Intelligent Efficiency Conference
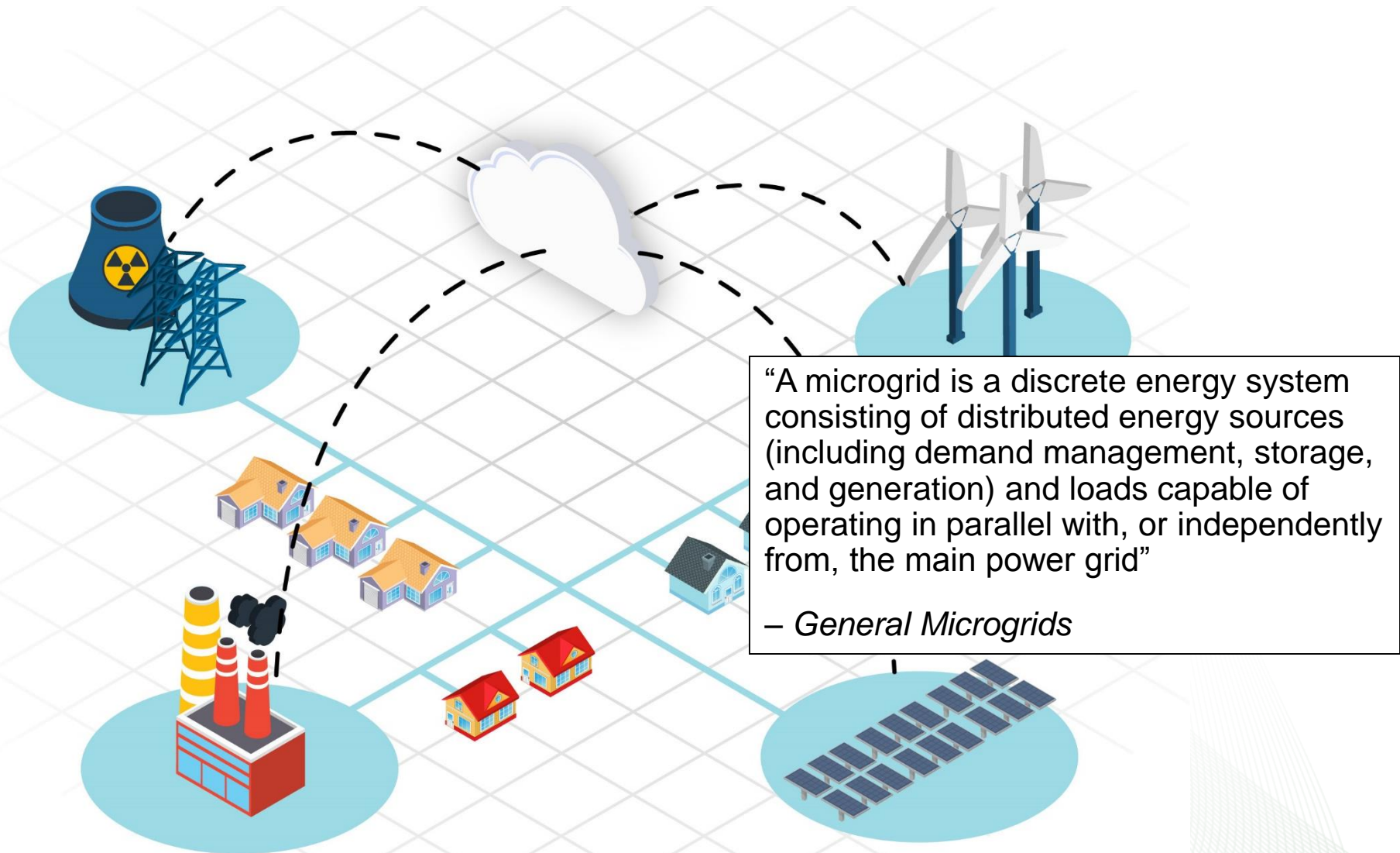
Track A: Integrating Distributed Resources

3A Integrating Nanogrids and Microgrids into the Modern Grid

Michael R. Starke, PhD, Oak Ridge National Laboratory
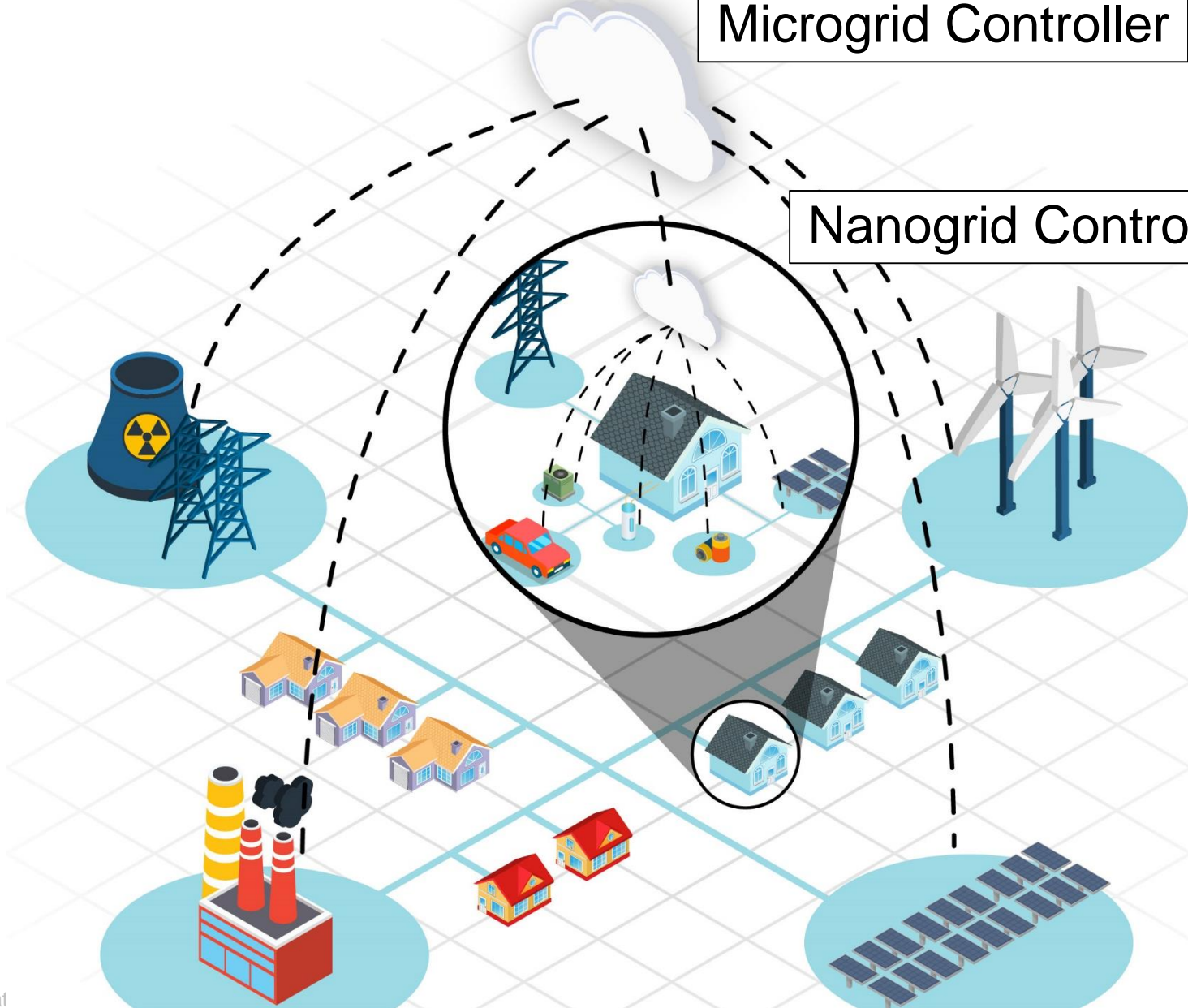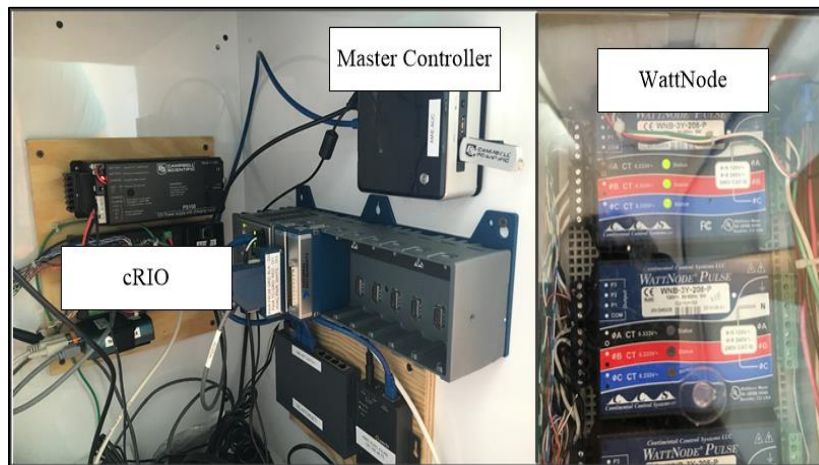**Microgrid Research**

What is a microgrid? – State of the Art

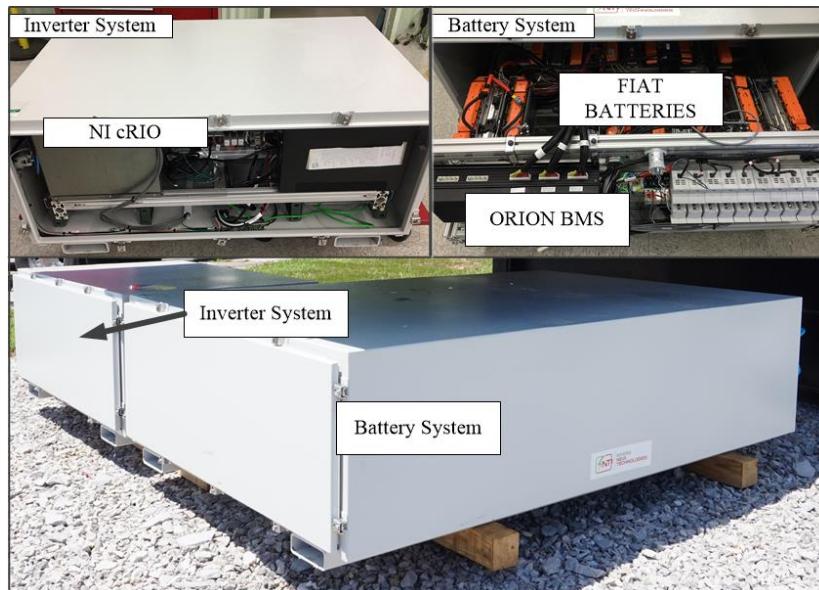"A microgrid is a discrete energy system consisting of distributed energy sources (including demand management, storage, and generation) and loads capable of operating in parallel with, or independently from, the main power grid"

– General Microgrids

Micro/Nano Grids – More Recent

Microgrid Controller

Nanogrid Controller

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Example of Nanogrid

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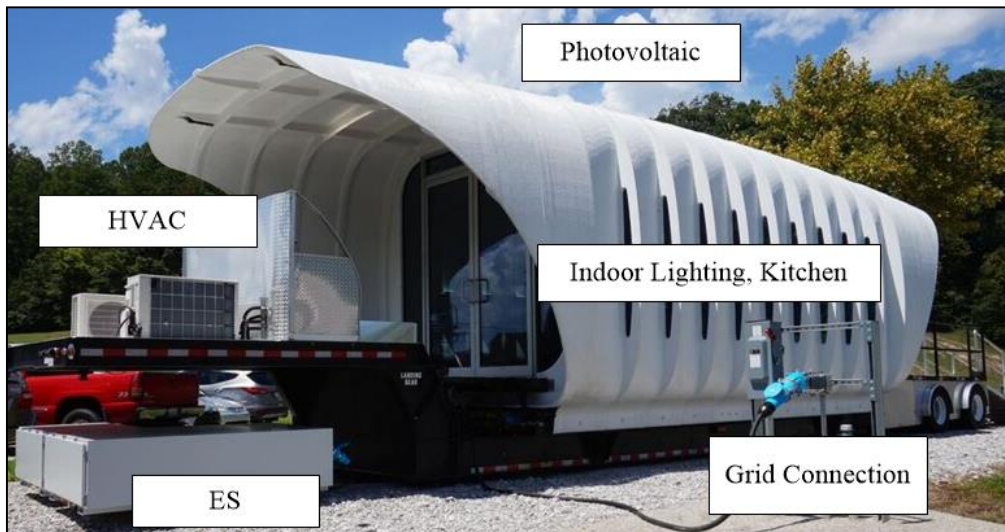
Next Generation: Networked Microgrids

Microgrid Controller A

Distribution Management System

Microgrid Controller B

Microgrid Controller C

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