

# Energy Efficiency Measure “Load” Shapes

Name

Title



# Passive EE Data Status Quo

- EE impacts are typically derived from approx. 6 data points:
  - Annual kWh reduction:
    - % kWh, summer on
    - % kWh, summer off
    - % kWh, winter on
    - % kWh, winter off
  - Peak kW reduction:
    - kW, summer coincident
    - kW, winter coincident

# Better, more granular data exists

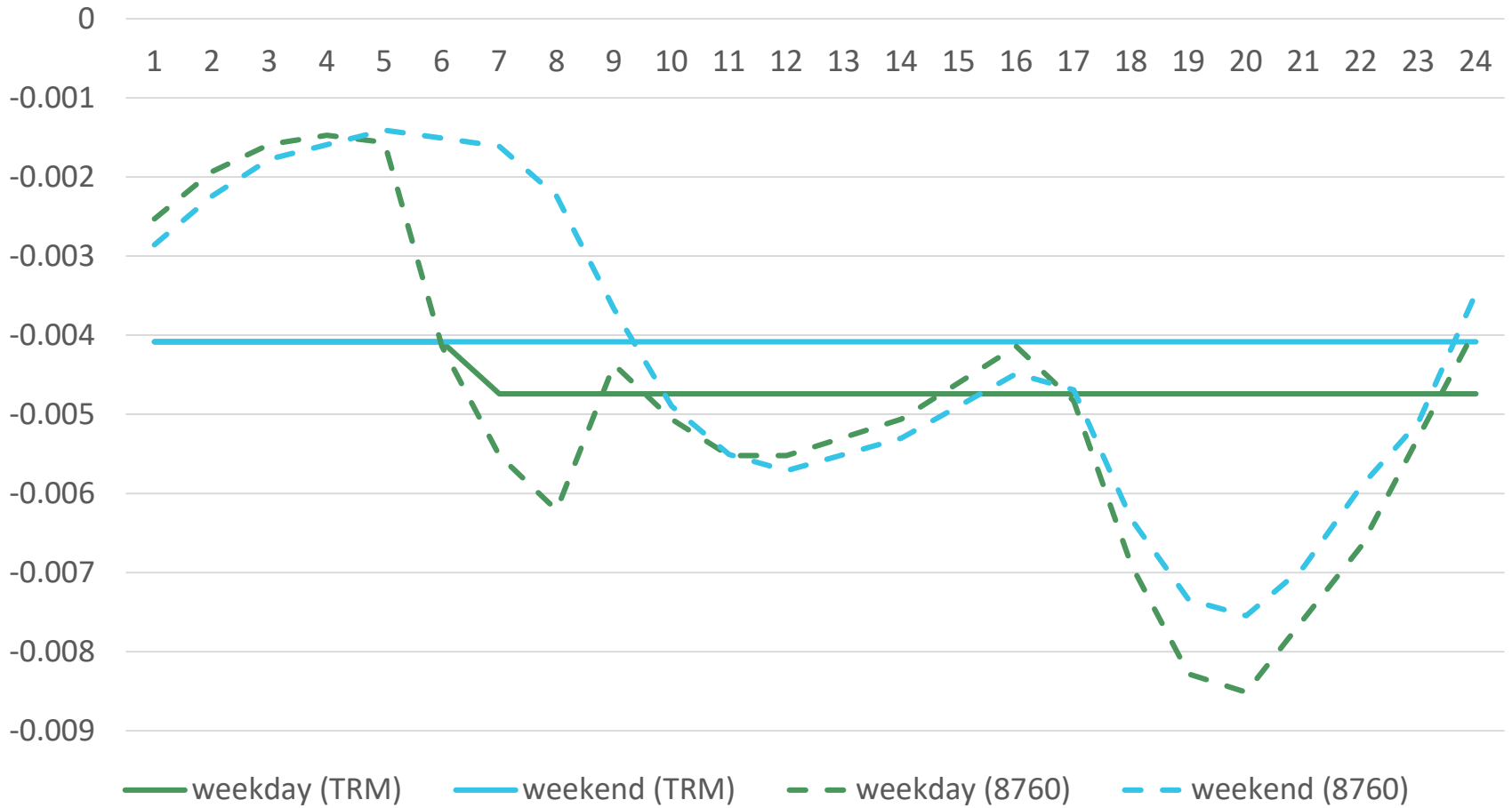
- Efficiency Vermont sources
  - Submetering
  - M&V reports
  - Extracting savings shapes from AMI
- MA EEAC RES data (2018)
  - Loadshapes; 576 points; weekday/end X month; (25) measures
- NEEP C&I data (~2011-2014)
  - Loadshapes and savings shapes; 8760 points; (36) measure / building combos
- Others exist: modeling, NREL/DOE data coming
  - Both measure loadshapes and “savings shapes”

# Opportunities for 8760 “Savings Shapes”

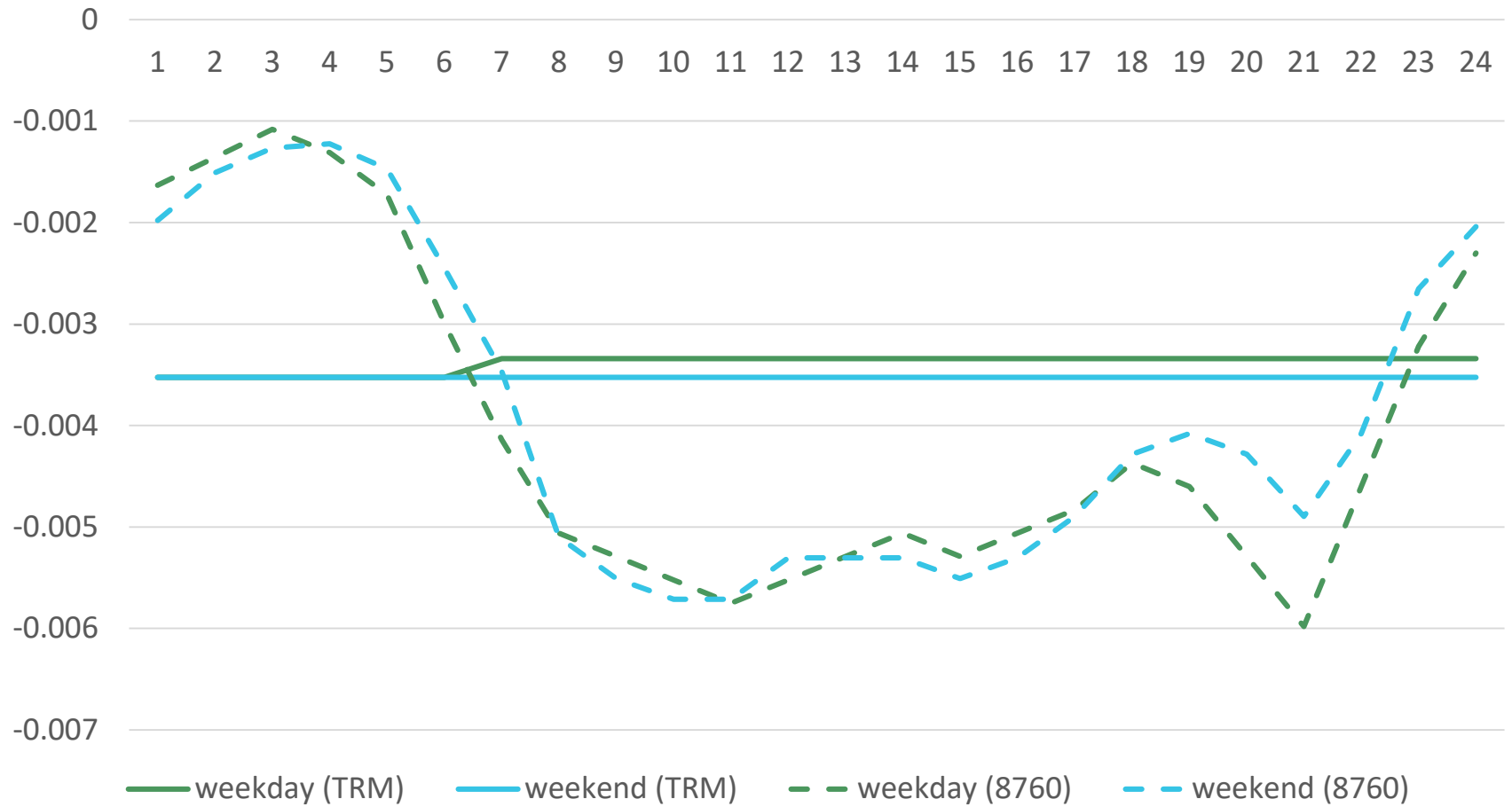
- Residential measures
  - Lighting
  - Window AC
  - Refrigerator
  - Clothes washer
  - HPWH (from elect. resistance)
  - CCHP (load only; fuel-switch)
- C&I measures
  - Lighting (15 building types)
  - VFDs (5 applications)
  - Unitary HVAC (2 sizes)

\* derived from measure “load” shapes

# RES LED: Avg Savings by Hour in Jan (kW)



# RES LED: Avg Savings by Hour in July (kW)



**More to come soon!**

**THANKS!**

