

WE HAVE TECHNOLOGY. LET'S GO.

LET'S VIGURE OUT A WAY
TO CHARGE FOR SUNSHINES

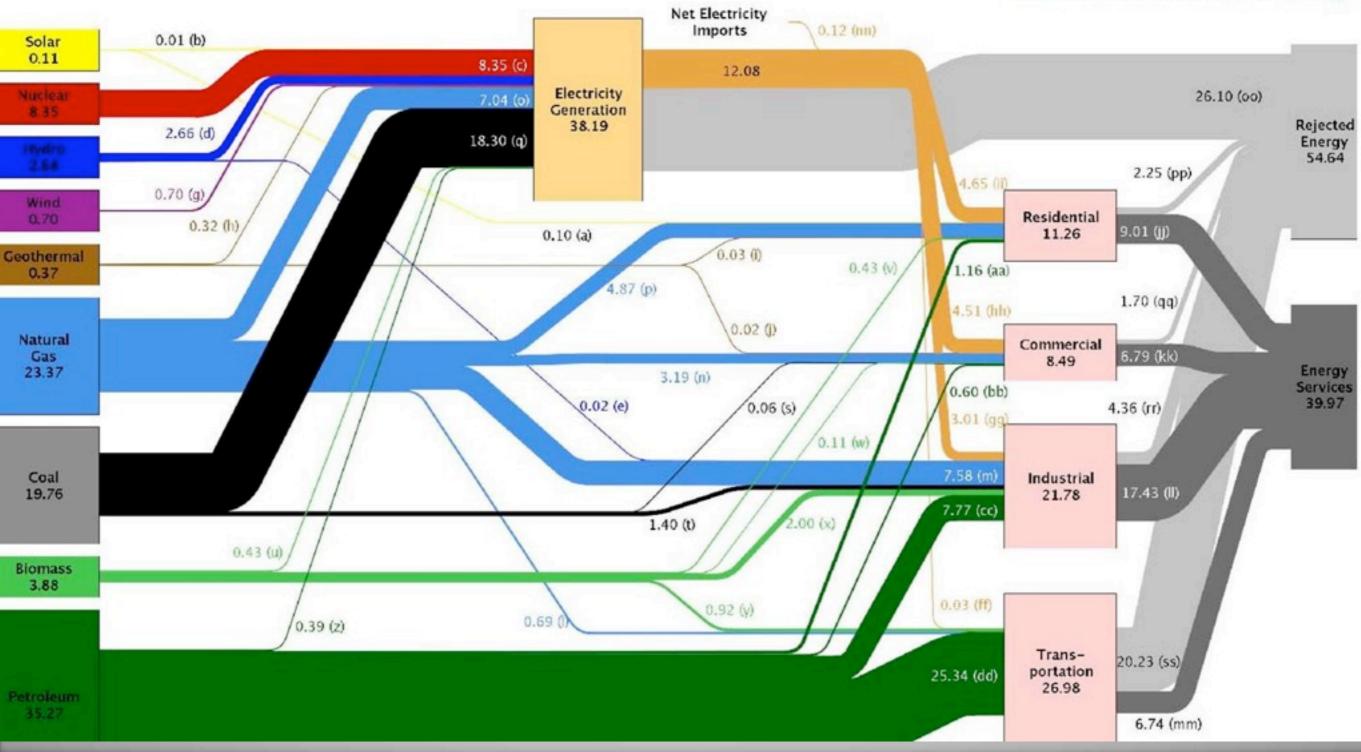
FIND OUT HOW EXISTING TECHNOLOGY IS HELPING TO MEET THE ENERGY CHALLENGE AT WWW.SHELL.US/LETSGO



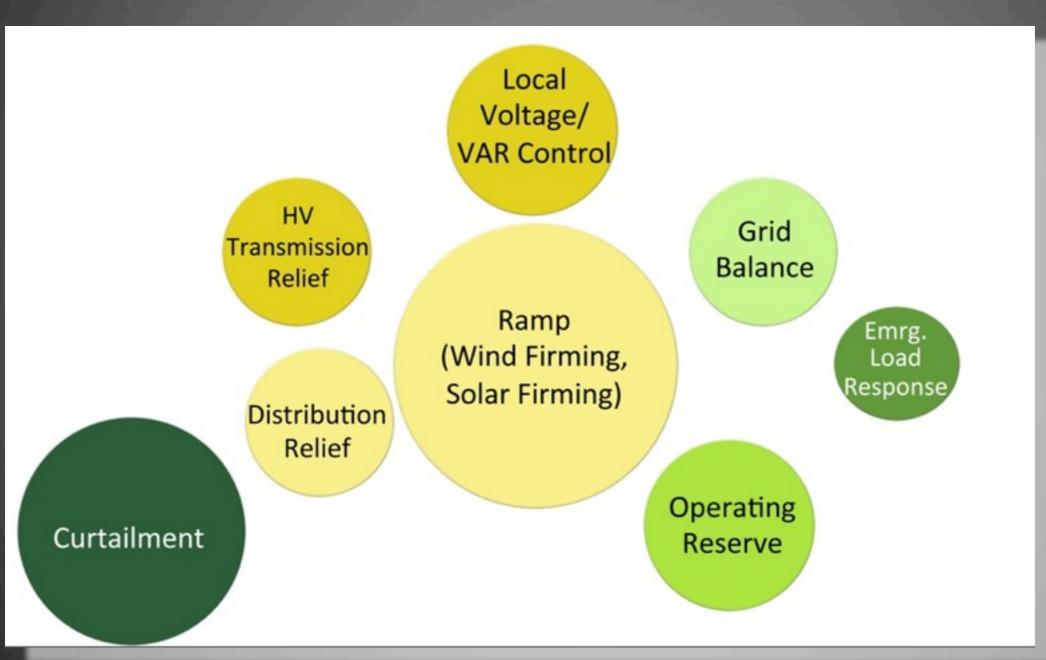


#### Estimated U.S. Energy Use in 2009: ~94.6 Quads





## Market Maturity for Demand-Side Assets to Participate

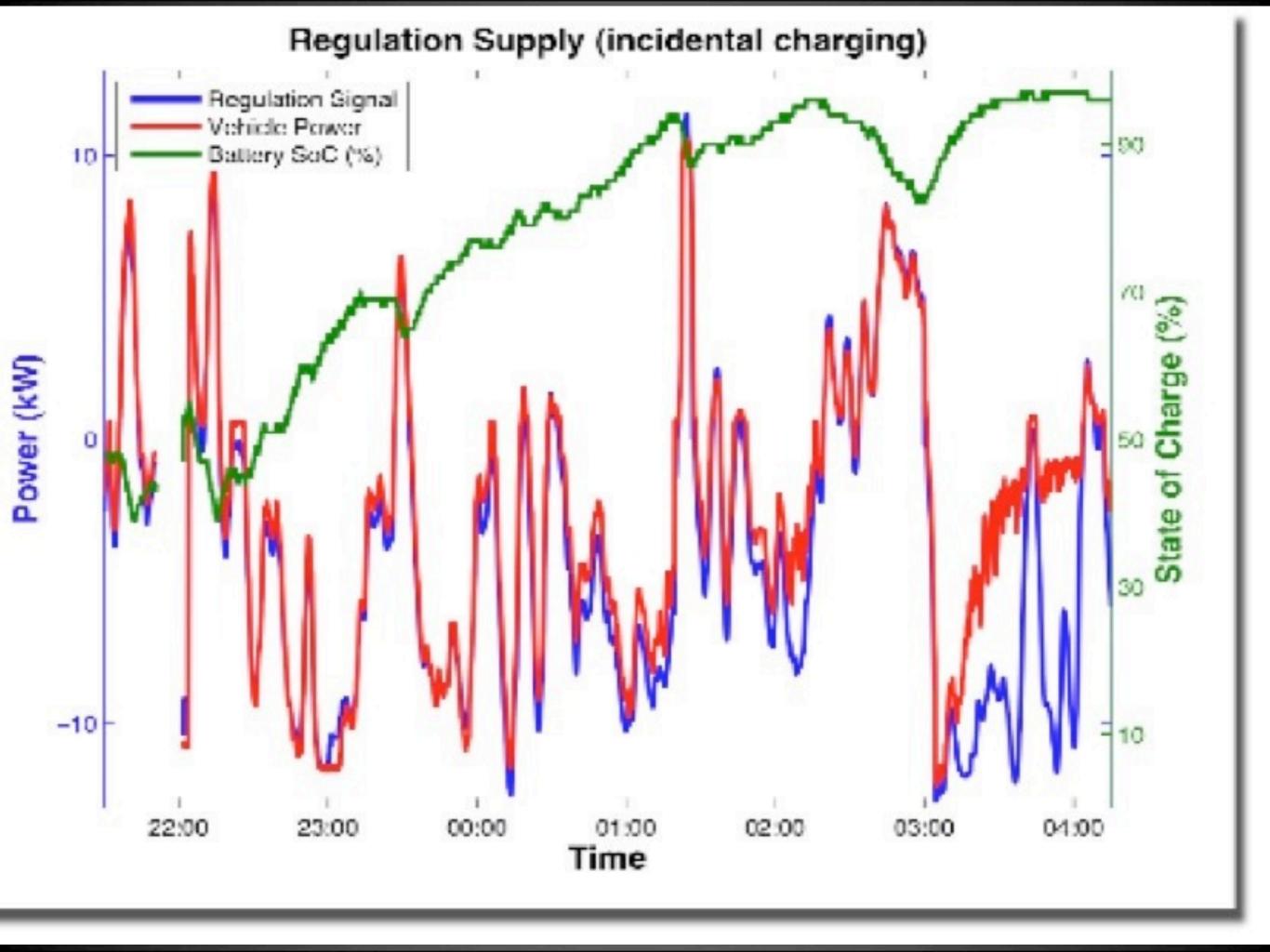


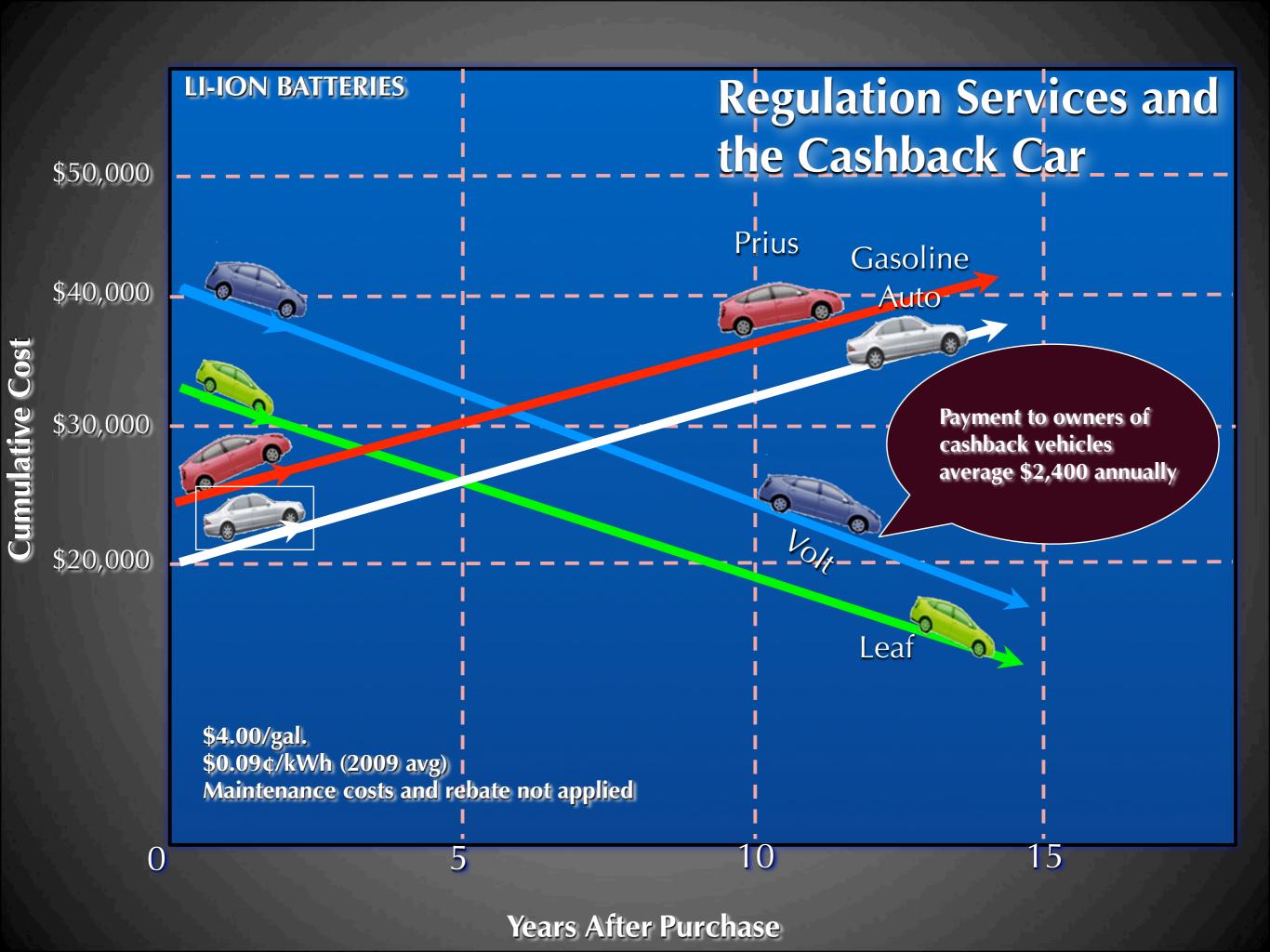
Size of Opportunity

**Speed of Response** 











## Transactive Load







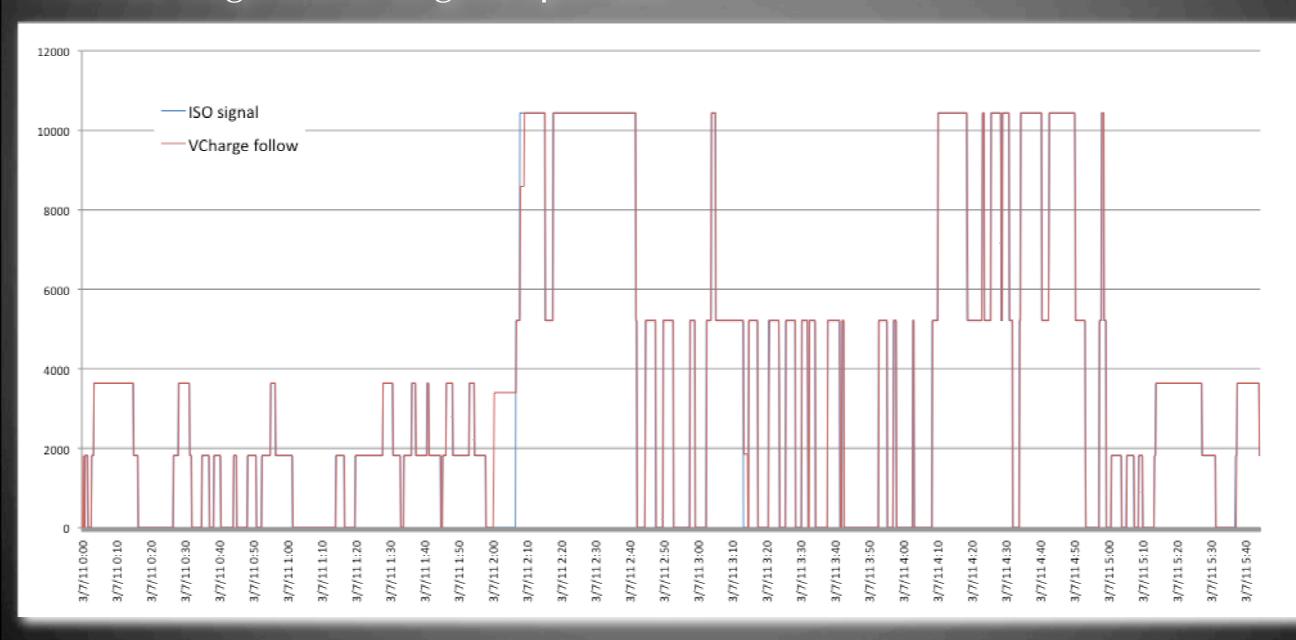
**Ice-based AC** 



EV's

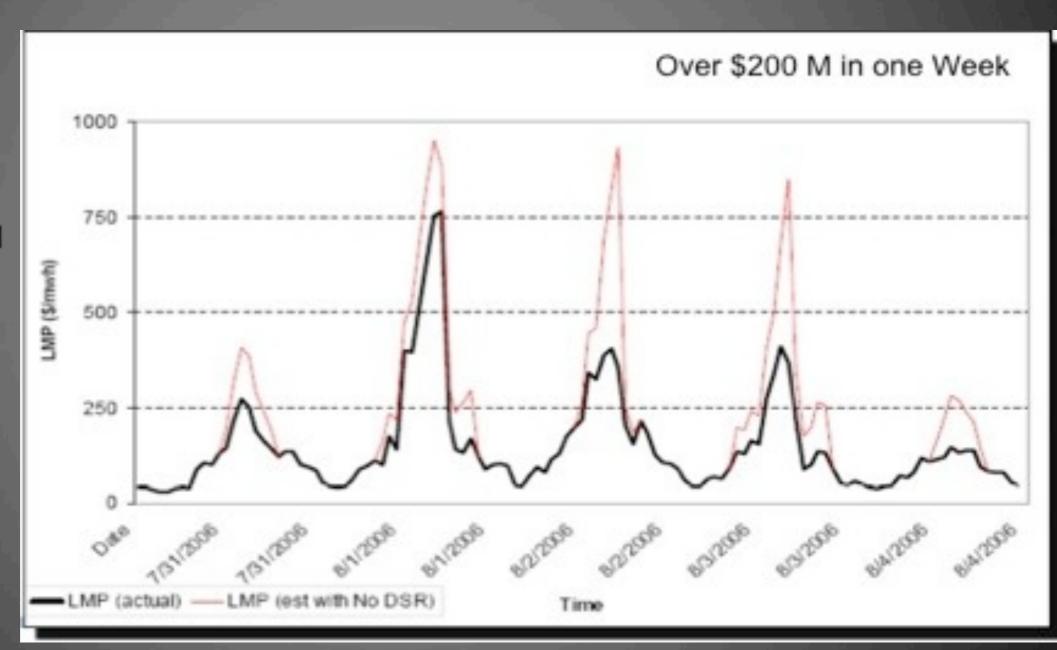
#### SmartBricks<sup>™</sup> Value Drivers

#### Provide Regulation to grid operator



#### Grid Benefits of Demand Response

- PJM Study- a 3% Reduction in Demand of Top 20 5hr Blocks in 5 Mid-Atlantic States Could Save \$280 Million annually
- Brattle Group- a 5% Reduction in Grid Peak Load (757 GW) Can Result in \$3 Billion Savings Annually, for PV Over 20 Yrs of \$31 Billion



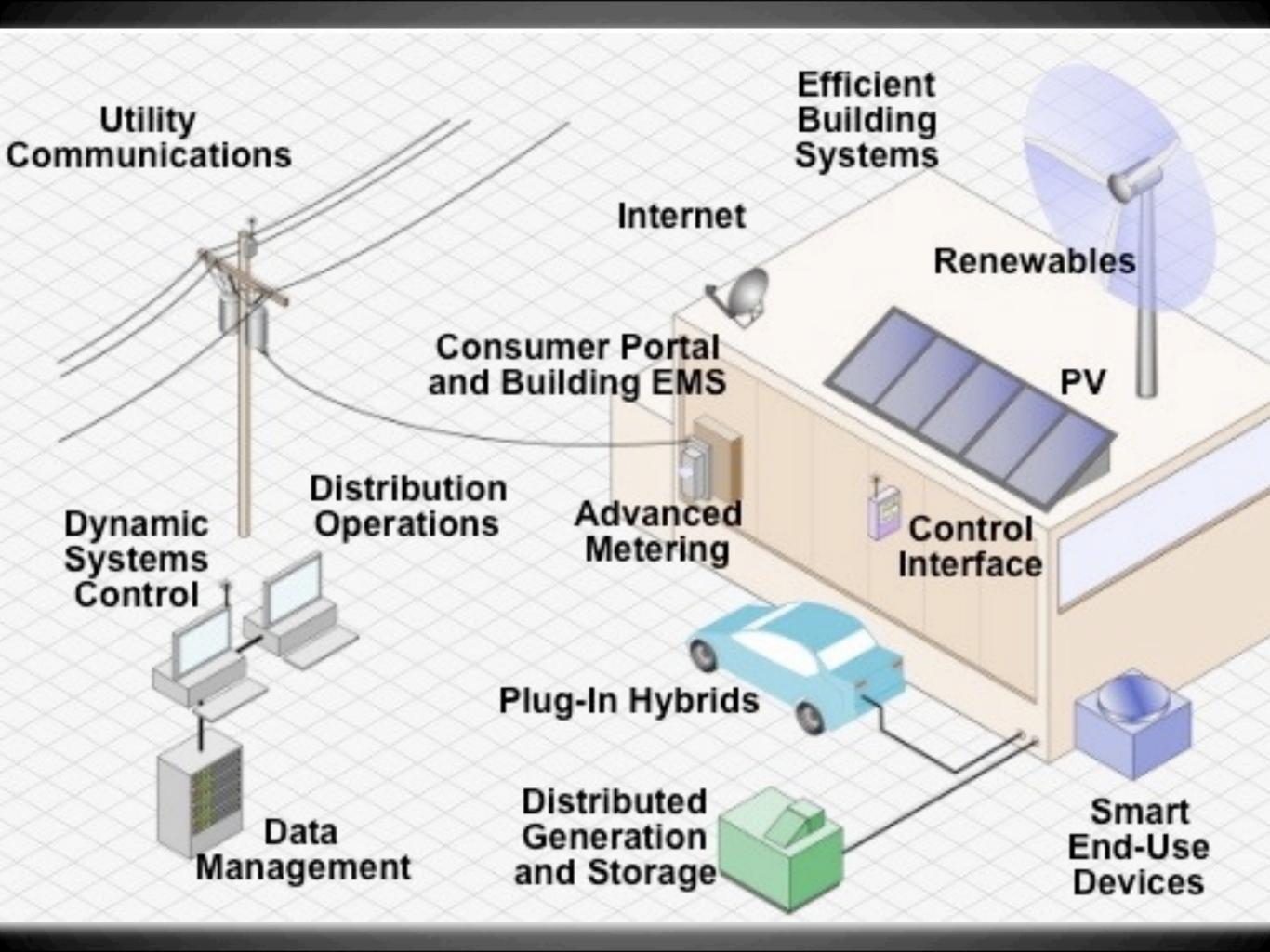


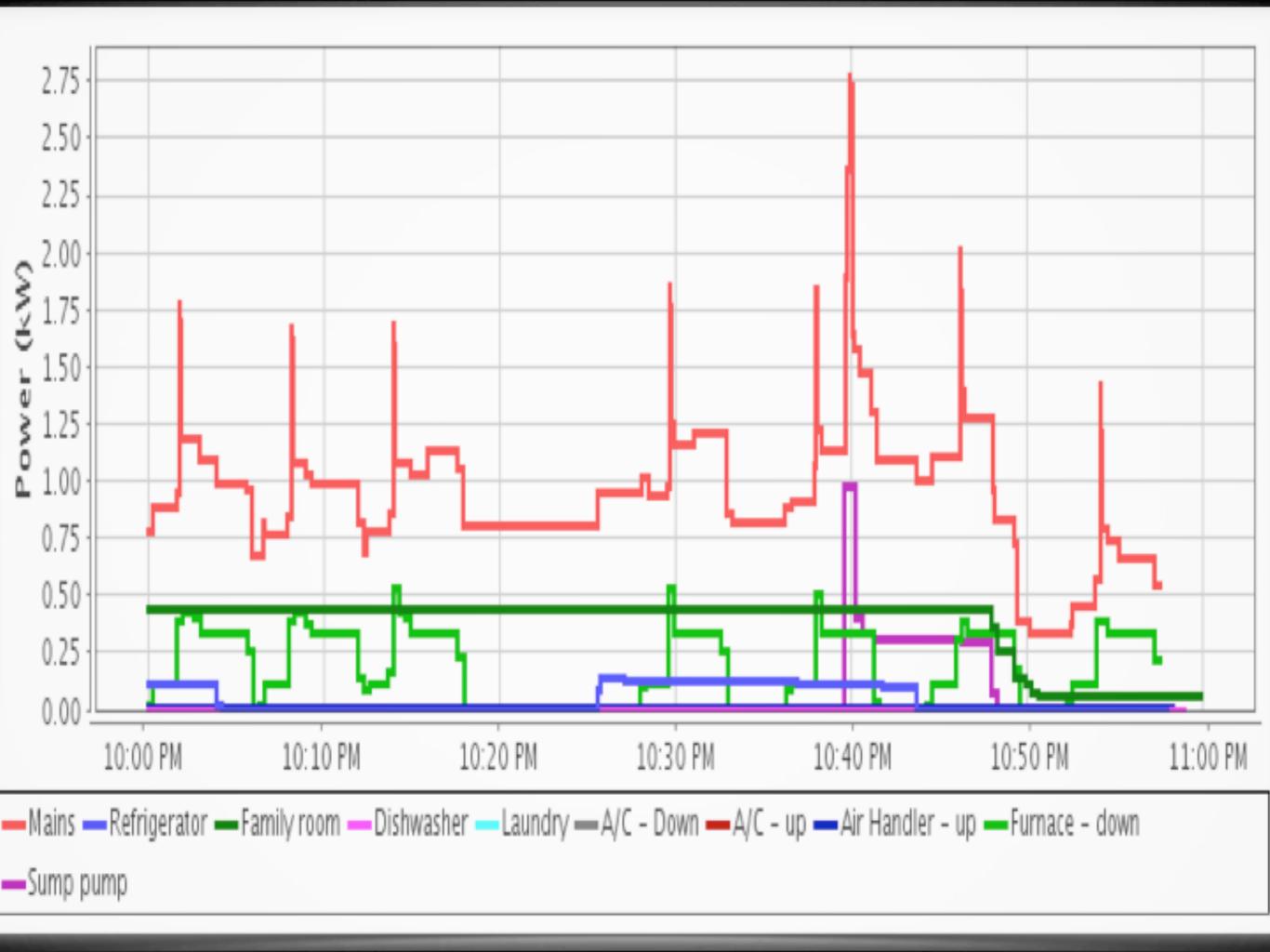












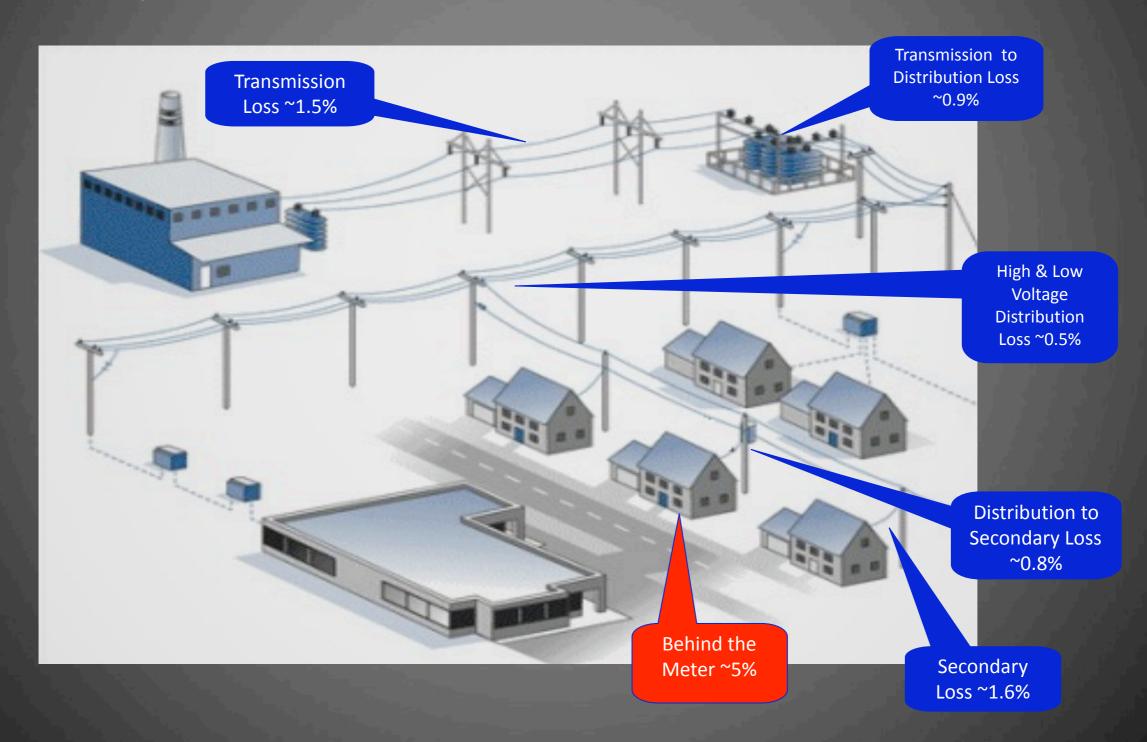


#### Dominion MicroGrid Vision

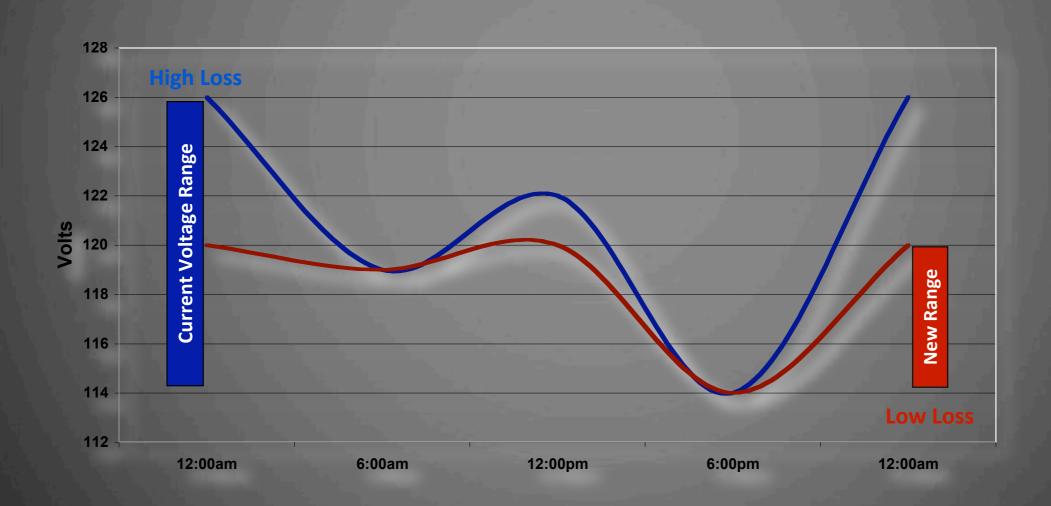
Direct Voltage Control **Dominion Substation E-Regional Transmission Grid Database Electrical GIS Operator (RTO) Based Control** System & Regional **Operations Center** Billing **Back Office** AMI Customer Military, Commercial, Industrial Microgrid Bills Dist Storage

# The Hunt for Transmission and Distribution Losses

2010 Electric System Loss ~ 10.3% Includes Transmission, Distribution and "Behind the Meter"



#### Precision Power: How it Works



### Google Electric Future

