

DER Integration in Patrol Base and Forward Operating Base Design



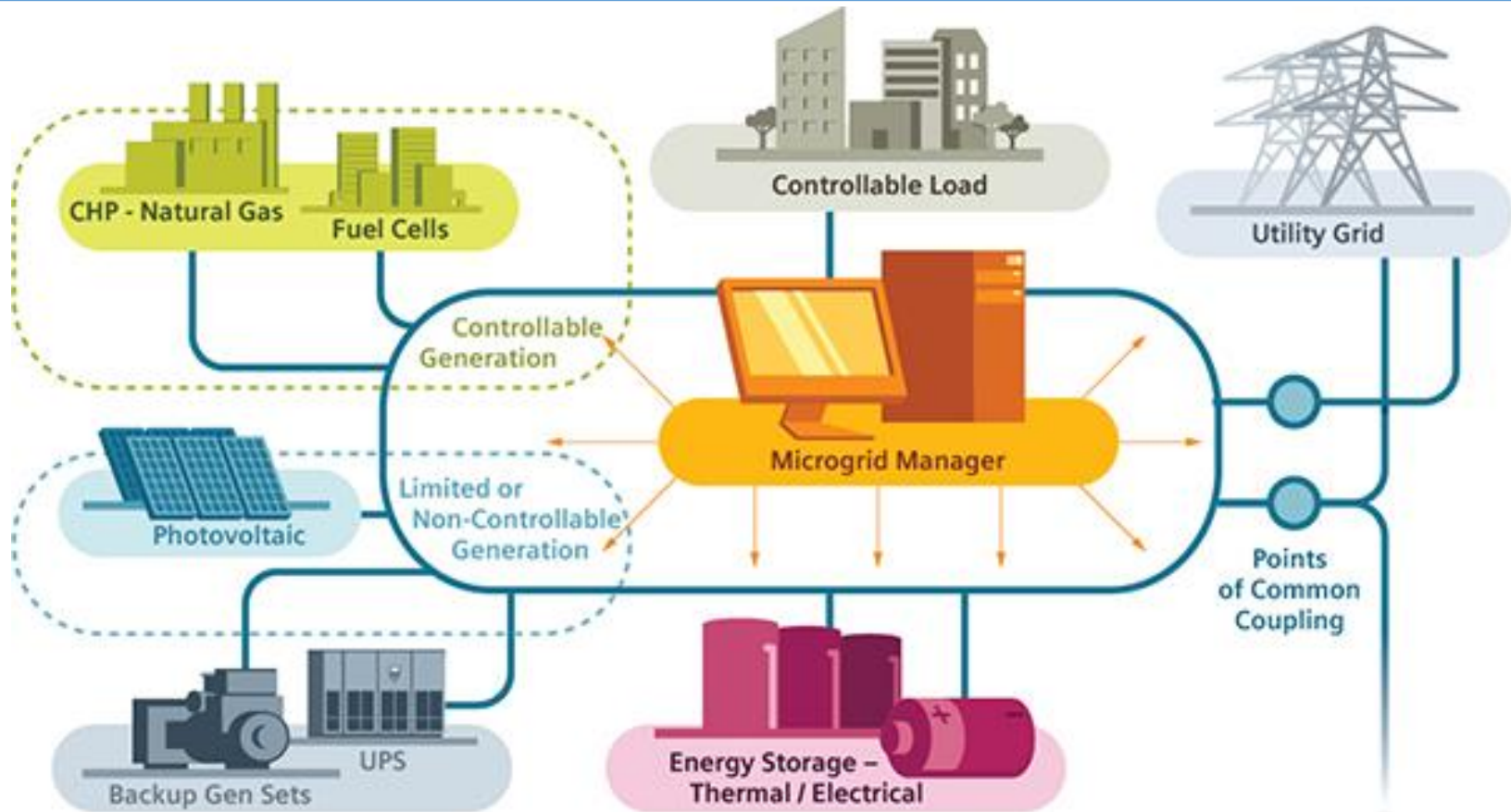
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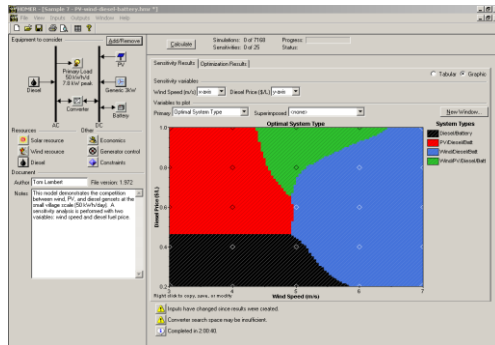
Microgrid



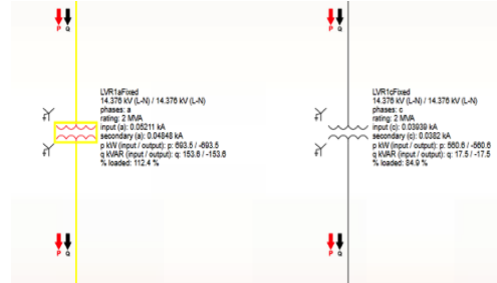
Simulation-based design and control

Combine microgrid sizing, design, and simulated operation tools into single analytical framework.

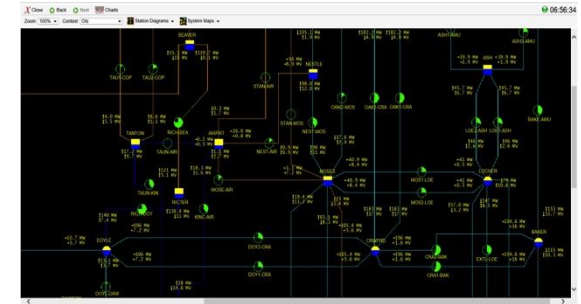
Provide additional features for comparative assessment of cost-performance for emerging features and controls.



System configuration and component sizing tool for economic feasibility study.



Rapid system design that reduces soft costs and improves design specs.



Real-time simulation, balancing, contingency analysis, voltage control, transient stability.



How should I design an Electrical Diagram?

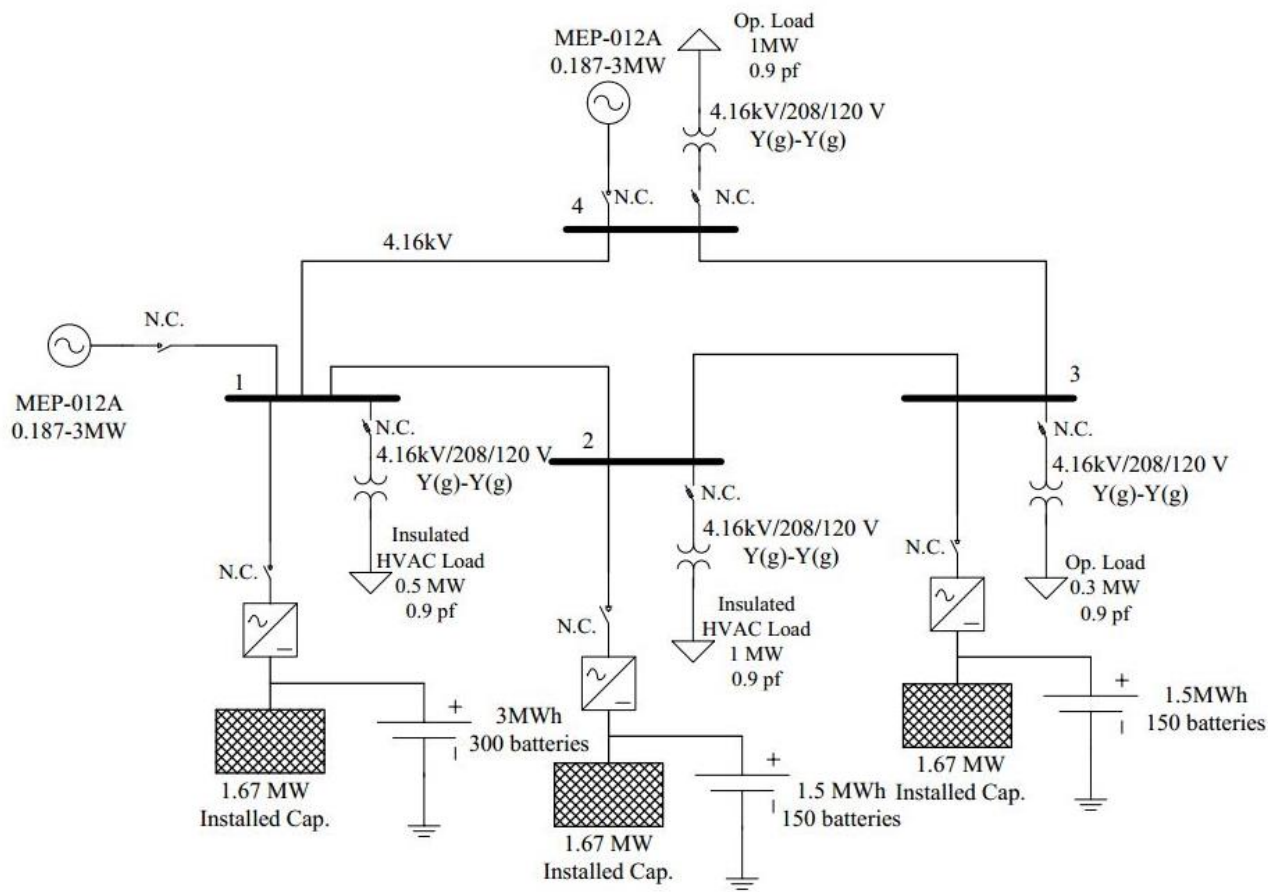
Demonstrations and Lesson Topics for Today

- • **Microgrid asset selection and sizing**
- • **Microgrid one-line diagram design automation**
- • Design best practices and collaboration features
- • **Google Maps integration for design automation and visualization**
- • System aware cost-optimized sizing and dispatch analysis
- • Load shape creation, and data management
- • Diesel generator, solar PV, smart Inverter, battery storage system, and controller modeling
- • **Quasi-Static Time-Series power flow**
- • **Advanced Reporting**
- • Project management automation for global multi-project environments

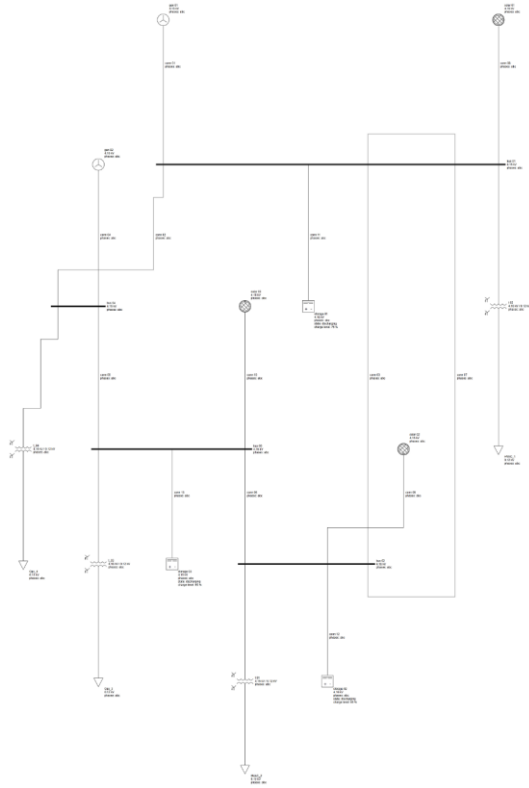
Examples to be Covered

- Design of a FOB, ways of improving voltage stability through simulation
- Design of a Microgrid Trailer/ Container (A microgrid container with Diesel Generator, Solar Inverter, Battery and Grid Connection)
- IEEE 13 Bus Test Case (Standard IEEE 13 Bus Test Case for Modeling the Distribution Network)
- Optimized Design of a microgrid (Asset Sizing through an Optimization framework and then utilizing the results for electrical network design)

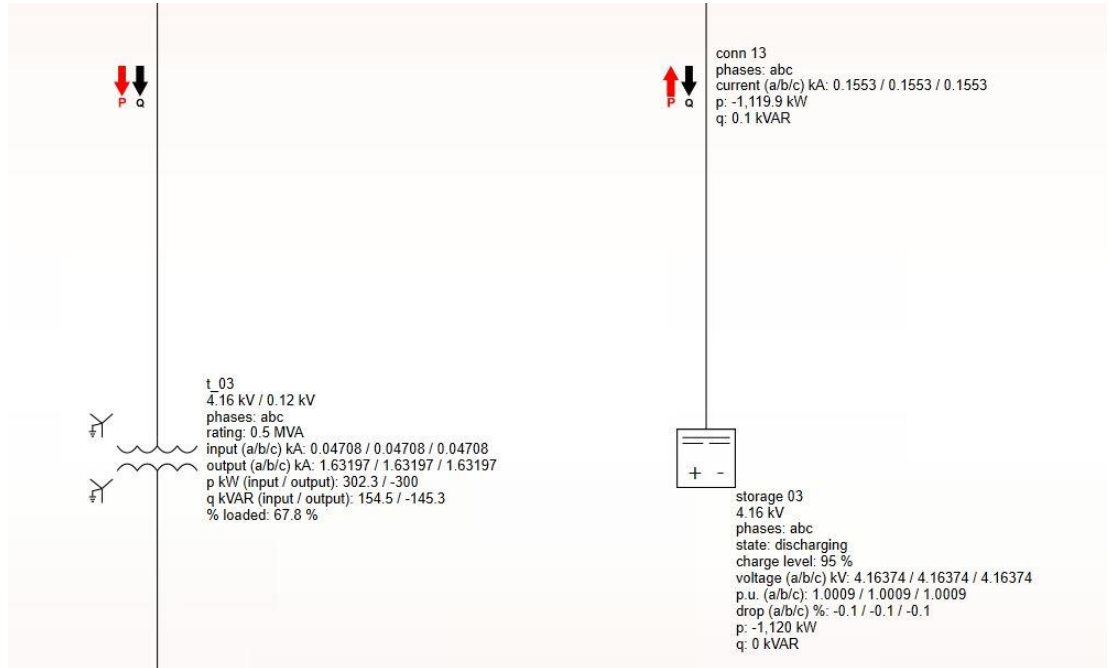
Schematic of a FOB



XENDEE Schematic (Case 1)

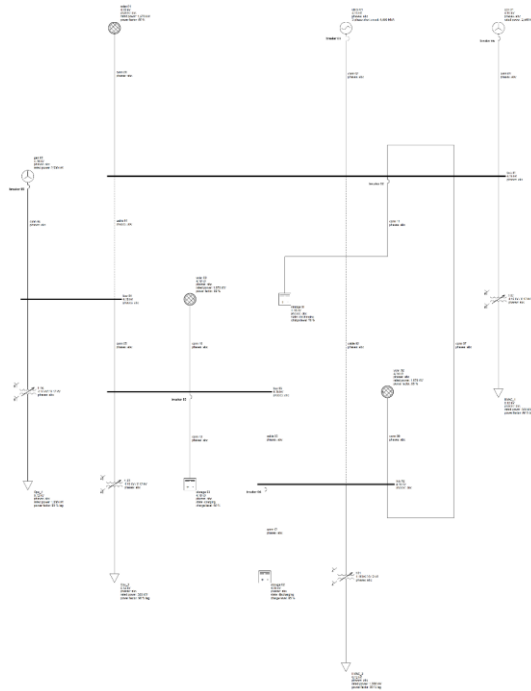


Schematic

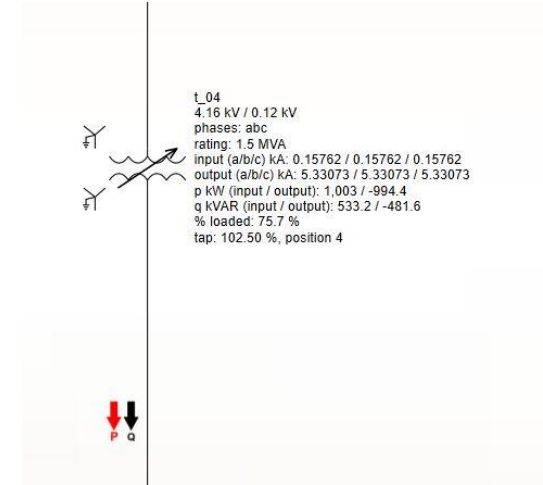
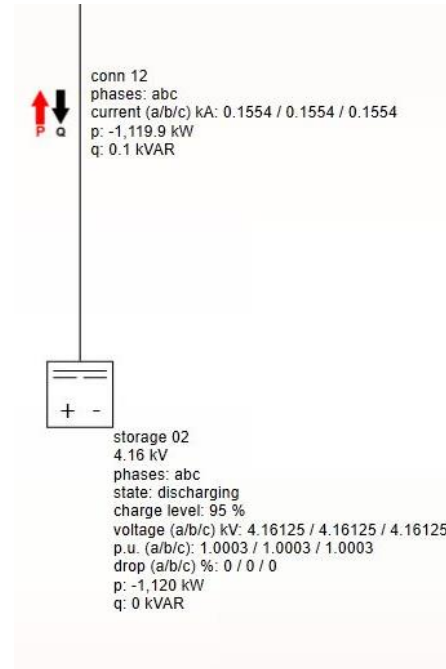


Power Flow Results

XENDEE Schematic (Case 2)



Schematic



Power Flow Results

Thank you!

For more information, please contact:

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