

2019 Business Energy Services



Agenda



- ▶ Renewable Program Components
- ▶ Overview of Energy Efficiency
- ▶ Program Components
- ▶ Incentives Available
- ▶ Application Process

Clean Energy Programs



Solar Incentives

Incentives are based on system size. Up-front Incentives (UFI) are available for installing solar panel systems that generate up to 25 kilowatts of electricity. Alternatively, Production-Based Incentives (PBI) are paid quarterly over a maximum of five years for installing solar panel systems that generate more than 25 kilowatts and up to 500 kilowatts of electricity. Note that systems cannot produce more than your annual electrical consumption.

CATEGORY	EPBB* / Watt	PBI** / kWh
Public, Low-income and Nonprofit	\$0.45	\$0.0550
Residential, Commercial and Industrial	\$0.20	\$0.0250

* EPBB: Expected Performance Based Buy Down

** PBI: Production Based Incentive

Energy Storage Incentives

Energy storage systems can offset peak demand for electricity, help avoid investments by NV Energy in traditional generation assets and improve the reliability of the electric grid.

Energy Storage Size	INCENTIVE AMOUNT
Less than 100 kW Residential with Time-of-Use Rate	Lesser of \$0.22 per Wh, 50% of equipment cost, or \$3,000*
Less than 100 kW Residential without Time-of-Use Rate	Lesser of \$0.11 per Wh, 50% of equipment cost, or \$3,000*
Less than 100 kW Non-Residential with Time-Of-Use Rate	\$0.15 per Wh
Less than 100 kW Non-Residential Without Time-Of-Use Rate	\$0.08 per Wh
100 kW to 1,000 kW Non-Critical Infrastructure	Lesser of \$0.30 per Wh, 50% of installed cost, or \$200,000**
100 kW to 1,000 kW Critical Infrastructure	Lesser of \$0.40 per Wh, 50% of installed cost, or \$300,000***

*Less than 100kW \$3,000 cap per premise

**\$200,000 cap per premise

***\$300,000 cap per premise



EV Charger Incentives

CHARGING STATION INCENTIVES

These incentives are available to commercial customers to help offset the cost of building charging stations at workplaces, multi-family residences and for fleet electrification. Incentives amounts are based on the type of charger that is installed, as shown in the table below:

CHARGER TYPE	INCENTIVE AMOUNT	MINIMUM SYSTEM SIZE	MAXIMUM SYSTEM SIZE
Level 2 Charger	Lesser of \$3,000 per Connector or 75% of Project Costs	2 Charging Connectors	10 Charging Connectors
Direct Current (DC) Fast Charger	\$15,000 per Charging System	1 Charging System	5 Charging Systems

EV CUSTOM GRANT

The custom grant program is designed to help commercial customers with any other electric vehicle infrastructure project that may fall outside of the guidelines for Charging Station Incentives. This program will be administered through a grant application process. **EV Custom Grant applications are reviewed and awarded quarterly.** Check the website for the current review period and submittal deadline at: nvenergy.com/cleanenergy/electric-vehicles/ev-grants



- ▶ Application Support (online application or website download)
- ▶ Technical Services (dedicated engineers review/validate energy savings)
- ▶ **Free** Classroom Education and Training
- ▶ Non Profit Agency Grants
- ▶ Small Business Project Incentives
- ▶ Retrofit Project Incentives
- ▶ New Construction Incentives

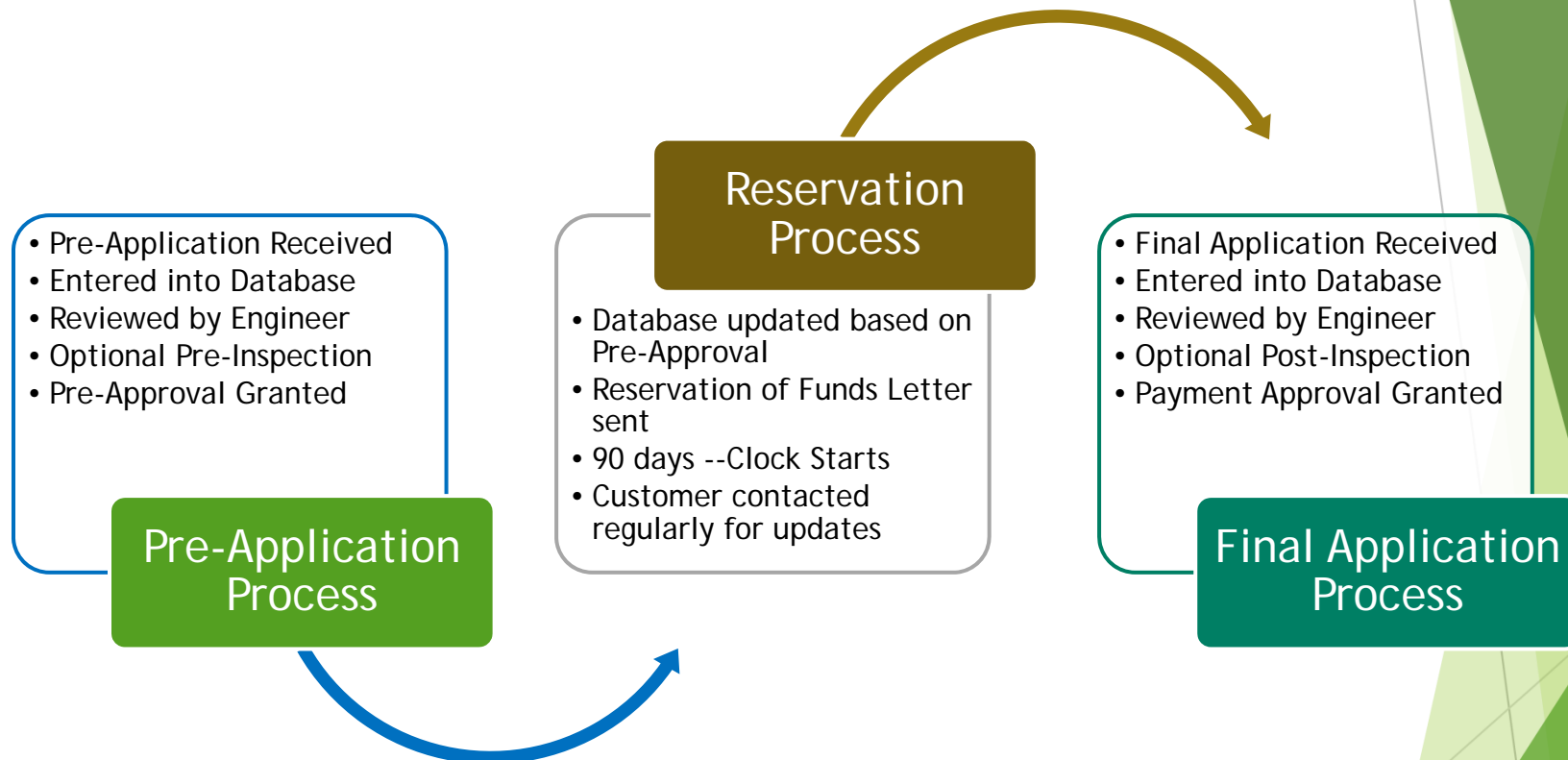
Education and Training

Presentation Topics:

Lighting, HVAC, Compressed Air,
Variable Frequency Drives, Motors,
Pumps, and Online Application
Training



How the Program Works



Retrofit Project Incentives

► Prescriptive Incentives

- Lighting
- Cooling/HVAC
 - VSD on HVAC Pumps/Fans
 - Unitary Equipment (Air or Water Cooled)
 - Incentives based on size and EER/SEER
 - Package Units
 - Programable Thermostats
- Commercial Kitchen & Refrigeration
- Transformers/UPS
- Miscellaneous



Retrofit Project Incentives

► Custom Incentives

- Any measure that can verifiably reduce energy consumption
- Measures that qualify for prescriptive incentives are NOT eligible for custom incentives
- Examples:
 - Chiller replacement
 - Plate-and-frame heat exchanger
 - EMS/control strategy or system configuration change



Custom Incentive Calculations

- ▶ Customer/contractor must provide initial saving calculations and documentation
- ▶ Documentation includes:
 - Savings calculation method - Tell us exactly how you arrived at your kWh number
 - Operation and efficiency assumptions - Be specific! 6 am - 5 pm Monday - Friday, not 8 hours a day
 - Manufacturer equipment cut sheets or material specification sheets
 - Monitoring data if available
 - Modeling data
 - Additional information as requested by the Business Energy Services team

Retrofit Projects

- ▶ Pre-application required
- ▶ Completed projects are not eligible
- ▶ Incentive must be greater than \$250
- ▶ Funds are reserved for 90 days





Business Energy Services 2019 Northern Retrofit Incentive Summary

Retrofit - Interior Lighting			
Measure	Size/Type	Unit	Incentive
Interior Lighting Lamp/Fixture	Interior	Watt Reduced	\$0.22
Interior LED Lamp, Hotel Guestroom	Interior	Watt Reduced	\$0.10
Delamp T8 Lamps	4-foot lamp	Lamp	\$3.00
Standard T8 to RW T8	4-foot lamp	Lamp	\$1.00
LED Exit Sign		Sign	\$15.00
LED Refrigerated Case Lighting		Lamp	\$25.00
LED Channel Sign	≤ 2 Feet	Letter	\$10.00
LED Channel Sign	> 2 Feet	Letter	\$25.00
Occ. Sensor on Refrigerated Case	Enclosed	Door	\$12.00
Occ. Sensor on Refrigerated Case	Open	LF of Case	\$4.00
Occupancy Sensors	Wall Box	Sensor	\$12.00
Occupancy Sensors	Ceiling Mount	Sensor	\$30.00
Occupancy Sensors	HB T5/T8 Sensor	Sensor	\$20.00
Occupancy Sensors	HB LED Sensor	Sensor	\$14.00
Daylighting Controls		Watt Controlled	\$0.10
Bi-Level Stairwell/Hall /Garage LED Fixtures with Sensors		Watt Controlled	\$0.40
Retrofit-Exterior and Garage Lighting			
Garage LED Replacing HID 24/7	24/7 Operation	Watt Reduced	\$0.22
Exterior Replacing HID 12 Hr	12 Hour Operation	Watt Reduced	\$0.18
Garage High Wattage Screw-In CFL	24/7 Operation	Watt Reduced	\$0.20
Exterior High Wattage Screw-In CFL	12 Hour Operation	Watt Reduced	\$0.15
LED Channel Sign	≤ 2 Feet	Letter	\$10.00
LED Channel Sign	> 2 Feet	Letter	\$25.00
Garage Hard-Wired CFL < 29W		Fixture	\$25.00
Garage Hard-Wired CFL > 30W		Fixture	\$40.00
Exterior Hard-Wired CFL < 29W		Fixture	\$15.00
Exterior Hard-Wired CFL > 30W		Fixture	\$30.00

Please refer to 2019 Business Energy Services Retrofit Specifications document for complete specifications

LEARN MORE

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EMAIL | bes@nvenergy.com
WEB | www.nvenergy.com/bes

Retrofit - Commercial Kitchen			
Measure	Unit	Incentive	
HE Fryer	Vat	\$200.00	
Large Vat Fryer	Vat	\$200.00	
HE Griddle	Griddle	\$300.00	
Convection Oven	Oven	\$350.00	
Combination Oven	Oven	\$1,000.00	
Steam Cooker	Steamer	\$750.00	
HE Holding Cabinets, Full Size	Cabinet	\$300.00	
HE Holding Cabinets, 3/4 Size	Cabinet	\$250.00	
HE Holding Cabinets, 1/2 Size	Cabinet	\$200.00	
Ventilation Control - Retrofit	HP	\$350.00	
Ventilation Control - New Hood	HP	\$300.00	
Anti-Sweat Heater Controls	Door	\$40.00	
EC Motors: Walk-in Boxes	Motor	\$40.00	
EC Motors: Refrigerated Cases	Motor	\$30.00	
Evaporator Fan Controller	Controller	\$35.00	
ENERGY STAR® Tier II Vending Machine Refurbishment Kit	Kit	\$75.00	
Vending Machine Controls	Controller	\$90.00	
Snack Machine Controls	Controller	\$15.00	
Floating Head Pressure Controls	HP	\$35.00	
Reach-In Cooler Controls	Controller	\$30.00	
Ice Machine ES/CEE I <300	Machine	\$50.00	
Ice Machine ES/CEE I 300-500	Machine	\$75.00	
Ice Machine ES/CEE I 500-1000	Machine	\$125.00	
Ice Machine ES/CEE I 1000-1500	Machine	\$200.00	
Ice Machine ES/CEE I >1500	Machine	\$250.00	
Ice Machine CEE II <300	Machine	\$100.00	
Ice Machine CEE II 300-500	Machine	\$150.00	
Ice Machine CEE II 500-1000	Machine	\$250.00	
Ice Machine CEE II 1000-1500	Machine	\$400.00	
Ice Machine CEE II >1500	Machine	\$500.00	
Refrigerator SD ES < 15 cf	Refrigerator	\$50.00	
Refrigerator SD ES 15 ≤ V < 30 cf	Refrigerator	\$75.00	
Refrigerator SD 30 ≤ V < 50 cf	Refrigerator	\$90.00	
Refrigerator SD ES ≥ 50 cf	Refrigerator	\$125.00	
Freezer SD ES < 15 cf	Freezer	\$60.00	
Freezer SD ES 15 ≤ V < 30 cf	Freezer	\$75.00	
Freezer SD ES 30 ≤ V < 50 cf	Freezer	\$80.00	
Freezer SD ES ≥ 50 cf	Freezer	\$200.00	
Refrigerator GD ES <15 cf	Refrigerator	\$50.00	
Refrigerator GD ES 15 ≤ V < 30 cf	Refrigerator	\$75.00	
Refrigerator GD 30 ≤ V < 50 cf	Refrigerator	\$90.00	
Refrigerator GD ES ≥ 50 cf	Refrigerator	\$125.00	
Freezer GD ES < 15 cf	Freezer	\$60.00	
Freezer GD ES 15 ≤ V < 30 cf	Freezer	\$75.00	
Freezer GD ES 30 ≤ V < 50 cf	Freezer	\$80.00	
Freezer GD ES ≥ 50 cf	Freezer	\$200.00	

¹ Incentive varies by transformer size, see application.

² Incentive varies by UPS size and input dependency characteristics, see application.

Retrofit - Transformer and UPS		
Measure	Unit	Incentive
Single & Three Phase High Eff. Transformer	Per Unit	Varies ¹
Single & Three Phase High Eff. Transformer - incremental	Per 0.01% Above Qual.	Varies ¹
High Eff. UPS - Single & Multi-Normal	Output kW	Varies ²
Retrofit - Miscellaneous		
Escalator Motor Controllers (EMC)	HP	\$20.00
VSD Pool Pump & Scheduling Control	HP	\$150.00
VSD Air Compressor Replacement < 50hp	HP	\$45.00
Compressed Air Engineered Nozzles	Nozzle	\$10.00
High Efficiency Battery Chargers	Charger	\$225.00
Demand Control Ventilation - Parking Garage	HP	\$90.00
Demand Control Ventilation - Interior Spaces	Per 1,000 sq ft	\$50 per 1,000 sq ft
Irrigation Nozzles	Nozzle	\$3.00
Irrigation Sprinklers	Sprinkler	\$2.50
Irrigation Regulators	Regulator	\$3.50
Irrigation Gaskets	Gasket	\$2.00
Retrofit - Cooling		
Air-Cooled Units:		
(≤65 kBtu/h), Qual EER	Ton	\$10.00
(65 kBtu/h), 1 Additional EER	Ton	\$5.00
(>65-135 kBtu/h), Qual EER	Ton	\$10.00
(>65-135 kBtu/h), 1 Additional EER	Ton	\$7.00
(>135-240 kBtu/h), Qual EER	Ton	\$15.00
(>135-240 kBtu/h), 1 Additional EER	Ton	\$8.00
(>240 kBtu/h) Qual EER	Ton	\$15.00
(>240 kBtu/h) 1 Additional EER	Ton	\$8.00
Water-Cooled Units, EER=14	Ton	\$15.00
Water-Cooled Units, 1 Additional EER	Ton	\$6.00
PTAC/PTHP, Qual EER	Ton	\$35.00
PTAC/PTHP, 1 Additional EER	Ton	\$15.00
Programmable Thermostat	Each	\$25.00
Window Film	Sq. Foot	\$0.50
VSD on HVAC Fans and Pumps	HP	\$40.00
Air Side Economizers	Ton	\$25.00
Retrofit - Custom		
	On-Peak	Non-On-Peak
Custom Incentive	\$0.10/kWh	\$0.04/kWh
On-Peak/Non-On-Peak Time Periods		
On-Peak		
July-September (Summer)	1 p.m. - 6 p.m.	Weekdays
October-June (Winter)	5 p.m. - 9 p.m.	7 Days/Wk
Non-On-Peak		
July-September (Summer)	6 p.m. - 1 p.m.	Weekdays
	Midnight to Midnight	Saturday / Sunday
October-June (Winter)	9 p.m. - 5 p.m.	7 Days/Wk

Retrofit Project Example

- ▶ Installed interior/exterior LED lighting throughout facility
- ▶ Installed occupancy sensors
- ▶ Energy savings: 4,307,224 kWh
 - ▶ $(\text{kWh} \times .08) = \$344,577.92$
- ▶ NV Energy incentive: \$125,386.00
- ▶ Simple Payback: 2.9 years



Retrofit Project Example

- ▶ Chiller Plant Optimization - Retrofit of air handler units throughout a casino facility.
 - ▶ Drives were tied into new controls and tied back to a new control system. Three-way valves were installed where appropriate.
 - ▶ Trend data was downloaded from the new control system and used to quantify energy savings.
-
- ▶ Energy savings: 518,587 kWh
 - ▶ $(\text{kWh} \times .08) = \$41,486.96$
 - ▶ NV Energy incentive: \$28,933.25
 - ▶ Simple Payback: 2.3 years



Retrofit Project Example

- ▶ Networked controls for roof top HVAC units at a casino
- ▶ Heating and cooling was operating at the same time
- ▶ Billing data was used to validate energy savings and showed a 17% decrease in energy use
- ▶ Energy savings: 358,315 kWh
 - ▶ $(\text{kWh} \times .08) = \$21,665$
- ▶ NV Energy incentive: Cost Capped at \$9,815.00 (\$21,441.10)
- ▶ Simple Payback: 0.45 years



New Construction

- ▶ The intent is to encourage energy efficiency in newly constructed, major renovated areas, tenant improvement spaces, or buildings from the design stage through construction
- ▶ The goal is to be at least 10% better than IECC 2009 standards or 5% better than IECC 2012 standards as applicable



- ▶ Performance Based requires a qualifying individual item or a system, such as high efficiency chiller, comparison with IECC 2009/2012 or ASHRAE 90.1 - 2007/2010 minimum-system

New Construction Incentives

- ▶ Lighting Power Density
 - Watts/sq. ft.
 - 10% better than IECC 2009 to qualify
 - 5% better than IECC 2012 to qualify
- ▶ Cooling & HVAC
 - CHW Flat Plate Heat Exchanger (IECC 2009)
 - VSD on HVAC Pumps/Fans not required by code
 - Unitary Equipment (air or water cooled)
 - Incentives based on size and EER/SEER
 - Package Terminal Units
- ▶ Commercial Kitchen

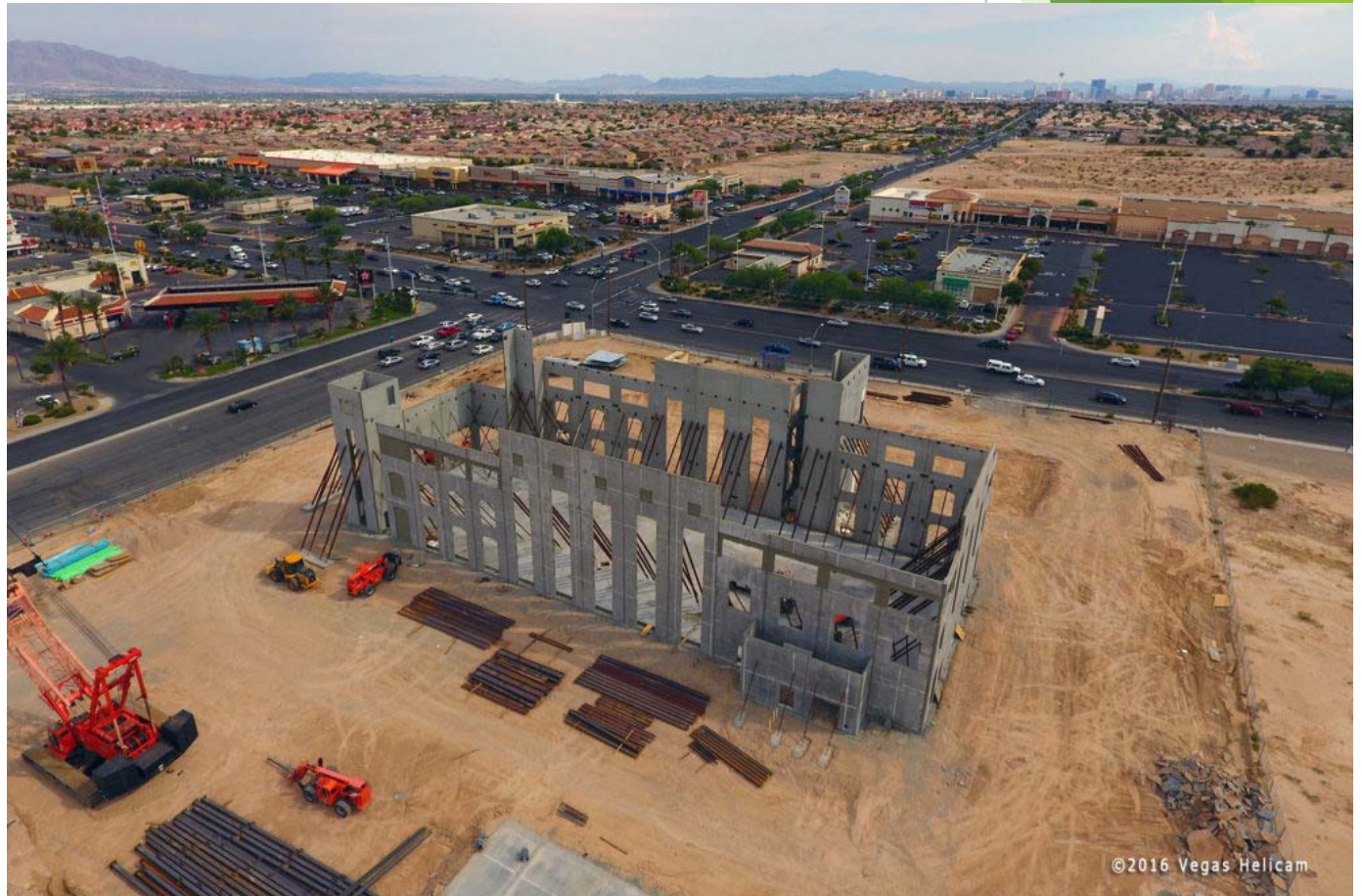


New Construction Incentives Continued

- ▶ Custom/Performance Based Incentives
 - For measures that don't fit a prescriptive incentive
 - Whole building approach
 - Performance Based for system approach
 - Incentive:
 - \$0.10/kWh On-Peak Saved
 - \$0.04/kWh Non On-Peak Saved

New Construction Projects

- ▶ Pre-application required
- ▶ Completed projects are not eligible
- ▶ Funds are reserved based on project timeline





Business Energy Services 2019 Northern New Construction Incentive Summary

New Construction - Lighting Power Density		
Measure	Unit	Incentive
Interior Lighting Power Density, 10% Better Than IECC 2009	kw	\$350.00
Interior Lighting Power Density, 5% Better Than IECC 2012	kw	\$250.00
Interior Lighting Power Density, 5% Better Than IECC 2018	kw	\$250.00
New Construction - Lighting		
Measure	Unit	Incentive
Day Light Dimming System (Not Available for IECC 2012 OR 2018 Applications)	Connected Watt	\$0.10
New Construction - Performance Based / Whole Building		
Approach	On-Peak Incentive	Non-On-Peak Incentive
Performance Based - 10% Better Than IECC 2009	\$0.09 per kWh	\$0.05 per kWh
Whole Building - 10% Better Than IECC 2009	\$0.09 per kWh	\$0.05 per kWh
Performance Based - 5% Better Than IECC 2012	\$0.10 per kWh	\$0.06 per kWh
Whole Building - 5% Better Than IECC 2012	\$0.10 per kWh	\$0.06 per kWh
Performance Based - 5% Better Than IECC 2018	\$0.10 per kWh	\$0.06 per kWh
Whole Building - 5% Better Than IECC 2018	\$0.10 per kWh	\$0.06 per kWh
On-Peak/Non-On-Peak Time Periods		
On-Peak		
July - September (Summer)	1 p.m. - 6 p.m.	Weekdays Only
October - June (Winter)	5 p.m. - 9 p.m.	7 Days per Week
Non-On-Peak		
July - September (Summer)	6 p.m. - 1 p.m.	Weekdays
	Midnight to Midnight	Saturday / Sunday
October-June (Winter)	9 p.m. - 5 p.m.	7 Days per Week

New Construction - Cooling / Misc.			
Measure	Unit	IECC 2009 / IECC 2012 Incentive	IECC 2012 C406 ¹ Incentive
Air-Cooled Units			
(≤65 kBtuh), Qual EER	Ton	\$10.00	\$12.00
(≤65 kBtuh), 1 Additional EER	Ton	\$5.00	\$6.00
(>65 to 135 kBtuh), Qual EER	Ton	\$10.00	\$12.00
(>65 to 135 kBtuh), 1 Additional EER	Ton	\$7.00	\$8.00
(>135 to 240 kBtuh), Qual EER	Ton	\$15.00	\$18.00
(>135 to 240 kBtuh), 1 Additional EER	Ton	\$8.00	\$10.00
(>240 kBtuh) Qual EER	Ton	\$15.00	\$18.00
(>240 kBtuh) 1 Additional EER	Ton	\$8.00	\$10.00
Water-Cooled Units, EER=14	Ton	\$15.00	\$18.00
Water-Cooled Units, 1 Additional EER	Ton	\$6.00	\$7.00
PTAC/PTHP, Qual EER	Ton	\$42.00	\$42.00
PTAC/PTHP, 1 Additional EER	Ton	\$18.00	\$18.00
Flat Plate Heat Exchanger ²	HX Tons	\$15.00	N/A
Variable Speed Drive	per HP	\$45.00	N/A

¹Incentives for projects subject to Section C406 of IECC 2012.

²Flat Plate Heat Exchangers are required by IECC 2012 and thus not eligible for incentive.

New Construction - Commercial Kitchen		
Measure	Unit	Incentive
HE Fryer	Vat	\$200.00
Large Vat Fryer	Vat	\$200.00
HE Griddle	Griddle	\$300.00
Convection Oven	Oven	\$350.00
Combination Oven	Oven	\$1,000.00
Steam Cooker	Steamer	\$750.00
HE Holding Cabinets, Full Size	Cabinet	\$300.00
HE Holding Cabinets, 3/4 Size	Cabinet	\$250.00
HE Holding Cabinets, 1/2 Size	Cabinet	\$200.00
Ventilation Control - New Hood	HP	\$300.00
Evaporator Fan Controller	Controller	\$35.00
Ice Machine ES/CEE I <300	Machine	\$50.00
Ice Machine ES/CEE I 300-500	Machine	\$75.00
Ice Machine ES/CEE I 500-1000	Machine	\$125.00
Ice Machine ES/CEE I 1000-1500	Machine	\$200.00
Ice Machine ES/CEE I >1500	Machine	\$250.00
Ice Machine CEE II <300	Machine	\$100.00
Ice Machine CEE II 300-500	Machine	\$150.00
Ice Machine CEE II 500-1000	Machine	\$250.00
Ice Machine CEE II 1000-1500	Machine	\$400.00
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Refrigerator SD ES < 15 cf	Refrigerator	\$50.00
Refrigerator SD ES 15 ≤ V < 30 cf	Refrigerator	\$75.00
Refrigerator SD 30 ≤ V < 50 cf	Refrigerator	\$90.00
Refrigerator SD ES ≥ 50 cf	Refrigerator	\$125.00
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Refrigerator GD ≥ 50 cf	Refrigerator	\$125.00
Freezer GD ES < 15 cf	Freezer	\$60.00
Freezer GD ES 15 ≤ V < 30 cf	Freezer	\$75.00
Freezer GD ES 30 ≤ V < 50 cf	Freezer	\$80.00
Freezer GD ES ≥ 50 cf	Freezer	\$200.00

Please refer to 2019 Business Energy Services
New Construction Specifications document for complete
specifications

LEARN MORE

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New Construction Project Example

- ▶ Upgraded condenser water system to maximize efficiency of 9,000-ton system
 - ▶ Install 6-1500-ton chillers, 10M gal thermal storage tank, hybrid dry/wet deck closed loop cooling towers
 - ▶ Annual Energy Savings
 - 2,398,456 kWh/yr
 - (kWh*.08)= \$191,876.48
 - ▶ Total Incentive: \$131,592.52
- First year savings: \$323,469



New Construction Example

- ▶ Warehouse and Offices Facility - 401,842 SF
 - ▶ 394,971 square foot production facility
 - ▶ 6,871 square foot office area
- ▶ Measures included
 - ▶ Use of LED Lighting
 - ▶ Lighting Power Density greater than 5% IECC 2012 requirements
- ▶ Annual Energy Savings 1,660,144 kWh/yr
 - ▶ $(\text{kWh} \times .08) = \$132,811.52$
- ▶ Total Incentive: \$133,503
- ▶ First year savings: \$266,315



New Construction Project Example

- ▶ Customer able to cool site without a chiller, using a heat exchanger and cold lake water at a hotel site
- ▶ Data logging of flow and building chilled water temp was done to validate energy savings
- ▶ Annual Energy Savings
 - 98,984 kWh/yr
 - $(\text{kWh} \times .08) = \$7,919$
- ▶ Total Incentive: \$7,684.48
- ▶ First year savings: \$15,603





Expectations: Quality & Compliance

- ▶ Project requirements aim to produce quality results and lasting savings
 - Pre-notification apps required for ALL projects
 - 90-day funding reservation period
 - Incentives must be > \$250
- ▶ Contractors play critical role
 - Submit complete applications
 - Communicate requirements to customers
 - Communicate project status to Business Energy Services team



Contact Us!

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