

PROGRAM CATEGORIES

FREE ELECTRONS 2025



1 NEXT GENERATION RENEWABLES

- 1.1. Offshore and onshore wind enabling technologies
- 1.2. Distributed wind solutions
- 1.3. Solar distributed generation
- 1.4. Floating solar; novel solar cell types; modular solar systems
- 1.5. Geothermal technologies
- 1.6. Novel hydro systems



2 ENERGY MANAGEMENT / DATA

- 2.1 Digital trust and cybersecurity
- 2.2. Planning, simulation and forecasting tools
- 2.3. Cloud and edge computing
- 2.4. Datacentre optimisation
- 2.5. Generative AI for business operations and LLMs
- 2.6. Demand response and VPP platforms
- 2.7. Trading tools
- 2.8. Advanced connectivity solutions; the Internet of Energy



3 ASSET OPTIMISATION

- 3.1. Drones, robots and sensors for monitoring and maintenance
- 3.2. Condition monitoring, control or optimisation
- 3.3. Lifetime extension technologies
- 3.4. Digital twins
- 3.5. Image analytics

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4 THERMAL SOLUTIONS

- 4.1. Heat pumps & novel hot water systems
- 4.2. Decentralised geothermal systems
- 4.3. Thermal energy storage
- 4.4. Process heat alternatives
- 4.5. Industry electrification
- 4.6. District heating



5 GRID PLANNING, OPTIMISATION AND STABILITY

- 5.1 Accelerating T&D roll-out including construction improvements
- 5.2. Tools for planning optimisation
- 5.3. Integrating renewables and storage in the grid
- 5.4. Ancillary services enablers/ flexibility services
- 5.5. Low voltage network adequacy and stability
- 5.6. Micro grids including community batteries
- 5.7. Network modelling and field service management
- 5.8. Satellite applications in grid management



6 ENERGY STORAGE

- 6.1. Long duration solutions including pumped hydro
- 6.2. Lithium ion battery alternative chemistries
- 6.3. Supply chain efficiencies & ethical sourcing of materials
- 6.4. Lifetime extension and/or second life options
- 6.5. Residential solutions

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7 CONNECTED & ENGAGED CUSTOMERS (B2B AND B2C)

- 7.1. Customer engagements solutions
- 7.2. Metering and disaggregation technologies
- 7.3. Non-energy home services - water, internet, security, banking
- 7.4. Residential demand response and orchestration
- 7.5. Heating & cooling solutions
- 7.6. Energy efficiency solutions



8 MOBILITY & TRANSPORT ELECTRIFICATION

- 8.1 Novel charging solutions including route and bill optimisation
- 8.2. Integration solutions including vehicle to grid
- 8.3. Fleet management solutions
- 8.4. Advanced mobility technologies



9 OTHER

- 9.1. Carbon capture and storage solutions
- 9.2. Climate engineering and carbon management & accounting
- 9.3. Power to X - includes sustainable fuels, materials & bioenergy
- 9.4. Hydrogen generation and electrolyzers technology
- 9.5. Novel funding models
- 9.6. Soaking excess renewables
- 9.7. Energy access and addressing energy poverty
- 9.8. Solutions to enhance electric work safety