

THE INVAD E PROJECT

WHAT IS IT ABOUT?

Our current electrical infrastructure face several challenges in the coming years, one being a greater share of renewable energies, another is aging infrastructure. These challenges should be resolved in a cost-efficient manner.

Renewable energies set higher demands to system resilience and flexibility, as we deal with intermittent energy resources, and it is oftentimes produced locally in the distribution grid. New system infrastructure is very expensive, urging for better use of existing infrastructure in conjunction with new inexpensive technologies.

Better energy services

INVAD E seeks to solve these issues by combining already existing technologies into a new framework. At the core is a cloud-based flexibility management system integrated with electric vehicles (EVs) and batteries empowering energy storage to increase the share of renewables in the smart grid. Additionally, smart control of domestic appliances will aid in load-balancing over the course of a day.

Combining physical batteries with state of the art data technology will open new marketplaces to trade energy and energy services, which in turn will provide the end-users with better services. The electric grid manager will also benefit from this by better being able to manage their resources, and discover patterns in the power consumption, all made possible by the latest technology within big data analytics.

Large-scale pilots

The project will integrate the platform with existing infrastructure and systems at pilot sites in Bulgaria, Germany, Spain, Norway and the Netherlands, and validate it through mobile, distributed and centralized use cases in the distribution grid – in large-scale demonstrations.

Novel business models and extensive exploitation activities will be able to tread the fine line between maximizing profits for a full chain of stakeholders and optimizing social welfare, while contributing to the standardization and regulation policies for the European energy market. A meaningful integration of the transport sector is represented by both the Norwegian and the Dutch pilot – the two countries with the highest penetration of EVs worldwide.



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