

# SMALL BUSINESS DIRECT INSTALL PROGRAMS

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 **Nexant**



**WHAT AND WHY?  
HOW?  
DID IT WORK?**

# NEXANT, INC.

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## ■ Energy Efficiency & Carbon Management (EE&CM)

- Market Characterization
- Market Potential Studies
- DSM Program Planning, Design, Administration Implementation
- Energy Auditing, Commissioning, Recommissioning, Energy Modeling, LEED, M&V
- Impact Evaluations
- Database Management Software
- Customer Service and Rebate Processing



## WHAT IS A SMALL BUSINESS DIRECT INSTALL PROGRAM?

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- Seeks to provide energy efficiency services and education to harder to reach small business market
- Provides energy assessment for small commercial facilities
- Facilitates the direct retrofit installation of energy efficiency measures through program-ready contractors
- Helps to minimize customer effort and reduce financial barriers by providing direct services and incentives

# TYPICAL PROGRAM PROCESS

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Program Outreach

Energy On-Site Assessment

Customer Financing (if applicable)

Measure Installation

Measurement & Verification

# PROGRAM OUTREACH OPTIONS

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- Pull (lower cost and likely lower participation)
  - Direct Mailer
  - Bill Inserts
  - Website Information
  - Chamber of Commerce
- Push (higher cost and higher participation)
  - “Door to Door” or “Street Sweeps”
  - “Contractor in the area” Announcements
  - Utility Customer Service must be aware of activities to confirm legitimacy



# DEFINING CUSTOMER ELIGIBILITY

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- 'Small Business' eligibility is often established by peak demand or annual energy consumption
  - Could include premise size or age criteria
  - Target businesses that do not have formal or significant budgets for energy efficiency and/or equipment improvements or are not candidates for ESPC.
- Program can target business sectors, such as:
  - Retail
  - Service
  - Restaurant
- Consider avoiding businesses with high churn rate, where code requirements may require energy efficient measures and opportunities are minimal.

# ENERGY ON-SITE ASSESSMENT

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- Important “first” interaction between utility representative and customer needs to balance:
  - Time commitment from customer
  - Invasiveness vs Thoroughness
  - Education of customer on holistic energy efficiency opportunities; home and business
- Conduct on-site audit to determine program and measure installation options and eligibility



# ENERGY ON-SITE ASSESSMENT

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- Utilize standard survey instruments for assessment completeness
  - Consistent auditing forms
  - PDA's

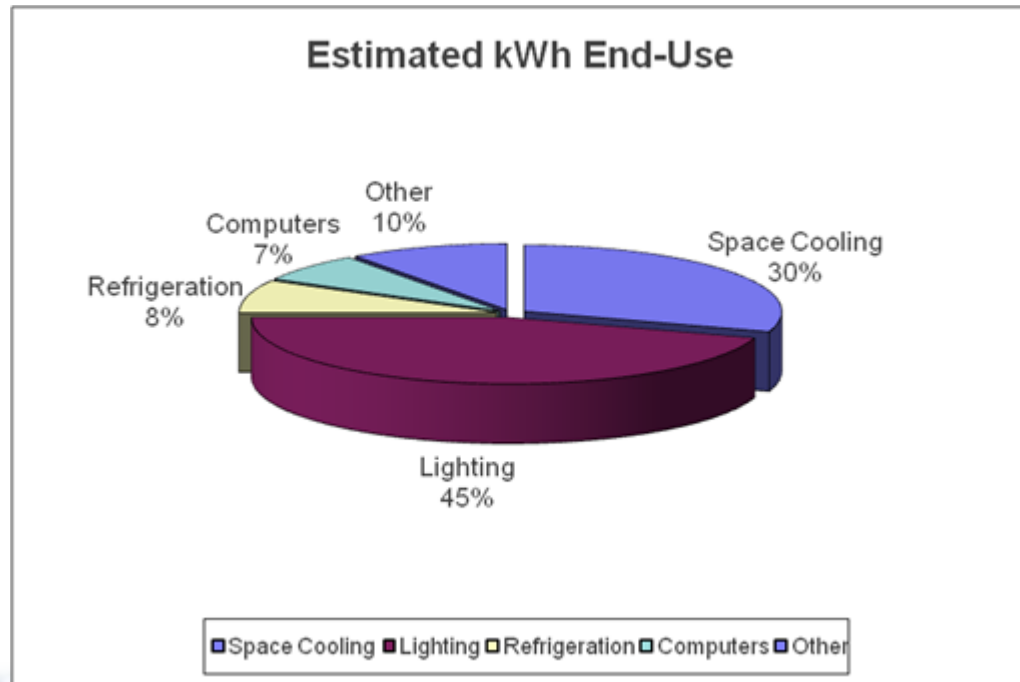


- Establish a customer installation cost and work order to complete project and identify simple payback
  - Establish deemed measure performance for uniformity and simplicity

# ENERGY ON-SITE ASSESSMENT

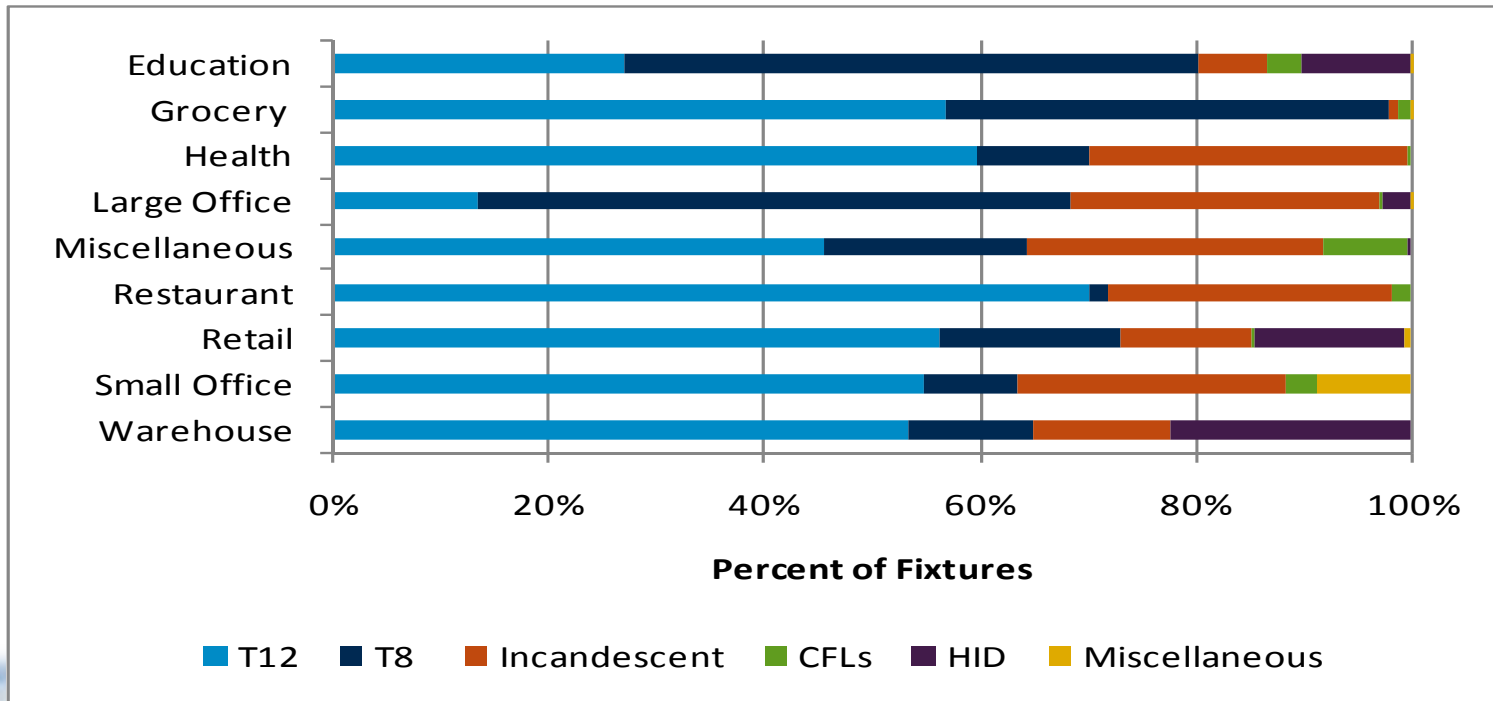
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- Optional: Provide customer with an understanding of premise energy consumption
  - Utilization of on-line report printing can keep customer engaged in the program



# ENERGY ON-SITE ASSESSMENT

- Optional: Gather information about saturations of existing:
  - Commercial sector composition
  - End-use prevalence
  - Equipment efficiency saturations not in program



# ENERGY ON-SITE ASSESSMENT: EFFECTIVE MEASURES

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- Program should include measures that are proven to be cost-effective ( $TRC > 1.0$ ) and relatively simple to install
  - Fluorescent Lighting
  - Lighting Controls
  - LED exit signs
  - LED signs
  - HVAC tune-up
  - Programmable Thermostats
  - Refrigeration
    - Gaskets and Insulation
    - Door Closures
  - Water Heating
    - Equipment upgrade
    - Pipe Insulation



# CUSTOMER FINANCING

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- Several incentive and financing options
  - No cost to customer for measure installations up to \$1,000, \$1,500, even \$2,500!
    - Customer can elect to install measures above no cost thresholds. Utility can provide incentives for projects exceeding no cost threshold.
  - Customer funds 20% to 30% of installation costs
    - Optional zero-percent financing option recovered through energy bill payments
  - Tie-in with existing utility incentives
- Define a stream-lined cost proposal to customer and easy to follow participation process



# MEASUREMENT & VERIFICATION

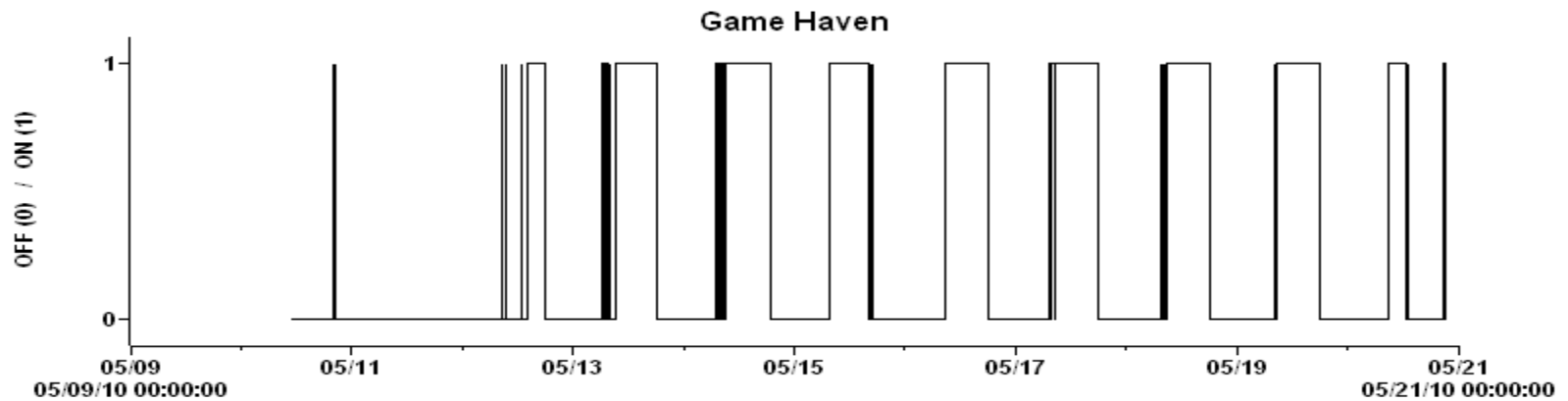
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- Conduct inspections on small sample of projects to confirm proper installation procedures
- Provide higher sampling rates for energy efficiency measures that have higher uncertainty of savings
  - Savings from thermostats and lighting controls can be defeated.
  - CFL saving persistence can be lower.
- Reduce sampling rates for measures that have low uncertainty of savings, such as
  - Fluorescent lighting
  - LED exit signs
- Consider baseline inspections to verify savings.
- Lighting loggers to determine operating hours can be useful to calibrate deemed savings.



# LIGHTING LOGGER DATA

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# EVALUATION LESSONS LEARNED

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- Program included:
  - Linear fluorescent measures
  - CFL measures
  - LED exit signs
  - Water heating aerators
  - Water heating insulation
- Up to \$1,000 of no cost installed measures
  - Customer can purchase program measures for 100% of measure installation cost over \$1,000
- Program participants could not participate in other utility DSM programs for 2 years
- Program participation percentages:
  - 99.5% linear fluorescent
  - 30% CFL measures
  - 16% Exit signs
  - 1.5% Water heating measures





# EVALUATION LESSONS LEARNED

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- 2,420 kWh saved per customer
- Average implementation cost was \$1,008
  - 25% exceeded no cost cap
- Evaluated SBDI program had TRC = 2.30, PAC = 1.34
- Evaluated Net-to-Gross is 95%
- Program had an evaluated peak demand coincidence of 81%
- Operating hours for small businesses were lower than California DEER deemed operating hours, 80% of deemed values
- Baseline equipment installation tracking can be difficult with many possible equipment types
  - In some cases like for like installations have occurred
- CFL measures can have poor persistence



# SBDI PROGRAM BENEFITS

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- Reducing overhead costs for small businesses!
- JOBS, JOBS, JOBS
  - Program has measurable impact on job creation
- High incentives can lead to high participation in hard to reach market
  - Buoy DSM portfolio targets when CFL baselines increase
- Proper program design can have TRC and PAC over 1.0.



**QUESTIONS?**