The Future of Energy with Open Renewable Energy Systems (ORES)

Panelists:

Tony Shannon - Head of Digital Services, Office of Government Chief Information Officer at Department of Public Expenditure & Reform, Government of Ireland

Savannah Goodman - Data and Software Climate Solutions Lead at Google

Karl Yang - CEO, DEGCent

Moderator:

Chris Xie, Chair of the ORES Working Group, LF Energy

LF ENERGY

Introductions

Meet Our Panel

Moderator:
Chris Xie, ORES, LF Energy

Tony Shannon
Gov't of Ireland

Savannah Goodman
Google

Karl Yang
DEGCent

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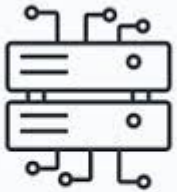
What is ORES? Why ORES?

ORES JUST PLUG IT IN

`ORES` is a specification that describes the standard components of a renewalbe energy system, and its standard architectures, APIs, protocols among various components of the system, and communication interfaces with the grid and with higher level services. The current specification is here. The design objective of ORES is meant to realize the vision of plug and play energy production and democratized energy ecossystem participation, both as an energy producer and an energy consumer.



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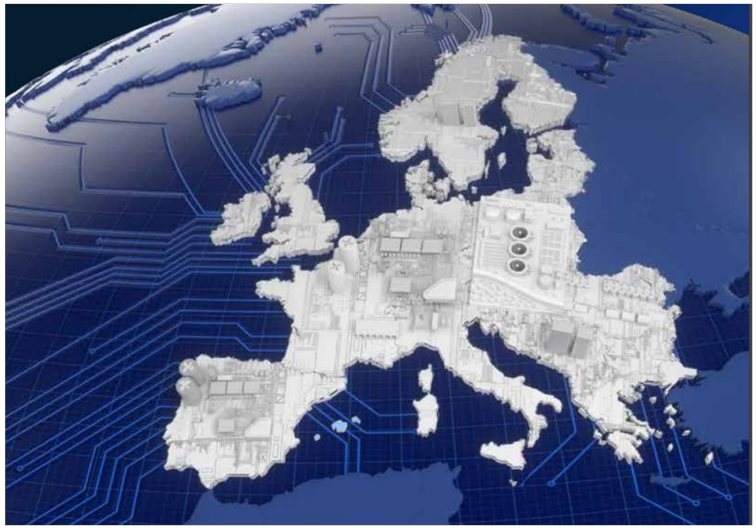
Tony Shannon

The ORES Case For Regulators/Policy Makers

Towards 2030: Decade of Digital & Green



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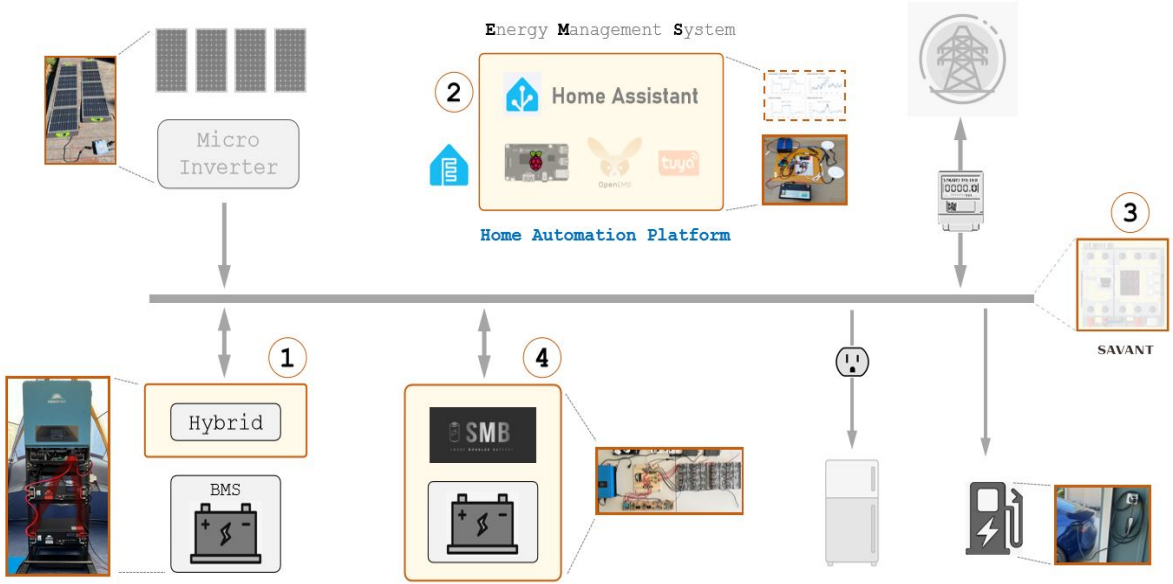
The ORES Case For GenAI/Hyperscalers

Savannah Goodman
Google

The ORES Implementation

Karl Yang

Plug & Play DIY **Standardization** Initiative, Progress & Plan



Initiative:

1) Communication Protocols & Devices Integration
2) Software Defined EMS with Patterns & Types
3) Power Plane Home Grid & Smart Panel
4) Innovation

Progress: Run Components Independent

Plan: Integrate Off Grid and Grid Tie

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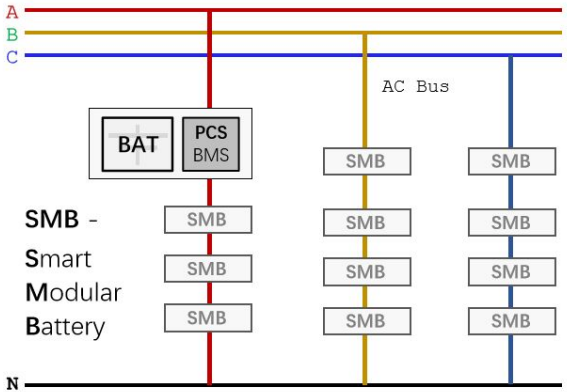
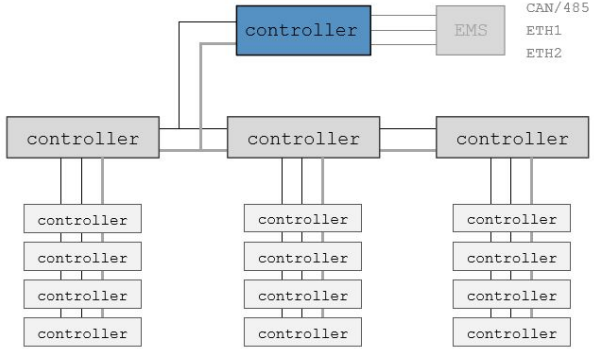
The ORES Implementation

Karl Yang

Energy Router - “AC Battery” Technology Based **Innovation** for Home Grid





Architecture

1) Multi level Cascaded PCS
2) Use MOSFET instead of IGBT
3) Combine PCS with BMS

Advantage

1) Native Equalization, Safer.
2) Lower Cost, Longer Life Cycle.
3) Higher Efficiency
4) Scale, Higher Power and Capacity

Implementation

1) Standalone ESS

   AC Coupling

2) Energy Router

   All in One Box

   Hybrid

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Get Involved!

Join our mailing list:
https://lists.lfenergy.org/g/ORES

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ORES Repo

https://github.com/open-renewable-energy-systems