

Distributed Energy Resource (DER) and Microgrid Overview

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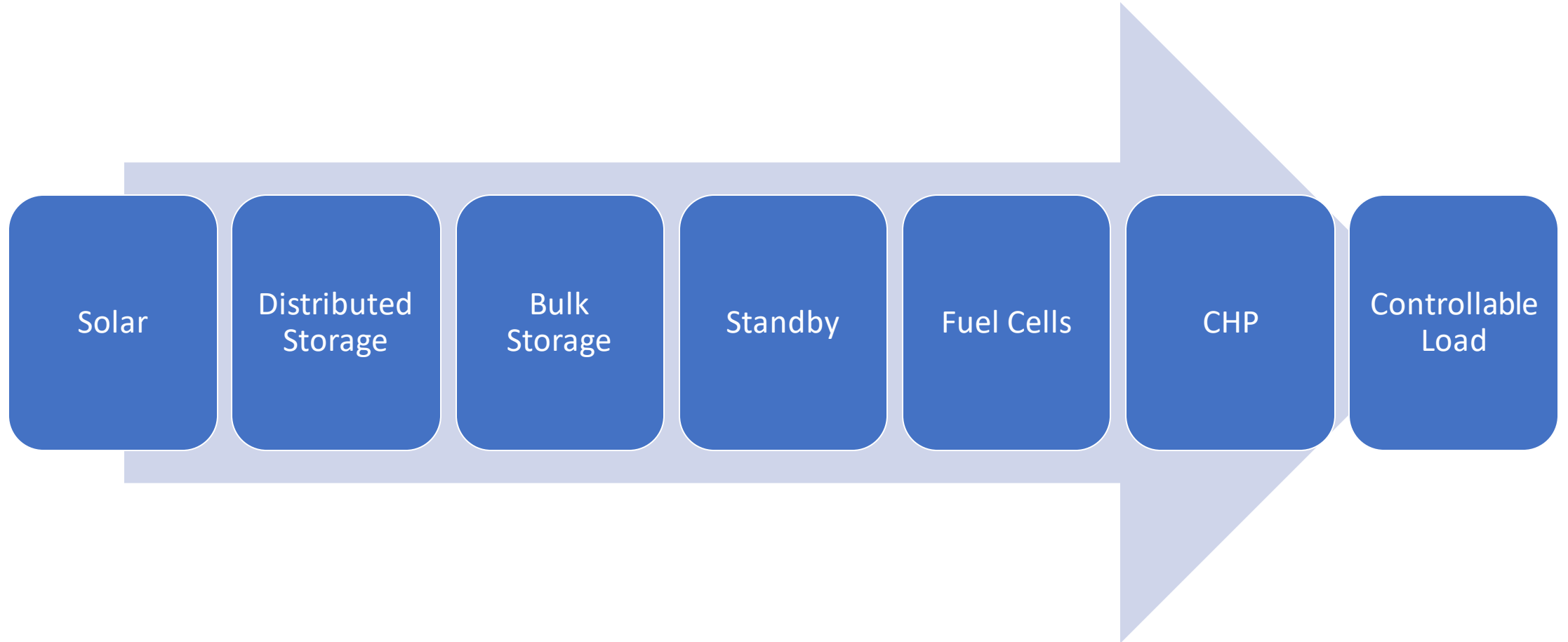
Chief Innovation Officer

Clean Spark

What is a Microgrid?

- A group of interconnected loads
- And Distributed Energy Resources
- Acts as a single controllable entity
- Connect and disconnect from the grid
- Operate grid connected or “islanded”

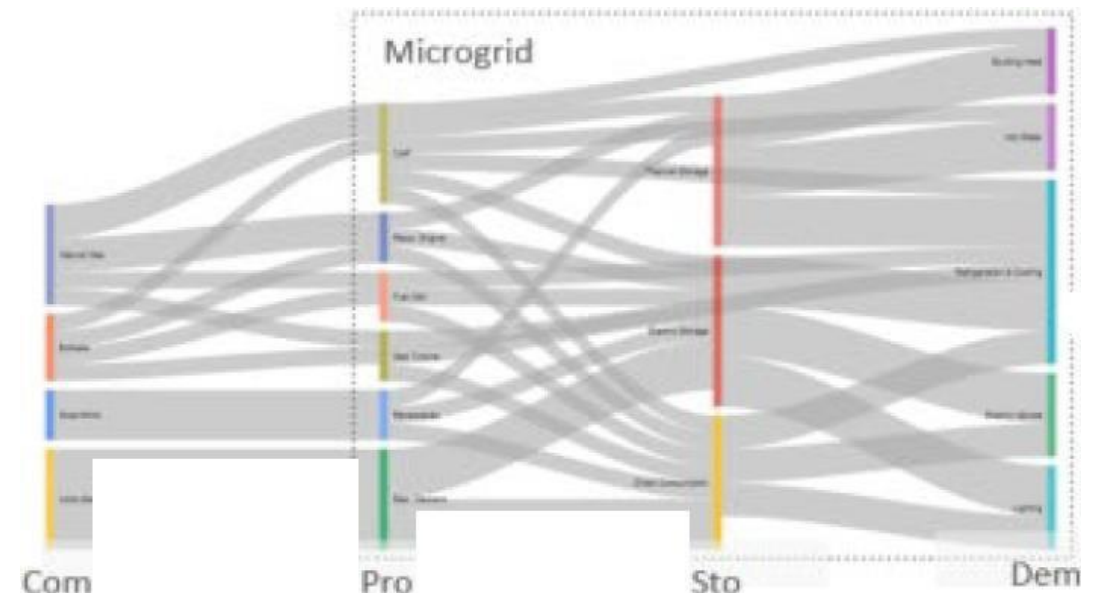
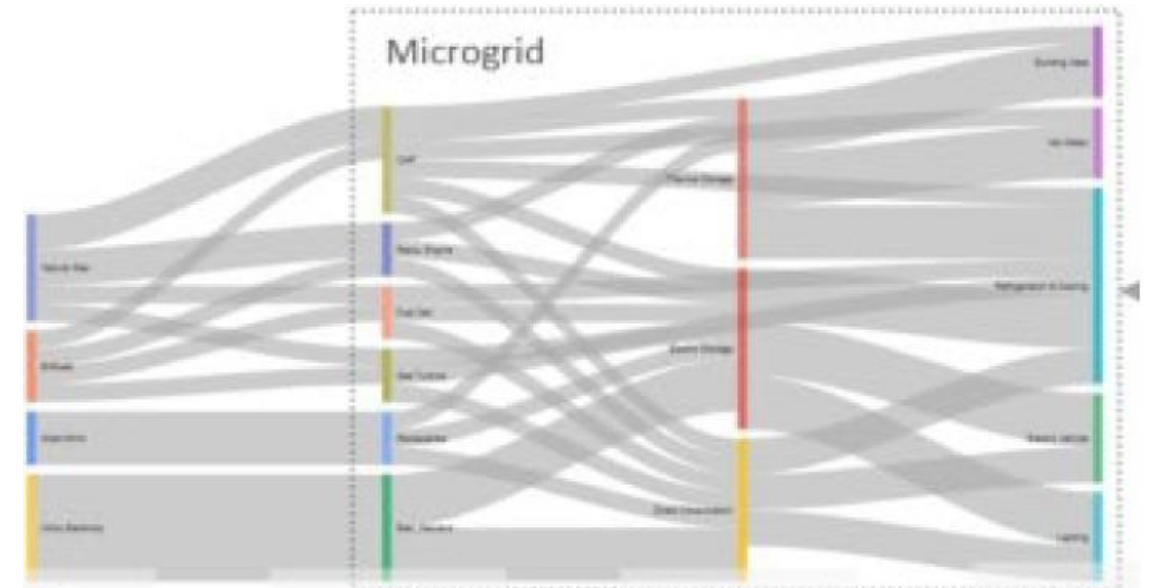
And Distributed Energy Resources?



That Acts as a Single Controllable Entity

- Commercial
- Industrial
- Neighborhoods
- Municipality
- Defense

A Group of Interconnected Microgrids



Why Now?

- Maturing technology
- Declining cost
- Field proven deployments
- Increasing accessible energy markets

The Local Story – Emerging Threats

California Public Safety Power Shutoffs (PSPS)

- Ability of California utilities to turn off power during fire prone weather for periods of up to 6 days
- Major life safety impacts
- Significant economic impacts

Progressive Political Action

- 8/31/2019 - California SB 1339 approved, designed to boost microgrid development and streamline interconnect issues
- 2020 – Track 1 utility proposals currently being considered at CPUC