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# **UPDATE: Energy Consumption Baseline and Alternative Energy Assessment**

# Summary of Findings by ElectriTech

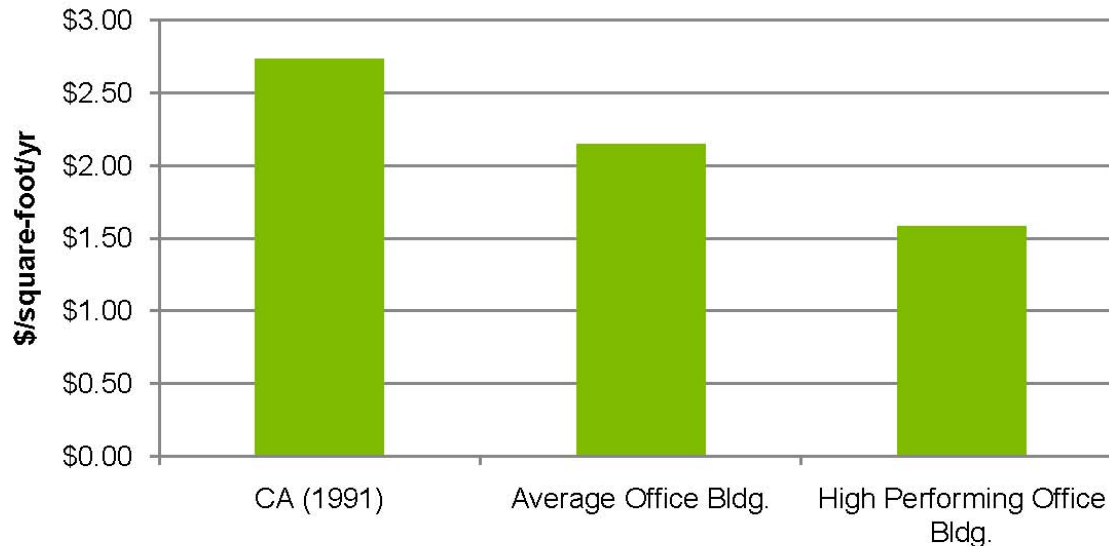
Audit conducted in 2010 based on 2008 Tollway data

- Tollway has approximately 700 utility accounts
- Tollway is a large energy consumer – approximately \$5.1 million spent annually for gas and electric
- Energy consumption has not historically been tracked, analyzed or managed
- There are many opportunities to invest in energy efficiency improvements
- Tollway has potential to lower utility rates - best rates require good credit and timely payment
- Alternative energy applications are viable options



# Baseline Energy Audit: Comparative Data

## Central Administration Electricity and Natural Gas Cost

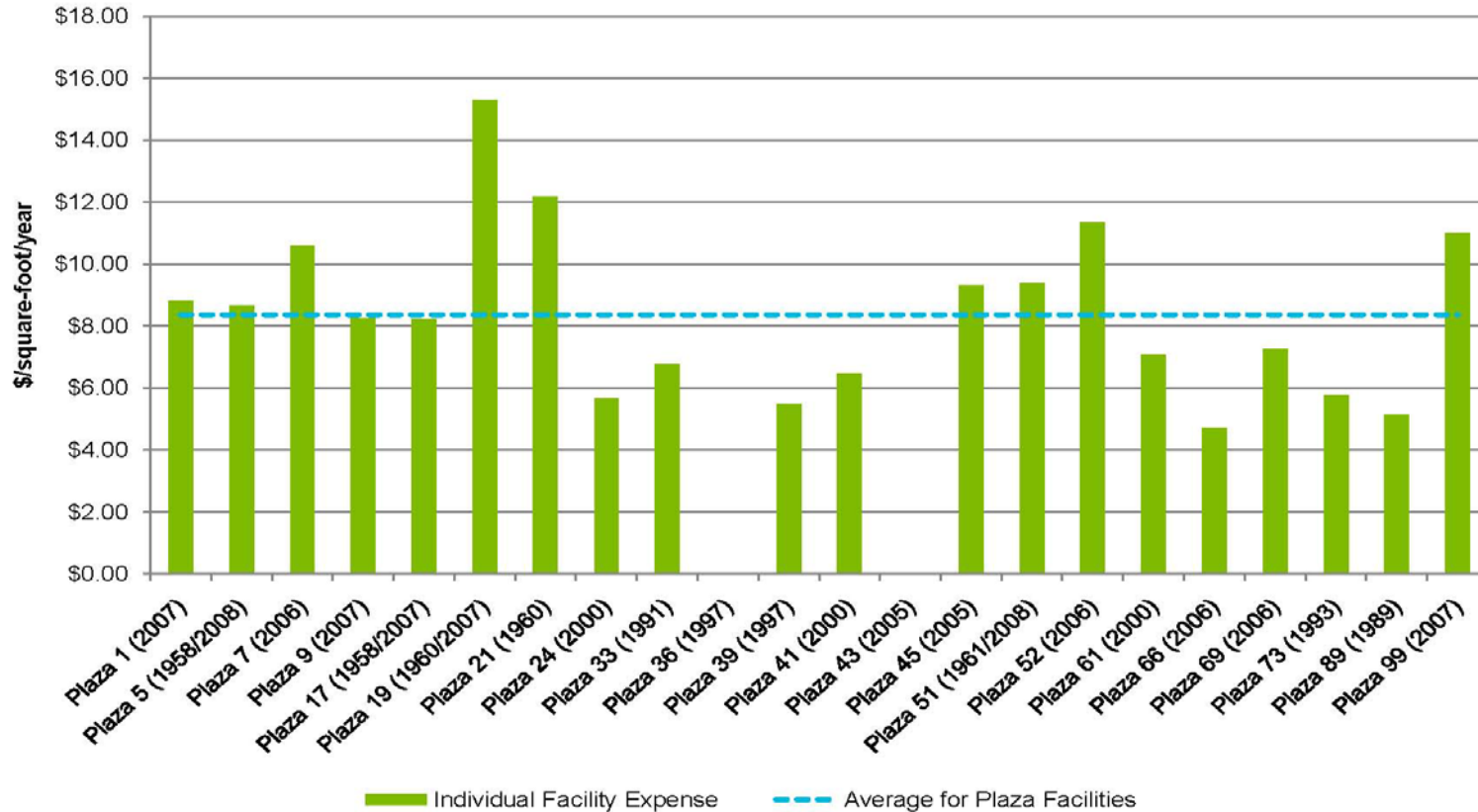


- More than \$600,000 in annual electricity and natural gas expense
- Improvements should yield large annual savings
  - i.e. 15 percent improvement in energy = \$90,000 per year



# Baseline Energy Audit: Comparative Data

## Plaza Facility Electricity and Natural Gas Cost



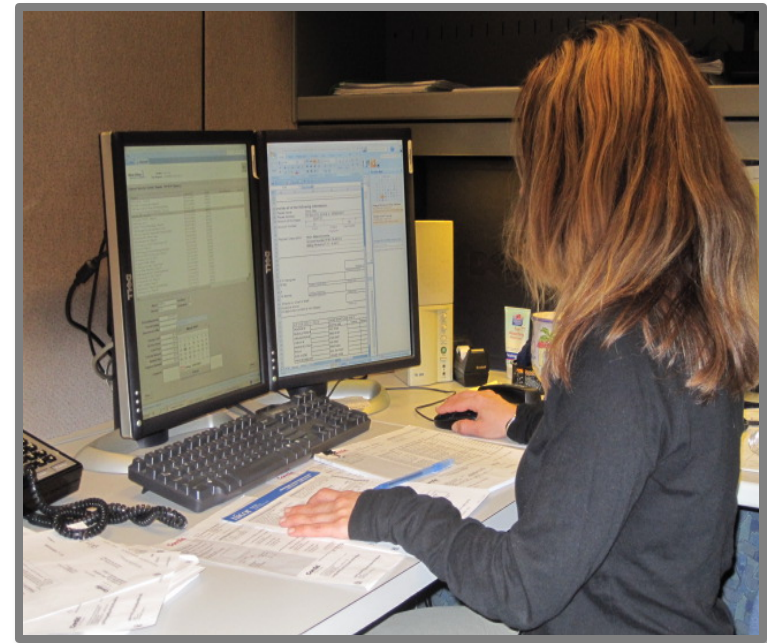
# ElectriTech Recommendations

- Develop a system to track and monitor billing information
- Authorize energy audit for 2009 and 2010
- Define internal responsibility for procurement and usage
- Develop a policy for operations and construction
- Review energy procurement process
- Perform energy efficiency analysis for Tollway facilities
- Implement energy efficiency improvements that have an acceptable payback
- Install a demonstrative wind and/or solar application



# Tollway Action: Database Development

- Allows staff to track and audit information using calendar year 2008 to present
  - ❑ Costs and payment information
  - ❑ Copies of issued checks and utility agreements
  - ❑ Energy usage by account
  - ❑ Facility information and GPS coordinates



# Tollway Action: New Policy and Procurement Review

- Assigned staff to database management and bill process
- Reviewed state energy procurement process
- Investigated the feasibility of independent power procurement
- Currently drafting an environmental and energy policy statement



# Tollway Action: Efficiency Upgrades

- Energy efficiency initiatives prioritized and many projects are underway
- Projects include:
  - Building automation system upgrades
  - HVAC system rehabilitation
  - CA window tinting
  - CA interior lighting upgrades
  - Temperature controls and setbacks





# Tollway Action: Alternative Energy Commitment

- Argonne National Laboratory partnership to investigate solar panel performance
- Green interchange evaluation to combine solar, wind and/or other demonstration projects
- System-wide evaluation and specification development to select appropriate alternative energy applications





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**THANK YOU**