LESS ENERGY • MORE CASH

Urbana School District #116

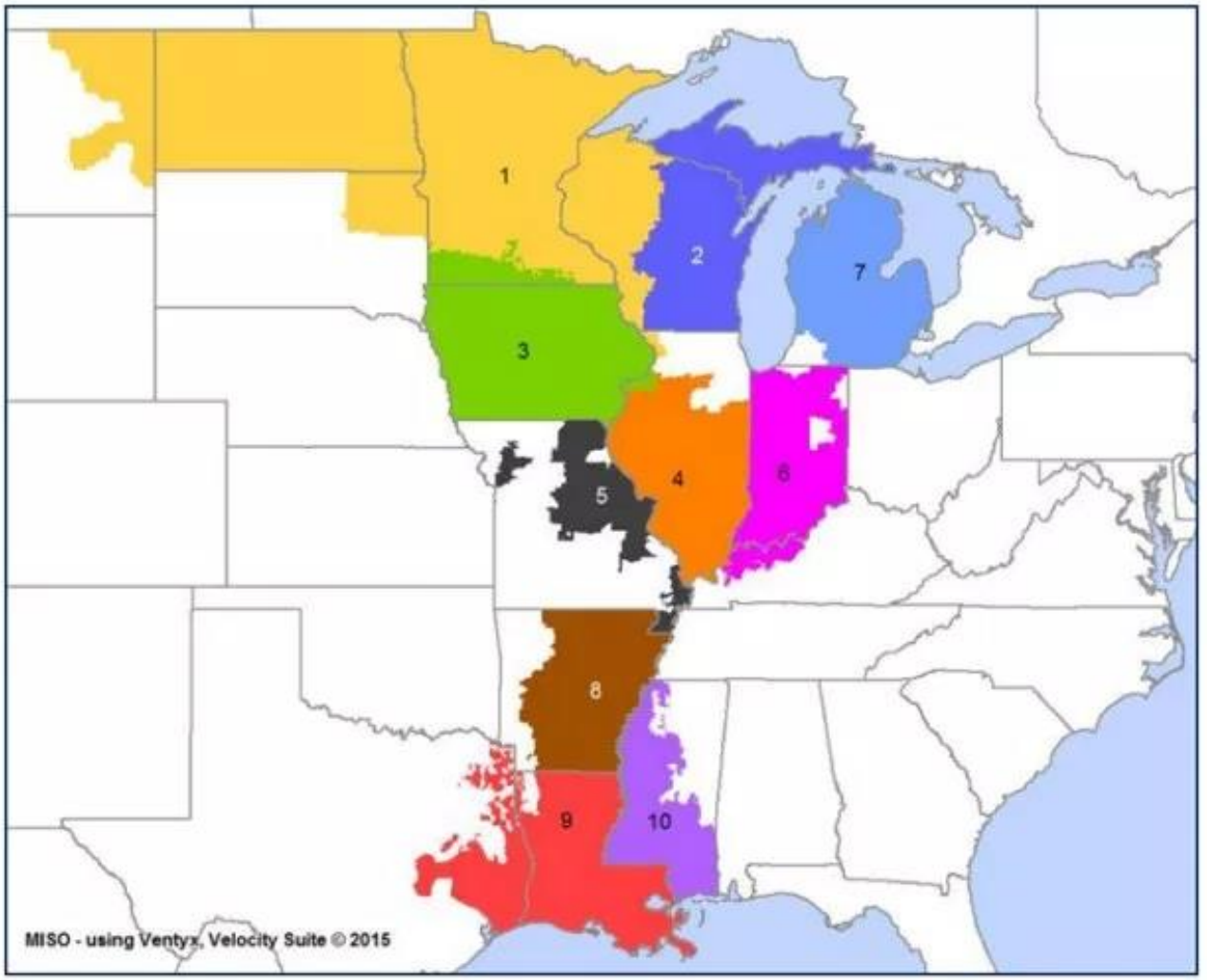
Demand Response Program - MISO - Illinois

March 1, 2019

Agenda

- Introductions
- **What is Demand Response?**
- How Does Demand Response Work?
- Benefits of Demand Response
- About Voltus
- Next Steps

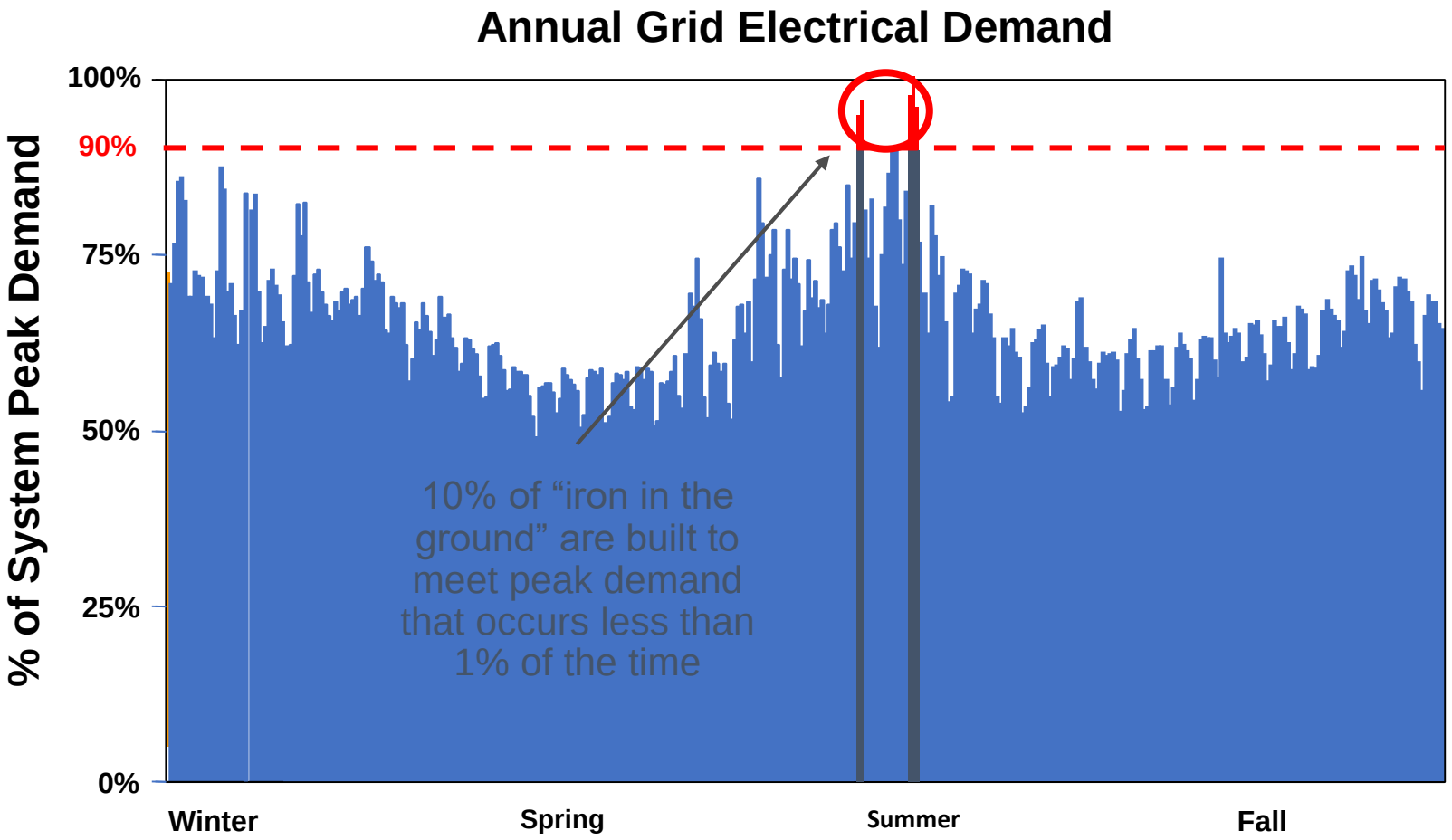
MISO Footprint and Zones



Source: MISO

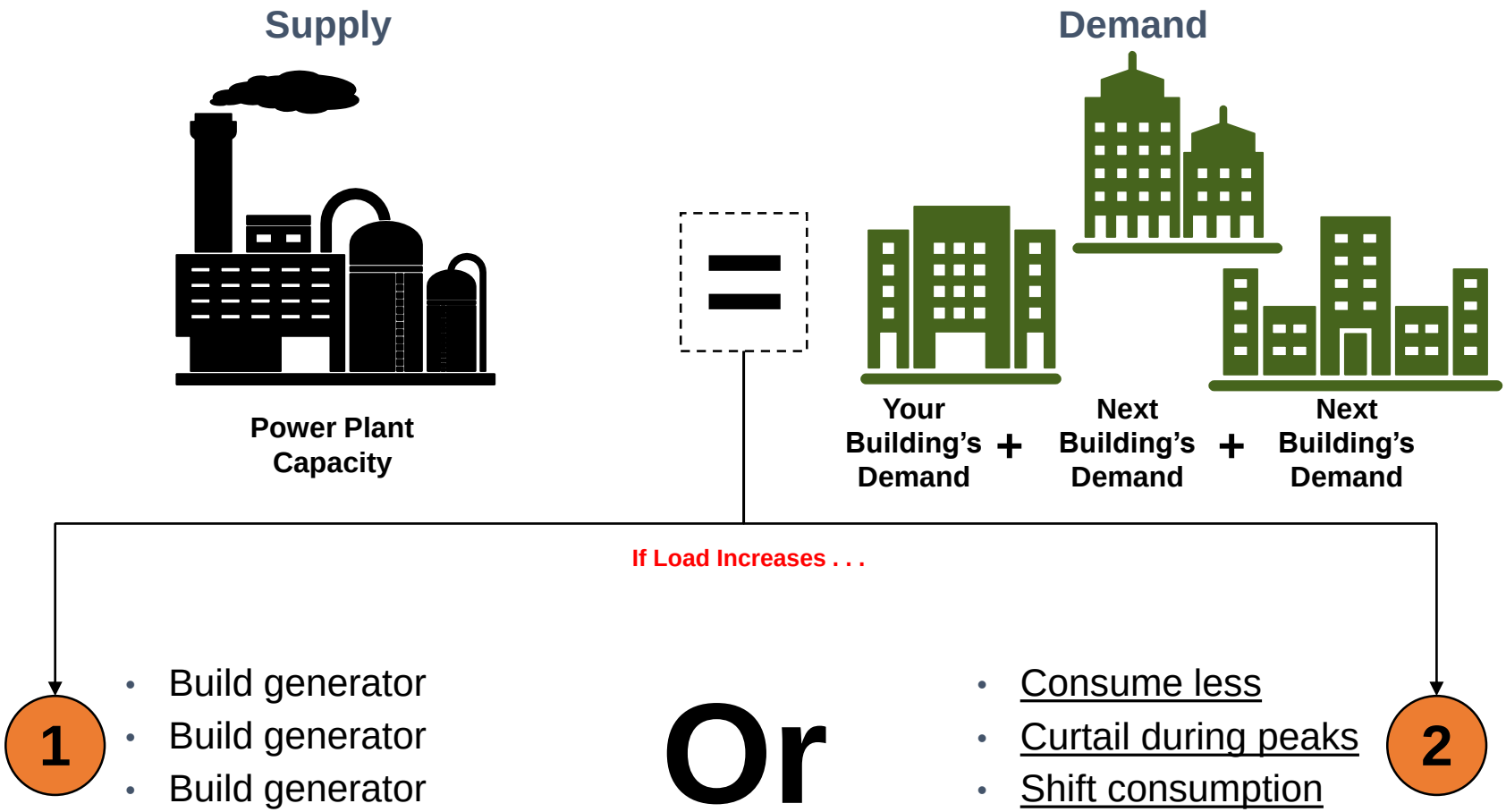
What is Demand Response (DR)?

. . . is a reliable, cost-effective way to meet peak electrical demand, avoiding the need to build generation and transmission capacity that will be used less than 1% of the year.



What is Demand Response (DR)?

DR is now a resource required by the Federal Energy Regulatory Commission (FERC) to be integrated into grid operation.



The Energy Market Now Pays Customers to Respond!!!

What is Demand Response?

There are two basic options for end-users of electricity to participate in demand response markets.

Self Generation – This can include permitted emergency/backup generation, peaking and continuous-duty distributed generation, or even Uninterruptible Power Supply systems.

Curtailment/Efficiency – Turning off lights, turning up cooling set-points, turning off air handlers, shifting production schedules, escalators, elevators, water features, parking lights, signage, heating elements, etc.

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How Does Demand Response Work in MISO?

Program Season	Capacity payments are based on either (1) **nominated load**, if there is no demand response event **or** (2) **average performance** during any demand response events **from June 1- August 31.** Participation outside of the summer season is optional, and may result in additional energy payments.
Program hours	24/7. Summer dispatches are most likely during non-holiday weekdays from noon to 6:00 p.m.
Dispatch Trigger	True emergency, to avoid a region-wide blackout. Only dispatched when "NERC EEA 2" parameters are met (1 in 10 year occurrence).
Dispatch Timing and Commitment	12 hour notification, up to five dispatches per year, four hour event duration. Maximum of 20 hours per year.
Dispatch History	No dispatches have happened during the summer obligation period since 2007. Two voluntary dispatches occured in MISO South in January and April 2017.
Penalty for Under-Performance	$0. Voltus bears 100% of the risk of underperformance by managing risk in its portfolio.

Benefits of Demand Response

Financial

- Get paid for commitment to curtail – not a bill credit
  - Capacity payment = guaranteed payment whether called to curtail or not
  - Energy payment = paid for each hour you are dispatched
- Create a hedge against increasing capacity prices
- Potential to lower your (PLC) Peak Load Contribution

Operational

- 12-hour notification of grid emergency—potential blackout
- Permitted generator fully loaded and prepared to run
- Demand Response helps keep the lights on

Community

- Contribution to the stability of the power grid—helps prevent power failures
- The greenest kWh is the one never used – reduce greenhouse gas emissions and comply with new regulatory requirements

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