# DEPLOYING A DR SOLUTION TO EVERY CUSTOMER

*NATIONAL TOWN MEETING ON DEMAND RESPONSE & SMART GRID*

*RICK LUNA*
*CPS ENERGY*

AFFORDABLE | RELIABLE | INNOVATIVE

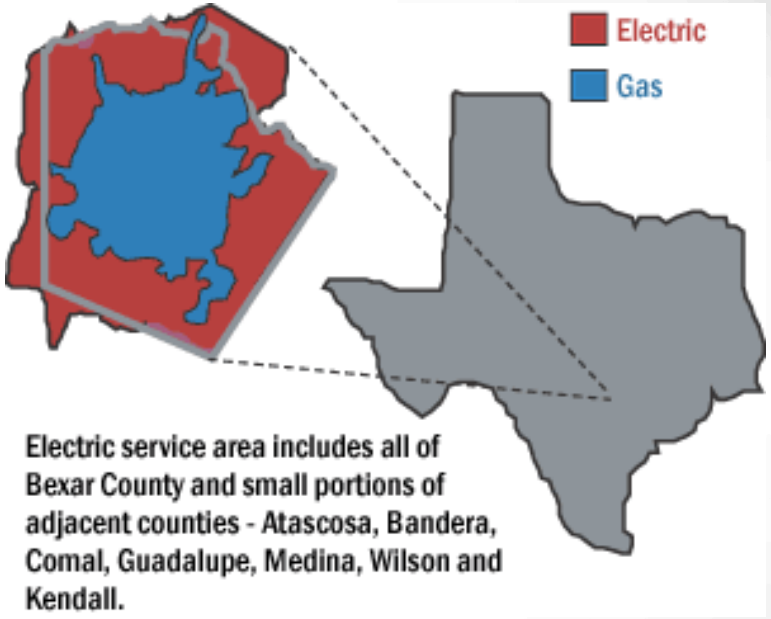
# CPS ENERGY

Nation's largest municipally-owned energy company providing both natural gas and electricity

We serve over 1 million customers in Bexar County and seven adjoining counties

- 728,000 electric customers
- 328,000 natural gas customers

Electric peak demand of 4,803 MW in 2013




Electric service area includes all of Bexar County and small portions of adjacent counties - Atascosa, Bandera, Comal, Guadalupe, Medina, Wilson and Kendall.

# DR…THE FIRST 10 YEARS

- CPSE launched DR in 2003 with Honeywell's Peak Saver program.
- Save for Tomorrow Energy Plan (STEP) approved in 2009
  - Ramped up DR/EE efforts with funding source through fuel adjustment
  - On track to reduce load growth by 771 MW by 2020.
- For summer 2014, expect150 MW of DR load participation
  - 100,000 residential customers providing ~70 MW
  - C&I makes up ~80 MW.






# TRADITIONAL DR MODEL

- CPSE's traditional role in DR :
  - Sole provider of DR services to our customers based on role as full service utility.
  - CPSE selects technology partners based on feasibility and cost effectiveness
  - CPSE markets programs to customers
  - CPSE or third party installs devices in homes and businesses.
  - DR events mainly focused around STEP goal of reducing peak load.

# EMERGING CHALLENGES

**Evolving customer preferences**

- Residential customers want choices around technology
- New service providers are marketing direct to residential customers

**Marketing**

- Limits to the free give-away model

**Economics**

- Cost-effectiveness of direct installs
- Need for more and faster DR resources

**Ramping MW reduction goals**



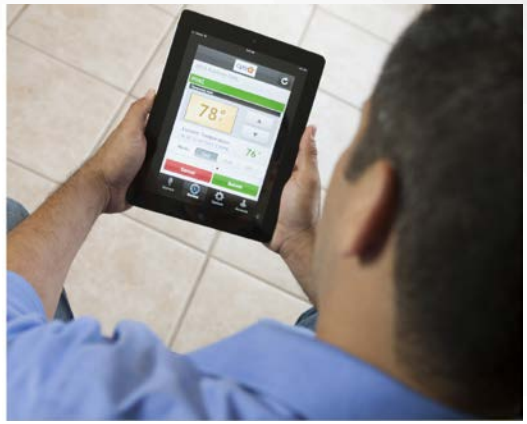






# EMERGING OPPORTUNITIES

- Growing residential customer acceptance of DR
- Increasing market value of load capacity
- Flood of connected devices hitting the market
- Retailers and product manufacturers growing recognition of the value of utility partnerships



# RETHINK DR STRATEGY

## Deploy a DR solution for every customer

- Forge partnerships with emerging technology providers
- Leverage emerging channels to broaden reach into mass markets
- Adopt technology to enable faster load shed
- Tailor incentives to engage/retain customers in DR programs



**Residential Central A/C**
- *Home Manager*
- *Smart Thermostat*
- *Nest Learning Thermostat*



**Large Commercial**
- *Traditional DR*
- *Emergency DR*
- *Automated DR*



**Residential Window A/C**
- *Cool Energy/Smart A/C Kits (ThinkEco)*
- *Kühl Window A/C (Friedrich)*




**Small Commercial**
- *Smart Thermostat*

# PARTNERSHIPS

- **Customer Relationships**
  - DR agreement remains between CPSE and customer
  - CPSE pays incentives direct to the customer
- **Economics**- CPSE retains ownership of load reduction
- **Co-Branding**- CPSE has right to review/approve co-branded marketing materials
- **IT Security**- Partners must comply with CPSE data security requirements
- **Privacy**- Safeguards for protection of customer data are in place

# AUTO DR

**Target Customers**

- Large multi-site customers with limited staff
- Customers with BMS system

**2013 Pilot Results**

- 9 sites providing 1.5 MW of DR
- Customers include hotel, corporate HQ, K-12 schools and university, city/county buildings

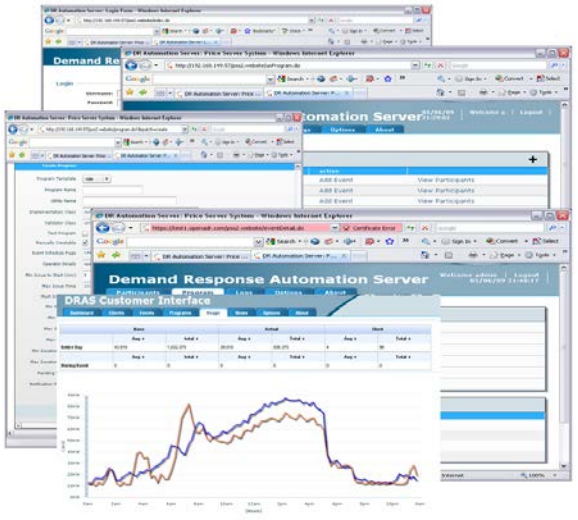
**Lessons**

- First customer is the hardest
- Security and customer control are key
- Able to load shed within seconds

**Full Launch**

- Partnering with Honeywell
- 60 sites over next 2 years



# WINDOW AC

- **Target Customers**
  - Customers with window ac units (~17% of CPS customers)
  - Older homes, weatherization participants
- **How it works**
  - Patterned on ThinkEco's success with CoolNYC program
  - During a DR event, the customer's programmed set point will be adjusted upwards a few degrees.
  - Customers can opt out at any time and return to normal settings.
- **Incentives**
  - Friedrich Incentive: a $100-$300 bill credit depending on unit size (includes energy efficiency rebate), a $30.00 end of season bill credit
  - ThinkEco Incentive: Enrollment Incentive: a free SmartAC kit and a $30.00 end of season bill credit.
- **Enrollment Goal**
  - 2,000 Units






# NEST THERMOSTAT

- **Target Customers**
  - Program launches June 2
  - Residential customers who currently own a Nest thermostat
  - Appeal to upper income, tech enthusiasts, DIY'ers who want to purchase a Nest Thermostat
- **How it works**
  - Nest's algorithms determine the optimal combination of pre-cooling, cycling, and setbacks during a DR event.
  - Customer can opt out at any time and return to normal settings.
- **Incentives**
  - Enrollment Incentive: a one-time $85 bill credit
  - Participation Incentive: a $30.00 end of season bill credit.
- **Enrollment Goal**
  - 5,000 customers for 2014



# THANK YOU