Project Info:

- GA number: 833955
- Call topic: H2020-SU-DS-2018
- Start date: 01/05/2019
- Duration: 36 months

Project Coordinator: Alfredo Gonzalez Naranjo (AYESA)
Dissemination Leader: Dr. Theodoros Rokkas (inCITES Consulting)

Contact:

- www.sdnmicrosense.eu
- SDNmicroSENSE
- info@sdnmicrosense.eu

Use Cases:

Investigation of Versatile Cyberattack Scenarios and Methodologies Against EPES
Location: Trondheim, Norway

Massive False Data Injection Cyberattack Against State Operation and Automatic Generation Control
Location: Sofia, Bulgaria

Large-scale Islanding Scenario Using Real-life Infrastructure
Location: Lavrio, Attica, Greece

EPES Cyber-defence against Coordinated Attacks
Location: Spain

Distribution Grid Restoration in Real-world PV Microgrids
Location: Avdera, Xanthi, Greece

Realising Private and Efficient Energy Trading among PV Prosumers
Location: Sweden

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 833955.

SDN - microgrid reSilient Electrical eNergy SystEm
OBJECTIVES

- To design and provide a new resilient, multi-layered and SDN-enabled microgrid architecture which will leverage the global system visibility for preventing and addressing disruptions to the underlying SCADA and ICS infrastructure.
- To design and develop a risk assessment and management framework.
- To develop and implement applications which exploit direct networking controllability and programmability offered by SDN to investigate multiple security applications, including self-healing attack-resilient PMU and RTU, for going toward achieving resilient and secure operations in the face of various cyberthreats and failures.
- Deliver an energy trading platform for secure and flexible trading management.

- To provide a robust, distributed and effective IT cyber-defence system for large-scale EPES ecosystem.
- To design and deploy an anonymous channel of EPES which will allow secure and privacy-preserving information sharing among energy operators and actors.
- To deliver a privacy-preserving framework for enhancing EPES against data breaches.
- To design and develop and a policy recommendation framework based on the SDN-microSENSE results, lessons learnt and best practices for formulating recommendations for standardisation and certification.
- To design and demonstrate five large-scale pilots across Europe.