

# Workshop Agenda

Modernising the distribution grid for enabling high penetration of photovoltaic electricity through advanced data analytic operational observability and management  
(ELECTRA)

<b>Date/Time:</b>	7 <sup>th</sup> August 2023 / 10:00 – 12:00 (EEST – CY Time)
<b>Location:</b>	Online Workshop – ZOOM – Register beforehand via the link <a href="#">here</a> , to get access to the workshop and receive the connection details.
<b>Hosted by:</b>	University of Cyprus
<b>Moderator:</b>	Dr George Makrides (University of Cyprus – PV Technology Laboratory)
<b>Website:</b>	<a href="https://fosscy.eu/projects/electra/">https://fosscy.eu/projects/electra/</a>

**Background:** Solar energy is vital for the future energy mix of Cyprus and in order to enable large-scale deployment and increase the competitiveness of photovoltaic (PV) technology (both technical and economical), it is important to primarily safeguard optimal grid integration by modernising and transforming the distribution grid.

This workshop will provide cutting-edge insights and extensive technical information in the area of data-driven flexibility tools that ensure grid-friendly integration of renewables in smart grids.

Participants will get in-field knowledge of next-generation grid-supportive tools and the latest technology developments that enable optimised distribution grid operations at high renewable shares. The workshop is intended for project developers and EPCs, investors, consultants and researchers in the renewable energy sector and smart grids.

## Workshop Agenda

10:00	10:15	0:15	<b>Welcome</b> by Dr George Makrides <i>ELECTRA Project Coordinator (University of Cyprus)</i>
10:15	10:45	0:30	<b>Novel data-driven tools and concepts for modernised grids</b> <i>Presentation by Dr George Makrides (University of Cyprus)</i>
10:45	11:00	0:15	<b>Advanced PV generation forecasting for the electricity market of Cyprus</b> <i>Presentation by Dr Spyros Theocharides (University of Cyprus)</i>
11:00	11:15	0:15	<b>The Regulatory Framework of Cyprus' Electricity Market and the roadmap towards Energy Transition</b> <i>Presentation by Dr Venizelos Venizelou (Cyprus Energy Regulatory Authority)</i>
11:15	11:30	0:15	<b>Energy policy framework for higher renewable shares</b> <i>Presentation by Mr Alexandros Stylianides (Ministry of Energy, Commerce and Industry)</i>
11:30	12:00	0:30	<b>Closing Remarks and Discussion</b>

## Detailed Workshop Information

**Background:** Solar energy is vital for the future energy mix of Cyprus and in order to enable large-scale deployment and increase the competitiveness of photovoltaic (PV) technology (both technical and economical), it is important to primarily safeguard optimal grid integration by modernizing and transforming the distribution grid infrastructure and operations.

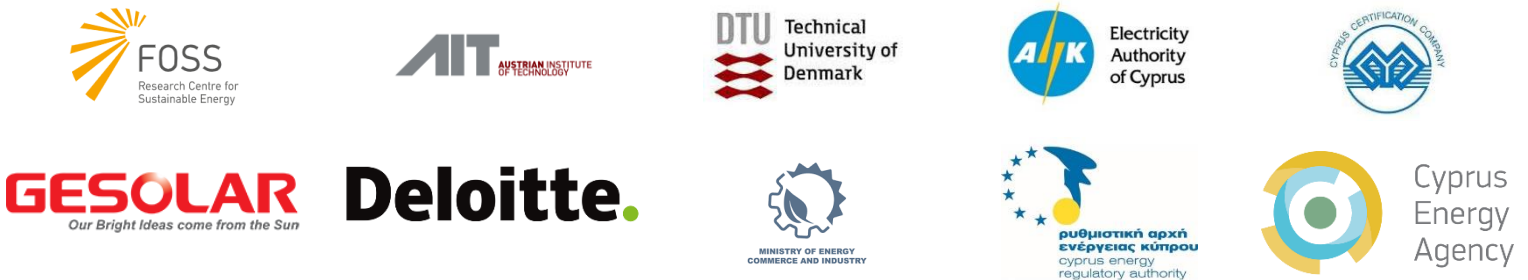
The ELECTRA project aimed at addressing the main challenges that distribution networks are facing to accommodate high shares of PV systems with respect to improving the observability and operational management of the network, operate the network closer to its physical limits with advanced grid support functionalities and suitable flexibility options.

**Goal:** The goal of the workshop is to present novel scientific results and industrial innovation outputs of the project in the area of grid modernisation. Ultimately, the main project outcomes and technological outputs address issues associated with adaptive multi-service distribution management tools that enable the efficient and flexible operation of distribution systems at high RES shares. In this domain, the distribution system in Cyprus is 'destined', with more and more PV penetration and activities to strengthen the competitiveness and sustainability of renewables by promoting new forms of innovation with high short-term (scientific, technological) and long-term impact (economic, environmental and societal), are mission critical for the energy sector.

### Scientific/Industrial topics covered:

- Advanced generation and consumption forecasting models.
- Energy analytics that leverage machine learning principles.
- New digitalized grid landscape frameworks for improved observability.
- Novel microgrid and battery storage concepts (grid-forming mode of operation).
- Demand side management and grid-friendly solar functionalities.
- Multi-service next-generation supervision and control based on cloud database structures and Internet of Things (IoT) digital solutions.

### Consortium:



*"The ELECTRA project is co-funded by the European Regional Development Fund and the Republic of Cyprus through the Cyprus Research and Innovation Foundation with protocol number: INTEGRATED/0918/0071."*

