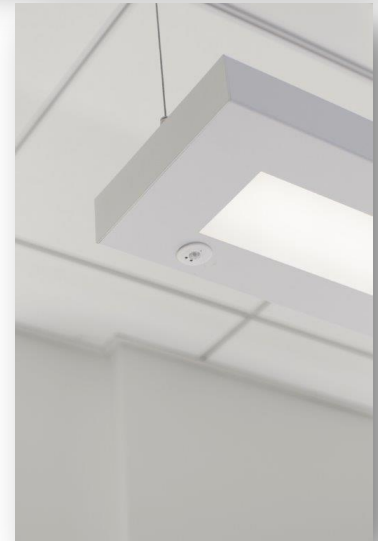


## #4 – PACIFIC TOWER

- Measures installed
  - Air-to-water heat pumps, VFD on chiller, demand-controlled ventilation in all zones, LEDs with controls integrated to HVAC and OS, tenant engagement
- Status
  - Completed renovation in 2016
  - September 2016
    - Reached 75% occupancy
    - Performance period begins!



## #5 – VIRTUAL AUDIT RFP

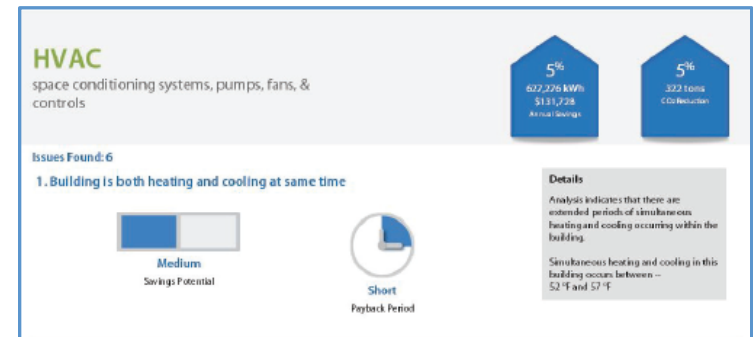
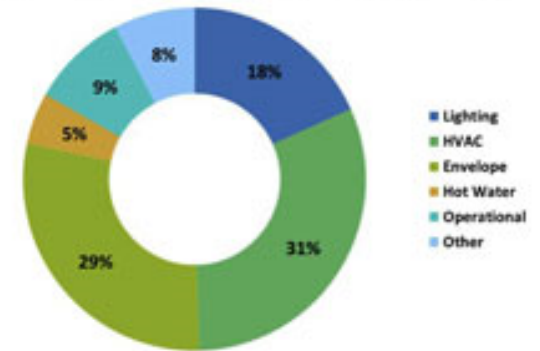
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- City of Seattle tune-up ordinance
  - Compliance staged
    - 200k sf 2018
    - 50k to 70k sf by 2021
  - DOE grant awarded
    - “Tune-up Accelerator”
    - Target buildings between 50k to 100k
- SCL Pilot to support Tune-up Accelerator
  - ~ 60 small and medium rate customers
    - Located in the “downtown network”
    - Currently have active interval meters

# #5 – VIRTUAL AUDIT RFP

- Virtual audit reports
  - Based on historical interval data
  - Identify energy uses
  - Make recommendations
  - Provide on-going monitoring and feedback
- Incentives
  - Report and monitoring provided at no cost
  - Customer paid for verified O&M savings
  - Capital upgrades through existing utility programs

Total Savings Opportunity by Category (MBtu)



# GENERAL FINDINGS

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- Savings can be seen at the meter!
- Managing the data can be difficult
  - Quality/reliability of data sources
- Industry not as mature as expected
  - Tools and techniques
  - Awareness/application of ASHRAE Guideline 15 (confidence and uncertainty)

# OPEN QUESTIONS

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- Savings attribution - are we paying for savings?
  - Impact of energy codes
  - Fuel switching
  - Change in use/occupancy
- Is it reportable and what is auditable documentation?
  - How is cost-effective defined
    - No measure attribution
    - No documentation of “measure cost”
  - What can we count towards BPA? Towards I-937?
    - Can’t differentiate between Capital, Operational, and Behavioral
    - How do you keep track of market penetration or conservation potential?
    - How do we incorporate the savings into our IRP?
- What is the best incentive structure?
  - Fixed/ rolling baseline
  - Term of performance
  - Optimal incentive rate





# CITY LIGHT

## OUR VISION

To set the standard—to deliver the best customer service experience of any utility in the nation.

## OUR MISSION

Seattle City Light is dedicated to exceeding our customers' expectations in producing and delivering environmentally responsible, safe, low-cost and reliable power.

## OUR VALUES

Excellence, Accountability, Trust and Stewardship.

