HVAC/PLUMBING INCENTIVE CATALOG

focus on energy℠
Partnering with Wisconsin utilities

SAVING ENERGY AND MONEY FOR WISCONSIN

For more information, call 800.762.7077 or visit focusonenergy.com

Focus on Energy, Wisconsin utilities' statewide program for energy efficiency and renewable energy, helps eligible residents and businesses save energy and money while protecting the environment. Focus on Energy information, resources and financial incentives help to implement energy efficiency and renewable energy projects that otherwise would not be completed.

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NEED HELP?
CALL
800.762.7077

HOW TO APPLY

Focus on Energy makes saving energy and money easy for Wisconsin businesses. Use the information below to help guide your way to savings. For electronic copies of the forms visit focusonenergy.com/applications.

STEP 1 BEFORE YOU APPLY:

Verify customer and product eligibility:

- ❍ Confirm your gas and electric utilities participate in Focus on Energy at focusonenergy.com/utilities
- ❍ Read product requirements, both general and technology-specific, in your equipment's corresponding incentive catalog.
- ❍ Review the Participation Requirements on page 10.
- ❍ Review the Terms and Conditions at focusonenergy.com/terms
- ❍ View the qualified product lists at focusonenergy.com/business/qpls
- ❍ Applications for the Multifamily Energy Savings Program exceeding $10,000 and all other Business Programs exceeding $25,000 that do not receive pre-approval **may not** receive payment if program funds have been exhausted.
- ❍ Need help? Call us at 800.762.7077

Purchase and install your qualifying products by December 31, 2016.

STEP 2 WHAT YOU'LL NEED:

- ❍ Incentive Application & Equipment Incentive Catalog(s)
- ❍ Gas & Electric Utility Account Numbers
- ❍ Tax ID Number
- ❍ Invoice showing **proof of purchase(s)/installation MUST include:**
  - ❍ Trade Ally name, address and phone number
  - ❍ An itemized list of each product along with manufacturer name, model number, and quantity
  - ❍ Itemized purchase price of product/installation
  - ❍ Job Site Address
  - ❍ Incentives are capped at 100% of project cost unless otherwise noted.
- ❍ Manufacturer specifications – **MUST include:**
  - ❍ Full model number
  - ❍ Energy performance information
- ❍ Additional documentation (as required)

STEP 3 COMPLETE THIS APPLICATION:

- ❍ All fields on application are required. If not complete - application(s) cannot be processed
- ❍ Complete SECTION 7 with all product/equipment information. Use the Incentive Product Information Sheet if you need more room. Make sure you use the incentive code that's right for your facility. **Business incentive codes are found in blue. Multifamily incentive codes are found in green.**
- ❍ Include installation date (date of the last technology installed). If project is new construction, please use the occupancy date.
- ❍ Complete the catalog-specific Supplemental Data Sheet for applicable measures. An asterisk (*) next to the code indicates when this is needed.
- ❍ Include the reservation code(s) in SECTION 7 when applicable.
- ❍ Sign and date SECTION 8.
- ❍ Supporting documents are attached, including itemized invoice(s) and manufacturer specification sheets.
- ❍ Make a copy of the application and supporting documents for your records.

STEP 4 SUBMIT YOUR APPLICATION:

Mail, fax, or email your application and all supporting documentation. Applications must be submitted within 60 calendar days of project installation, unless otherwise noted. Please retain a copy of the application for your records.

Don't know where to send it? Refer to Page 9 for program descriptions and submittal information.

INCENTIVE APPLICATION

PLEASE COMPLETE ALL SECTIONS. INCOMPLETE APPLICATIONS CANNOT BE PROCESSED AND WILL DELAY PAYMENT OF INCENTIVES. APPLICATIONS MUST BE SUBMITTED WITHIN 60 DAYS OF PROJECT INSTALLATION. FOR AN ELECTRONIC COPY OF THIS FORM VISIT FOCUSONENERGY.COM/APPLICATIONS.

SECTION 1 ACCOUNT AND CUSTOMER INFORMATION

TAX IDENTIFICATION NUMBER (Check one.)

❍ FEIN **or** ❍ SSN

FEIN OR SOCIAL SECURITY NUMBER

BUSINESS CLASSIFICATION OF CUSTOMER

(Check one. Required for all businesses, including non-profits.)

❍ Corporation ❍ Partnership ❍ Sole Proprietorship – Individual

❍ LLC ❍ Other _____

OWNER NAME (REQUIRED IF SSN IS USED AS TAX IDENTIFICATION NUMBER)

COMPANY NAME

LEGAL ADDRESS (AS SHOWN ON COMPANY W-9)

CITY

STATE ZIP

How did you hear about us? (Check all that apply.)

❍ Utility ❍ Trade Ally ❍ Energy Advisor ❍ Website

❍ E-mail ❍ Trade Show/Event ❍ Advertisement/Mailing

❍ Other: _____

WHO DID YOU WORK WITH FROM FOCUS ON ENERGY ON THIS PROJECT? (CONTACT NAME)

SECTION 2 JOB SITE INFORMATION

(Please refer to your utility bills for account numbers below.)

JOB SITE BUSINESS NAME

ELECTRIC UTILITY AT JOB SITE

ELECTRIC ACCOUNT

GAS UTILITY AT JOB SITE

GAS ACCOUNT

❍ Job Site Address is same as Legal Address

❍ Job Site Address is different (complete below.)

JOB SITE ADDRESS

CITY

STATE ZIP

SECTION 3 CUSTOMER CONTACT INFORMATION

JOB SITE CUSTOMER CONTACT NAME

PRIMARY PHONE #

E-MAIL ADDRESS

SECTION 4 TRADE ALLY INFORMATION

FOCUS ON ENERGY TRADE ALLY

TRADE ALLY CONTACT NAME

PRIMARY PHONE #

E-MAIL ADDRESS

TRADE ALLY COMPANY NAME

ADDRESS

CITY

STATE ZIP

Must be a registered Trade Ally to receive payment. See Participation Requirements for more information.

(Check one.) ❍ FEIN **or** ❍ SSN

FEIN OR SOCIAL SECURITY NUMBER (REQUIRED IF RECEIVING PAYMENT)

SECTION 5 BUSINESS PAYMENT INFORMATION

Make incentive check payable to: ❍ Customer ❍ Trade Ally

Mail check to: ❍ Legal Address ❍ Job Site Address

❍ Alternate Address (complete below.)

ADDRESS

CITY

STATE ZIP

ATTENTION TO (OPTIONAL)

If Focus on Energy has a question about this application, we should contact:

❍ Customer ❍ Trade Ally ❍ Other _____

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SECTION 6

BUSINESS PROPERTY TYPE

❍ **Existing Building** ❍ **New Construction**

(Select one only. If applying for both existing and new construction equipment incentives please complete two separate applications)

Select one (1) property type that best describes your business:

- ❍ Agriculture Producer
  - ❍ Dairy
  - ❍ Livestock
  - ❍ Greenhouse
  - ❍ Crop Farming
  - ❍ Aquacare
  - ❍ Other: _____
- ❍ Education
  - ❍ College/University
  - ❍ Preschool/Day Care
  - ❍ Private K-12
  - ❍ Public K-12
  - ❍ Technical College
- ❍ Grocery/Convenience Store
- ❍ Financial Institution
- ❍ Food Service
- ❍ Government
  - ❍ Federal/State
  - ❍ Municipal/County
  - ❍ Native American
- ❍ Healthcare
  - ❍ Clinic
  - ❍ Hospital
  - ❍ Skilled Nursing
  - ❍ Other: _____
- ❍ Hotels & Lodging
- ❍ Manufacturing (product): _____
- ❍ Multifamily
  - ❍ Apartment
  - ❍ Condominium
  - ❍ Mixed Use

  Number of Units: _____

  Number of Buildings: _____
- ❍ Retail
- ❍ Service
- ❍ Religious Worship
- ❍ Other: _____

SECTION 7

INCENTIVE PRODUCT INFORMATION

Please refer to:

- **Applicable incentive catalog** for incentive codes, incentive per unit and product eligibility requirements.
- **focusonenergy.com/business/qpls** for qualified products lists.
- **Invoice showing proof of purchase** for Manufacturer and Model Number.
- **Incentive Product Information Sheet** if you need additional lines in the table below.

INCENTIVE CODE	MANUFACTURER NAME	MODEL #	UNIT MEASURE	# OF UNITS (A)	INCENTIVE PER UNIT (B)	TOTAL INCENTIVE (A X B)
L3111 (example)	*STARK LIGHTING*	*LED5VZP*	*Fixture*	*10*	$ *15.00*	$ *150.00*
					$	$
					$	$
					$	$
					$	$
					$	$
					$	$
					$	$

Itemized invoice(s) Attached	Yes ❍	**RESERVATION CODE(S)** (if applicable):		Subtotal from Incentive Product Information Sheet (if applicable)	$
Manufacturer Specifications Attached (if applicable):	Yes ❍	**INSTALLATION DATE:**	/ /	**INCENTIVE TOTAL***	$

SECTION 8

CUSTOMER SIGNATURE

Certification: The following certifications are required in order for this form to substitute for the IRS form W-9. Under penalty of perjury, I certify that:

- The number shown on this form is the correct taxpayer identification number.
- I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the IRS that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding.
- I am a U.S. citizen (includes a U.S. resident alien).

I agree that the stated energy-efficient measure(s) was (were) installed at the job site address listed above as part of the Focus on Energy Program. I have read and agree to the provisions set forth herein and to the Terms and Conditions posted at focusonenergy.com/terms. I understand that Focus on Energy may revise these Terms and Conditions at any time and I will not be notified in the event changes are made. To the best of my knowledge, the statements made on this application are complete, true and correct, and I have submitted the appropriate supporting documentation to receive an incentive.
(Please use blue or black ink in the signature box below.)

SIGN HERE

CUSTOMER SIGNATURE | NAME (PRINT) | DATE

Please select the program for which you are applying (check one):

- ❍ Agriculture, Schools and Government Program AgSGapps@focusonenergy.com
- ❍ Business Incentive Program BIPapps@focusonenergy.com
- ❍ Chain Stores and Franchises Program CSFapps@focusonenergy.com
- ❍ Large Energy Users Program LEUapps@focusonenergy.com
- ❍ Multifamily Energy Savings Program MESPapps@focusonenergy.com

Please see the Program Descriptions and Submittal Information page for mailing addresses and fax numbers.

*Incentive total may be adjusted based on project caps. See measure requirements and Terms and Conditions for more information.

HVAC/PLUMBING INCENTIVE CATALOG SUPPLEMENTAL DATA SHEET

THIS FORM MUST BE ATTACHED TO COMPLETED INCENTIVE APPLICATION AND SUBMITTED TOGETHER. NEED HELP? CALL 800.762.7077.

HOW TO FILL OUT THIS FORM

Please refer to:

- The **HVAC/Plumbing Incentive Catalog** for measure requirements and information.
- Complete the table corresponding to the measure in the catalog.

Attach this form to a completed **Incentive Application** and submit together.

CUSTOMER INFORMATION

JOB SITE BUSINESS NAME

JOB SITE ADDRESS

TRADE ALLY NAME

A — COMMERCIAL AIR CONDITIONING SPLIT AND PACKAGED SYSTEMS (ALL SIZES) — INCENTIVE CODE: H3022 — PAGE 24
MULTIFAMILY AIR CONDITIONING SPLIT AND PACKAGED SYSTEMS >5.4 TONS — INCENTIVE CODE M-H3761 — PAGE 25

EQUIP #	AHRI RATED CAPACITY (tons)	AHRI RATED FULL LOAD EFFICIENCY (SEER ≤5.4 tons, otherwise EER)	MIN. EFF. TO QUALIFY (SEER <5.4 tons, otherwise EER) (from Measure Description pg 24 or 25)	DELTA EFFICIENCY (AHRI rated – min eff)	ADDITIONAL INCENTIVE DELTA EFFICIENCY x $10	BASE INCENTIVE ($/ton)	INCENTIVE RATE ($/ton) (base incentive + additional incentive)	TOTAL INCENTIVE* (AHRI rated tons x incentive rate)
Example	*15.0*	*12.6 EER*	*12.0*	*0.6*	*$6*	*$45*	*$51*	*$765*
1						$45		
2						$45		
3						$45		

B1 — CHILLERS (BUILDING COOLING LOAD) — INCENTIVE CODE: H2249, H2250, H2251, H2252 , M-H2249, M-H2250, M-H2251, M-H2252 — PAGE 27

EQUIP #	ANNUAL HOURS OF CHILLER OPERATION	BUILDING/SPACE DESIGN COOLING LOAD (tons)	BASE OR TRIM CHILLER?
Example	*4000*	*90*	*Base*
1			
2			

B2 — CHILLERS (EQUIPMENT PERFORMANCE) — INCENTIVE CODE: H2249, H2250, H2251, H2252 — PAGE 27

EQUIP #	AHRI RATED CAPACITY (tons)	MAX FULL LOAD (kW/ton) (from Measure Description pg 28)	AHRI RATED FULL LOAD EFFICIENCY (kW/ton)	MAX PART LOAD (IPLV) (kW/ton) (from Measure Description pg 28)	AHRI RATED PART LOAD EFFICIENCY (IPLV) (kW/ton)	DELTA EFFICIENCY: (max full load - rated full load) + (max part load - rated part load)	ADDITIONAL INCENTIVE ($/ton) (delta efficiency x $250)	BASE INCENTIVE ($/ton)	INCENTIVE RATE ($/ton) (additional incentive + base incentive)	TOTAL INCENTIVE* (AHRI rated capacity x incentive rate)
Example	*95*	*1.20*	*1.15*	*0.90*	*0.75*	*0.20*	*$50*	*$12*	*$62*	*$5,890*
1										
2										

C — ENERGY RECOVERY VENTILATOR (ERV) — INCENTIVE CODE: H2314, M-H2314 — PAGE 32

EQUIP #	HOURS OF OPERATION (hrs/wk)	SUPPLY AIRFLOW (AHRI listed CFM)	WINTER EFFECTIVENESS %	SUMMER EFFECTIVENESS %	SPACE HEAT EFFICIENCY (%)	SPACE COOL EFFICIENCY (kW/ton or EER)
Example	*60 hrs/wk*	*2,000 cfm*	*81%*	*77%*	*80%*	*1.20 kW/ton*
1						
2						

D — ECONOMIZERS — INCENTIVE CODE: H3066 — PAGE 33

EQUIP #	RTU RATED CAPACITY (tons)	RTU COOLING EFFICIENCY (EER, IF KNOWN)	ECONOMIZER CHANGEOVER TEMP (°F)	AHU CONTROLS (no setback or EMS/t-stat)	RELIEF ADDED?
Example	*10*	*10.3*	*60*	*T-stat*	*Yes*
1					
2					

E — DEMAND CONTROLLED VENTILATION (DCV) — INCENTIVE CODE: H3266 (SINGLE SOURCE ZONE RTU), H2853 (DCV FOR AHU) — PAGE 34

EQUIP #	SPACE COOLING TYPE	SPACE HEATING TYPE	AREA SERVED TYPE	AHU COOLING SIZE (MBH)	HOURS OF OPERATION/ WEEK	AREA SERVED (sq ft)	ECONOMIZER (DB, ENTH, none)	AHU CONTROLS (no setback, EMS/T-STAT)	CO_2 SET POINT (PPM)	OUTSIDE AIRFLOW RATE (CFM)
Example	*DX*	*Gas*	*Office*	*240*	*60*	*10,000*	*DB*	*T-stat*	*600*	*3,000*
1										
2										

F — GUEST ROOM MANAGEMENT CONTROLS — INCENTIVE CODE: H2374 — PAGE 35

HVAC SYSTEM TYPE	COOLING EFFICIENCY W/ UNITS	HEATING EFFICIENCY W/ UNITS	"OTHER HEAT OPTION" EXPLANATION	HEATING SYSTEM SOURCE (if WSHP or fan coil)	COOLING SYSTEM SOURCE (if WSHP or fan coil)
PTHP	*12.4 EER*	*3.3 COP*	*N/A*	*N/A*	*N/A*

G — PROGRAMMABLE THERMOSTAT FOR RTU — INCENTIVE CODE: H3121 (PROGRAMMABLE), H3120 (ADVANCED PROGRAMMABLE) — PAGE 35

THERMOSTAT #	RTU RATED CAPACITY (tons)	HEATING TYPE	SPACE TYPE	AREA SERVED (sq ft)	HOURS RESET/ DAY	COOLING SET UP (°F)	HEATING SET BACK (°F)
Example	*25*	*Gas Furnace*	*Classrooms*	*4,500*	*6*	*10*	*5*
1							
2							

H — PARKING GARAGE VENTILATION CONTROLS — INCENTIVE CODE: H3016, M-H3016, H3493, M-H3493 — PAGE 35

LOCATION	EXHAUST FAN SIZE (HP)	PROPOSED FAN OPERATION (hrs/day)	VENTILATION AIRFLOW (CFM)	GARAGE SIZE (sq ft, if heated)	HEATING SYSTEM EFFICIENCY (%)	HEATING SETPOINT (°F)
Garage-1a	*10*	*10*	*6,700*	*10,000*	*80%*	*55*

I — VARIABLE FREQUENCY DRIVES — INCENTIVE CODE: H2640, M-H2640, H2641, M-H2641, H2643, M-H2643, H2726, M-H2726, H2644, M-H2644, H2646, M-H2646 — PAGE 37

VFD #	VFD APPLICATION	CONTROLS BEFORE VFD	EQUIPMENT OPERATING HOURS (2,000 hr/yr min)	HP CONTROLLED BY VFD	QUANTITY	SUBTOTAL INCENTIVE (qty X HP X $/HP)*
AHU-1a	*HVAC Fan*	*Inlet Guide Vanes*	*2500*	*10*	*3*	

J — SURGERY OCCUPANCY CONTROLS – INCENTIVE CODE: H3632 — PAGE 36

LOCATION	AVERAGE AREA (SQ FT) OF SURGERY ROOMS	WHEN ARE SURGERY ROOMS OCCUPIED?	ESTIMATED SURGERY HRS/ YRS	RE-HEAT TYPE (electric or gas)	EXISTING AIR CHANGES PER HOUR	ROOM TEMPERATURE SETPOINT, °F	DISCHARGE AIR TEMPERATURE, °F	# OF ROOMS WITH CONTROLS
Example	*400*	*6 AM to 10 PM*	*5,840*	*gas*	*20*	*65*	*50*	*4*

K — ENERGY-EFFICIENT WATER HEATERS FOR HIGH-USE COMMERCIAL APPLICATIONS — INCENTIVE CODE: P3045, P3046, P3047, P3684 — PAGE 42

BLDG TYPE	EXISTING SYSTEM FUEL TYPE	EXISTING WATER HEATER TYPE	EXISTING EFFICIENCY (% or EF)	WATER HEATER SUPPLY TEMPERATURE (˚F)	ANNUAL OPERATION (days/ year)	ACTUAL USAGE (See page 42 for units of measure)	NEW SYSTEM EFFICIENCY (% or EF)
Example-Cafeteria	*Gas*	*Gas Storage*	*82%*	*125 ˚F*	*350*	*400 meals/day*	*95%*

L — DHW PLANT — INCENTIVE CODE: M-P2760 — PAGE 44

EQUIP #	# OF EXISTING WATER HEATERS	INPUT CAPACITY (MBH)	TANK MFG (Required if indirect)	TANK MODEL NUMBER (Required if indirect)	TANK INPUT CAPACITY (Btu/ hr) (Required if indirect)
Example		*299*	*N/A*	*N/A*	*N/A*
1					
2					

*Focus on Energy may adjust total incentive based on project caps. Please see measure requirements and Terms and Conditions for more information.

PROGRAM DESCRIPTIONS AND SUBMITTAL INFORMATION

Submit your completed application to the program that best describes your business. Incentives for businesses are noted in blue and incentives for multifamily properties are green. Refer to the Program Descriptions with Examples page for more detailed program information.

NEED HELP?
CALL
800.762.7077

INCENTIVES FOR BUSINESSES

Measure Description	Code	Incentive	Unit	NC
4' 1 Lamp 25W RWT8 System, Low Ballast Factor	L2556	$4	Fixture	✔
ECM Evaporator Fan Motor, Walk-in Cooler, <1/20HP	R2308	$30	Motor	
Hot Water Boiler <300 MBH	H2218	$3	MBH	✔

✔ = New Construction eligible

SAMPLE

AGRICULTURE, SCHOOLS AND GOVERNMENT (AgSG) PROGRAM

Customers include agricultural producers, tribes, federal facilities, municipal and county government buildings, K-12 schools, colleges, universities, and wastewater facilities. School and Government facilities that fall under LEU should apply to the LEU Program.

MAIL: Focus on Energy AgSG
725 W. Park Avenue
Chippewa Falls, WI 54729

FAX: 608.663.0267

E-MAIL: AgSGapps@focusonenergy.com

BUSINESS INCENTIVE PROGRAM (BIP)

Customers include but are not limited to commercial and industrial businesses, small to midsize healthcare facilities and hospitality businesses. Businesses that do not fall under AgSG, CSF, or LEU programs should apply to BIP.

MAIL: Focus on Energy BIP
12075 Corporate Parkway, Suite 100
Mequon, WI 53092

FAX: 262.240.0825

E-MAIL: BIPapps@focusonenergy.com

CHAIN STORES AND FRANCHISES (CSF) PROGRAM

Qualifying customers include chain and franchise retail, restaurant, grocery, and convenience stores with five or more branded locations in the state of Wisconsin.

MAIL: Focus on Energy CSF
12075 Corporate Parkway, Suite 100
Mequon, WI 53092

FAX: 262.240.0825

E-MAIL: CSFapps@focusonenergy.com

LARGE ENERGY USERS (LEU) PROGRAM

Qualifying customers consistently have energy utility bills over $60,000 per month. Typical Large Energy Users include paper and pulp, food processing, foundries, large hospitals, etc.

MAIL: Focus on Energy LEU
440 Science Drive, Suite 203
Madison, WI 53711

FAX: 608.819.9051

E-MAIL: LEUapps@focusonenergy.com

INCENTIVES FOR MULTIFAMILY PROPERTIES

Measure Description	Code	Incentive	Unit	NC
4' 1 Lamp 25W RWT8 System, Low Ballast Factor	M-L2556	$25	Fixture	✔
Faucet Aerator, 1.5 gpm, Bathroom, Electric (NC Only)	M-P3028	$3	Aerator	✔
Hot Water Boiler <300 MBH	M-H2743	$500	Boiler	✔

✔ = New Construction eligible

SAMPLE

MULTIFAMILY ENERGY SAVINGS PROGRAM (MESP)

Eligible for residential properties with four or more dwelling units, including apartments, condominiums, and mixed use buildings.

MAIL: Focus on Energy MESP
12075 Corporate Parkway, Suite 100
Mequon, WI 53092

FAX: 262.240.0825

E-MAIL: MESPapps@focusonenergy.com

NEW CONSTRUCTION ELIGIBLE Working on a new construction project? Look for the ✔ symbol within each table which indicates equipment measures that qualify for new construction incentives.

PLEASE NOTE →

SUPPLEMENTAL DATA SHEET NEEDED If you see the * symbol next to the code, this means additional information is needed on the catalog-specific Supplemental Data Sheet. Be sure to read the measure requirements in your catalog for directions.

NEED HELP?
CALL
800.762.7077

PARTICIPATION REQUIREMENTS

Before you start your project, please make sure you are familiar with participation requirements, program information and Terms and Conditions.

INFORMATION AND REQUIREMENTS

General Terms and Conditions

Review Focus on Energy's Terms and Conditions at focusonenergy.com/terms or call **800.762.7077** to request a copy be provided to you.

Prescriptive Incentives

Agriculture, Schools and Government Program, Business Incentive Program, Chain Stores and Franchises Program, and Large Energy Users Program (collectively, "Business Programs"): Any project with an expected incentive exceeding $25,000 require pre-approval BEFORE project initiation or equipment purchase to guarantee fund availability. Projects not receiving pre-approval will be subject to funding availability. Projects with expected incentives of $10,000 or more may request pre-approval. Check the Focus on Energy website at **focusonenergy.com/business** or call **800.762.7077** for more information.

Multifamily Energy Savings Program: Any project with an expected incentive exceeding $10,000 require pre-approval BEFORE project initiation or equipment purchase to guarantee fund availability. Projects not receiving pre-approval will be subject to funding availability. Check the Focus on Energy website at **focusonenergy.com/multifamily** or call **866.486.0832** for more information.

For all prescriptive incentives, the incentive can not exceed the cost of the product (including any external labor).

Custom Incentives

If your project does not fit the descriptions on this prescriptive incentive application form, it may qualify for a custom incentive. This requires approval prior to project initiation and ordering equipment or issuing purchase orders. For Business Programs, direct inquiries to **800.762.7077** or visit **focusonenergy.com/business**. For Multifamily Programs, direct inquiries to **866.486.0832** or visit **focusonenergy.com/multifamily**.

Incentive Limits

Agriculture, Schools and Government Program, Business Incentive Program, and Multifamily Energy Savings Program: Incentives are limited to $200,000 per project and $400,000 per customer per calendar year for all Focus on Energy incentives (prescriptive and custom). Depending on your business tax classification, you may receive IRS Form 1099 for incentives totaling over $600 in a calendar year.

Chain Stores and Franchises Program: Incentives are limited to $250,000 per project and $500,000 per customer per calendar year for all Focus on Energy incentives (prescriptive and custom). Depending on your business tax classification, you may receive IRS Form 1099 for incentives totaling over $600 in a calendar year.

Large Energy Users Program: Incentives are limited to $150,000 per project and $300,000 per customer per calendar year for all Focus on Energy incentives (prescriptive and custom). Depending on your business tax classification, you may receive IRS Form 1099 for incentives totaling over $600 in a calendar year.

Trade Ally Information

A Trade Ally represents the company who provided/installed the equipment for a project or performed the service for which a customer is seeking an incentive. Trade Allies who have signed an agreement with Focus on Energy are allowed to enjoy certain program benefits, one of which is to receive direct payment of incentives at the Trade Ally's request. Incentives can only be paid directly to a Trade Ally if the Trade Ally has completed and submitted a Trade Ally Application.

The Federal Employer Identification Number (FEIN) and Business Classification of the Trade Ally is required IF you received your incentive as a credit on your invoice, whereby the incentive is paid directly to the Trade Ally. In this scenario, the credit must be clearly labeled as the Focus on Energy incentive and deducted from the amount due.

If your project was completed by more than one Trade Ally (example, equipment was purchased from one Trade Ally but installed by another Trade Ally) and the incentive is being paid to you the customer, please enter the information of the Trade Ally who installed your equipment in Section 4: Trade Ally Information. If the equipment was self-installed, please enter the information of the Trade Ally from whom you purchased the equipment.

Focus on Energy Information

Focus on Energy works with eligible Wisconsin residents and businesses to install cost-effective energy efficiency and renewable energy projects. Focus on Energy information, resources and financial incentives help to implement projects that otherwise would not get completed, or to complete projects sooner than scheduled. Its efforts help Wisconsin residents and businesses manage rising energy costs, promote in-state economic development, protect our environment and control the state's growing demand for electricity and natural gas.

CATALOG GUIDE

Find the Focus on Energy equipment incentives you need in one of the incentive catalogs or applications pictured. All catalogs and applications are available at focusonenergy.com/applications. For custom incentives, visit **focusonenergy.com/custom** to get started. Still need help? Call us at **800.762.7077**, and we will find the correct resource for your needs.

NEED HELP?
CALL
800.762.7077

AGRICULTURE

View these applications to find the equipment right for your facility:

- Dairy & Livestock Equipment Application
- Irrigation Systems & Grain Dryer Application
- Greenhouse Application

COMMERCIAL KITCHEN EQUIPMENT

- Cooking Equipment
- Commercial Kitchen Ventilation Equipment
- Washing Equipment

COMMERCIAL REFRIGERATION

- Case Lighting
- Commercial Refrigerators
- Commercial Freezers
- Commercial Ice Machines
- Electronically Commutated Motors
- Energy-Efficient Doors
- Non Self-Contained Controls
- Open Case Modifications
- Self-Contained Controls
- Vending Machines

HVAC/PLUMBING

- Appliances
- Aerators and Showerheads
- Boilers
- Boiler Controls and Burners
- Chillers
- Direct Expansion Systems
- Dock Seals and Hinges
- Forced Air and Radiant Heat
- Insulation (pipe and building)
- Steam Systems
- Variable Frequency Drives for HVAC
- Ventilation Upgrades and Controls
- Water Heaters

LIGHTING

- Daylight Controls
- Exterior Flood
- Exterior Controls
- Fuel and High Canopy
- High Bay and Low Bay
- High Bay Controls
- Linear Fluorescent
- Non High Bay Controls
- Other Interior and Exterior Fixtures
- Parking Garage and Low-Canopy
- Pole-Mounted
- Replacement Lamps
- Wall-Mounted

PROCESS SYSTEMS

- Air Compressors
- Accessories/Ancillary Equipment
- Compressed Air Load Shifting
- Compressed Air Survey Leak and Repair
- Heat Recovery
- Heat Treating
- Plastics
- Process Exhaust Filtration
- Pulp and Paper
- Steam Trap Maintenance and Replacement
- Pumps and Fans (Variable and Constant Torque)
- Variable Frequency Drives for Process

NEW CONSTRUCTION

Interested in NEW CONSTRUCTION incentives? Every catalog can be used to apply for new construction. Look for the ✔ in the measure tables to find qualifying equipment.

Qualifying Focus on Energy Trade Allies can also utilize the following offerings:

- Common Area Lighting Package (CALP)
- Express Building Tune-Up (EBTU)
- Exterior Lighting Optimization (ELO)
- Retrocomissioning (RCx)

Contact **800.762.7077** or visit **focusonenergy.com/trade-allies** to become a registered Trade Ally or find one for your needs.

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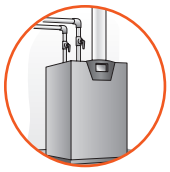
HEATING SYSTEMS

BOILERS

General Requirements: Only natural gas equipment is eligible for incentives. Boilers fueled by electric, propane or oil are NOT eligible for incentives. Redundant or backup boilers do not qualify. Condensing boilers (≥90% AFUE or thermal efficiency) will provide maximum efficiency only if the return water temperature is cool enough to condense flue gases. If the heating system configuration cannot provide necessary operating conditions to the boiler, selection of a non-condensing or near-condensing boiler may be more appropriate.



HOT WATER BOILERS

Requirements:

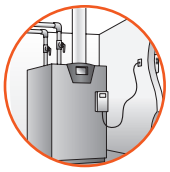
- Boiler incentives are only available for equipment used in space heating applications. Boilers used for only domestic hot water heating and industrial or process heating are not eligible for this incentive but may qualify for a DHW or custom incentive.
- Space heating boilers also used for DHW may be eligible for indirect DHW incentives but are subject to requirements.
  - In plant systems, boilers are eligible for incentives for their primary use only.
  - A boiler replacing a space heating and indirect DHW system will use the capacity of the existing space heating and DHW systems to estimate the split of incentives.
  - Boilers with indirect that are only serving DHW are not eligible for the space heating incentives.
- Steam boilers are not eligible for this incentive but may qualify for a custom incentive.
- Chimney liners must be installed where a high-efficiency natural gas boiler replaces atmospherically drafted equipment that was vented through the same flue as a gas water heater.
- Hot Water Boilers <300 MBh:
  - Must be a sealed combustion unit and ≥90% AFUE.
  - Condensing boilers must modulate their firing rate and include outdoor-air reset control.
- Hot Water Boilers ≥300 MBh:
  - Boilers must be capable of capacity modulation.
  - **Submit boiler specification sheet with steady state boiler input and output ratings and thermal efficiency.**
  - When replacing a boiler system with both condensing (>90% thermal efficiency) and near condensing (>85% thermal efficiency), use the Hybrid Hot Water Boiler Plant measure.
- Hybrid Hot Water Boiler Plant ≥1,000 MBh:
  - This measure looks at the entire boiler plant capacity. The summation of the capacity for all heating equipment must be ≥1,000 MBh, excluding backup and redundant boilers. The entire plant must be replaced.
  - Boiler plant must include both condensing (≥90% thermal efficiency) and near condensing (85%-89% thermal efficiency) and be capable of capacity modulation.
  - Hybrid boiler plant option must have at a minimum 50% of total heating capacity served by boilers with thermal efficiencies of ≥90%.
  - Hybrid boiler plants must have controls set up to operate condensing boilers when return water temperature allows condensing operation.
  - Boiler plant must have indoor/outdoor reset and staging controls installed for the system.
  - **Submit boiler specification sheet with steady state boiler input and output ratings and thermal efficiency.**

BUSINESS INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
Hot Water Boilers <300 MBh, ≥90% AFUE	H2218	$3	MBh	✔
Hot Water Boilers ≥300 MBh input, ≥85% Thermal Efficiency	H3277	$1	MBh	✔
Hot Water Boilers ≥300 MBh input, ≥90% Thermal Efficiency	H3276	$3	MBh	✔
Hot Water Boiler Plant ≥1,000 MBh input, Hybrid Efficiencies	H3275	$2	MBh	✔
✔ = New Construction eligible				

MULTIFAMILY INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
Hot Water Boilers <300 MBh, ≥90% AFUE	M-H2743	$500	Boiler	✔
Hot Water Boilers ≥300 MBh input, ≥85% Thermal Efficiency	M-H3277	$1.50	MBh	✔
Hot Water Boilers ≥300 MBh input, ≥90% Thermal Efficiency	M-H3276	$3	MBh	✔
Hot Water Boiler Plant ≥1,000 MBh input, Hybrid Efficiencies	M-H3275	$2	MBh	✔
✔ = New Construction eligible				

BOILER CONTROLS AND BURNERS

General Requirements: Only natural gas equipment is eligible for incentives. Boilers fueled by electric, propane or oil are NOT eligible for incentives. Redundant or backup boilers do not qualify.



OUTSIDE AIR RESET/CUTOUT CONTROLS

Requirements:

- Outside air temperature boiler reset and cutout control incentives are for retrofit projects only. New boilers equipped with these controls do not qualify.
- System must have an outdoor temperature sensor installed in a shaded location on the north side of the building.
- System must be set up so that the minimum temperature is less than 10°F above boiler manufacturer's recommended minimum return temperature (unless unusual circumstances require a higher setting).
- For controls on multiple boilers to qualify, control strategy must stage the lag boiler(s) only after the first boiler stage(s) fail to maintain the water temperature called for by the reset control.
- Provide capacity of boilers (in MBh) controlled with outside air reset and cutout controls per the example below.

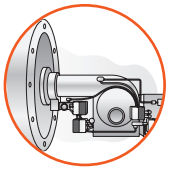
BUSINESS INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
Outside Air Reset/Cutout Controls	H2221	$60	Control	
Not Eligible for New Construction				

BUSINESS INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
Outside Air Reset/Cutout Controls	M-H2221	$100	Control	
Not Eligible for New Construction				

OUTSIDE AIR RESET/ CUTOUT CONTROLS EXAMPLE

Use this example when applying for outside air reset/cutout controls which also requires boiler capacity in MBh. Please reference this table when filling out **SECTION 7** on the Incentive Application.

INCENTIVE CODE	MANUFACTURER NAME	MODEL #	UNIT MEASURE	# OF UNITS (A)	INCENTIVE PER UNIT (B)	TOTAL INCENTIVE (A X B)
H2221	ABC Controls	OA1234	Control	1	$60	$60
--------	--------	Boiler Capacity	MBh	500	--------	--------



BOILER COMBUSTION UPGRADES

Requirements:

- Incentives for linkageless and O_2 trim controls are available for upgrades to existing boilers only. If existing boiler is not capable of being retrofitted with these controls and a new boiler is therefore necessary, this incentive may be eligible for installation on a new boiler with prior approval from Focus on Energy.
- Incentives for High Turndown Burners are available for both retrofit and new construction. However, high turndown burner incentives may not be paired with incentives for a new 90% efficient boiler.
- Boiler must be natural gas-fired, forced-draft boiler used for space heating that operates a minimum of 4,000 hours per year.
- Installation on redundant or backup boilers does not qualify for an incentive.
- Boiler input must be entered in boiler horsepower (BHp). 1 BHp = 33.476 MBh. High turndown burner must be able to provide efficient combustion at a 10:1 turndown ratio.
- Incentive is capped at 50% of final invoice cost not including any internal labor. Invoices must be attached and include the manufacturer name and model number of linkageless controls, O_2 trim and high turndown burner equipment.

BUSINESS INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
Linkageless Controls	H2205	$10	BHp	
O_2 Trim Controls	H2206	$5	BHp	
High Turndown Burner	H2203	$10	BHp	✔
✔ = New Construction eligible				

HOT WATER AND STEAM DISTRIBUTION SYSTEMS

General Requirements: Only systems with steam and hot water produced by natural gas equipment (and electric equipment if specifically allowed in the requirements below) are eligible for incentives. Systems with equipment fueled by propane or oil are NOT eligible for incentives. Municipal steam systems (i.e., "city steam") are not a qualifying utility.

HEATING HOT WATER PIPE INSULATION

Requirements:

- This incentive is intended for adding insulation to uninsulated hot water piping that is used for space heating.
- Incentive is limited to 50% of invoice cost, not including any internal labor.
- Piping 3.0 inch and smaller must install at least 1.0 inch thick insulation.
- Piping greater than 3.0 inch must install at least 1.5 inch thick insulation.
- Hot water system must be used for space heating applications. Other applications may qualify for a custom incentive.

MULTIFAMILY INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
Hot Water Space Heat, ½" and ¾" Pipe, Natural Gas	M-H3685	$2	Ft of Pipe	
Hot Water Space Heat, 1" and 1 ¼" Pipe, Natural Gas	M-H3686	$3	Ft of Pipe	
Hot Water Space Heat, 1 ½" and 2" Pipe, Natural Gas	M-H3687	$4	Ft of Pipe	
Hot Water Space Heat, 3" and 4" Pipe, Natural Gas	M-H3688	$6	Ft of Pipe	
Hot Water Space Heat, ½" and ¾" Pipe, Electric	M-H3689	$2	Ft of Pipe	
Hot Water Space Heat, 1" and 1 ¼" Pipe, Electric	M-H3690	$3	Ft of Pipe	
Hot Water Space Heat, 1 ½" and 2" Pipe, Electric	M-H3691	$4	Ft of Pipe	
Hot Water Space Heat, 3" and 4" Pipe, Electric	M-H3692	$6	Ft of Pipe	
Not eligible for New Construction				

STEAM PIPE INSULATION

Requirements:

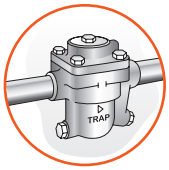
- This incentive is intended for adding insulation to uninsulated steam piping and/or fittings.
- Insulation for fittings must be removable and reusable.
- For business programs: steam piping insulation must be ≥1.5 inches for pipes <1.5 inches in diameter and ≥3 inches for pipes >1.5 inches in diameter.
- For multifamily: steam piping insulation must have 1.5 inch thick insulation and Incentive is limited to 50% of invoice cost, not including any internal labor.
- Steam system being insulated must be used for space heating applications. Industrial process applications may be eligible for a custom incentive.

BUSINESS INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
Insulation for Steam Fittings, Natural Gas	H2429	$8	Fitting	
Insulation for Steam Pipe, Natural Gas	H2430	$2	Ft of Pipe	
Not eligible for New Construction				

MULTIFAMILY INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
Steam Space Heat, ½" and ¾" Pipe, Natural Gas	M-H3751	$2	Ft of Pipe	
Steam Space Heat, 1" and 1 ¼" Pipe, Natural Gas	M-H3752	$3	Ft of Pipe	
Steam Space Heat, 1 ½" and 2" Pipe, Natural Gas	M-H3753	$4	Ft of Pipe	
Steam Space Heat, 3" and 4" Pipe, Natural Gas	M-H3754	$6	Ft of Pipe	
Steam Space Heat, ½" and ¾" Pipe, Electric	M-H3755	$2	Ft of Pipe	
Steam Space Heat, 1" and 1 ¼" Pipe, Electric	M-H3756	$3	Ft of Pipe	
Steam Space Heat, 1 ½" and 2" Pipe, Electric	M-H3757	$4	Ft of Pipe	
Steam Space Heat, 3" and 4" Pipe, Electric	M-H3758	$6	Ft of Pipe	
Not eligible for New Construction				

PRO TIP

Insulating steam piping can typically reduce energy losses by 90% and help ensure proper steam pressure at plant equipment. Any surface over 120°F should be insulated, including boiler surfaces, steam and condensate return piping, and fittings.



STEAM TRAP MAINTENANCE AND REPAIR

Requirements:

- Repair incentive is only available for the repair or replacement of traps that have malfunctioned and are leaking steam. Repair incentive is not available for traps that are failed closed or are plugged.
- Copy of paid invoice must be submitted with application. Survey and repair incentives will not exceed invoice cost.
- For industrial process steam traps, use the Process Systems Incentive Catalog.
- Repairs do not need to be made at one time, but only one repair incentive per trap can be applied for in a year.
- Mass replacement of traps can be completed without condition assessment. Focus on Energy will assume that 20% of traps were leaking and pay a repair incentive for 20% of the total traps replaced and no survey incentive.
- Steam trap survey and repair work must be recorded in a log sheet and attached to the application in order to be eligible for the survey incentive. Trade Ally must create and fill in the log as work is completed. Required fields (minimum):
  - ID Tag Number
  - Location Description
  - Nominal Steam Pressure
  - Trap Type
  - Indicate Condition for Each Steam Trap (chose one of the following):
    - Functioning Properly
    - Malfunctioning - Not Leaking Steam
    - Malfunctioning - Leaking Steam
  - Survey Date/Repair Date
  - Survey/Repair Technician Name
  - Orifice Size (if repaired or replaced)
  - Notes
- For business programs:
  - Surveys are optional. A customer may apply for the repair incentive only to repair or replace known failed steam traps. Survey incentives are available only once per year per steam system.
  - To qualify for the survey incentive, customer must repair or replace one trap for every five traps surveyed. If less than one trap per every five traps surveyed is identified as failed, then all failed traps must be repaired or replaced. In the case where all identified failed traps must be repaired or replaced, customer may provide written explanation for a trap that cannot be repaired or replaced and may still qualify for an incentive.

BUSINESS INCENTIVES

Measure Description	Code	Incentive	Unit	NC
Steam Trap Survey	H2225	$4	Steam Trap	
<50 psig General Heating Steam Trap, 7/32" or Smaller Orifice	H3269	$40	Steam Trap	
<50 psig General Heating Steam Trap, 1/4" Orifice	H3270	$40	Steam Trap	
<50 psig General Heating Steam Trap, 5/16" Orifice	H3271	$40	Steam Trap	
<50 psig General Heating Steam Trap, 3/8" or Larger Orifice	H3272	$40	Steam Trap	
50-125 psig General Heating Steam Trap, 7/32" or Smaller Orifice	H3516	$60	Steam Trap	
50-125 psig General Heating Steam Trap, 1/4" Orifice	H3583	$60	Steam Trap	
50-125 psig General Heating Steam Trap, 5/16" Orifice	H3515	$60	Steam Trap	
50-125 psig General Heating Steam Trap, 3/8" or Larger Orifice	H3514	$60	Steam Trap	
126-225 psig General Heating Steam Trap, 7/32" or Smaller Orifice	H3520	$100	Steam Trap	
126-225 psig General Heating Steam Trap, 1/4" Orifice	H3517	$100	Steam Trap	
126-225 psig General Heating Steam Trap, 5/16" Orifice	H3519	$100	Steam Trap	
126-225 psig General Heating Steam Trap, 3/8" or Larger Orifice	H3518	$100	Steam Trap	
>225 psig General Heating Steam Trap, 7/32" or Smaller Orifice	H3524	$160	Steam Trap	
>225 psig General Heating Steam Trap, 1/4" Orifice	H3521	$160	Steam Trap	
>225 psig General Heating Steam Trap, 5/16" Orifice	H3523	$160	Steam Trap	
>225 psig General Heating Steam Trap, 3/8" or Larger Orifice	H3522	$160	Steam Trap	

Not eligible for New Construction

MULTIFAMILY INCENTIVES

Measure Description	Code	Incentive	Unit	NC
<10 psig radiator	M-H2772	$25	Steam Trap	
<50 psig General Heating Steam Trap, 7/32" or Smaller Orifice	M-H3269	$50	Steam Trap	
<50 psig General Heating Steam Trap, 1/4" Orifice	M-H3270	$50	Steam Trap	
<50 psig General Heating Steam Trap, 5/16" Orifice	M-H3271	$50	Steam Trap	
<50 psig General Heating Steam Trap, 3/8" or Larger Orifice	M-H3272	$50	Steam Trap	

Not eligible for New Construction

PRO TIP

According to the U.S. Department of Energy, 15%-30% of the installed steam traps could have failed in steam systems that have not been maintained for three to five years. Failed traps allow live steam to escape into the condensate return system, never reaching end-use equipment. With a regularly scheduled maintenance program, leaking traps should account for less than 5% of the trap population.

FORCED AIR AND RADIANT HEAT

General Requirements: Only natural gas equipment is eligible for incentives (and electric equipment if specifically allowed in the requirements below). Equipment fueled by propane or oil is NOT eligible for incentives. Incentives are only available for equipment used in space heating applications. Equipment serving process or other loads does not qualify.

FURNACES

Requirements:

- Eligibility for furnace and single package vertical unit measures is based on customer having both an eligible electric and natural gas provider.
- Furnaces and single package vertical unit must meet the minimum efficiency requirements listed and be a sealed combustion unit. Efficiency ratings will be verified using the AHRI database (ahridirectory.org).
- Furnaces and single package vertical units must have an ECM motor (single speed, multi-speed, or variable speed). Permanent split capacitor motors are not eligible. Air handlers with an ECM motor are not eligible.
- Required features must be documented on a specification sheet.
- Provide capacity of furnace or single package vertical unit (in MBh) on the Incentive Application per the example below.
- For furnaces only:
  - Furnaces must have a multi-stage burner and have at least two firing stages.
  - Chimney liners must be installed where a high-efficiency natural gas furnace replaces an atmospherically drafted furnace and only a water heater remains vented through the chimney. The interior opening left by the removed furnace must be closed with a metal cap and sealed with caulk or mortar.
  - Furnaces listed on the Focus on Energy residential furnace qualified products list does not guarantee the furnace has all features required for business and multifamily incentives.

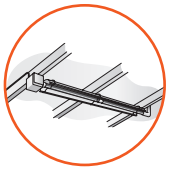
BUSINESS INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
Furnace with ECM, ≥95%+ AFUE, NG	H3491	$220	Furnace	✔
Furnace with ECM, ≥90%+ AFUE, NG	H3492	$100	Furnace	✔
✔ = New Construction eligible				

MULTIFAMILY INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
Furnace with ECM, ≥95%+ AFUE, NG	M-H2764	$220	Furnace	✔
Single package vertical unit, ≥90%+ Thermal Efficiency, NG, ≥10.0 EER Cooling	M-H3693	$150	Single Package Vertical Unit	✔
Single package vertical unit, ≥90%+ Thermal Efficiency, NG	M-H3694	$100	Single Package Vertical Unit	✔
✔ = New Construction eligible				

FURNACE EXAMPLE

Use this example when applying for furnaces which also requires furnace capacity in MBh. Please reference this table when filling out **SECTION 7** on the Incentive Application.

INCENTIVE CODE	MANUFACTURER NAME	MODEL #	UNIT MEASURE	# OF UNITS (A)	INCENTIVE PER UNIT (B)	TOTAL INCENTIVE (A X B)
H3492	XYZ Furnaces	F987A	Furnace	2	$100	$200
--------	--------	Furnace Capacity	MBh	60	--------	--------

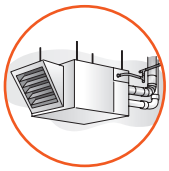


INFRARED HEATERS

Requirements:

- Both low-intensity and high-intensity heaters are eligible.
- Must have electronic ignition.
- Must be either directly vented outdoors with insulated flue pipe or indirectly vented by positive air displacement according to manufacturer's specifications.
- Low-intensity heaters must use outside non-conditioned combustion air.
- Excludes outdoor patio heating applications.
- Replacement of an existing infrared heater does not qualify.

BUSINESS INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
Infrared Heater	H2422	$2	MBh	
Infrared Heater (NC only)	HN2422	$1	MBh	✔
✔ = New Construction eligible				

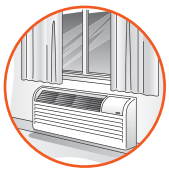


UNIT HEATERS

Requirements:

- Unit heater must be an upgrade from a standard efficiency (typically 80%-84% thermal efficiency) unit heater.
- Must be vented and condensate drained per manufacturer specifications.
- Direct fired rooftop units/make-up air units are not eligible for this incentive.
- Must replace or be installed instead of an existing non-condensing unit heater.
- **Provide a manufacturer's specification sheet to document the features and efficiency level of the unit heater.**

BUSINESS INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
Unit Heater, ≥90% Thermal Efficiency	H2608	$2	MBh	
Unit Heater, ≥90% Thermal Efficiency (NC only)	HN2608	$1	MBh	✔
✔ = New Construction eligible				



PACKAGED TERMINAL HEAT PUMPS (PTHP)

Requirements:

- Eligibility for PTHP measures is based on customer having an eligible electric provider.
- Must replace or be instead of a Packaged Terminal Air Conditioner (PTAC). Replacement of existing PTHP does NOT qualify.
- Unit must be AHRI listed as a Commercial PTHP. Window and through-the-wall air conditioners/heat pumps do not qualify.
- The equipment size category (BTUh) is the cooling capacity value of the unit.
- Must meet both heating and cooling specifications for the equipment size category.
- All efficiency ratings will be verified using the AHRI database (ahridirectory.org).

BUSINESS INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
PTHP <8,000 BTUh, ≥10.7 EER and ≥3.0 COP	H2699	$75	PTHP	✔
PTHP 8,000-9,999 BTUh, ≥10.4 EER and ≥3.0 COP	H2702	$75	PTHP	✔
PTHP 10,000-12,999 BTUh, ≥9.9 EER and ≥2.9 COP	H2701	$75	PTHP	✔
PTHP ≥13,000 BTUh, ≥9.3 EER and ≥2.8 COP	H2700	$75	PTHP	✔
✔ = New Construction eligible				

MULTIFAMILY INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
PTHP <8,000 BTUh, ≥10.7 EER and ≥3.0 COP	M-H2699	$100	PTHP	✔
PTHP 8,000-9,999 BTUh, ≥10.4 EER and ≥3.0 COP	M-H2702	$100	PTHP	✔
PTHP 10,000-12,999 BTUh, ≥9.9 EER and ≥2.9 COP	M-H2701	$100	PTHP	✔
PTHP ≥13,000 BTUh, ≥9.3 EER and ≥2.8 COP	M-H2700	$100	PTHP	✔
✔= New Construction eligible				

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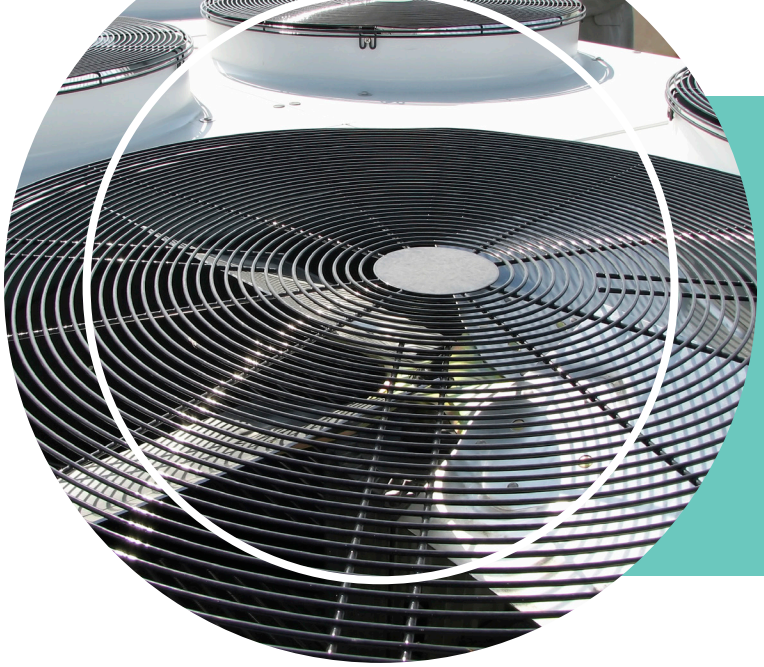
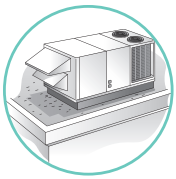
COOLING SYSTEMS



DIRECT EXPANSION (DX) SYSTEMS

General Requirements: All efficiencies will be verified using the AHRI database. Visit ahridirectory.org

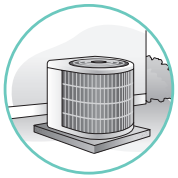


COMMERCIAL AIR CONDITIONING (A/C) SPLIT AND PACKAGED SYSTEMS

Requirements:

- **Complete Table A of the "HVAC/Plumbing Incentive Catalog Supplemental Data Sheet" for this measure.**
  - For the "Min. Eff. To Qualify" column, use the value listed in the Measure Description below. Example: for a 7.5 ton unit, the "min. efficiency to qualify" would be 12.0 EER (from second row of measure table).
  - For the Delta Efficiency column, use AHRI Rated Full Load Efficiency – Min. Eff. To Qualify.
  - For the Incentive Rate column, use Additional Incentive + Base Incentive.
  - For the Total Incentive column, use AHRI Rated Capacity x Incentive Rate.
  - Only complete 1 line of supplemental data sheet if multiple of the exact same model number were installed.
- Incentive is for the installation of high-efficiency packaged rooftop units and split system air conditioning equipment. The base incentive rate for meeting the minimum efficiency is $45/ton, with an additional $10/ton incentive for each 1.0 SEER (≤5.4 tons) or 1.0 EER (>5.4 tons) that the cooling system exceeds the minimum efficiency.
- Incentives are for standard HVAC applications only.
  - Rooftop units and split system air conditioners used for industrial process cooling, ice rinks and refrigerated warehouses may qualify for a custom incentive.
  - When used in data centers, rooftop units and split system air conditioners which are ≤5.4 tons and listed on ahridirectory.org are eligible. Equipment >5.4 tons and equipment that is not listed on ahridirectory.org may be eligible for a custom incentive when used for data centers. Note: most equipment from manufacturers of data center specific cooling equipment IS NOT listed on ahridirectory.org.
- Rated AHRI efficiency must meet or exceed minimum ratings shown for EER and either SEER or IEER.
- AHRI verified cooling capacity, EER, SEER, and IEER will be used to calculate the incentive.
- For multiple of the exact same model number, complete the Incentive Application as follows: enter qty @ tons each in the # of Units column (example: 3 @ 11.5).
- For split systems:
  - Performance data must be for the "Matched Air Handler" or "Complete System" that includes the condensing unit and evaporator coil. "Condensing Unit Only" performance data is not acceptable.
  - Both the condenser and evaporator coils must be replaced. Refrigerant line diameters must meet manufacturer specifications.
  - Must include evaporator coil model number.
  - Mini-split/ductless systems and air-source heat pumps that are ≤5.4 tons, meet the required efficiency, and are listed in AHRI with matching indoor unit and outdoor unit configuration also qualify.

BUSINESS INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
DX Cooling ≤5.4 tons, Min. Eff. = 15 SEER and 12.0 EER (additional incentive on SEER)	H3022*	$45+	Ton	✔
DX Cooling 5.5-11.3 tons, Min. Eff. = 12.0 EER and 13.8 IEER (additional incentive on EER)	H3022*	$45+	Ton	✔
DX Cooling 11.4-19.9 tons, Min. Eff. = 12.0 EER and 13.0 IEER (additional incentive on EER)	H3022*	$45+	Ton	✔
DX Cooling 20.0-63.2 tons, Min. Eff. = 10.6 EER and 12.1 IEER (additional incentive on EER)	H3022*	$45+	Ton	✔
DX Cooling ≥63.3 tons, Min. Eff. = 10.2 EER and 11.4 IEER (additional incentive on EER)	H3022*	$45+	Ton	✔
*** Supplemental Data Sheet needed ✔ = New Construction eligible**				

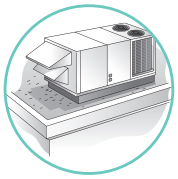


MULTIFAMILY AIR CONDITIONING (A/C) SPLIT SYSTEMS ≤5.4 TONS

Requirements:

- Incentive is for the installation of high-efficiency split system air conditioning equipment. Rated AHRI efficiency must meet or exceed minimum SEER ratings shown.
- System efficiency is based solely on the evaporator and condenser coils; the SEER may not be increased by factoring in the efficiency of a variable speed forced air heating system fan, except where a two-stage air conditioner is installed.
- AHRI verified cooling capacity and SEER will be used to calculate the incentive.
- Refrigerant line diameters must meet manufacturer's specifications.
- Mini-split/ductless systems and air-source heat pumps that meet these efficiencies and are listed in AHRI with matching indoor unit and outdoor unit configuration also qualify.

MULTIFAMILY INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
14 SEER DX Cooling, ≤5.4 tons	M-H2194	$100	A/C Unit	✔
15 SEER DX Cooling, ≤5.4 tons	M-H2192	$150	A/C Unit	✔
16 SEER DX Cooling, ≤5.4 tons	M-H2193	$200	A/C Unit	✔
✔ = New Construction eligible				



MULTIFAMILY AIR CONDITIONING (A/C) SPLIT AND PACKAGED SYSTEMS >5.4 TONS

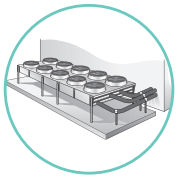
Requirements:

- **Complete Table A of the "HVAC/Plumbing Incentive Catalog Supplemental Data Sheet" for this measure.**
  - For the "Min. Eff. To Qualify" column, use the value listed in the Measure Description below. Example: for a 7.5 ton unit, the "min. efficiency to qualify" would be 12.0 EER (from first row of measure table).
  - For the Delta Efficiency column, use AHRI Rated Full Load Efficiency – Min. Eff. To Qualify.
  - For the Incentive Rate column, use Additional Incentive + Base Incentive.
  - For the Total Incentive column, use AHRI Rated Capacity x Incentive Rate.
  - Only complete 1 line of supplemental data sheet if multiple of the exact same model number were installed.
- Incentive is for the installation of high-efficiency packaged rooftop units and split system air conditioning equipment. The base incentive rate for meeting the minimum efficiency is $45/ton, with an additional $10/ton incentive for each 1.0 EER that the cooling system exceeds the minimum efficiency.
- Incentives are for standard HVAC applications only.
- Rated AHRI efficiency must meet or exceed minimum ratings shown for EER and IEER.
- AHRI verified cooling capacity, EER, and IEER will be used to calculate the incentive.
- For multiple of the exact same model number, complete the Incentive Application as follows: enter qty @ tons each in the # of Units column (example: 3 @ 11.5).
- For split systems:
  - Performance data must be for the "Matched Air Handler" or "Complete System" that includes the condensing unit and evaporator coil. "Condensing Unit Only" performance data is not acceptable.
  - Both the condenser and evaporator coils must be replaced. Refrigerant line diameters must meet manufacturer specifications.
  - Must include evaporator coil model number.

MULTIFAMILY INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
DX Cooling 5.5-11.3 tons, Min. Eff. = 12.0 EER and 13.8 IEER	H3761*	$45+	Ton	✔
DX Cooling 11.4-19.9 tons, Min. Eff. = 12.0 EER and 13.0 IEER	H3761*	$45+	Ton	✔
DX Cooling 20.0-63.2 tons, Min. Eff. = 10.6 EER and 12.1 IEER	H3761*	$45+	Ton	✔
DX Cooling ≥63.3 tons, Min. Eff. = 10.2 EER and 11.4 IEER	H3761*	$45+	Ton	✔
✔ = New Construction eligible				

PRO TIP

Additional system strategies include variable speed fans and compressor controls to more effectively use the refrigerant and modulate the temperature and amount of cooled air supplied to the space. See economizers, demand controlled ventilation (DCV) and programmable thermostats for additional savings opportunities.



ENERGY-EFFICIENT DRYCOOLER FOR DATA CENTER

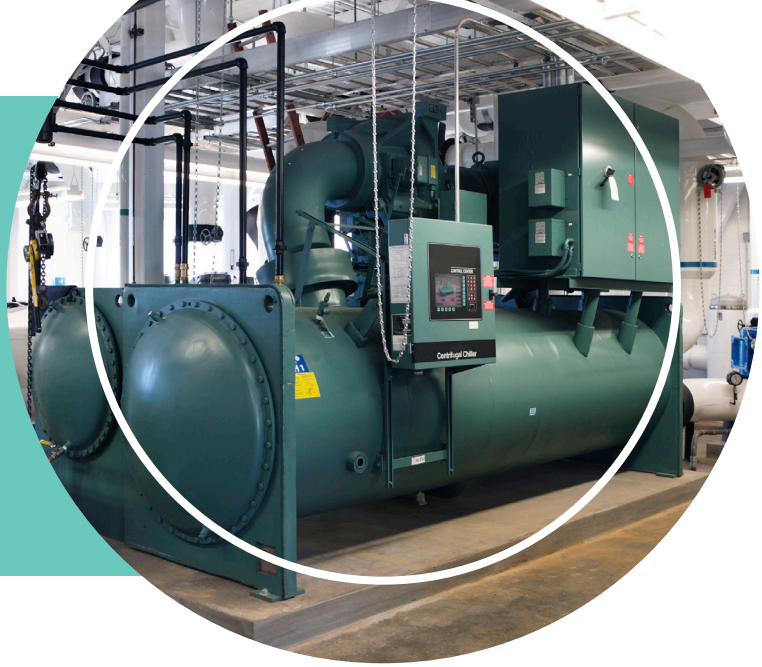
Requirements:

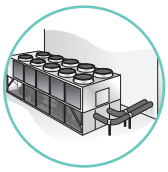
- Install a water-side economizer that is automatically controlled to enable economizer operation based on outside air temperature.
- Water-side economizer must be installed new and is not for replacement of an existing water-side economizer.
- Only for data centers with direct expansion (DX) computer room air conditioning (CRAC) units (chilled water systems may be eligible for custom incentives).
- Redundant CRAC units that are not in operation do not count toward the total capacity (i.e., the total capacity of redundant, non-operational CRAC units should not be included when calculating the total capacity).
- Provide documentation of total rated capacity of data center cooling system. Documentation should include an inventory of CRAC units with quantity, manufacturer and model number of each unit.

BUSINESS INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
Energy-Efficient Drycooler for Data Center	H2305	$80	Ton	✔
✔ = New Construction eligible				

CHILLERS

General Requirements: Chillers purchased or installed for backup or redundant systems are not eligible. Chiller components, such as motors and variable frequency drives (VFD), are incented as part of the chiller package and are not independently eligible for prescriptive incentives during a chiller replacement.





AIR-COOLED CHILLERS

Requirements:

- **Complete Table B1 and B2 of the "HVAC/Plumbing Incentive Catalog Supplemental Data Sheet" for this measure.**
  - For the "Max Full Load" and "Max Part Load (IPLV)" columns, use the values listed in the Measure Description below.
  - For the "Delta Efficiency" column, use: ("Max Full Load"– "AHRI Rated Full Load Efficiency") + ("Max Part Load (IPLV)" – "AHRI Rated Part Load Efficiency").
  - The "Base Incentive" is $12/ton for <150 ton air-cooled chillers and $10/ton for ≥150 ton air-cooled chillers.
  - The "Incentive Rate" is: "Base Incentive" + "Additional Incentive".
  - The "Total Incentive" is: AHRI Rated Capacity x "Incentive Rate".
- **Incentives for this technology are not available for Large Energy Users Program customers.** To check if you are a Large Energy Users Program customer, call 800.762.7077.
- Chillers must be air cooled and driven by an electric motor. Absorption chillers, engine driven and steam turbine driven chillers are not eligible for this incentive but may be eligible for a custom incentive.
- **Manufacturer specification sheets for items installed must be submitted with the completed Incentive Application.** Chiller specification sheets must include performance data, including full load efficiency in kW/ton, IPLV value in kW/ton and capacity in tons at AHRI standard rating conditions per AHRI Standard 550/590 test procedures.
- Incentives are calculated based on performance data (including capacity) at AHRI standard rating conditions.
- The base incentive rate is listed in the incentive tables below. The incentive increases as the full load and part load kW/ton exceeds the minimum efficiency requirements. Additional incentive = ([Maximum Full Load kW/ton – AHRI Rated Full Load kW/ton] + [Maximum Part Load IPLV kW/ton – AHRI Rated Part Load IPLV kW/ton]) x $250/ton.
- The full product identification/model number must be shown on the AHRI specification sheets and invoices.
- Equipment must meet either full load efficiency, part load efficiency or both. Both full load and part load efficiency must be counted in the incentive calculation formula, even if it is less efficient than the minimum. In the event the full load efficiency is slightly better than the minimum and part load efficiency is significantly worse (or vice-versa), making the calculated incentive negative, no incentive is available and an incentive application should not be submitted. Equipment must be purchased and operating prior to submitting an Incentive Application form (unless submitting for pre-approval).
- Electric chiller incentives are only available for HVAC space cooling applications. Chillers used for industrial process cooling, ice rinks, data centers and refrigerated warehouses may qualify for a custom incentive.
- Provide all kW/ton values to at least 2 decimal places.

BUSINESS INCENTIVES

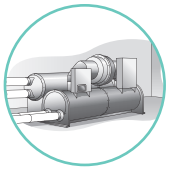
Measure Description	Code	Incentive	Unit	NC
Air-Cooled <150 tons, Full Load ≤1.2 kW/ton, Part Load ≤0.90 kW/ton	H2249*†	$12+	Ton	✔
Air-Cooled ≥150 tons, Full Load ≤1.2 kW/ton, Part Load ≤0.90 kW/ton	H2249*†	$10+	Ton	✔

* Supplemental Data Sheet needed
† = Not available for LEU Program Customers ✔ = New Construction eligible

MULTIFAMILY INCENTIVES

Measure Description	Code	Incentive	Unit	NC
Air-Cooled <150 tons, Full Load ≤1.2 kW/ton, Part Load ≤0.90 kW/ton	M-H2249*	$12+	Ton	✔
Air-Cooled ≥150 tons, Full Load ≤1.2 kW/ton, Part Load ≤0.90 kW/ton	M-H2249*	$10+	Ton	✔

* Supplemental Data Sheet needed ✔ = New Construction eligible



WATER-COOLED CHILLERS

Requirements:

- **Complete Table B1 and B2 of the "HVAC/Plumbing Incentive Catalog Supplemental Data Sheet" for this measure.**
  - For the "Max Full Load" and "Max Part Load (IPLV)" columns, use the values listed in the Measure Description below.
  - For the "Delta Efficiency" column, use: ("Max Full Load"– "AHRI Rated Full Load Efficiency") + ("Max Part Load (IPLV)" – "AHRI Rated Part Load Efficiency").
  - The "Base Incentive" is $10/ton for all water-cooled chillers.
  - The "Incentive Rate" is: "Base Incentive" + "Additional Incentive".
  - The "Total Incentive" is: AHRI Rated Capacity x "Incentive Rate".
- **Incentives for this technology are not available for Large Energy Users Program customers.** To check if you are a Large Energy Users Program customer, call 800.762.7077.
- Chillers must be water cooled and driven by an electric motor. Absorption chillers, engine driven and steam turbine driven chillers are not eligible for this incentive, but may be eligible for a custom incentive.
- **Manufacturer specification sheets for items installed must be submitted with the completed Incentive Application.** Chiller specification sheets must include performance data, including full load efficiency in kW/ton, IPLV values in kW/ton and capacity on tons at AHRI standard rating conditions per AHRI Standard 550/590 test procedures.
- Incentives are calculated based on performance data (including capacity) at AHRI standard rating conditions.
- The base incentive rate is listed in the incentive tables below. The incentive increases as the full load and part load kW/ton exceeds the minimum efficiency requirements. Additional incentive = ([Maximum Full Load kW/ton – AHRI Rated Full Load kW/ton] + [Maximum Part Load IPLV kW/ton – AHRI Rated Part Load IPLV kW/ton]) x $250/ton.
- The full product identification/model number must be shown on the AHRI specification sheets and invoices.
- Equipment must meet either full load efficiency, part load efficiency or both. Both full load and part load efficiency must be counted in the incentive calculation formula, even if it is less efficient than the minimum. In the event the full load efficiency is slightly better than the minimum and part load efficiency is significantly worse (or vice-versa), making the calculated incentive is negative, no incentive is available and an incentive application should not be submitted. Equipment must be purchased and operating prior to submitting an Incentive Application form (unless submitting for pre-approval).
- Electric chiller incentives are only available for HVAC space cooling applications. Chillers used for industrial process cooling, ice rinks, data centers, and refrigerated warehouses may qualify for a custom incentive.
- Provide all kW/ton values to at least 2 decimal places.

BUSINESS INCENTIVES

Measure Description	Code	Incentive	Unit	NC
Rotary Screw or Scroll Water-Cooled <150 tons, Full Load ≤0.74 kW/ton, Part Load ≤0.58 kW/ton	H2250*†	$10+	Ton	✔
Rotary Screw or Scroll Water-Cooled ≥150 tons & <300 tons, Full Load ≤0.67 kW/ton, Part Load ≤0.53 kW/ton	H2252*†	$10+	Ton	✔
Rotary Screw or Scroll Water-Cooled ≥300 tons, Full Load ≤0.59 kW/ton, Part Load ≤0.47 kW/ton	H2251*†	$10+	Ton	✔
Centrifugal Water-Cooled <150 tons, Full Load ≤0.65 kW/ton, Part Load ≤0.57 kW/ton	H2250*†	$10+	Ton	✔
Centrifugal, Water-Cooled ≥150 tons & <300 tons, Full Load ≤0.58 kW/ton, Part Load ≤0.50 kW/ton	H2252*†	$10+	Ton	✔
Centrifugal, Water-Cooled ≥300 tons, Full Load ≤0.53 kW/ton, Part Load ≤0.45 kW/ton	H2251*†	$10+	Ton	✔

* Supplemental Data Sheet needed
† = Not available for LEU Program Customers ✔ = New Construction eligible

MULTIFAMILY INCENTIVES

Measure Description	Code	Incentive	Unit	NC
Rotary Screw or Scroll Water-Cooled <150 tons, Full Load ≤0.74 kW/ton, Part Load ≤0.58 kW/ton	M-H2250*	$10+	Ton	✔
Rotary Screw or Scroll Water-Cooled ≥150 tons & <300 tons, Full Load ≤0.67 kW/ton, Part Load ≤0.53 kW/ton	M-H2252*	$10+	Ton	✔
Rotary Screw or Scroll Water-Cooled ≥300 tons, Full Load ≤0.59 kW/ton, Part Load ≤0.47 kW/ton	M-H2251*	$10+	Ton	✔
Centrifugal Water-Cooled <150 tons, Full Load ≤0.65 kW/ton, Part Load ≤0.57 kW/ton	M-H2250*	$10+	Ton	✔
Centrifugal, Water-Cooled ≥150 tons & <300 tons, Full Load ≤0.58 kW/ton, Part Load ≤0.50 kW/ton	M-H2252*	$10+	Ton	✔
Centrifugal, Water-Cooled ≥300 tons, Full Load ≤0.53 kW/ton, Part Load ≤0.45 kW/ton	M-H2251*	$10+	Ton	✔

* Supplemental Data Sheet needed ✔ = New Construction eligible

PRO TIP

Chillers are typically sized for the hottest day of the year, but run at much less than full capacity the majority of the time. Selecting a chiller with excellent part-load performance and good loading and unloading characteristics will help maximize energy efficiency.

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NOTES

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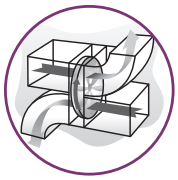
VENTILATION AND CONTROLS

VENTILATION UPGRADES

General Requirements: Please see information below for requirements specific to each technology.



ENERGY RECOVERY VENTILATORS (ERV)

Requirements:

- **Complete Table C of the "HVAC/Plumbing Incentive Catalog Supplemental Data Sheet" for this measure.**
- Incentive intended for standard HVAC applications only; other applications such as industrial process heat recovery may be eligible for a custom incentive.
- Areas served by ERVs must be air conditioned during the periods of June through August from 1 to 4 p.m. on weekdays and heated during the winter. If this requirement is not met, the project may be eligible for a custom incentive.
- Replacement of existing ERV and use of ERV where required by state code does NOT qualify.
- Equipment must be AHRI certified to Standard 1060 (see ahridirectory.org). Equipment must bear the AHRI certification symbol for AHRI air-to-air energy recovery ventilation equipment certification program based on AHRI 1060. Systems with ASHRAE or other independent testing may be eligible for custom incentives.
- All efficiency ratings (supply airflow, summer and winter effectiveness) will be verified using the AHRI database (ahridirectory.org). This supply airflow rating will be used to calculate the incentive.
- Custom engineered ERVs, and ERVs integral to packaged rooftop units or air handlers which use AHRI certified heat exchangers must provide documentation (supply airflow, summer and winter effectiveness, manufacturer, model number) specific to the heat exchanger component within the overall system.
- Please provide efficiency of the building's cooling and heating systems. This information will not affect ERV incentive. If the heating or cooling efficiency of equipment for space served by the ERV is unknown, provide the manufacturer's name and model instead.

BUSINESS INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
Energy Recovery Ventilator	H2314*	$0.75	CFM	✔
*** Supplemental Data Sheet needed**		**✔ = New Construction eligible**		

MULTIFAMILY INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
Energy Recovery Ventilator	M-H2314*	$0.75	CFM	✔
* Supplemental Data Sheet needed		✔ = New Construction eligible		

PRO TIP

Facilities with large quantities of exhaust air or long hours of operation can use ERVs to recover between 50% and 85% of the cooling and heating energy that would otherwise be lost. An ERV designed to exchange both latent and sensible energy will precool and dehumidify outside ventilation air during the cooling season while preheating and humidifying during the heating season.

NEED HELP?
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800.762.7077

ECONOMIZERS

Requirements:

- **Complete Table D of the "HVAC/Plumbing Incentive Catalog Supplemental Data Sheet" for this measure.**
  - For the "Space Type" column, enter a short descriptor of the space type, such as office, retail, school classrooms, gym, etc.
  - For the "Area Served" column, enter the square feet of building space served by the rooftop unit (RTU) receiving the economizer.
  - For the "AHU Controls" column, enter "No Setback," "EMS" for energy management system or "T-Stat" for programmable thermostat.
- This incentive is for the addition of an economizer to an existing RTU.
- Economizers attached to RTUs with single stage compressors should be controlled by advanced thermostats with integrated economizer controls that allow an economizer stage as the first stage.
- Economizers should be set up with a changeover point of 60°F in order to maximize savings.

BUSINESS INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
Economizer (Existing RTU Only)	H3066*	$200	RTU	

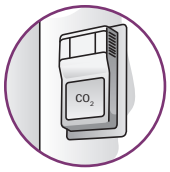
*** Supplemental Data Sheet needed Not eligible for New Construction**

PRO TIP

Dry-bulb-type economizers can be set to 60˚F to maximize free cooling and reduce mechanical cooling run time. Enthalpy-controlled economizers can be set to 70˚F and will account for both temperature and humidity of the outside air.

CONTROLS

General Requirements: Please see information below for requirements specific to each technology.



DEMAND CONTROL VENTILATION (DCV)

Requirements:

- **Complete Table E of the "HVAC/Plumbing Incentive Catalog Supplemental Data Sheet" for this measure.**
  - For the "Space Cooling Type" column, enter "DX," "Air-Cooled Chiller," "Water-Cooled Chiller," "None" or other type of cooling system as appropriate.
  - For the "Space Heating Type" column, enter "Gas," "Hot Water," "Steam," "Electric Resistance," "Electric Heat Pump" or other type of heating system as appropriate. For "Steam," steam must be on-site generated.
  - For the "Area Served Type" column, enter a short descriptor of the space type, such as office, retail, school classrooms, gym, etc.
  - For the "Economizer" column, enter "DB" for dry bulb, "Enthalpy" or "None".
  - For the "AHU Controls" column, enter "No Setback," "EMS" for energy management system or "T-Stat" for programmable thermostat.
- For air handling unit (AHU), DCV controls must measure CO_2 levels in the conditioned space, with sensors wall-mounted at an appropriate height and provide the required level of outside air without over-ventilating.
- Single zone rooftop unit (RTU) DCV controls must measure CO_2 levels in the conditioned space or return air ductwork for the zone served and provide the required level of outside air without over-ventilating.
- DCV installations required by code are not eligible.
- All installations must comply with code requirements for ventilation.
- Incentive is per CFM of outside air, not total CFM provided by the AHU or RTU.
- Spaces controlled by DCV must be heated, but are not required to be air conditioned.
- Incentives cannot exceed 50% of project cost.
- If system is custom-built using a CO_2 sensor and the buildings existing automation system, provide a copy of the control sequence that was programmed into the building automation system.

BUSINESS INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
DCV for AHU	H2853*	$0.20	CFM	✔
DCV for Single Zone RTU	H3266*	$350	RTU	✔
*** Supplemental Data Sheet needed ✔ = New Construction eligible**				

PRO TIP

Spaces with large variations in occupancy are great candidates for DCV. Controls allow the HVAC system to determine the proper level of ventilation without creating unnecessary heating and cooling loads.

NEED HELP?
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800.762.7077

GUEST ROOM ENERGY MANAGEMENT

Requirements:

- **If the heating/cooling system is Packaged Terminal Air Conditioner (PTAC) units with electric resistance heating, no supplemental data is needed. If the heating/cooling system is anything else, then complete Table F of the "HVAC/Plumbing Incentive Catalog Supplemental Data Sheet" for this measure.**
  - For the "HVAC System Type" column, enter "PTAC w/ other heat option," "PTHP," "Water Source Heat Pump" or "Fan Coil."
  - For the "Heating System Source" column enter "Hot Water Boiler," "Steam Boiler," "City Steam," etc. if the HVAC System Type is water source heat pump or fan coil; otherwise leave blank.
  - For the "Cooling System Source," enter "Air-Cooled Chiller," "Water-Cooled Chiller," etc. if the HVAC System Type is water source heat pump or fan coil; otherwise leave blank.
  - For the "Other Heat Option" column, enter a description of the heating source if the HVAC system type is "PTAC w/ other heat option;" otherwise leave blank.
- Must be a lodging business.
- The incentive is for occupancy-based guest room energy management controls.
- Occupancy control may be key-activated or sensed due to motion or body heat and must control the HVAC system serving the room.

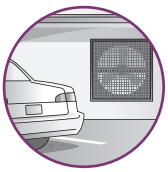
BUSINESS INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
Guest Room Energy Management (PTAC w/ electric heat)	H2373	$60	Room	✔
Guest Room Energy Management (all other HVAC systems)	H2374*	$60	Room	✔
*** Supplemental Data Sheet needed**	**✔ = New Construction eligible**			

PROGRAMMABLE THERMOSTAT FOR ROOFTOP UNITS

Requirements:

- **Complete Table G of the "HVAC/Plumbing Incentive Catalog Supplemental Data Sheet" for this measure.**
  - For the "Heating Type" column, enter "Gas Furnace," "Electric Resistance" or "Air Source Heat Pump".
  - For the "Space Type" column, enter a short descriptor of the space type, such as office, retail, school classrooms, gym, etc.
- Basic thermostats must be commercial-grade thermostats programmed by the Trade Ally to set back/up space temperatures by 5 degrees or more during unoccupied periods (minimum of 6 hours per day) replacing a standard non-programmable thermostat.
- Advanced thermostat incentive requires that rooftop unit (RTU) be equipped with an economizer which resets the minimum position to eliminate outside air for ventilation during unoccupied periods.
- A list of qualified advanced thermostats can be found on focusonenergy.com/qpls.
- Thermostat incentives are only available for single zone RTUs.

BUSINESS INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
Programmable Thermostat for RTU	H3121*	$30	T-Stat	
Advanced Programmable Thermostat for RTU	H3120*	$80	T-Stat	
*** Supplemental Data Sheet needed**	**Not eligible for New Construction**			



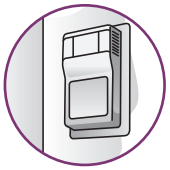
PARKING GARAGE VENTILATION CONTROLS

Requirements:

- **Complete Table H of the "HVAC/Plumbing Incentive Catalog Supplemental Data Sheet" for this measure.**
  - Garage Size (sq ft), Heating System Capacity, Heating System Efficiency and Heating Set Point are only required for heated garages.
- Install carbon monoxide (CO) controls to control parking garage exhaust fan that meet all state and local codes.
- Current system must run 24/7.
- Heated garages must be heated by either natural gas furnaces, natural gas unit heaters or hot water/steam from an on-site natural gas boiler. Garages heated by municipal steam systems (i.e., "city steam") are not eligible.

BUSINESS INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
Parking Garage Ventilation Controls	H3016*	$120	System	
Parking Garage Ventilation Controls with Heating	H3493*	$250	System	
*** Supplemental Data Sheet needed**	**Not eligible for New Construction**			

MULTIFAMILY INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
Parking Garage Ventilation Controls	M-H3016*	$150	System	
Parking Garage Ventilation Controls with Heating	M-H3493*	$300	System	
*** Supplemental Data Sheet needed**	**Not eligible for New Construction**			



SURGERY ROOM SUPPLY AIR OCCUPANCY CONTROLS

Requirements:

- **Complete Table J of the "HVAC/Plumbing Incentive Catalog Supplemental Data Sheet" for this measure.**
- This incentive is for the installation of controls to provide reduced supply air to surgery rooms when the rooms are unoccupied. Both an eligible electric and natural gas provider are required to be eligible for this incentive.
- Not all surgery rooms are good candidates for controls. Pressure requirements and reduced loading on the HVAC system can make unoccupied schedules inefficient or impossible. If you are unsure whether your system is a good candidate, Focus on Energy provides a Project Assessment Incentive that helps fund studies to determine project feasibility and energy savings. See focusonenergy.com/business/custom-projects for more information.
- The controls must reduce supply air flow while still maintaining temperature setpoint, positive pressure, and 20% - 60% humidity levels.
- The HVAC system must use two coils: one for heating and one for cooling.
- Systems with heat recovery capability are not eligible for this incentive but may qualify for custom incentives.
- Systems should reduce air changes and outside air requirements to the lowest number possible (e.g. eight air changes and two outside air change per hour) to achieve greatest savings.
- Triage and procedure rooms that have similar air change requirements as surgery rooms also qualify.
- Incentives cannot exceed 50% of the project cost.

BUSINESS INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
Surgery Occupancy Controls	H3632*	$600	Room	✔
*** Supplemental Data Sheet needed ✔ = New Construction eligible**				

PRO TIP

VFDs can achieve energy savings in pump and fan systems where the load varies based on temperature, pressure or flow. VFDs and variable speed pumps with ECMs can be applied to systems with hundreds of motor horsepower down to fractional horsepower.

VARIABLE FREQUENCY DRIVES

General Requirements: The system controlled must have significant load diversity that will result in savings through motor speed variation. Units installed only to allow soft starts are not eligible. Redundant or backup units do not qualify. Routine replacement of an existing variable frequency drive (VFD) does not qualify.

VFDs may not be beneficial in pump systems where static head makes up a large portion of the total system head. It is also important that the load on the system vary over time to take advantage of the savings that a VFD can provide. Be sure to understand these aspects of your system and discuss them with the equipment vendor in advance of applying VFD technology.

VARIABLE FREQUENCY DRIVE (VFD)

Requirements:

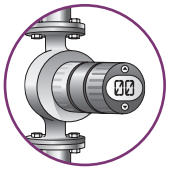
- **Complete Table I of the "HVAC/Plumbing Incentive Catalog Supplemental Data Sheet" for this measure.**
  - For the "VFD Application" column, enter "Chilled Water Distribution Pump", "HVAC Heating Pump", "Process Pump", "Pool Pump", "Boiler Draft Fan", "Cooling Tower Fan," "HVAC Fan," or "Process Fan".
  - For the "Controls Before VFD" column, enter "Outlet Control Valve," "Bypass Valve," "Discharge Damper," "Inlet Guide Vanes," "On/Off," or "Other" and then describe.
- The equipment controlled by the VFD must operate a minimum of 2,000 hours annually and may not exceed 500 horsepower.
- For new construction projects, VFDs that are required in accordance to International Energy Conservation Code 2009 are not eligible. For HVAC applications, this includes:
  - VFDs for HVAC pump systems are required by code for hydronic HVAC systems greater than or equal to 300,000 BTU/hr. VFDs on pump motors for hydronic systems ≥ 300,000 BTU/hr DO NOT qualify for incentives.
  - VFDs for HVAC fan systems are required by code for variable air volume systems with motors ≥ 10 HP. VFDs on fan motors ≥ 10 HP DO NOT qualify for incentives.
- VFD speed must be automatically controlled by differential pressure, flow, temperature or other variable signal.
- Internal labor costs cannot be included in project costs (see definition of Internal Labor in the Terms and Conditions).
- VFDs added to chillers, kitchen ventilation hoods and air compressors do not qualify for this incentive. Refer to "Cooling Systems" section of this catalog if installing a chiller with a VFD, Process Systems Incentive Catalog if installing a Variable Speed Drive air compressor, Commercial Kitchen Incentive Catalog if installing a VFD on kitchen ventilation hoods, or apply for a custom incentive if installing a VFD somewhere else.
- VFD incentives are limited to 50% of project cost.
- VFD must be installed on a centrifugal or axial flow pump or fan, i.e., a variable torque load.
- Staged air volume systems (using a VFD to achieve two-speed fan control on a rooftop unit) are not eligible but may be eligible for a custom incentive.
- For constant torque and variable torque VFD incentives for industrial and process uses, please see the Variable Frequency Drive section of the Process Systems Incentive Catalog.

BUSINESS INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
Variable Torque VFD, Boiler Draft Fan	H2640*	$40	HP	
Variable Torque VFD, Cooling Tower Fan	H2641*	$40	HP	
Variable Torque VFD, HVAC Fan	H2643*	$40	HP	
Variable Torque VFD, Chilled Water Distribution Pump	H2726*	$40	HP	
Variable Torque VFD, HVAC Heating Pump	H2644*	$40	HP	
Variable Torque VFD, Pool Pump Motor	H2646*	$40	HP	
Variable Torque VFD, Boiler Draft Fan (NC Only)	HN2640*	$25	HP	✔
Variable Torque VFD, Cooling Tower Fan (NC Only)	HN2641*	$25	HP	✔
Variable Torque VFD, HVAC Fan (NC Only)	HN2643*	$25	HP	✔
Variable Torque VFD, HVAC Fan (NC Only)	HN2726*	$25	HP	✔
Variable Torque VFD, HVAC Heating Pump (NC Only)	HN2644*	$25	HP	✔
Variable Torque VFD, Pool Pump Motor (NC Only)	HN2646*	$25	HP	✔

*** Supplemental Data Sheet needed** **✔ = New Construction eligible**

MULTIFAMILY INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
Variable Torque VFD, Boiler Draft Fan	M-H2640*	$60	HP	
Variable Torque VFD, Cooling Tower Fan	M-H2641*	$60	HP	
Variable Torque VFD, HVAC Fan	M-H2643*	$60	HP	
Variable Torque VFD, Chilled Water Distribution Pump	M-H2726*	$60	HP	
Variable Torque VFD, HVAC Heating Pump	M-H2644*	$60	HP	
Variable Torque VFD, Pool Pump Motor	M-H2646*	$60	HP	
Variable Torque VFD, Boiler Draft Fan (NC Only)	M-HN2640*	$60	HP	✔
Variable Torque VFD, Cooling Tower Fan (NC Only)	M-HN2641*	$60	HP	✔
Variable Torque VFD, HVAC Fan (NC Only)	M-HN2643*	$60	HP	✔
Variable Torque VFD, HVAC Fan (NC Only)	M-HN2726*	$60	HP	✔
Variable Torque VFD, HVAC Heating Pump (NC Only)	M-HN2644*	$60	HP	✔
Variable Torque VFD, Pool Pump Motor (NC Only)	M-HN2646*	$60	HP	✔

* Supplemental Data Sheet needed ✔ = New Construction eligible



VARIABLE SPEED PUMP WITH ELECTRONICALLY COMMUTATED MOTOR (ECM)

Requirements:

- Variable speed electronically commutated motor (ECM) pumps are for the replacement of constant speed permanent split capacitor (PSC) motor pumps.
- Pump may replace domestic hot water recirculation pumps, heating hot water circulation pumps, cooling water circulation pumps, and/or water loop heat pump circulation loops.
- Existing pumps being replaced may be continuous run, timer controlled or controlled by aquastat temperature sensor.
- New pump speed must be automatically controlled by differential pressure, flow, temperature or other variable signal.
- For new construction projects, variable speed pumps that are required in accordance to International Energy Conservation Code 2009 are not eligible. For HVAC applications, this includes:
- Variable speed drives for HVAC pump systems are required by code for hydronic HVAC systems greater than or equal to 300,000 BTU/hr. Variable speed drives on pump motors for hydronic systems ≥ 300,000 BTU/hr DO NOT qualify for incentives.
- Internal labor costs cannot be included in project costs (see definition of Internal Labor in the Terms and Conditions).
- Variable speed pump with ECM motor incentives are limited to 50% of project cost.
- For other HVAC VFD systems and larger motors, please see Variable Frequency Drives (VFD) in the previous section.
- For constant torque VFD incentives, please see the variable frequency drive section of Process Systems Incentive Catalog.
- Variable speed ECM pumps used for industrial process incentives may qualify for a custom incentive.

BUSINESS INCENTIVES

Measure Description	Code	Incentive	Unit	NC
Variable Speed ECM Pump, <100 Watts Max Input, Domestic Hot Water Recirculation	H3494	$80	Pump	✔
Variable Speed ECM Pump, 100 – 500 Watts Max Input, Domestic Hot Water Recirculation	H3495	$160	Pump	✔
Variable Speed ECM Pump, >500 Watts Max Input, Domestic Hot Water Recirculation	H3496	$320	Pump	✔
Variable Speed ECM Pump, <100 Watts Max Input, Heating Water Circulation	H3497	$80	Pump	✔
Variable Speed ECM Pump, 100 – 500 Watts Max Input, Heating Water Circulation	H3498	$160	Pump	✔
Variable Speed ECM Pump, >500 Watts Max Input, Heating Water Circulation	H3499	$320	Pump	✔
Variable Speed ECM Pump, <100 Watts Max Input, Cooling Water Circulation	H3500	$40	Pump	✔
Variable Speed ECM Pump, 100 – 500 Watts Max Input, Cooling Water Circulation	H3501	$80	Pump	✔
Variable Speed ECM Pump, >500 Watts Max Input, Cooling Water Circulation	H3502	$160	Pump	✔
Variable Speed ECM Pump, <100 Watts Max Input, Water Loop Heat Pump Circulation	H3503	$80	Pump	✔
Variable Speed ECM Pump, 100 – 500 Watts Max Input, Water Loop Heat Pump Circulation	H3504	$160	Pump	✔
Variable Speed ECM Pump, >500 Watts Max Input, Water Loop Heat Pump Circulation	H3505	$320	Pump	✔

✔ = New Construction eligible

MULTIFAMILY INCENTIVES

Measure Description	Code	Incentive	Unit	NC
Variable Speed ECM Pump, <100 Watts Max Input, Domestic Hot Water Recirculation	M-H3494	$80	Pump	✔
Variable Speed ECM Pump, 100 – 500 Watts Max Input, Domestic Hot Water Recirculation	M-H3495	$160	Pump	✔
Variable Speed ECM Pump, >500 Watts Max Input, Domestic Hot Water Recirculation	M-H3496	$320	Pump	✔
Variable Speed ECM Pump, <100 Watts Max Input, Heating Water Circulation	M-H3497	$80	Pump	✔
Variable Speed ECM Pump, 100 – 500 Watts Max Input, Heating Water Circulation	M-H3498	$160	Pump	✔
Variable Speed ECM Pump, >500 Watts Max Input, Heating Water Circulation	M-H3499	$320	Pump	✔
Variable Speed ECM Pump, <100 Watts Max Input, Cooling Water Circulation	M-H3500	$40	Pump	✔
Variable Speed ECM Pump, 100 – 500 Watts Max Input, Cooling Water Circulation	M-H3501	$80	Pump	✔
Variable Speed ECM Pump, >500 Watts Max Input, Cooling Water Circulation	M-H3502	$160	Pump	✔
Variable Speed ECM Pump, <100 Watts Max Input, Water Loop Heat Pump Circulation	M-H3503	$80	Pump	✔
Variable Speed ECM Pump, 100 – 500 Watts Max Input, Water Loop Heat Pump Circulation	M-H3504	$160	Pump	✔
Variable Speed ECM Pump, >500 Watts Max Input, Water Loop Heat Pump Circulation	M-H3505	$320	Pump	✔

✔ = New Construction eligible

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PLUMBING

WATER HEATERS

General Requirements: Only natural gas and electric equipment are eligible for incentives. Equipment fueled by propane or oil is NOT eligible for incentives.

HIGH USE COMMERCIAL WATER HEATERS

Requirements:

- **Complete Table K of the "HVAC/Plumbing Incentive Catalog Supplemental Data Sheet" for this measure.**
  - For the "Building Type" column, enter "Full-Service Restaurant," "Fast Food," "Cafeteria," "Hotel/Motel," "Nursing Home," "Laundromat," "Supermarket," "Dormitory," "K-12 school," Prison, or "Hospital". Note these are the only eligible building types, all others do not qualify.
  - For the "Existing System Fuel Type" column, enter "Gas" or "Electric".
  - For the "Existing System Type" column, enter the type of existing water heaters: gas storage, gas tankless, or electric storage.
  - For the "Annual Operation (days/year)" column, enter the number of days per year that the facility is open or occupied.
  - For the "Actual Usage" column, enter the actual usage that corresponds to the building type. The minimum usage requirements are as follows:
    - Restaurant, fast food and cafeteria locations must serve ≥300 meals/day.
    - Hotel, motel, nursing home locations must have ≥30 rooms or beds.
    - Laundromats must have ≥30 washes/day.
    - Supermarkets do not have a minimum usage requirement other than days/year.
    - Dormitories must have ≥50 students.
    - K-12 Schools must have ≥300 students/building.
    - Prisons must have ≥50 inmates.
    - Hospitals must have ≥30 beds.
- Equipment must supply all of the domestic hot water usage for one or more qualifying systems in the building type above. Systems must meet the minimum usage requirements for each qualifying system. Non-qualifying systems may be eligible for the residential type or custom incentives.
- Equipment eligibility is verified through AHRI Directory of Certified Product Performance for Water Heating Equipment (ahridirectory.org), ENERGY STAR® pre-qualified list and other reliable sources. Tankless water heaters must meet all ENERGY STAR criteria and will be verified with the current ENERGY STAR pre-qualified list.
- Annual operation for the facility where the water heater is installed must be ≥300 days/year, except:
  - Annual operation for cafeterias must be ≥175 days/year.
  - Annual operation for schools must be ≥180 days/year.
  - Annual operation for dormitories must be ≥200 days/year.
- Water heaters used for dairy and livestock are not eligible for these incentives and must use the Dairy & Livestock Incentive Application form.

BUSINESS INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
K-12 School High Use Commercial Water Heater, Storage ≥90% Thermal Efficiency	P3684*	$200	Water Heater	✔
High Use Commercial Water Heater, Gas Storage ≥90% Thermal Efficiency	P3045*	$400	Water Heater	✔
High Use Commercial Water Heater, Gas Tankless ≥0.82 Energy Factor	P3046*	$400	Water Heater	✔
High Use Commercial Water Heater, Electric Heat Pump Storage ≥2.0 Energy Factor	P3047*	$400	Water Heater	✔
*** Supplemental Data Sheet needed**	**✔ = New Construction eligible**			

RESIDENTIAL-TYPE WATER HEATERS

Requirements:

- These incentives are for residential-type water heaters only. Residential-type water heaters are defined as water heaters having a heating input capacity of 75,000 BTU/hr or less (natural gas) or 12 kW or less (electric).
- Equipment eligibility is verified through AHRI Directory of Certified Product Performance for Water Heating Equipment (ahridirectory.org), ENERGY STAR pre-qualified list (energystar.gov) and other reliable sources. Tankless water heater must meet all ENERGY STAR criteria and will be verified with the current ENERGY STAR pre-qualified list.
- Energy factor is the overall efficiency of the water heater. Recovery efficiency or Energy Guide rating may NOT be substituted for energy factor.
- For business programs:
  - Must be central units used to supply domestic hot water (DHW) to an entire premise. Point-of-use units are not eligible.
  - Electric water heaters are not eligible.
  - Water heaters for dairy farm milk houses may not use residential-type equipment and must use the Dairy & Livestock Incentive Application.
- For multifamily programs:
  - An eligible water heater must be an individual unit serving one residential unit.
  - Incentives for electric tank-type water heaters available only if natural gas is unavailable at the street through a participating utility.

BUSINESS INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
Natural Gas DHW Power Vent Tank Type ≥0.67 EF	P2651	$50	Water Heater	✔
Natural Gas DHW Power Vent Tankless Type ≥0.82 EF	P2652	$100	Water Heater	✔
✔ = New Construction eligible				

MULTIFAMILY INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
Natural Gas DHW Power Vent Tank Type ≥0.67 EF	M-P2651	$50	Water Heater	✔
Natural Gas DHW Power Vent Tankless Type ≥0.82 EF	M-P2652	$100	Water Heater	✔
Natural Gas DHW Condensing Tank Type ≥90% TE	M-P1986	$150	Water Heater	✔
Natural Gas Indirect DHW with Modulating Boiler ≥90% AFUE	M-P2658	$200	Water Heater	✔
Electric DHW Tank Type ≥0.93 EF	M-P1989	$50	Water Heater	✔
✔ = New Construction eligible				

WATER HEATER FUEL CONVERSION

Requirements:

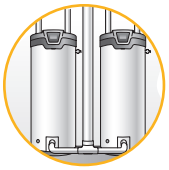
- Fuel conversion from electric to natural gas only is eligible. Conversion to electric is not available.
- Must install new power-vented unit that meets the Energy Factor or Thermal Efficiency criteria listed in the water heater requirements (i.e., unit that meets requirements for P2651 or P2652 in previous section).
- Documentation of fuel conversion is required (complete removed electric water heater section and/or notation on invoice that electric unit was removed).
- This incentive is instead of, not in addition to, the incentives offered for measures P2651 and P2652.
- Provide manufacturer, model number and date the electric water heater was removed on the Incentive Application per the example below.

BUSINESS INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
Residential-Type DHW Fuel Conversion (electric to gas only)	P2825	$200	Water Heater	
Not eligible for New Construction				

WATER HEATER FUEL CONVERSION EXAMPLE

Use this example when applying for water heater fuel conversions that also requires information on the electric water heater that was removed. Please reference this table when filling out **SECTION 7** on the Incentive Application.

INCENTIVE CODE	MANUFACTURER NAME	MODEL #	UNIT MEASURE	# OF UNITS (A)	INCENTIVE PER UNIT (B)	TOTAL INCENTIVE (A X B)
P2825	XYZ Gas Water Heaters	PG225	Water Heater	1	$200	$200
Elec WH Removed	ABC Elec Water Heaters	PE18k	--------	Removed	1/4/2015	--------



DOMESTIC HOT WATER PLANT

Requirements:

- **Complete Table L of the "HVAC/Plumbing Incentive Catalog Supplemental Data Sheet" for this measure.**
  - "# of Existing Water Heaters" is noted on the supplemental data sheet. Number of new water heaters should be noted in the quantity column of the Incentive Application.
  - "Input Capacity (MBH)" is the input capacity per water heater for the new water heaters that were installed.
  - "Tank Mfg," "Tank Model Number" and "Tank Input Capacity" fields are only needed if the new water heater plant is an indirect system. "Tank Input Capacity" is the Btu/hr capacity of the boiler that is dedicated to domestic hot water heating (vs. space heating).
- This measure is for the replacement of an ENTIRE Domestic Hot Water plant. Partial plant replacements may qualify for custom incentives.
- New water heaters must be stand-alone condensing units with a thermal efficiency of ≥90% or an indirect storage tank connected to a boiler with an AFUE of ≥90%.
- Incentive is limited to $1,500 per domestic hot water plant.
- Indirect water heating systems input capacity eligible for incentive is only the capacity of the boiler supplying the indirect tank(s) not the entire boiler plant capacity. Only enter boiler information for boiler controlling indirect tank(s) below.
- All leased water heaters must transfer ownership to the building owner upon the end of lease term.
- Boilers also used for space heating may be eligible for space heating incentives.
- A boiler replacing a space heating and indirect DHW system will use the capacity of the existing space heating and DHW systems to estimate the split of incentives.

MULTIFAMILY INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
Domestic Hot Water Plant	M-P2760*	$1	MBh	✔
* Supplemental Data Sheet needed ✔ = New Construction eligible				

DOMESTIC HOT WATER PIPE INSULATION

Requirements:

- This incentive is intended for adding foam or fiberglass insulation to uninsulated domestic hot water piping for multifamily buildings.
- Incentive is limited to 50% of invoice cost, not including any internal labor.
- Piping less than 2.0 inch must install at least 0.5 inch thick insulation.
- Piping 2.0 inches and greater must install at least 1.0 inch thick insulation.

MULTIFAMILY INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
Domestic Hot Water, ½" and ¾" Pipe, NG	M-H3695	$2	Ft of Pipe	
Domestic Hot Water, 1" and 1 ¼" Pipe, NG	M-H3696	$3	Ft of Pipe	
Domestic Hot Water, 1 ½" and 2" Pipe, NG	M-H3697	$4	Ft of Pipe	
Domestic Hot Water, 3" and 4" Pipe, NG	M-H3698	$6	Ft of Pipe	
Domestic Hot Water, ½" and ¾" Pipe, Elec	M-H3699	$2	Ft of Pipe	
Domestic Hot Water, 1" and 1 ¼" Pipe, Elec	M-H3700	$3	Ft of Pipe	
Domestic Hot Water, 1 ½" and 2" Pipe, Elec	M-H3701	$4	Ft of Pipe	
Domestic Hot Water, 3" and 4" Pipe, Elec	M-H3702	$6	Ft of Pipe	
Not eligible for New Construction				

AERATORS AND SHOWERHEADS

General Requirements: Only natural gas and electric equipment are eligible for incentives. Equipment fueled by propane or oil is NOT eligible for incentives.

AERATORS AND SHOWERHEADS

Requirements:

- Flow restricting device must be for a gas or electric water heater only.
- Must be a new construction multifamily project. For existing buildings, please contact the Multifamily Direct Install Program at 866.486.0832 or visit focusonenergy.com/multifamily.
- Both common areas and in-unit upgrades are eligible.

MULTIFAMILY INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
Faucet Aerator, ≤0.5 gpm, Bathroom, Electric (NC only)	M-P2151	$4	Aerator	✔
Faucet Aerator, ≤0.5 gpm, Bathroom, NG (NC only)	M-P3508	$4	Aerator	✔
Faucet Aerator, ≤1.0 gpm, Bathroom, Electric (NC only)	M-P2127	$3	Aerator	✔
Faucet Aerator, ≤1.0 gpm, Bathroom, NG (NC only)	M-P2121	$3	Aerator	✔
Faucet Aerator, ≤1.5 gpm, Bathroom, Electric (NC only)	M-P3028	$2	Aerator	✔
Faucet Aerator, ≤1.5 gpm, Bathroom, NG (NC only)	M-P3027	$2	Aerator	✔
Faucet Aerator, ≤0.5 gpm, Kitchen, Electric (NC only)	M-P3509	$6	Aerator	✔
Faucet Aerator, ≤0.5 gpm, Kitchen, NG (NC only)	M-P3510	$6	Aerator	✔
Faucet Aerator, ≤1.0 gpm, Kitchen, Electric (NC only)	M-P3506	$5	Aerator	✔
Faucet Aerator, ≤1.0 gpm, Kitchen, NG (NC only)	M-P3507	$5	Aerator	✔
Faucet Aerator, ≤1.5 gpm, Kitchen, Electric (NC only)	M-P3026	$4	Aerator	✔
Faucet Aerator, ≤1.5 gpm, Kitchen, NG (NC only)	M-P3025	$4	Aerator	✔
Showerhead, ≤1.5 gpm, Electric (NC only)	M-P3030	$10	Aerator	✔
Showerhead, ≤1.5 gpm, NG (NC only)	M-P3029	$10	Aerator	✔
✔ = New Construction eligible				

PRO TIP

Installing energy-efficient showerheads and aerators reduces the amount of water to be heated, saving heating energy, water and sewage costs. Showerheads and 1.5 GPM faucet aerators use 40% less water than 2.5 GPM.

APPLIANCES

General Requirements: Please see information below for requirements specific to each technology.

COMMON AREA CLOTHES WASHERS

Requirements:

- Only qualified, ENERGY STAR appliances are eligible for these incentives. Refer to qualified products list located at energystar.gov/products/certified-products/detail/commercial-clothes-washers.
- Common area clothes washers may be purchased or leased (10-year-lease agreement required).

MULTIFAMILY INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
Clothes Washer, Common Area, Electric, ENERGY STAR	M-P2756	$50	Washer	✔
Clothes Washer, Common Area, Natural Gas, ENERGY STAR	M-P2757	$50	Washer	✔
✔ = New Construction eligible				

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BUILDING ENVELOPE

OVERHEAD DOOR MODIFICATIONS

General Requirements: Please see information below for requirements specific to each technology.

DOOR AND RAMP SEALS

Requirements:

- These incentives are intended to reduce air infiltration at truck loading docks. Seals must effectively close all gaps between the building and semitrailer.
- To qualify, building interior space must be heated with natural gas during winter.
- Refrigerated interior spaces are not eligible but may qualify for a custom incentive.
- Dock door seals extend out to fill the gap between the dock door and the trailer, including the "hinge gap" that occurs with outwardly swinging trailer doors.
- Leveler ramp air seals reduce air infiltration from around the loading dock leveler ramp. Air seals may be attached to the exterior of the building or around the edge of the ramp and must maintain an effective seal both when ramp is in use (raised or lowered) or out of use. Brush-type or whisker-type perimeter/edge seals may be used in conjunction with air seals but do not qualify for incentive.

BUSINESS INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
Dock Door Infiltration Reduction, New Install	B2300	$150	Door Sealed	
Dock Door Infiltration Reduction, Replace Existing	B2301	$150	Door Sealed	
Dock Pit/Ramp External Seal, Added to Existing "Brush" Barrier	B2302	$75	Pit sealed	
Dock Pit/Ramp External Seal, No Brush Barrier Present	B2303	$75	Pit sealed	✔
✔ = New Construction eligible				

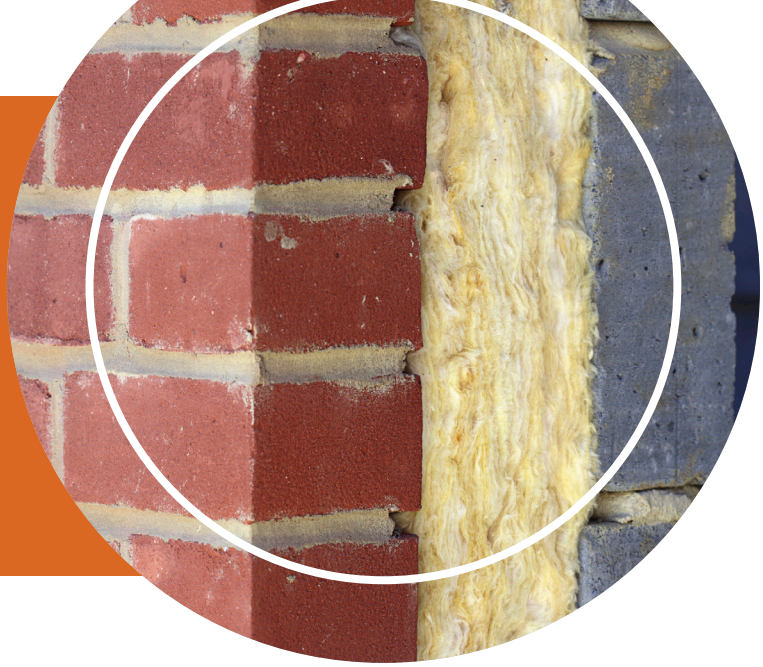
SPRING-LOADED OVERHEAD DOOR HINGES

Requirements:

- These incentives are intended to reduce air infiltration at overhead doors by using spring-loaded garage door hinges that keep overhead door sections pressed tightly against the seals.
- To qualify, building interior space must be heated with only natural gas during winter. Buildings heated by waste oil burners, propane, or other fuel sources are not eligible.
- Replacement of existing spring-loaded overhead door hinges does not qualify.

BUSINESS INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
Spring-loaded Overhead Door Hinge, Heating Setpoint = 55°F	B3680	$80	Per Door	✔
Spring-loaded Overhead Door Hinge, Heating Setpoint = 60°F	B3681	$80	Per Door	✔
Spring-loaded Overhead Door Hinge, Heating Setpoint = 65°F	B3682	$80	Per Door	✔
Spring-loaded Overhead Door Hinge, Heating Setpoint = 70°F	B3683	$80	Per Door	✔
✔ = New Construction eligible				

WALL AND ATTIC INSULATION



General Requirements: Only buildings heated with natural gas or electricity are eligible for incentives. Buildings heated with propane, oil, municipal steam systems, or other sources are not eligible. Buildings with and without cooling systems are eligible; select the corresponding measure code for "with cooling" or "without cooling".

WALL INSULATION

Requirements:

- These incentives are for providing additional insulation to above grade exterior walls of multifamily buildings.
- Eligible insulation types include but are not limited to: fiberglass batts, spray foam, loose fill cellulose, metalized polymers, or other material providing that it meets local and state building codes.
- Incentive is limited to 50% of invoice cost, not including any internal labor.
- Existing wall insulation must be R-5 or less.
- Additional wall insulation must bring walls up to at least R-20 of cavity insulation.
- The use of R-13 cavity insulation plus R-5 insulated sheathing is considered equivalent to cavity insulation of R-20.
- Projects adding insulation to existing walls greater than R-5 or providing additional insulation significantly beyond R-20 may qualify for a custom incentive.
- Sill boxes are able to be considered as part of the exterior wall.

MULTIFAMILY INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
Wall Insulation, Natural Gas Heat with Cooling	M-H3703	$0.40	Sq Ft	
Wall Insulation, Natural Gas Heat without Cooling	M-H3704	$0.40	Sq Ft	
Wall Insulation, Electric Heat with Cooling, Existing	M-H3705	$0.40	Sq Ft	
Wall Insulation, Electric Heat without Cooling	M-H3706	$0.40	Sq Ft	
Not eligible for New Construction				

ATTIC INSULATION

Requirements:

- These incentives are for providing additional attic insulation to multifamily buildings.
- Eligible insulation types include but are not limited to: fiberglass batts, spray foam, loose fill cellulose, metalized polymers, or other material providing that it meets local and state building codes.
- Incentive is limited to 50% of invoice cost, not including any internal labor.
- Existing attic insulation must be as specified in the measure description: either ≤R-11 or between R-12 and R-19 (excluding assembly section).
- Additional insulation must bring attic up to R-38 or greater.
- Projects adding insulation to existing attic insulation greater than R-19 or providing additional insulation significantly beyond R-38 may qualify for a custom incentive.

MULTIFAMILY INCENTIVES				
Measure Description	**Code**	**Incentive**	**Unit**	**NC**
Attic Insulation, Natural Gas Heat with Cooling, Existing Insulation ≤R-11	M-H3707	$0.25	Sq Ft	
Attic Insulation, Natural Gas Heat without Cooling, Existing Insulation ≤R-11	M-H3708	$0.25	Sq Ft	
Attic Insulation, Natural Gas Heat with Cooling, Existing Insulation R-12 to R-19	M-H3709	$0.10	Sq Ft	
Attic Insulation, Natural Gas Heat without Cooling, Existing Insulation R-12 to R-19	M-H3710	$0.10	Sq Ft	
Attic Insulation, Electric Heat with Cooling, Existing Insulation ≤R-11	M-H3711	$0.25	Sq Ft	
Attic Insulation, Electric Heat without Cooling, Existing Insulation ≤R-11	M-H3712	$0.25	Sq Ft	
Attic Insulation, Electric Heat with Cooling, Existing Insulation R-12 to R-19	M-H3713	$0.10	Sq Ft	
Attic Insulation, Electric Heat without Cooling, Existing Insulation R-12 to R-19	M-H3714	$0.10	Sq Ft	
Not eligible for New Construction				

SAMPLE INVOICE – CUSTOMER RECEIVING INCENTIVE

NEED HELP?
CALL
800.762.7077

Focus on Energy requires a copy of your itemized invoice to process customer incentives. Use this example to help guide you through our invoice requirements. If submitting a purchase order, please submit an invoice as well. **Purchase orders alone are not sufficient documentation.**

INVOICE

INVOICE DATE AND NUMBER

Date: 1/1/2015
Invoice # 00001

PROVIDER NAME AND ADDRESS

ABC LIGHTING CONTRACTOR
111 Lighting Expert Rd
Anytown, WI 53523
(555) 555-1212

To

CUSTOMER NAME AND ADDRESS

John Sample Corporation
123 Save Energy Way
Anytown, WI 53590

Ship To

John Sample Corporation
123 Save Energy Way
Anytown, WI 53590

INCLUDE JOB SITE INFORMATION (NAME & ADDRESS) IF DIFFERENT FROM ABOVE

QUANTITY SHIPPED	MANUFACTURER OR BRAND	MODEL #	DESCRIPTION	EXTENDED PRICE
10	ABC Brand	XYZ123000-6	6 Lamp T8 High Bay Fixture	$ 1,200.00
10	ABC Brand	X71DPP-60D135-0	4' 3 Lamp HPT8 Fixture	$ 2,500.00
10	ABC Brand	XX-332-L	Low Ballast Factor Ballast	$ 00.00
30	ABC Brand	T8XXXXXX	Lamps	$ 00.00
25	ABC Brand	XY-XXLED-15	15W – LED Lamp	$ 375.00
2	ABC Brand	ZZ-123	Passive infrared sensor	$ 90.00
8	ABC Brand	XX-XYZLED-123	LED Pole Mounted Exterior Fixture	$ 3,600.00
2	ABC Brand	YY – 122 – XYZ	LED Wall Pack	$ 7,20.00

INCLUDE BALLAST AND LAMP MODEL NUMBERS

INCLUDE ITEM COST

SPECIFY THE QUANTITY FOR EACH

IDENTIFY MANUFACTURER AND MODEL NUMBERS

INCLUDE A DETAILED DESCRIPTION

Subtotal	**$8,485.00**
Sales Tax	**$466.68**
Total	**$8,951.68**

TOTAL AMOUNT DUE

Thank you for your business!

SAMPLE INVOICE – TRADE ALLY RECEIVING INCENTIVE

NEED HELP?
CALL
800.762.7077

Focus on Energy requires a copy of your itemized invoice to process customer incentives. Use this example to help guide you through our invoice requirements. Only registered Trade Allies can receive incentive payments. If submitting a purchase order, please submit an invoice as well. **Purchase orders alone are not sufficient documentation.**

INVOICE

INVOICE DATE AND NUMBER

Date: 1/1/2015
Invoice # 00001

REGISTERED TRADE ALLY NAME AND ADDRESS

XYZ HVAC CONTRACTOR
111 HVAC Expert Rd
Anytown, WI 53523
(555) 555-1212

To

CUSTOMER NAME AND ADDRESS

John Sample Corporation
123 Save Energy Way
Anytown, WI 53590

Ship To

John Sample Corporation
123 Save Energy Way
Anytown, WI 53590

INCLUDE JOB SITE INFORMATION (NAME & ADDRESS) IF DIFFERENT FROM ABOVE

QUANTITY SHIPPED	MANUFACTURER OR BRAND	MODEL #	DESCRIPTION	EXTENDED PRICE
1	ABC Brand	XYZ123000-17	3 Ton Rooftop Unit	$ 2,733.00
1	ABC Brand	X71DPP-60D135-0	Natural Gas Boiler – 150,000 BTU, 95% efficient	$ 4,685.00

SPECIFY THE QUANTITY FOR EACH

IDENTIFY MANUFACTURER AND MODEL NUMBERS

INCLUDE A DETAILED DESCRIPTION

INCLUDE ITEM COST

If you are a Focus on Energy registered Trade Ally that is receiving the incentive you must show the credit to the customer on your invoice

Focus on Energy Incentive	- $ 250.00
Subtotal	$ 7,168.00
Sales Tax	$ 394.24
Total	$ 7,562.24

TOTAL AMOUNT DUE

Thank you for your business!

PROGRAM DESCRIPTIONS WITH EXAMPLES

Use the detailed descriptions below to help find the program that's right for you. Still not sure? Call **800.762.7077** and our program staff will help you find the program to meet your needs. You can also visit **focusonenergy.com** to find savings opportunities specific to your business.

INCENTIVES FOR BUSINESS

AGRICULTURE, SCHOOLS AND GOVERNMENT (AgSG) PROGRAM

Facility types include:

Agriculture Producers	School Facilities	Government
Dairy Farms	Public and Private K-12	Federal/State
Livestock	Churches if associated with a school	Municipal/County
Greenhouses	Technical Colleges	Wastewater Treatment (Non-LEU)
Crop Farming	2 Year UW Colleges	Tribes
Aquacare	Small Colleges & Universities (non-LEU)	

Agriculture producers are businesses engaged in growing and producing product such as grain, livestock, milk, poultry, fruits, vegetables, bees and honey, fish, shellfish, etc.

BUSINESS INCENTIVE PROGRAM (BIP)

Qualifying customers are businesses that do not fall under AgSG, CSF, or LEU programs. Typical facility types include:

- Commercial facilities - e.g. banks, hotels, offices
- Small to midsize industrial facilities - e.g. manufacturing, breweries, processors of raw agricultural products into intermediary or final products
- Small to midsize healthcare facilities - e.g. nursing homes/skilled nursing, community-based residential facilities (CBRF)

CHAIN STORES AND FRANCHISES (CSF) PROGRAM

Qualifying customers are businesses with the following primary facility types:

- Retail stores with 5 or more branded locations in Wisconsin
- Restaurants with 5 or more branded locations in Wisconsin
- Grocery Stores with 5 or more branded locations in Wisconsin
- Convenience stores/gas stations with 5 or more locations owned by the same corporation or ownership group in Wisconsin
- For a full list of eligible customers, visit focusonenergy.com/chainstores

LARGE ENERGY USERS (LEU) PROGRAM

Qualifying customers have incurred monthly energy demand of at least 1,000 kW of electricity or 100,000 Therms of natural gas at least once in the last 12 months and were billed at least $60,000 by their energy utility. Typical facility types include:

- Large industrial facilities – e.g. paper mills, food processors, foundries
- Large healthcare – e.g. large hospitals, large healthcare systems including VA hospitals
- School and government facilities - e.g. UW 4-year universities, large private universities, Fort McCoy
- Large publicly-owned wastewater treatment plants – e.g. Milwaukee Metropolitan Sewerage District

SMALL BUSINESS PROGRAM (SBP)

Qualifying customers are businesses with an average peak monthly electric demand up to 100 kW. Customers eligible for the SBP are also eligible for AgSG and BIP for measures that are not included in the SBP. Typical facility types include:

- Independent retail stores
- Churches not associated with a school
- Small hotels/motels
- Restaurants not served by the CSF Program
- Laundromats
- Small offices
- Storage facilities
- Agricultural producers on residential rates/tariffs due to a residence attached to an Agribusiness
- Town halls, Private Schools, and Fire and Police Stations in towns with a population under 7,500

Visit **focusonenergy.com/smallbusiness** for more information on participating in this program.

INCENTIVES FOR MULTIFAMILY PROPERTIES

MULTIFAMILY ENERGY SAVINGS PROGRAM (MESP)

Qualifying customers own/manage residential properties which include:

- Apartments/condominiums buildings with 4 or more units under one roof
- Residential care apartment complexes (RCAC)
- Nursing homes/assisted living without skilled nursing
- Student housing
- Rooming houses containing 4+ bedrooms
- Housing authorities

MIXED USE FACILITIES

Mixed use facilities are buildings which qualify for more than one program in the same building. These buildings should work with the programs listed above based on the individual space type being upgraded. For example, an apartment building which contains retail space below the residential units is considered mixed use. The retail space may work with SBP, CSF or BIP based on the qualifications of that space, while the residential area should work with MESP. Call 800.762.7077 if you are unsure which program(s) is right for you.

NEED HELP?
CALL
800.762.7077

GLOSSARY

Acronyms, abbreviations and technical terms used throughout this catalog are defined below.

ACRONYMS AND ABBREVIATIONS

A/C	Air Conditioner
AFUE	Annual Fuel Utilization Efficiency
AgSG	Agriculture, Schools and Government Program
AHRI	Air Conditioning, Heating and Refrigeration Institute
AHU	Air Handling Unit
ANSI	American National Standards Institute
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers
BHp	Boiler Horsepower (also Brake Horsepower - please see definitions)
BIP	Business Incentive Program
BTU	British Thermal Units
BTUh	British Thermal Units Per Hour
CFM	Cubic Feet Per Minute
CO	Carbon Monoxide
CO_2	Carbon Dioxide
COP	Coefficient of Performance
CRAC	Computer Room Air Conditioner
CSF	Chain Stores and Franchises Program
DB	Dry Bulb
DC	Direct Current
DCV	Demand Controlled Ventilation
DHW	Domestic Hot Water
DOE	Department of Energy
DX	Direct Expansion
EA	Exhaust Air
ECM	Electronically Commutated Motor
EER	Energy Efficiency Ratio
EF	Energy Factor
Eff.	Efficiency or Effectiveness
EMS	Energy Management System
Enth	Enthalpy
ERV	Energy Recovery Ventilator
Ft	Foot or Feet
GPM	Gallons Per Minute
HP	Horsepower
HRV	Heat Recovery Ventilator
HVAC	Heating, Ventilation and Air Conditioning
IEER	Integrated Energy Efficiency Ratio
in	Inches
IPLV	Integrated Part Load Value
kW	Kilowatts
kWh	Kilowatt-hours
LEU	Large Energy Users Program
LP	Liquid Petroleum or Propane
MBh	1,000 BTUh
MESP	Multifamily Energy Savings Program
Mfr.	Manufacturer
NC	New Construction
NG	Natural Gas
O_2	Oxygen
OA	Outside Air
PPM	Parts Per Million
PSC	Permanent Split Capacitor
psia	Pounds Per Square Inch Absolute
psig	Pounds Per Square Inch Gauge
PTAC	Packaged Terminal Air Conditioner

ACRONYMS AND ABBREVIATIONS, CONTINUED

PTHP	Packaged Terminal Heat Pump
RA	Return Air
RTU	Rooftop Unit
SA	Supply Air
SCFM	Standard Cubic Feet Per Minute
SEER	Seasonal Energy Efficiency Ratio
sq ft	Square Feet
TE	Thermal Efficiency
Therm	100,000 BTU
T-Stat	Thermostat
VFD	Variable Frequency Drive
VSD	Variable Speed Drive
WSHP	Water Source Heat Pump
wk	Week
Δ	Delta or Difference

GLOSSARY TERMS

Air Conditioning, Heating, and Refrigeration Institute
(AHRI) is the trade association representing manufacturers of HVACR and water heating equipment within the global industry. It includes a certification program that provides accurate and unbiased evaluation of heating, water heating, ventilation, air conditioning and commercial refrigeration equipment. AHRI develops industry-recognized performance standards for equipment.

Air Handling Unit
The part of the central air conditioning or heat system that circulates heated or cooled air through building ductwork.

Annual Fuel Utilization Efficiency
The measure of seasonal or annual efficiency of a residential heating furnace or boiler. It takes into account the cyclic on/off operation and associated energy losses of the heating unit as it responds to changes in the load, which in turn is affected by changes in weather and occupant controls.

Boiler (Condensing)
Condensing boilers heat water at higher efficiencies (greater than 90%) by using the waste heat in the flue gases to preheat the cooler water entering the boiler. The term "condensing" refers to the water vapor that collects in the boiler flue from the reduced exhaust temperatures.

Boiler (Near Condensing)
Near condensing boilers heat water at efficiencies between 85% and 89% by using the waste heat in the flue gases to preheat the cooler water entering the boiler. These boilers typically do not cool the flue exhaust enough to cause "condensing" of the water vapor in the boiler flue.

Boiler Horsepower
A measure of a boiler's capacity to produce steam. The amount of energy needed to produce 34.5 pounds of steam per hour at a temperature of 212 degrees Fahrenheit into steam at 212 degrees Fahrenheit.

Brake Horsepower
The brake horsepower is the amount of actual horsepower going to the pump or fan, not the horsepower used by the motor. The actual power delivered by a motor is measured by the use of a brake.

British Thermal Units
A measurement of energy. The amount of heat required to raise the temperature of one pound of water 1 degree Fahrenheit at or near 39.2 degrees Fahrenheit.

British Thermal Units Per Hour
The number of BTUs consumed or generated in a one-hour period.

Carbon Dioxide
A colorless, odorless noncombustible gas with the formula CO_2 that is present in the atmosphere. CO_2 is a natural by-product of respiration.

Carbon Monoxide
A colorless, odorless but poisonous combustible gas produced by incomplete combustion of fuels such as natural gas, L.P., coal, and gasoline.

Chiller (Air-Cooled)
A device that removes heat from a liquid such as water with compressors and refrigerant. Air cooled chillers are usually outside and consist of condenser coils cooled by fan driven air.

Chiller (Water-Cooled)
A device that removes heat from a liquid such as water with compressors and refrigerant. Water cooled chillers are usually inside a building, and heat from these chillers is carried by recirculating water to a heat sink such as an outdoor cooling tower.

Coefficient of Performance
Ratio of tons of refrigeration produced to energy required to operate equipment.

Combustion Efficiency
A measure of how effectively the heat content of a fuel is transferred into usable heat.

Computer Room Air Conditioner
A packaged direct expansion air conditioning unit designed specifically for computer room, data center and heat intensive spaces.

Cubic Feet Per Minute
This measurement indicates how many cubic feet of air pass by a stationary point in one minute. The higher the number, the more air that is being forced through the ductwork by the system.

Demand Controlled Ventilation
A control and sensor system that allows the HVAC system to determine the proper level of ventilation air required based on actual building occupancy. This reduces unnecessary heating and cooling loads and saves energy.

Direct Current
A type of electricity transmission and distribution by which electricity flows in one direction through the conductor: usually relatively low voltage and high current.

Direct Expansion
Air conditioning and refrigeration systems in which the cooling is obtained directly from the expansion of the liquid refrigerant into a vapor. System components include coils, compressors, evaporators and expansion valves.

Domestic Hot Water
Water heated for domestic or commercial purposes other than space heating and process requirements. Common uses include washing, bathing and cooking.

Dry Bulb
The sensible temperature of the air as measured by a standard thermometer.

Drycooler
A drycooler is similar to an air-cooled condensing unit, but utilizes a liquid solution, such as water, ethylene glycol/water or propylene glycol/water, to transfer heat in lieu of refrigerant and compressors.

Economizer
A method of operating a ventilation system to reduce refrigeration load. Whenever the outside air conditions are more favorable (lower heat content) than return air conditions, outdoor air quantity is increased.

Efficiency or Effectiveness
Typically used in reference to ERV systems. It is the ratio of energy transferred between the two air streams compared with the total energy transported through the heat exchanger.

Electronically Commutated Motor
A motor that uses a permanent magnet design to generate a rotating magnetic field. The rotating magnetic field causes the axle to rotate, spinning the fan. These motors are also referred to as brushless DC motors or Solid State Commutator (SSC) motors.

Energy Efficiency Ratio
The measure of the instantaneous energy efficiency of air conditioners; the cooling capacity in BTU/hr divided by the watts of power consumed at a specific outdoor temperature (usually 95 degrees Fahrenheit).

Energy Factor
The measure of overall efficiency for a variety of appliances. For water heaters, the energy factor is based on three factors: 1) the recovery efficiency, or how efficiently the heat from the energy source is transferred to the water; 2) stand-by losses, or the percentage of heat lost per hour from the stored water compared to the content of the water; and 3) cycling losses. For dishwashers, the energy factor is defined as the number of cycles per kWh of input power. For clothes washers, the energy factor is defined as the cubic foot capacity per kWh of input power per cycle. For clothes dryers, the energy factor is defined as the number of pounds of clothes dried per kWh of power consumed.

Energy Management System
A microprocessor-based system for controlling equipment and monitoring energy and other operating parameters in a building.

Energy Recovery Ventilator
A device that captures the sensible and latent heat from the exhaust air from a building and transfers it to the supply/fresh air entering the building to preheat the air and increase overall heating efficiency.

Enthalpy
The total heat content of air expressed in units of BTU/pound. It is the sum of the sensible and latent heat.

Gallons Per Minute
A measurement of liquid flow. Indicates how many gallons of water that pass by a stationary point in one minute.

Guest Room Energy Management
Guest room energy management controls use sensors to determine when a room is unoccupied and adjust the HVAC system operations accordingly. When guests return, the system readjusts to meet guest comfort requirements.

Heat Recovery Ventilator
A device that captures the sensible heat from the exhaust air from a building and transfers it to the supply/fresh air entering the building to preheat the air and increase overall heating efficiency.

High Turndown Burner
A boiler burner mixes fuel with air to produce combustion. The turndown ratio is the maximum inlet fuel or firing rate divided by the minimum firing rate. A burner higher turndown ratio reduces burner starts, provides better load control, saves wear and tear on the burner, reduces refractory wear, reduces purge-air requirements and provides fuel savings.

Integrated Energy Efficiency Ratio
A measure that expresses cooling part-load EER efficiency for commercial unitary air conditioning and heat pump equipment on the basis of weighted operation at various load capacities. IEER replaces IPLV for some equipment.

Integrated Part-Load Value
The efficiency performance factor at part-load cooling capacity. This performance is critical due to the higher quantity of operating hours under part-load conditions than at full load.

Kilowatt-hours
A unit of measurement for electrical energy usage. One kilowatt-hour equals 1000 watts of energy used for one hour.

Kilowatts
A unit of electrical power equivalent to 1000 watts.

Linkageless Controls
Linkageless burner systems remove mechanical linkages and mod-motors and replace them with servomotors and microprocessors. These systems can better modulate O_2, CO_2, and CO to maximum efficiency across the firing rate.

O_2 Trim Controls
The oxygen trim system provides feedback to the burner controls to automatically minimize excess combustion air and optimize the air-to-fuel ratio.

Outside Air Reset/Cutout Controls
Automatic controls to adjust boiler water temperatures based on outside air temperature and actual space heating requirements.

Packaged Terminal Air Conditioner
Air conditioning units intended for mounting through the wall that have a wall sleeve and a separate unencased combination of heating and cooling assemblies. A PTAC includes refrigeration components, separable outdoor louvers, forced ventilation and a heating system that may utilize hot water, steam or electric resistance.

Packaged Terminal Heat Pump
A type of PTAC that uses a reverse cycle refrigeration system for heating and includes a supplementary heat source. These units are more efficient than standard PTAC units.

Pounds Per Square Inch Absolute
A measurement of pressure. The force exerted on a surface in a fluid or gas measured relative to the absolute zero pressure – the pressure that would occur at absolute vacuum.

Pounds Per Square Inch Gauge
A measurement of pressure. The force exerted on a surface in a fluid or gas measured by a gauge relative to the surrounding atmosphere.

Seasonal Energy Efficiency Ratio
A measure of seasonal or annual efficiency of an air conditioner or heat pump. It takes into account the variations in temperature that can occur within a season and is the average number of BTU of cooling delivered for every watt-hour of electricity used by the heat pump over a cooling season.

Standard cubic feet per minute
This measurement indicates how many cubic feet of air pass by a stationary point in one minute at standard conditions.

Steam Trap
Steam traps are automatic valves used in every steam system to remove condensate, air and other non-condensable gases while preventing or minimizing the passing of steam. If condensate is allowed to collect, it reduces the flow capacity of steam lines and the thermal capacity of heat transfer equipment.

Thermal Efficiency
A measure of the efficiency of converting a fuel to energy, heat or useful work. It is a ratio of energy output divided by fuel energy input expressed as a decimal or percentage (example: 0.95 or 95%).

Variable Frequency Drive
An electronic controller that adjusts the speed of an electric motor by modulating the power being delivered. Variable frequency drives provide continuous control, matching motor speed to the actual demands of the pump, fan or motor system. Motor speed fully modulates as the frequency of the alternating current is adjusted by the VFD.

Variable Speed Drive
Often used interchangeably with variable frequency drive. These drives are often used on smaller motors, direct current (DC) motors and multiple speed motors that do not need full modulation.

CONVERSIONS

Term	Description	Conversion
BHp	Boiler Horsepower	1 BHp = 33,476 BTUh
kWh	Kilowatt-hours	1 kWh = 3.413 BTU
HP	Horsepower	1 HP = 0.746 kW
kW/ton	Kilowatt per ton of cooling	kW/ton = 12 / EER
kW/ton	Kilowatt per ton of cooling	kW/ton = 12 / (COP x 3.413)
COP	Coefficient of Performance	COP = EER / 3.413
COP	Coefficient of Performance	COP = 12 / (kW/ton x 3.413)
EER	Energy Efficiency Ratio	EER = 12 / kW/ton
EER	Energy Efficiency Ratio	EER = COP x 3.413
Ton	Unit of capacity for cooling equipment	1 Ton = 12,000 BTUh
MBh	1,000 BTUh	1 MBh = 1,000 BTUh
Therm	100,000 BTU	1 Therm = 100,000 BTUh (or 100 CF or 0.1 MCF)
CF	Quantity of natural gas	1 CF = 1 cubic foot (= approximately 1,000 BTU)
CCF	Quantity of natural gas	1 CCF = 100 cubic feet
MCF	Quantity of natural gas	1 MCF = 1,000 cubic feet (or 10 CCF or 10 Therms)

SOURCES Terms defined in the Glossary were referenced from the following sources:

ari.org
www1.eere.energy.gov
focusonenergy.com
energy.gov
energystar.gov
www1.eere.energy.gov
engineeringtoolbox.com
energy.ca.gov
lennox.com/resources/glossary.asp
ashrae.org/resources--publications/free-resources/ashrae-terminology
energy.gov/eere/energybasics/articles/glossary-energy-related-terms