DTE

Energy Efficiency Program for Business

# 2021 Prescriptive deemed measure worksheet

This worksheet lists all of the requested deemed measures that are not on our main program application. Once you have requested a new measure, it will be reviewed and approved by our engineers, and then added to this list. Complete this worksheet and attach to your application.

## Deemed electric measures

| Ref # | Equipment type | Incentive | Unit | # of units | Total incentive |
|---|---|---|---|---|---|
| PE-73 | Variable frequency drives on process cooling tower fans | $22.00/unit | HP | | |
| PE-74 | ENERGY STAR UPS single mode VFD (> 80 kW) | $3.00/unit | kVA | | |
| PE-75 | ENERGY STAR UPS single mode VI (> 80 kW) | $2.00/unit | kVA | | |
| PE-76 | ENERGY STAR UPS single mode VFI (> 80 kW) | $5.00/unit | kVA | | |
| PE-77 | ENERGY STAR UPS multiple mode VFD/VI (> 80 kW) | $2.00/unit | kVA | | |
| PE-78 | ENERGY STAR UPS multiple mode VFD/VFI (> 80 kW) | $4.00/unit | kVA | | |
| PE-79 | ENERGY STAR UPS single mode VFD P (> 1.5 kW to ≤ 10 kW) | $7.00/unit | kVA | | |
| PE-80 | ENERGY STAR UPS single mode VFD P (> 10 kW to ≤ 16 kW) | $3.00/unit | kVA | | |
| PE-81 | ENERGY STAR UPS single mode VFD (> 16 kW to ≤ 80 kW) | $3.00/unit | kVA | | |
| PE-82 | ENERGY STAR UPS single mode VI (> 1.5 kW to ≤ 10 kW) | $5.00/unit | kVA | | |
| PE-83 | ENERGY STAR UPS single mode VI (> 16 kW to ≤ 80 kW) | $2.00/unit | kVA | | |
| PE-84 | ENERGY STAR UPS single mode VFI (> 10 kW to ≤ 16 kW) | $13.00/unit | kVA | | |
| PE-85 | ENERGY STAR UPS single mode VFI (> 16 kW to ≤ 80 kW) | $3.00/unit | kVA | | |
| PE-86 | ENERGY STAR UPS multiple mode VFD/VI (> 1.5 kW to ≤ 10 kW) | $6.00/unit | kVA | | |
| PE-87 | ENERGY STAR UPS multiple mode VFD/VI (> 16 kW to ≤ 80 kW) | $2.00/unit | kVA | | |
| PE-88 | ENERGY STAR UPS multiple mode VFD/VFI (> 10 kW to ≤ 16 kW) | $11.00/unit | kVA | | |
| PE-89 | ENERGY STAR UPS multiple mode VFD/VFI (> 16 kW to ≤ 80 kW) | $4.00/unit | kVA | | |
| PE-90 | ENERGY STAR UPS single mode VFD P (> 0.35 kW to ≤ 1.5 kW) | $8.00/unit | kVA | | |
| PE-91 | ENERGY STAR UPS single mode VI (> 0.35 kW to ≤ 1.5 kW) | $12.00/unit | kVA | | |
| PE-92 | ENERGY STAR UPS single mode VFD (≤ 0.35 kW) | $21.00/unit | kVA | | |
| PE-93 | ENERGY STAR UPS single mode VI (≤ 0.35 kW) | $7.00/unit | kVA | | |
| PE-94 | ENERGY STAR UPS multiple mode VFD/VI (≤ 0.35 kW) | $11.00/unit | kVA | | |
| PE-95 | ENERGY STAR UPS multiple mode VFD/VFI (≤ 0.35 kW) | $39.00/unit | kVA | | |
| PE-96 | ENERGY STAR UPS multiple mode VFD/VI (> 0.35 kW to ≤ 1.5 kW) | $11.00/unit | kVA | | |

## Deemed electric measures continued

| Ref # | Equipment type | Incentive | Unit | # of units | Total incentive |
|---|---|---|---|---|---|
| HE-3 | AC 65k - 135k EER 12 IEER 13.8 | $3.00/unit | Ton | | |
| HE-4 | AC 135k - 240k EER 12 IEER 13 | $2.00/unit | Ton | | |
| HE-5 | AC 240k - 760k EER 10.6 IEER 13.3 | $7.00/unit | Ton | | |
| HE-068 | Original double hung storm window with low U storm | $30.00/unit | 100 sq. ft. | | |
| HE-069 | VFD for HVAC fans - fixed speed, tier 1 (51 - 54 Hz) | $56.00/unit | HP | | |

## Deemed gas measures

| Ref # | Equipment type | Incentive | Unit | # of units | Total incentive |
|---|---|---|---|---|---|
| PG-39 | Optimized snow and ice melt controls - without idle mode | $0.20/unit | Sq. Ft. | | |
| HG-49 | HVAC boiler sequencing | $0.18/unit | Input MBH | | |
| HG-51 | Enhanced ventilation control | $25.00/unit | Ton | | |
| HG-52 | Original double hung storm window with low U Value | $69.00/unit | 100 sq. ft. | | |

| | All measures |
|---|---|
| Total – deemed incentives | |

**Certain prescriptive measures require a reservation application. See individual specifications for more information.**

### PE-73 – Variable frequency drives on process cooling tower fans

Available for installing a VFD on new or existing process cooling tower fans.

- Fan motor must operate at least 2,000 hours/year.
- Must be automatically controlled (i.e., basin temperature) or at a fixed speed no greater than 54 Hz.
- Incentive is per controlled HP.
- The replacement of existing VFDs, or installing VFDs on redundant or back-up cooling towers do not qualify for incentive.
- Pre-notification is required on fan motors greater than 50 HP.

### PE-74 to PE-96 – ENERGY STAR UPS

Incentives are available for replacing existing UPS (uninterrupted power supply) with an ENERGY STAR rating.

Single-normal-mode UPS: A UPS that functions in Normal Mode within the parameters of only one set of input dependency characteristics. For example, a UPS that functions only as a VFI.

Multiple-normal-mode UPS: A UPS that functions in Normal Mode within the parameters of more than one set of input dependency characteristics. For example, a UPS that can function as either VFI or VFD.

VFD: Voltage and frequency dependent

VFI: Voltage and frequency independent

VI: Voltage independent

## Unitary and split AC

| Ref # | Equipment type | Unit |
|---|---|---|
| HE-3 to 5 | Unitary and split AC | Ton |

### HE-3 to HE-5 – Unitary and split air conditioning systems

Incentives are available to install replacement air conditioning systems that meet or exceed qualifying cooling efficiency. They can be either split systems or single packaged units. Water-cooled systems, evaporative coolers and water source heat pumps are not eligible for this incentive, but may be eligible for a custom incentive. Split system efficiency must be for air handling and condensing unit combined.

### HE-068 – Original double hung storm window with low U value

Incentives are available for rehabilitating double hung storm windows with low U values. The solar heat gain coefficient (SHGC) value must improve from ≥1.27 to ≤0.21. Fractional values are allowed for areas that are not multiples of 100 square feet. Documentation must be submitted verifying square footage.

### HE-069 – VFD for HVAC fans - fixed speed, tier 1 (51-54 Hz)

VFD must be used in conjunction with a process (non-HVAC) pumping application. Redundant or backup units do not qualify. Routine replacement of existing VFDs does not qualify. VFD speed must be automatically controlled by differential pressure, flow, temperature, or other variable signals. The proposed VFD frequency must be reduced to 54 Hz or less. The system controlled must have significant load diversity that will result in savings through motor speed variation. Copies of specification sheets and invoices that clearly show the drive's size are required.

## Boilers/controls

| Ref # | Equipment type | Unit |
|---|---|---|
| PG-39 | Optimized snow and ice melt controls - without idle mode | Sq. Ft. |
| HG-49 | HVAC boiler sequencing | Input MBH |

### PG-39 – Optimized snow and ice melt controls - without idle mode

Enhanced snow/ice melt controller must be added to existing or a new hydronic heated boiler system. The proposed controller must be programmed to turn off completely, not idle, when precipitation is not present. BAS system must gather weather forecast information and engage the snow/ice melt system to maintain an idle mode slab temperature of approximately 32˚F for approximately eight hours before the predicted precipitation event. A slab moisture sensor is required to enable slab temperature to rise to 40˚F during a moisture event.

### HG-49 – HVAC boiler sequencing

Available for installing sequence controls on existing boilers and for new boilers with built-in controls. The customer must provide the nominal unit rating (MBH) for the lead boiler and all additional lag/redundant boilers in the boiler plant. The Boiler Plant Control incentive is available for heating systems with at least two boilers currently isolated from each other independently feeding a common header. All boilers shall be monitored and controlled, at a minimum, as follows: sequenced and staged, both enabled and disabled, in a manner to optimize their operation as recommended by the boiler manufacturer. Within 15 minutes of disabling a boiler, the boiler's flow through that disabled boiler must be stopped, either by automatically disabling the boiler's corresponding circulating pump, or through automatically shutting of a an isolation valve when applicable. Hospitals or universities whose boiler operates year round may qualify as a process boiler. Qualifies for new construction and retrofit applications.

### HG-51 – Enhanced ventilation control

This incentive is available for adding enhanced ventilation control (EVC) to single zone packaged heating, ventilation, and air condition (HVAC) units or roof-top units (RTU). Available for both new and existing HVAC equipment, however, the existing RTU must be in good working order. Must include the following:

- An advanced digital economizer control (ADEC) system, consisting of replacing their existing analog or non-functional economizer control system with an ADEC system.
- The ADEC system must identify and report problems with sensors, dampers, and other components to ensure consistent and reliable economizer mode operation.
- Demand Control Ventilation (DCF) to reduce the amount of ventilation during periods of low occupancy, typically achieved through a carbon dioxide ($CO_2$) sensor.
- The DCV must be tied into the controller Variable Speed Drives (VSD) to modulate the supply fan (evaporator) motor. The VSD must be automatically controlled by differential pressure, flow, temperature, or other variable signal. The VSD must be tied to the controller.

This measure cannot be combined with the demand control ventilation (DCV), VFD, or economizer incentive measures. Incentive will be based on the nominal input rating in tons of the HVAC equipment. The existing system cannot have a supply fan VFD or $CO_2$ sensors installed. Factory provided controls on a new RTU would not qualify.

### HG-52 – Original double hung storm window with low U value

Incentives are available for rehabilitating double hung storm windows with low U values. The solar heat gain coefficient (SHGC) value must improve from ≥1.27 to ≤0.21. Fractional values are allowed for areas that are not multiples of 100 square feet. Documentation must be submitted verifying square footage.