

**Attachment A**  
**CADMUS Report (4/5/3013)**  
**HVAC and Savings Research**

**Residential Sector**

**Residential Cooling Measures:**

Cadmus recommends the following cooling measures/equipment to reduce electric energy consumption and peak demand in the residential sector:

- Early Retirement (p. 29-30). [Note: Cadmus estimates 457 kWh per year could be saved by replacing an existing inefficient CAC system with a new CAC system.(ref. Table 20, p. 59)].
- Ductless heat pump air-conditioners (p. 29)
- Ductless Mini-splits (p. 31).
- New construction and planned equipment replacement opportunities (p. 29).
- Web-enabled programmable thermostats with central controls for demand response actions during summer peak periods (p. 29, 32), including a pilot program (similar to the PSNH Heat Smart Load Control Program) (p. 32).

**Residential Non-cooling measures:**

CADMUS recommends the following non-cooling measures/equipment to reduce electric energy consumption and peak demand in the residential sector. These are listed in the CADMUS report at page 33 as follows:

- Heat pump water heaters (p. 33). [Note: CADMUS estimates that the reduced electricity requirement for hot water consumption compared to standard electric heater is 961 kWh per year (Table 20, p. 59)].
- Furnace with ECM. [Note: CADMUS estimates that the reduced electricity requirements for fan ECM compared to existing fan motor is 733 kWh per year (Table 20, p. 59)].
- Showerheads and aerators (p.33).
- ENERGY STAR® Dehumidifiers (p. 33).
- Clothes washers (education) (p. 33)
- Advanced power strips (p. 33).
- Computer power management (as a pilot) (p. 33)

**Attachment A (continued)**  
**CADMUS Report (4/5/2013)**  
**HVAC and Savings Research**

**C&I Cooling Measures:**

Cadmus recommends actions to reduce electric energy and peak demand consumption in the C&I sector as follows (p. 41-42):

- HVAC controls, C&I refrigeration, and industrial machine drives
- Building HVAC system retro-commissioning and controls
- Variable speed drives for data center computer room air conditioners
- Interval data billing analysis

**C&I Non-Cooling Measures:**

Cadmus recommends the following non-cooling measures/equipment to reduce electric energy consumption and peak demand in the C&I sector (p. 44):

- Lighting systems and controls
- Prescriptive refrigeration
- Computer power management
- Variable speed drives
- Advanced power strips
- Emergency generator block heater