

# LAKE UNION BUILDING

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

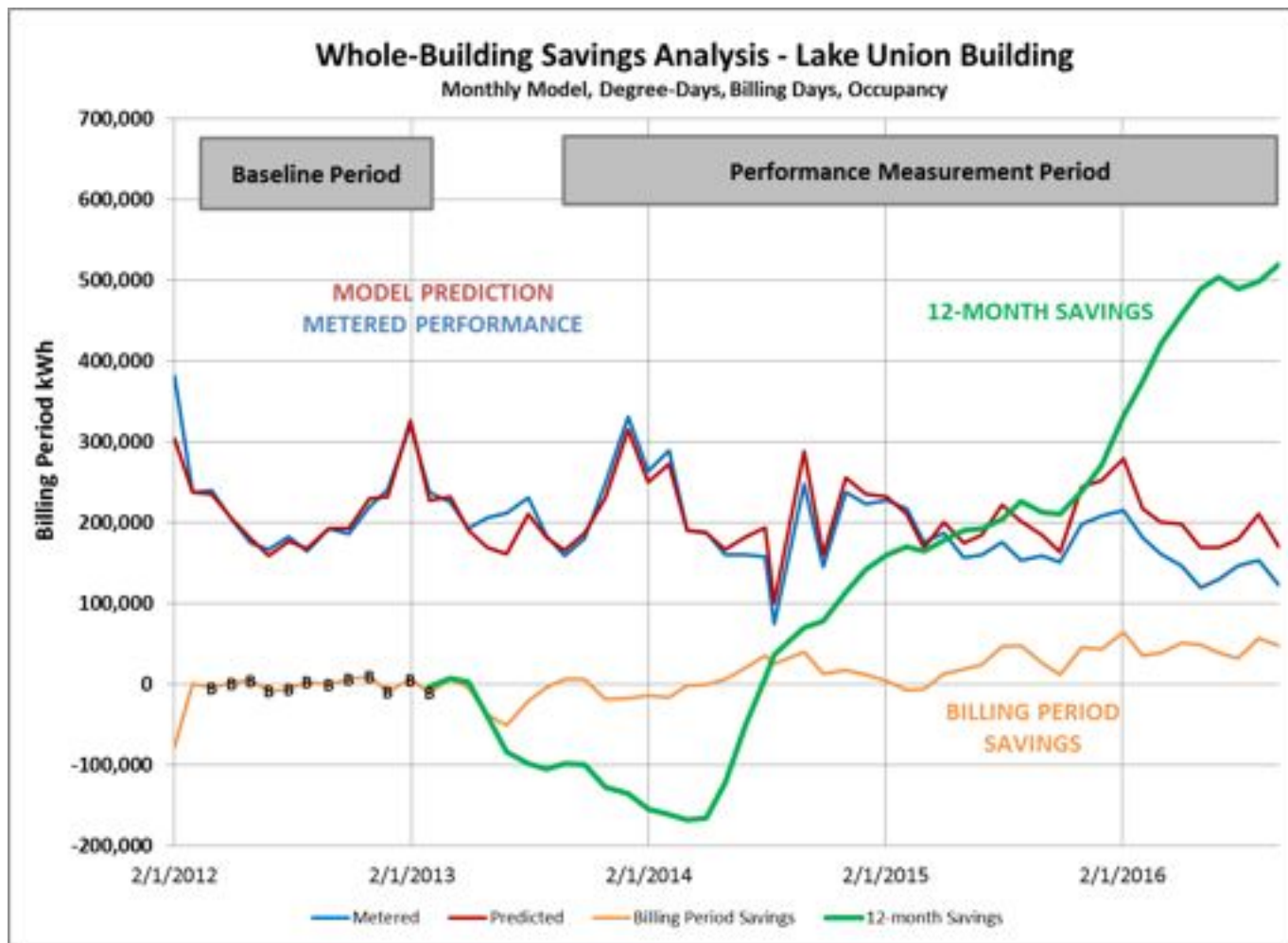


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- Efficiency measures
  - HVAC control system overhaul
    - Control system hardware and software
    - Installation of isolation dampers and active motor control for building pressurization control
  - Electro-chromatic glazing
    - Variable tinting characteristics via controlled signal

# LAKE UNION BUILDING – PRELIMINARY RESULTS

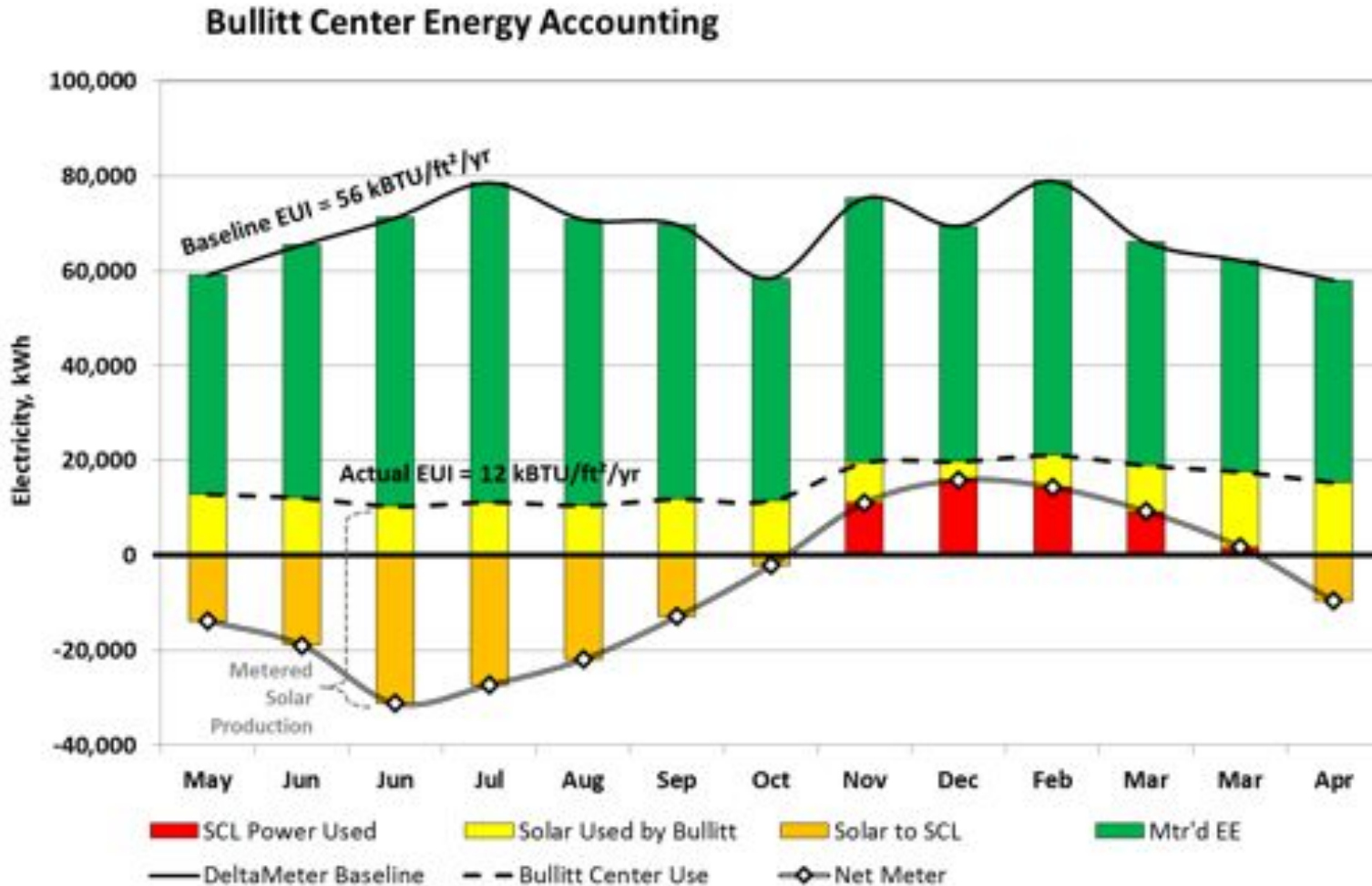


## #3 - BULLITT CENTER

- 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





## #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)**

