested in three European field trials. Visit www.platone-h2020.eu, subscribe to the mailing list or join the Platone group on LinkedIn!

GOFLEX

GOFLEX discussed local flexibilities with DSO associations

At this year’s European Utility Week, GOFLEX managed to bring together the four big European DSO associations E.DSO, CEDEC, Eurelectric and GEODE as well as representatives of the European Commission and ENTSO-E to discuss the role of local flexibilities for stabilising the grid. The workshop was organised in collaboration with InterFlex. The debate revealed a general agreement of all involved actors on the need of innovative platforms to organise local flexibilities, either to be used by grid operators to keep their networks stable or to trade them on the reserve market.

GOFLEX will end in February 2020. Its innovative work will be continued in the H2020 project FEVER.

SOGNO

SOGNO Innovation Event in Berlin

How can the energy sector benefit from 5G? Which new applications are possible combining the upcoming mobile standard and other cutting-edge enablers? SOGNO brought together practitioners in the energy field, 5G experts and solution providers in Berlin to have them join their expertise and answer these questions. In a co-creation process at EIT Digital Berlin, new & innovative use cases for 5G technology in the energy sector were brought up and discussed. Two “wheels of fortune” were used to find novel and sometimes surprising combinations of enabling technologies and areas of application.

A second workshop is planned for 2020 to develop solutions for the challenges & opportunities identified in the first event.

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WiseGRID

Deployment of tools in full swing

The deployment of the WiseGRID tools in 5 different pilot sites in Belgium, Italy, Spain, and Greece is in full swing. Nine energy solutions will be tested by 300 families and 25 companies, including a fast-charging station for electric cars, technology enabling homes to generate, store and trade their own energy, and smart meters which help households and businesses to reduce both their bills and their carbon footprint. Doing so, WiseGRID wants to push the energy sector of the future towards a more democratic model that sees businesses and citizens enabling Europe's transition from fossil fuels to sustainable energy.

On the picture on the left, you see the deployment of a fast-charging station for electric vehicles in Crevillent (Spain). (c)WiseGRID

X-FLEX

XFlex project will design, develop and demonstrate a set of tools to integrate the emerging decentralized ecosystem of RES and flexibility systems into the existing European energy system, in an efficient and cost-effective manner, to create more stable, secure and sustainable smart grid, with special attention to extreme weather conditions. It will address all actors of the smart grid value chain, from DSO to final consumers, including microgrid operators and utilities, considering flexibility in both on the generation and demand side, on an individual or aggregated level. Its solutions will be demonstrated in 3 pilots (Bulgaria, Slovenia and Greece). In early October, the 12 partners celebrated its kick-off meeting in Valencia (Spain).

NESOI

NESOI aims at unlocking the potential of EU islands to become the locomotives of European Energy Transition, mainstreaming green energy investments to an audience of 2.400 inhabited EU islands and giving the opportunity to test their innovative energy technologies and approaches in a cost-competitive way. Funds are available to finance energy efficiency and renewable energy projects. Many islands are engaged in energy transition; however, most of them have not the expertise to concretely launch investments, access finance and kick start the projects. NESOI aims at filling this gap through a hands-on approach allowing to get the expected financial leverage towards the effective implementation of islands' energy transition plans.