

# PRESCRIPTIVE HVAC

Energy Efficient Schools Initiative

## Completing the HVAC Measure Application

- Fill in all fields on page 1 and the appropriate fields on the **Incentive Calculation** tables for individual HVAC measures on pages 2 through 5.
- If applying for multiple buildings, include an application for each building.

## General Eligibility Requirements for HVAC Systems

- All equipment must meet minimum efficiency requirements presented in the tables that follow.
- Air-Conditioning, Heating and Refrigeration Institute (AHRI) maintains a directory of certified product performance for HVAC equipment. Visit <http://www.ahridirectory.org/ahridirectory/pages/home.aspx> to search for products that meet the program's minimum efficiency requirements.
- Compressor or condenser replacements are not eligible for incentives.
- Packaged systems with electric heat are ineligible.
- Please attach:
  - 1) Main Energy Efficient Schools program application
  - 2) Equipment specification sheets, including product manufacturer, model number, and performance rating

Building Information				
Building Name			Building Size (square feet)	
Address 1			Contact Name	
Address 2			Day Phone	
City	State	Zip	E-mail	

Utility Information	
Electric Utility	Account Number(s)
Gas Utility	Account Number(s)

## Individual HVAC Measure Incentive Totals

Furnace and Boiler Equipment (page 2)	Total \$ _____
Chiller Equipment (page 3)	Total \$ _____
Unitary HVAC and Split Air Systems (page 4)	Total \$ _____
DCV Sensors and Programmable Thermostats (page 4)	Total \$ _____
Heat Pump Systems (page 5)	Total \$ _____
<b>Grand Total Lighting Systems and Controls Incentive Requested \$ _____</b>	

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## HIGH EFFICIENCY FURNACE AND BOILER EFFICIENCY LEVELS AND INCENTIVE AMOUNTS

Measure Code	Measure Name	Unit Size (kBtu/h)	Minimum Efficiency	Project Type	Incentive (\$ per kBtu/h)
FNC	Furnace	<300	92% AFUE	New Construction	\$5
FR				Replacement	\$10
B1NC	Hot Water Boiler	<300	85% AFUE	New Construction	\$2
B1R				Replacement	\$5
B2NC	Hot Water Boiler	<300	90% AFUE	New Construction	\$8
B2R				Replacement	\$12
B3NC	Hot Water Boiler	≥300	85% TE	New Construction	\$2
B3R				Replacement	\$5
B4NC	Hot Water Boiler	≥300	90% TE	New Construction	\$5
B4R				Replacement	\$10

## HIGH EFFICIENCY FURNACE AND BOILER EQUIPMENT INCENTIVE CALCULATION

Measure Code	Manufacturer and Model Number	A Unit Size (kBtu/h)	B Unit Efficiency	C Incentive \$ per kBtu/h (Table)	D Quantity	E Total Incentive (A x C x D)
Ex: B2R	Acme, ABC123	250	91% AFUE	\$12	1	\$3000
<i>(enter on page 1)</i> <b>Total High Efficiency Furnace and Boiler Equipment Incentive Requested</b>						<b>\$</b>

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## CHILLER EFFICIENCY LEVELS AND INCENTIVE AMOUNTS

Measure Description	Measure Code	Size (Nominal Tons)	Minimum Efficiency	Project Type	Base Incentive (\$/ton)	Bonus Incentive (\$/ton per .01 kW/ton IPLV below criteria)
Rotary Screw/ Scroll	C1NC	<150	Full Load: .72 kW/ton	New Construction	\$25	\$8
	C1R		IPLV: .59 kW/ton	Replacement	\$100	
	C2NC	150-299	Full Load: .64 kW/ton	New Construction	\$25	\$4
	C2R		IPLV: .49 kW/ton	Replacement	\$100	
Centrifugal	C3NC	<150	Full Load: .64 kW/ton	New Construction	\$25	\$8
	C3R		IPLV: .53 kW/ton	Replacement	\$100	
	C4NC	150-299	Full Load: .59 kW/ton	New Construction	\$25	\$4
	C4R		IPLV: .52 kW/ton	Replacement	\$100	
Centrifugal or Screw	C5NC	≥300	Full Load: .56 kW/ton	New Construction	\$25	\$4
	C5R		IPLV: .45 kW/ton	Replacement	\$100	

## CHILLER INCENTIVE CALCULATION

Measure Code (Table)	Manufacturer and Model Number	A Unit Size (Tons)	B Quantity	C Equipment Efficiency (From manufacturer specification sheet)	D Minimum Efficiency (Table)	E Unit Incentive \$/Ton (Table)	F Base Incentive \$ (A x B x E)	G Additional Incentive \$ (A x B x (D-C) x 100 x E)	H Total Incentive \$ (F + G)
Ex: C2R	ABC123	200	2	Full Load: 0.6 kW/Ton Part Load: 0.45 kW/Ton	Full Load: 0.64 kW/Ton Part Load: 0.49 kW/Ton	Base: \$100/Ton Additional: \$4/Ton	\$40,000	\$6,400	\$46,400
				Full Load:	Full Load:	Base:			
				Part Load:	Part Load:	Additional:			
				Full Load:	Full Load:	Base:			
				Part Load:	Part Load:	Additional:			
				Full Load:	Full Load:	Base:			
				Part Load:	Part Load:	Additional:			
				Full Load:	Full Load:	Base:			
				Part Load:	Part Load:	Additional:			
(enter on page 1) <b>Total Chiller Incentive Requested</b>									<b>\$</b>

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## UNITARY HVAC AND SPLIT AIR SYSTEMS EFFICIENCY LEVELS AND INCENTIVE AMOUNTS

Measure Code	Equipment Size		Minimum Efficiency	Project Type	Incentive
	Tons	Btu/h			
UAC1NC	<5.4	<65,000	15 SEER	New Construction	\$125/ton
UAC1R				Replacement	\$450/ton
UAC2NC	≥5.4 and <20	≥65,000 and <240,000	12 EER	New Construction	\$100/ton
UAC2R				Replacement	\$400/ton
UAC3NC	≥20	≥240,000	10.8 EER	New Construction	\$100/ton
UAC3R				Replacement	\$400/ton

## UNITARY HVAC AND SPLIT AIR SYSTEMS INCENTIVE CALCULATION

Measure Code	Manufacturer and Model Number	A Unit Size (Tons)	B Unit Efficiency (EER and Heating COP)	C Incentive \$/ton (Table)	D Quantity	E Total Incentive (A x C x D)
Ex: UAC3R	Acme, ABC123	25	11.1 EER	\$400	1	\$10,000
<i>(enter on page 1)</i> <b>Total Unitary HVAC and Split Air Systems Incentive Requested</b>						<b>\$</b>

## DCV SENSOR & PROGRAMMABLE THERMOSTAT INCENTIVE AMOUNTS

Measure Description and Eligibility Criteria	Measure Code	Model #	Manufacturer	Count	Unit Incentive	Total Incentive
<b>Demand Controlled Ventilation (DCV)</b> • Carbon dioxide sensor must be installed in conjunction with a fully functioning controls-governed economizer	DCV				\$1,500	
<b>Programmable Thermostat</b> • Must replace a non-programmable thermostat in an existing facility	PT				\$50	
<i>(enter on page 1)</i> <b>Total DCV Sensor &amp; Programmable Thermostat Incentive Requested</b>						<b>\$</b>

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## AIR SOURCE HEAT PUMP SYSTEMS EFFICIENCY LEVELS AND INCENTIVE AMOUNTS

Measure Code	Equipment Size		Minimum Efficiency	Project Type	Incentive
	Tons	Btu/h			
ASHP1NC	<5.4	<65,000	15 SEER, 9.0 HSPF	New Construction	\$125/ton
ASHP1R				Replacement	\$450/ton
ASHP2NC	≥5.4 and <11.25	≥65,000 and <135,000	12 EER, 3.4 heating COP	New Construction	\$100/ton
ASHP2R				Replacement	\$400/ton
ASHP3NC	≥11.25	≥135,000	10.8 EER, 3.2 heating COP	New Construction	\$100/ton
ASHP3R				Replacement	\$400/ton

## WATER SOURCE HEAT PUMP EFFICIENCY LEVELS AND INCENTIVE AMOUNTS

Measure Code	Equipment Size	Minimum Efficiency	Project Type	Incentive
WSHPNC	Any size	14.0 EER, 4.6 heating COP	New Construction	\$100/ton
WSHPR			Replacement	\$450/ton

## GEOHERMAL HEAT PUMP EFFICIENCY LEVEL AND INCENTIVE AMOUNTS

Measure Code	Equipment Size	Minimum Efficiency	Base Incentive	Bonus Incentive (for closed loop systems ≥ 16.0 EER and open loop systems ≥ 19.0 EER)
GSHP	Any size	ENERGY STAR	\$1,000/ton	\$100/ton for each EER above 16.0 for closed loop and 19.0 for open loop

## HEAT PUMP SYSTEMS INCENTIVE CALCULATION

Measure Code	Manufacturer and Model Number	A Unit Size (Tons)	B Unit Efficiency (EER and Heating COP)	C Incentive \$/ton (Table)	D Quantity	E Total Incentive (A x C x D)
Ex: WSHPR	K2-150	8	14.6 EER	\$450	1	\$3,600
(enter on page 1) Total Heat Pump Systems Incentive Requested						\$