

Electric Vehicles

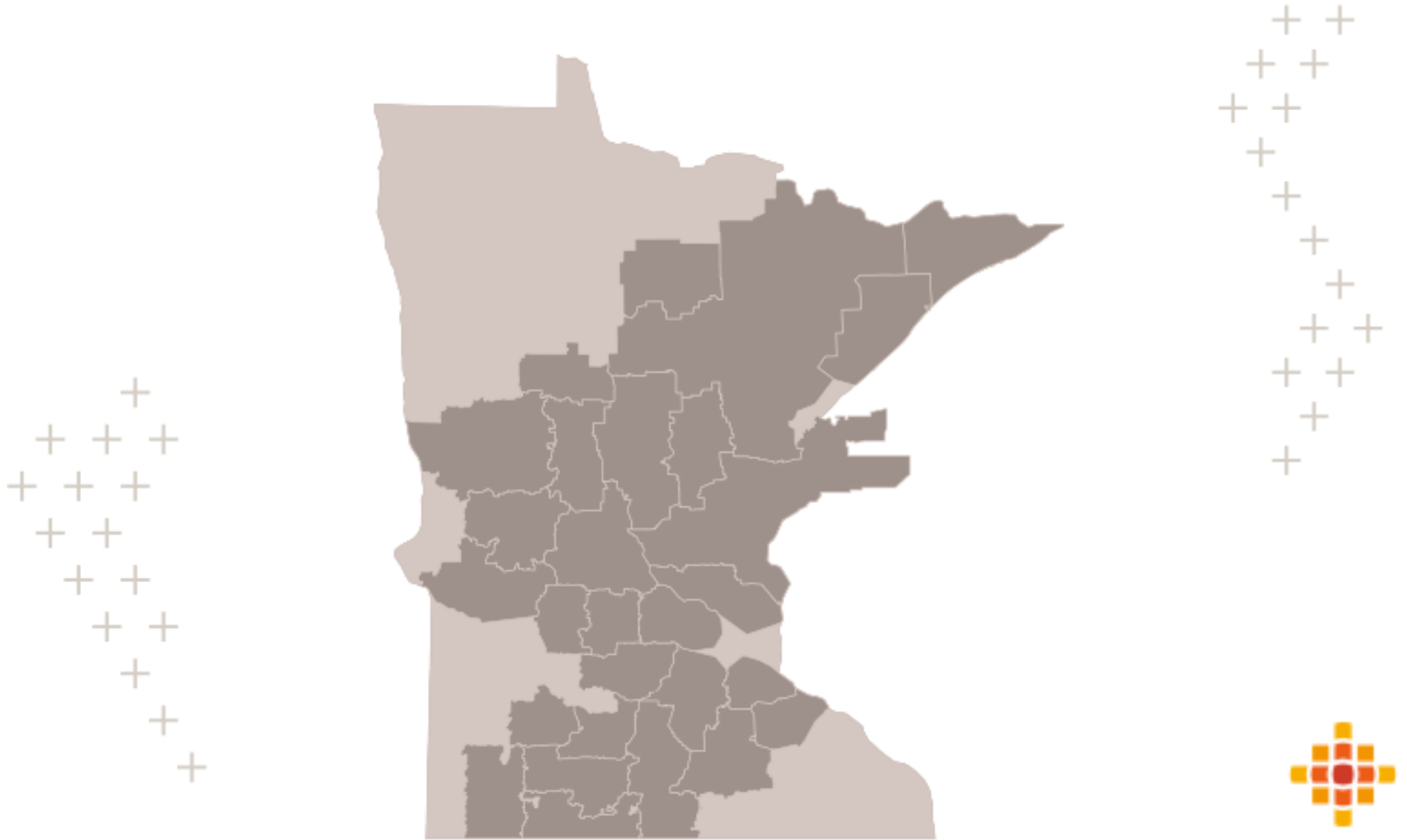
Electric Co-op Perspective



David Ranallo
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Great River Energy



Meet Frank & Zhoey



- New variables to consider
- Decision factors are evolving
- More players
- Utility is one of them



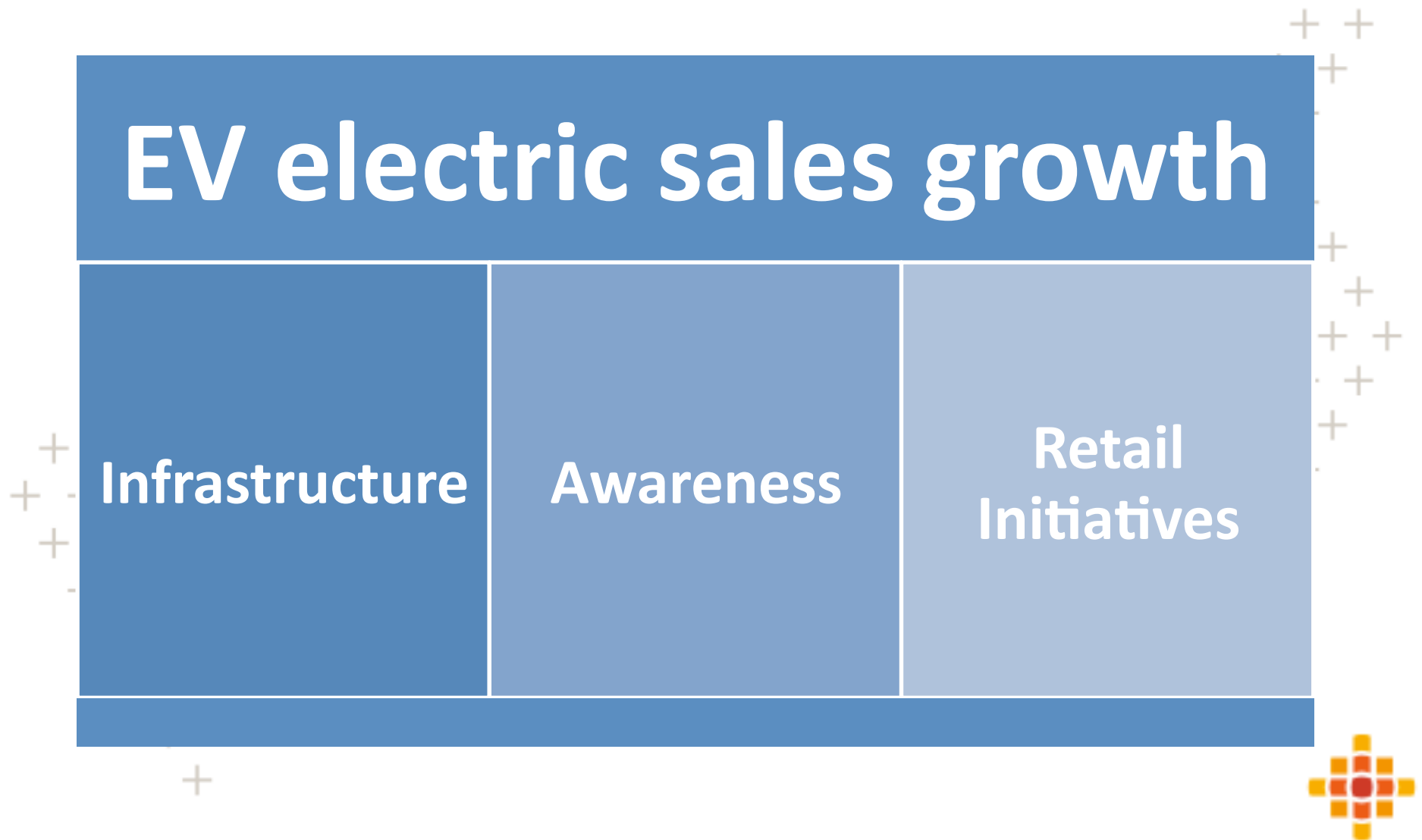
Wise Use of Electricity - Why EVs?

- Increase the deployment of PEVs
- Electricity is a smart choice
- Electrification efforts
- PEVs are:

- Smart use of electricity (efficient & off-peak)
- Environmental and efficiency benefits
- Improved fleet efficiency – commercial opportunity



Three “Pillars” of Activity to EV Growth



Determining Our Role

- Energy expert
- Education and awareness
- Partnerships
- Stakeholder meetings
 - *Electric Vehicle Round Table* September, 2014
- Utility collaboration discussions



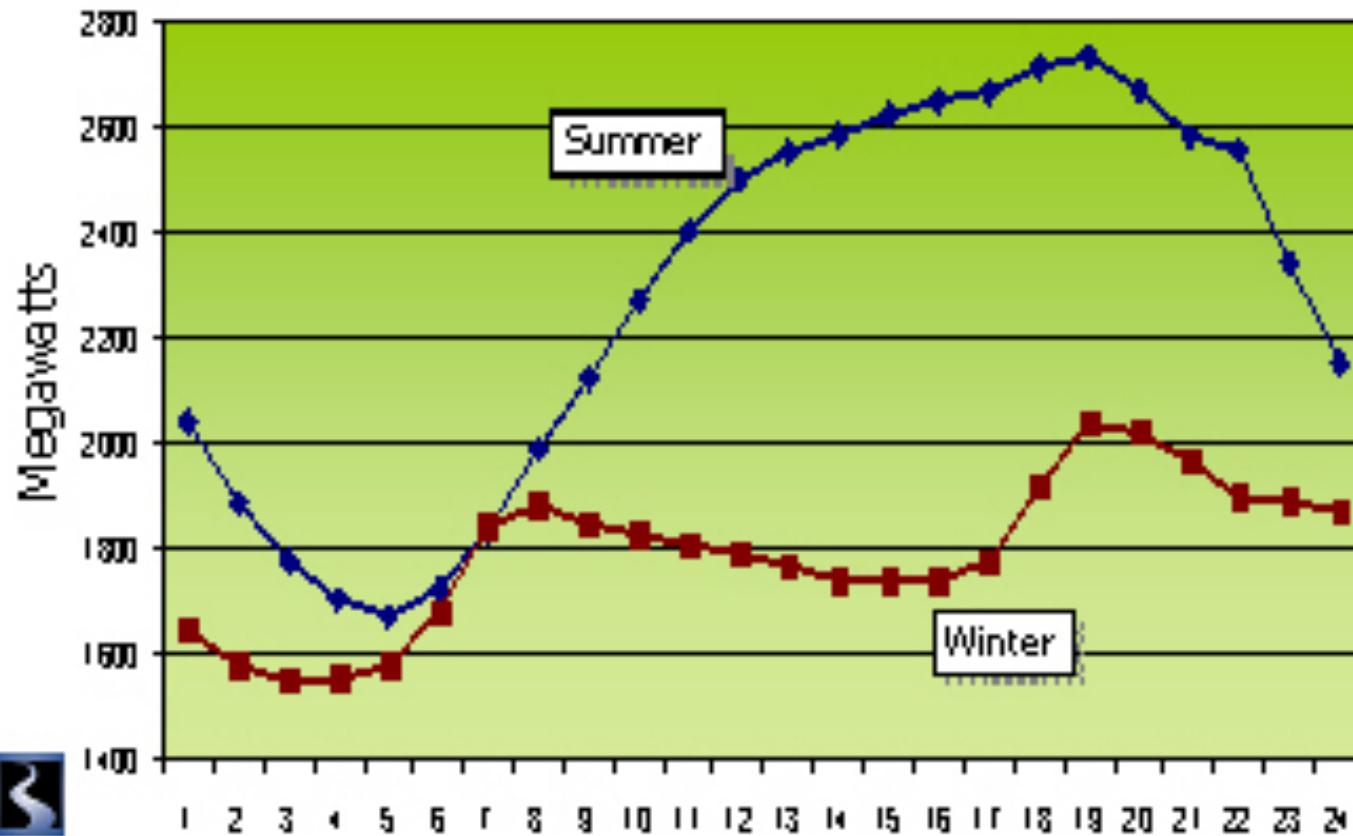
Affect on Electric Load

- Increases in PEV sales will increase electricity load – approximately 4,000 kWh
- The effect of this new load will depend on where/when PEV drivers charge
- Understanding customer's PEV expectations and purchase intentions is critical

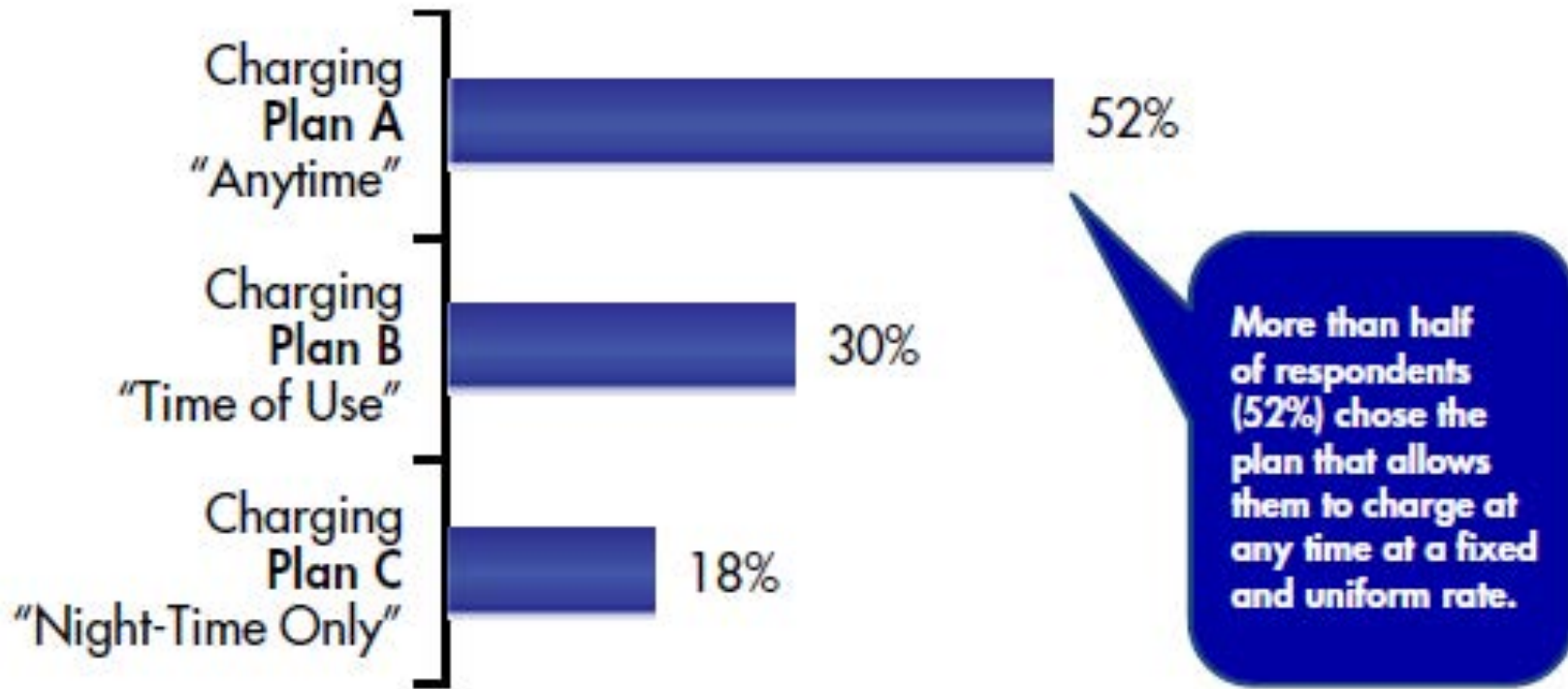


GRE's Current Load Curve

Daily electric usage patterns



Limiting Not the Answer



Source: EPRI, 2013



Time of Use Rates Available

PILOT PROGRAM - EV1

June-August	Mon	Tues	Wed	Thurs	Fri	Sat/Sun	Holidays*
9 pm - 8 am	5.85 ¢	5.85 ¢	5.85 ¢	5.85 ¢	5.85 ¢	5.85 ¢	5.85 ¢
8 am - 4 pm	11.544 ¢	11.544 ¢	11.544 ¢	11.544 ¢	11.544 ¢	5.85 ¢	5.85 ¢
4 p m - 9 pm	37.85 ¢	37.85 ¢	37.85 ¢	37.85 ¢	37.85 ¢	5.85 ¢	5.85 ¢
Other	Mon	Tues	Wed	Thurs	Fri	Sat/Sun	Holidays*
9 pm - 8 am	5.85 ¢	5.85 ¢	5.85 ¢	5.85 ¢	5.85 ¢	5.85 ¢	5.85 ¢
8 am - 4 pm	10.144 ¢	10.144 ¢	10.144 ¢	10.144 ¢	10.144 ¢	5.85 ¢	5.85 ¢
4 p m - 9 pm	37.85 ¢	37.85 ¢	37.85 ¢	37.85 ¢	37.85 ¢	5.85 ¢	5.85 ¢

*Holidays include New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day.

Time of Day Rate

Wholehouse Cost of Basic Service: \$9.50 per month (in lieu of General Service Cost of Basic Service)

**Electric Vehicle Charging:..... \$270 Rebate for installation of Time-of-Day meter

Energy Charge		Time	Day	Month
Peak Period Summer* (4%)	\$0.438/kWh	4 p.m. - 8 p.m.	M-F	June - Sept.
Peak Period Winter* (8%)	\$0.328/kWh	4 p.m. - 8 p.m.	M-F	Oct. - May
Intermediate Period* (38%)	\$0.093/kWh	8 a.m. - 4 p.m. 8 a.m. - 8 p.m.	M-F Sat/Sun	All Year All Year
Off Peak Period* (50%)	\$0.057/kWh	8 p.m. - 8 a.m	All Days	All Year

*Percent of hour during year

Infrastructure



great American
innovative love it green
technology smooth agile handling
fantastic well designed well engineered beautiful
high quality high tech America environmentally responsible
fun to drive efficient fun acceleration sleek
good acceleration well built environmentally friendly perfect
comfortable fuel efficient luxury
handles well extended range great looking
good looking quiet
amazing



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