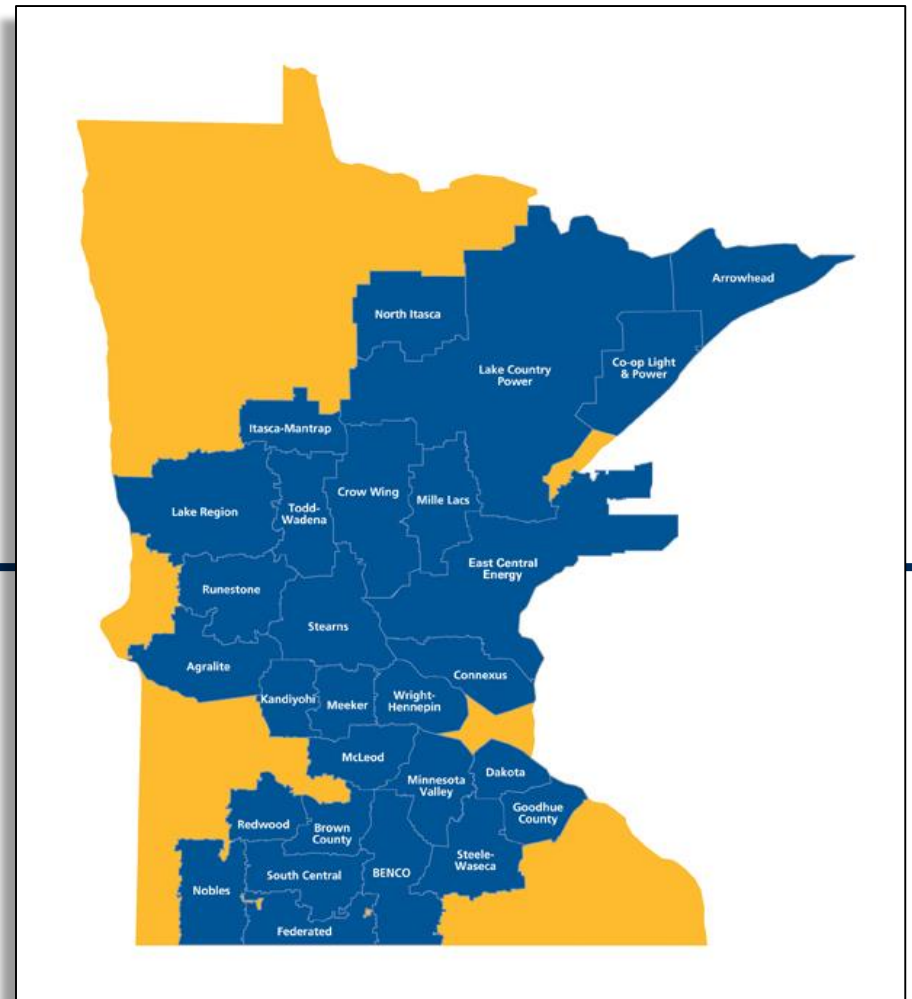

Gary Connett
July 30, 2015



Electricity



From our strategic imperatives:



Grow and Integrate – Promote electrification that enables revenue growth in concert with environmental, efficiency and quality-of-life benefits.

Electrification

Empowers us to:

- ▶ Meet conservation goals
- ▶ Increase revenue through selling of strategic programs
- ▶ Engage in efforts widely supported by stakeholders
 - Water heating
 - Community solar
 - Electric Vehicles



A juggling act

The needs of the new grid requires a juggling act of...

- ▶ Variable resources
- ▶ Variable load
- ▶ Variable pricing



Water heating

A Thermal Storage “Battery”

- ▶ Industry seeking a battery to store renewable energy
- ▶ Think of a 105 gallon water heater as a 26 kWh battery
 - Nominal two day supply of hot water
- ▶ GRE stores 1 GWH each night, every night, in water heaters

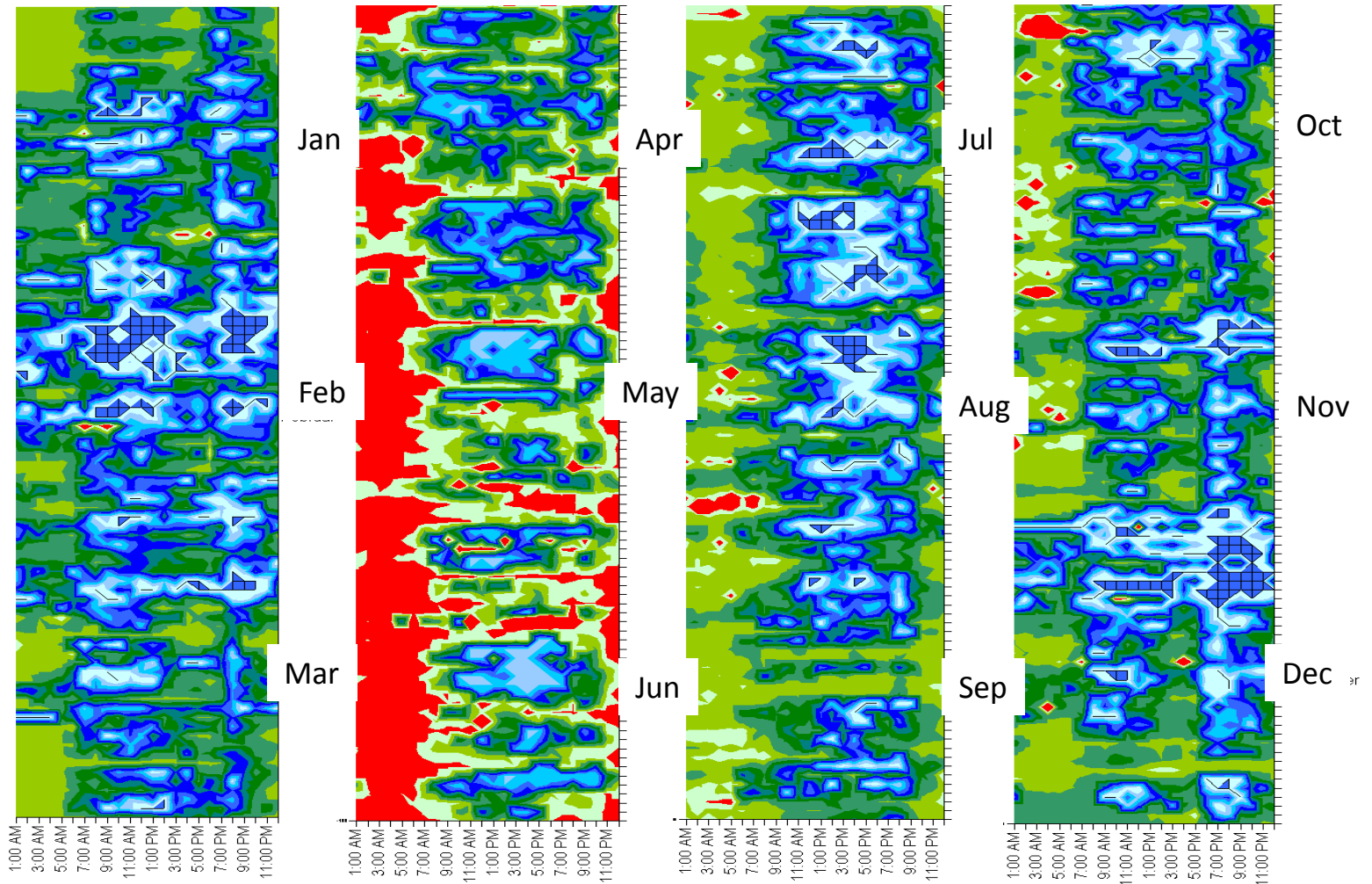


“Smart” water heaters

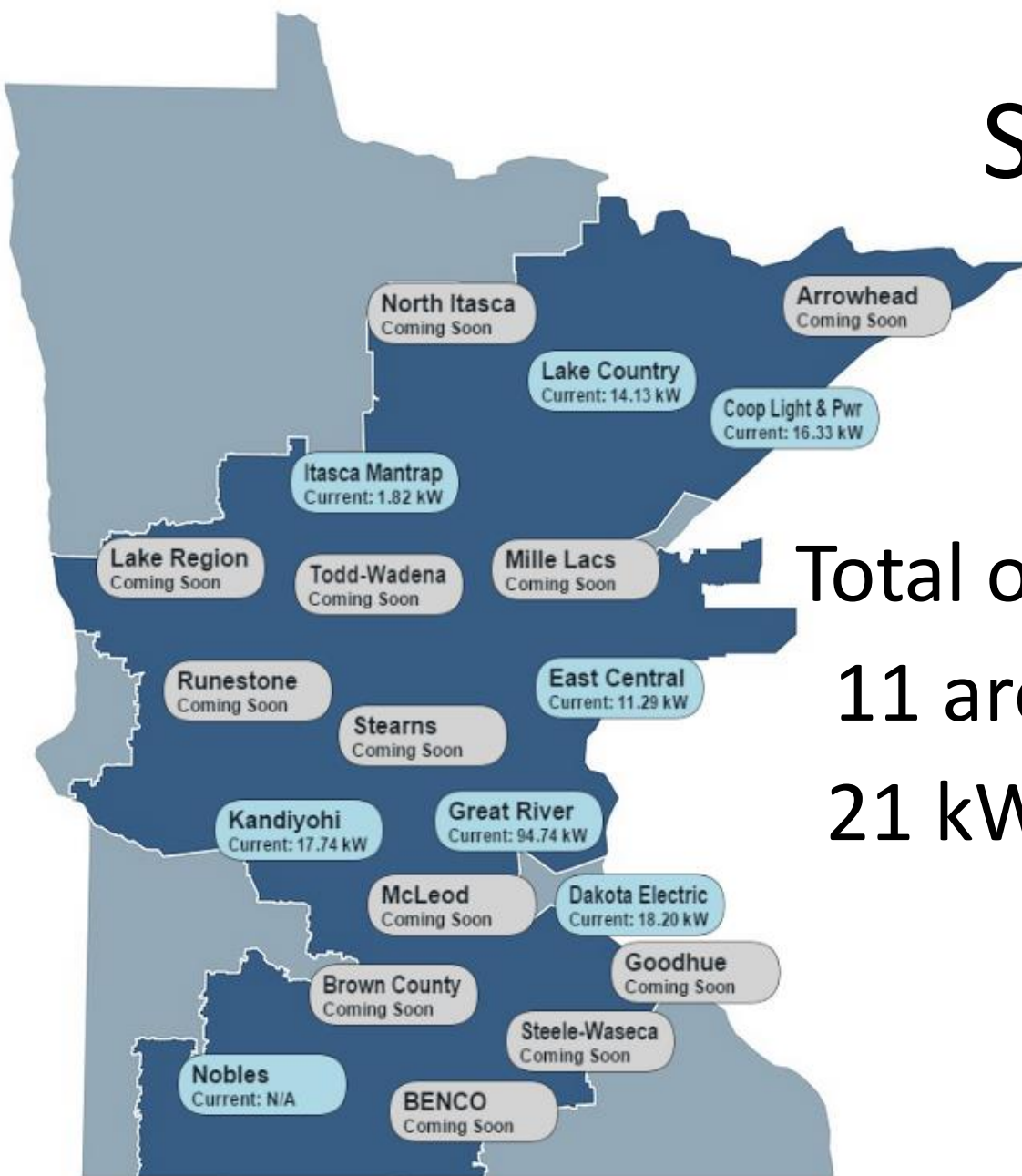
- ▶ Grid-Interactive control technology
 - Allows more renewable energy to be utilized
 - Enhances the value of renewable energy
 - Reduces water heater carbon footprint
 - Lowers member operating costs
 - Can provide ancillary services to wholesale markets



Real Time Prices - MISO NSP.Buffr



Solar projects



Total of 24 Solar projects
11 are community solar
21 kW to 276 kW in size
1.84 MW total



Matching community solar with
load management



Buy a 410 watt panel in the SUNNA project and get a free electric thermal storage water heater

- ▶ \$170 panel cost to consumer
- ▶ No sighting issues
- ▶ No maintenance issues
- ▶ Hedge against future energy hikes





Steele-Waseca Cooperative Electric offers sweet community solar and water heater bundle

Steele-Waseca Electric Cooperative Announces New Community Solar Model with Off-Peak Water Heating

JANUARY 13, 2015

Small Co-op, Big Idea



Why one electric co-op is offering their solar customers free water heaters

In Steele-Waseca's territory in Minnesota, community solar comes with a "catch."

By [Robert Walton](#) | February 10, 2015  print

revolt

EMBRACE ELECTRIC VEHICLES



Why electric vehicles?

WIN

Our
Members

WIN

Our Business

WIN

The
Environment

WIN

The Local
Economy

Our offer

- ▶ Purchase or lease a plug-in electric vehicle and you qualify for renewable energy at ZERO additional cost (above standard electric rates) for lifetime of the vehicle.
- You may also qualify for a \$500 electric charger rebate too!



Electricity



Vibrates a phone,
or shakes a nation.