

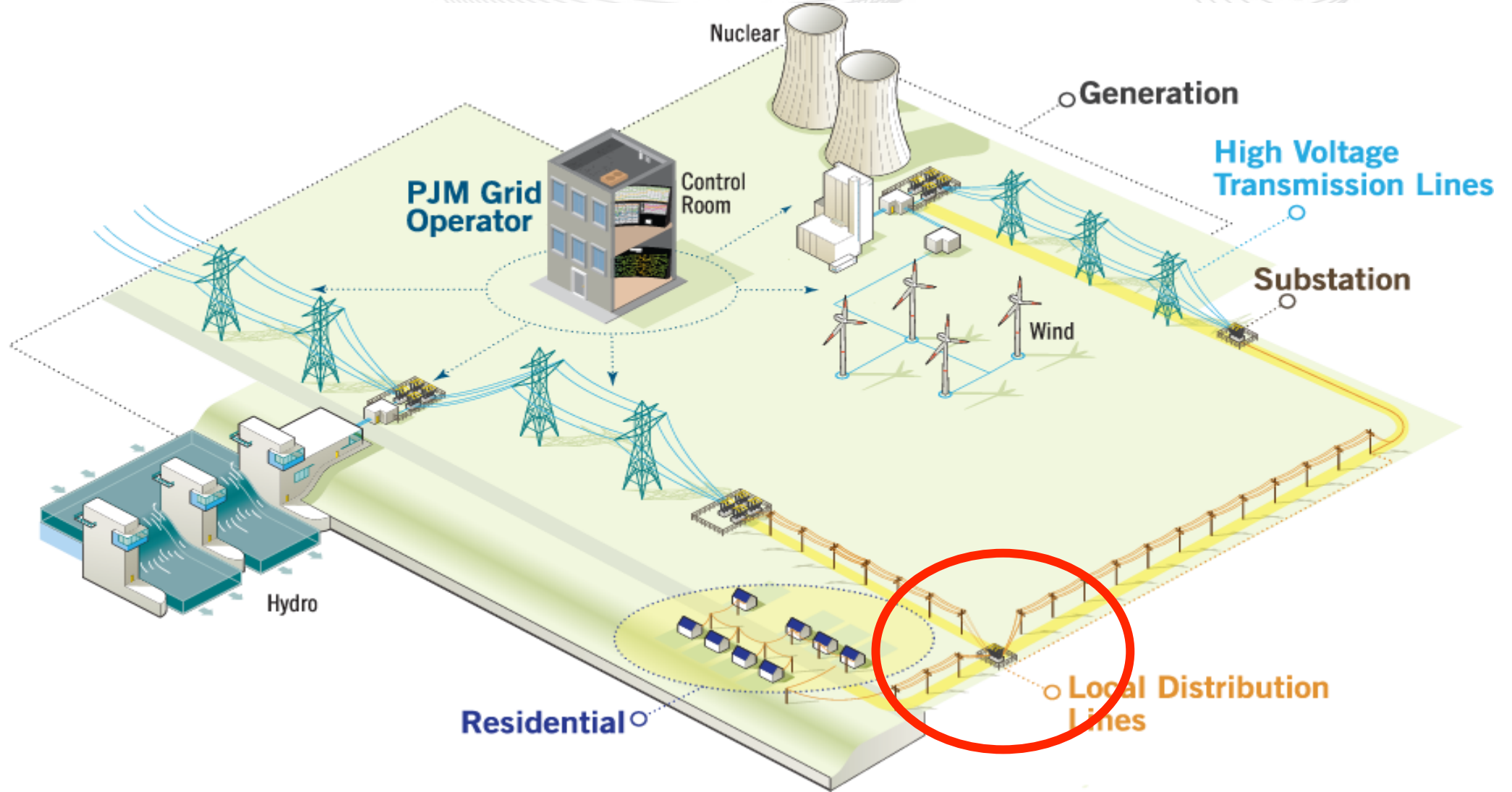


Power Outage Preparedness

Jonathon Monken

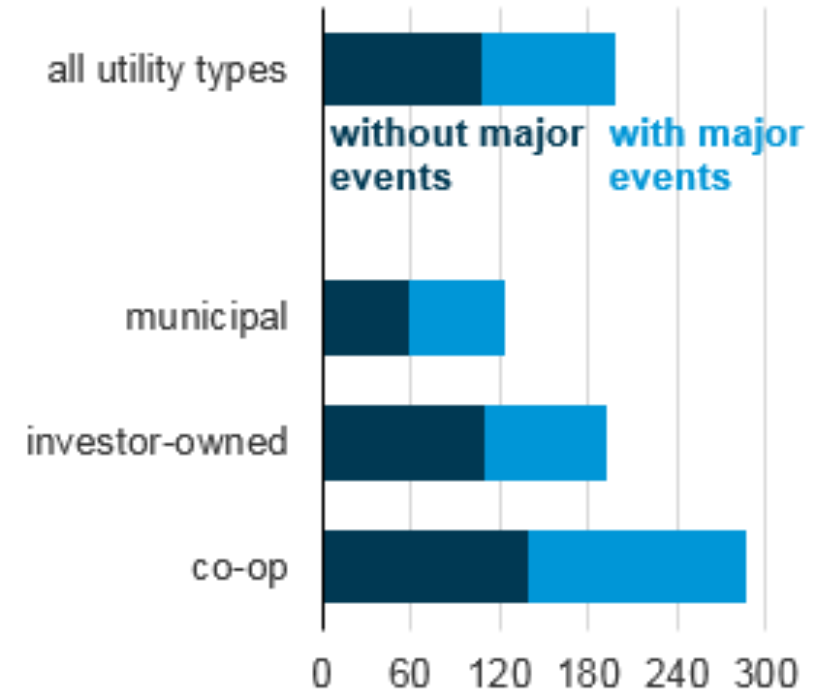
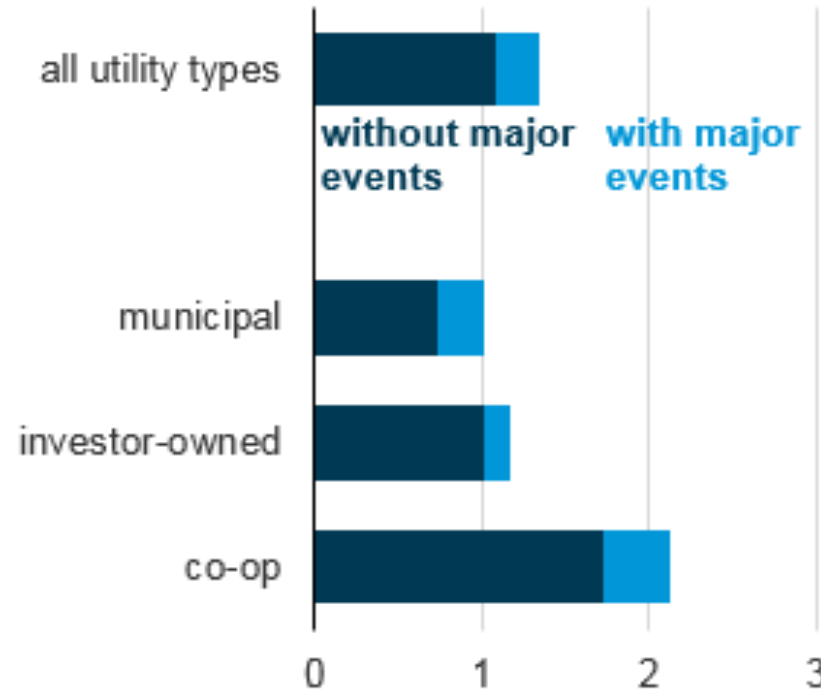
Senior Director, System Resilience
and Strategic Coordination





- 95% of outages last less than 4 hours
- Most people only experience 1 or 2 per year

Average electric power service interruptions per customer by utility type, 2015
 frequency (number of instances) total duration (minutes)



Unprecedented number of changes in the power industry



Storage technologies



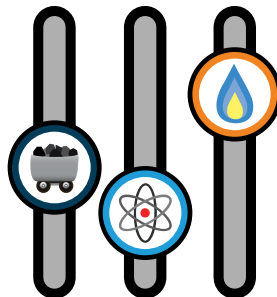
Distributed energy resources



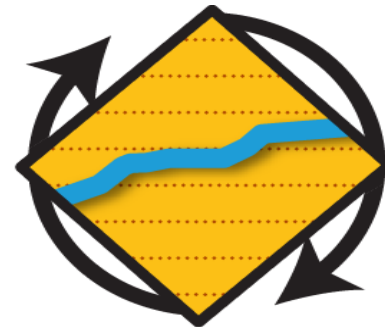
Intermittent renewables



Alternative technologies

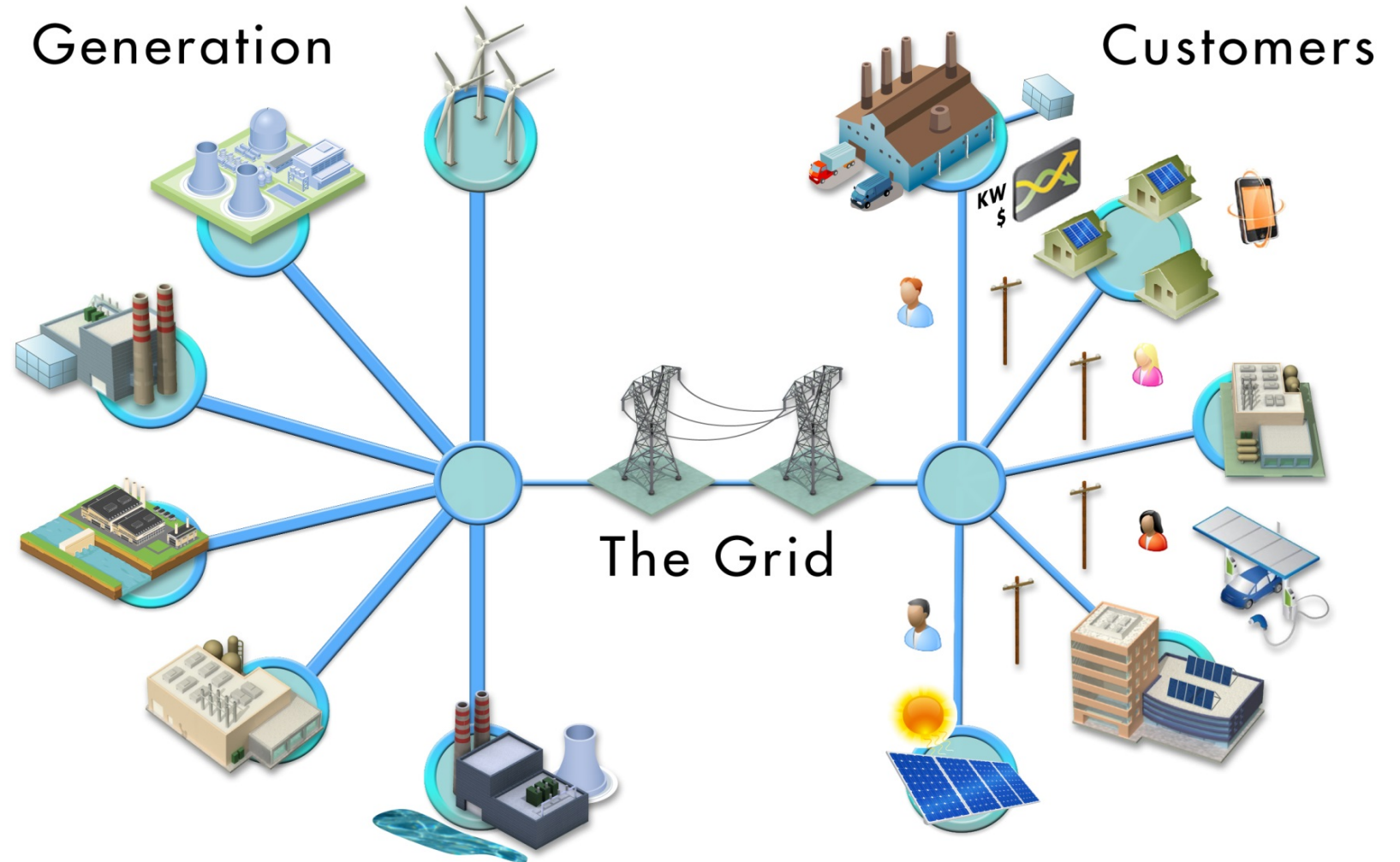


Fuel Swap



Changes in customer expectations

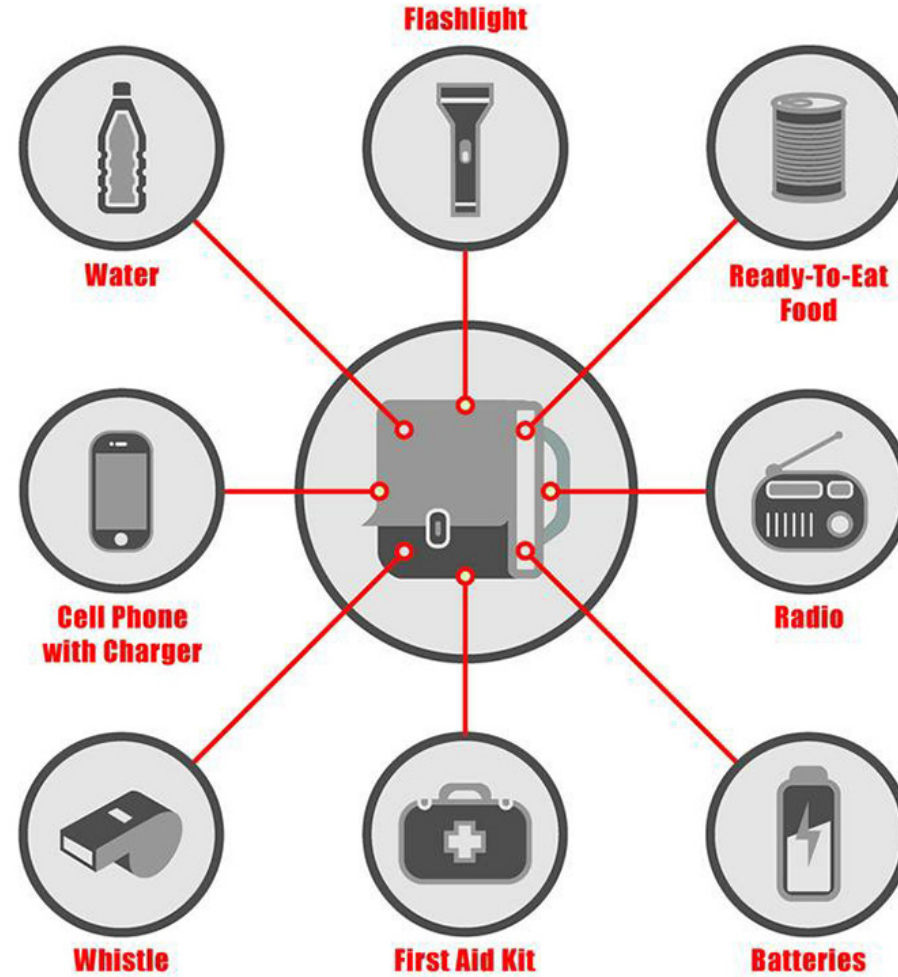
- In Short: Everyone!
- All major infrastructure systems rely on electricity



Source: EPRI

Build Your Own Disaster Kit

First Things First



#BELFORTips (🗣️)

Water

- Single most important thing to have
- Nearly 8% of all electricity usage is for water
- Water systems are generally backed up, but...
- Big drop-off after 48-72 hours
- Can't "flip the switch" like electricity
- Don't forget about wastewater!
- The real driver behind evacuations

Food

- Food spoils quickly
- Refrigeration is very power-intensive
- Consider your food prep method (electric vs. gas)

Communications

- Cell towers back-up last for 8-10 hours on average
- The longer the outage, the bigger the problem
- You're "land-line" is not!
- Stick to texting and essentials for bandwidth

Heating/Cooling

- Know your system
- Your furnace may be gas but your thermostat isn't!
- Hydration is key either way

- Proper ventilation is essential
- Adequate fuel (with stabilizer)
- Proper “load matching”
- Only the most important things first



Questions?

