LAKE UNION BUILDING

• Building
  o 7 story office building
  o Built in 1970
  o All-electric
  o 2,250,000 kWh/yr
  o EUI = 81 kBtu/sf
  o Energy Star rating of 66

• Energy Services
  o MacDonald Miller
LAKE UNION BUILDING

• Efficiency measures
  o HVAC control system overhaul
    • Control system hardware and software
    • Installation of isolation dampers and active motor control for building pressurization control
  o Electro-chromatic glazing
    • Variable tinting characteristics via controlled signal
LAKE UNION BUILDING – PRELIMINARY RESULTS

~20% Reduction
#3 - BULLITT CENTER

- **Living Building Challenge**
  - Net Zero
    - Highly Energy-Efficient Design
    - 244kW Solar Array

- **MEETS pilot**
  - Addresses deep-efficiency obstacles through a financial transaction structure
    - Performance-based payments
BULLITT CENTER PERFORMANCE

Bullitt Center Energy Accounting

Baseline EUI = 56 kBTU/ft²/yr

Actual EUI = 12 kBTU/ft²/yr

Electricity, kWh

SCL Power Used
Solar Used by Bullitt
Solar to SCL
Mtr’d EE
DeltaMeter Baseline
Bullitt Center Use
Net Meter
#4 – PACIFIC TOWER

- Partial renovation of historic building with change in occupancy
  - Amazon -> now State of Washington
  - Offices -> now education
  - 16 floors; 225,000 sf

- Built 1932, numerous additions and past renovations

- First building permitted under “Operating Energy Alternative”
  - Code EUI = 120% of reference model
  - Code kWh = 4,050,962 kW/year
  - 3 years to hit code after 75% occupancy
  - **Goal = 21% below code (850,000 kWh)**