



# Residential Smart Thermostat Program

City of St. Charles



# St. Charles Residential Smart Thermostat Program

- IMEA Grant Program & Funding
- Existing IMEA Programs & Example
- Residential Smart Thermostat Program Details



# IMEA Energy Efficiency Grants

- Annual IMEA funded program, over \$120,000 a year, in our 5<sup>th</sup> year (\$858,135 total granted)
- Focus on reducing peak and total kwh consumption, saving over 8.6M kwh per year
  - If an average residential customer uses about 10,000kwh per year, this is the equivalent reduction of 860 homes
- Incentives for numerous City and commercial/industrial customer projects
  - Lighting projects/HVAC upgrades/Motor upgrades



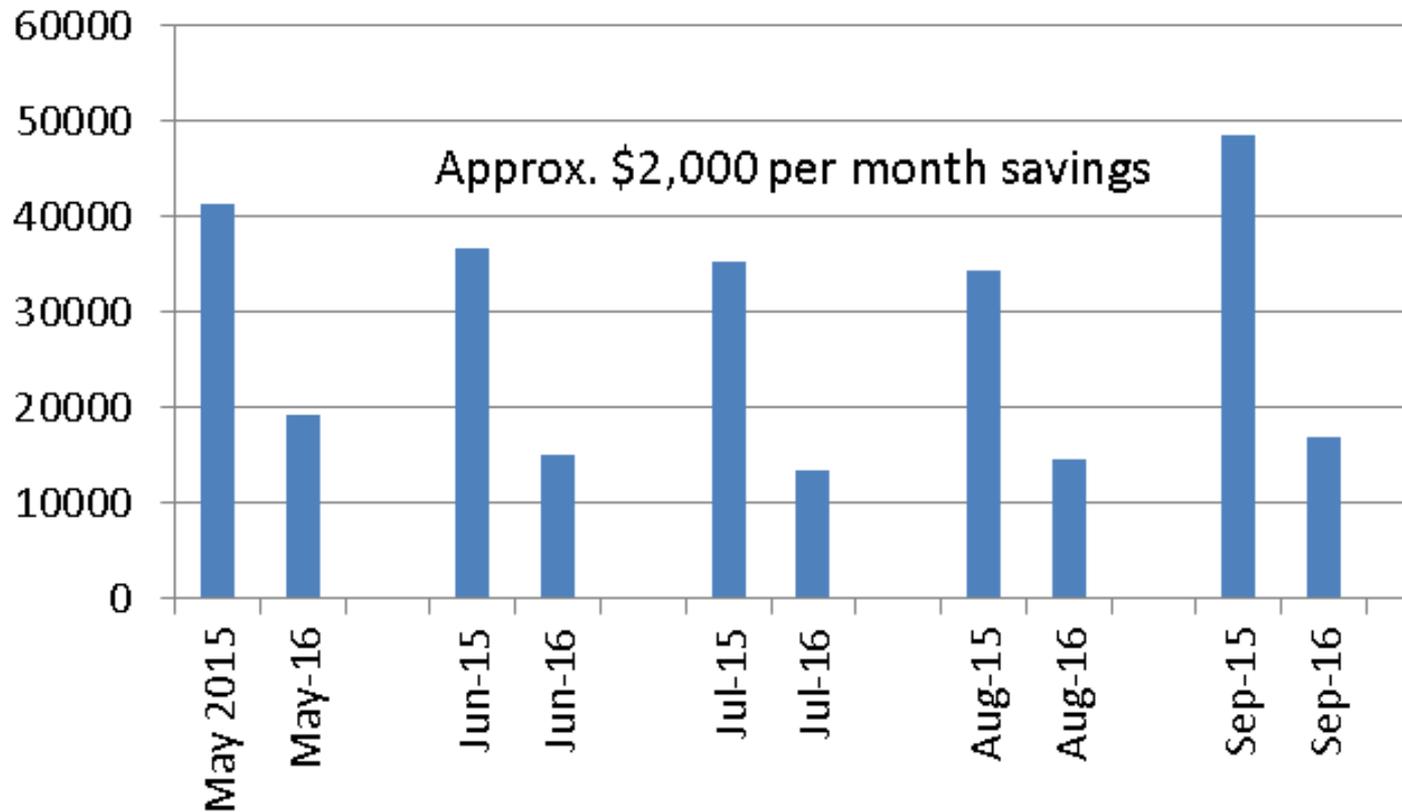
## IMEA Energy Efficiency Grant- Example

- First Street Parking Deck LED retrofit
- \$24,000 project
- After \$11,000 grant, City cost was \$13,000
- 60% energy savings = \$2,000 per month
- 6.5 month return on investment
- Lower expected maintenance on new lights



# IMEA Energy Efficiency Grants

## Parking Deck Energy Usage (kwh)





# IMEA Energy Efficiency Grants

- Current IMEA Grant program only includes commercial and industrial projects
- Residential customers have access to a separate Refrigerator Recycling Program
  - Old refrigerators will be picked up free of charge
  - Residents get a \$50 rebate
- Staff has worked with IMEA to obtain a \$10,000 grant for a City run Smart Thermostat program



# IMEA Energy Efficiency Grants

- What is a “Smart Thermostat”?
  - Wi-Fi connected
  - Able to be adjusted/monitored remotely
  - Learns patterns/adjusts accordingly
  - Knows when you are away using motion sensors
  - Able to provide reports/data
  - Able to be used to reduce consumption during peak hours



# Smart Thermostat Program Details

- Residential customers who buy and install a Nest smart thermostat will get a \$50 credit on their utility bill
  - Matches what ComEd is offering
  - Positions the City to be able to implement what is called a demand response program
  - Our \$10,000 funding will allow 200 customers to participate
  - If successful and popular, can expand the program



# Smart Thermostat Program Details

- Why?
  - Industry leaders are very active in these types of customer engagement programs
  - The Nest system, which ComEd uses, has the ability to modify settings on air conditioning systems during peak hours and reduce our City peak
  - The system uses a pre-cooling algorithm so that customers typically will not notice the difference
  - Even if we never use the demand response program, smart thermostats do hold a high probability of energy savings for our customers
  - Good for our customers and the utility



# Smart Thermostat Program Details

- When?
  - Plan to start April 1, 2017
  - Applicable to customers who purchase and install a Nest at their residential home after April 1, 2017



## Green Initiatives

- Questions or Comments?