



Commercial Kitchen & Refrigeration

Understanding the ROI of Energy-Efficient Systems



Presenter

Ruben Carrillo

Energy Engineer

- ✓ 10+ years of experience working with Nevada businesses
- ✓ Consulted with clients across multiple industries such as hotels, restaurants, supermarkets and non-profit organizations
- ✓ Las Vegas Valley native and an alumnus of the University of Nevada, Las Vegas
- ✓ Bachelor of Science in Electrical Engineering

Agenda



Industry energy usage



Control strategies



Equipment considerations



Maintenance and upgrades

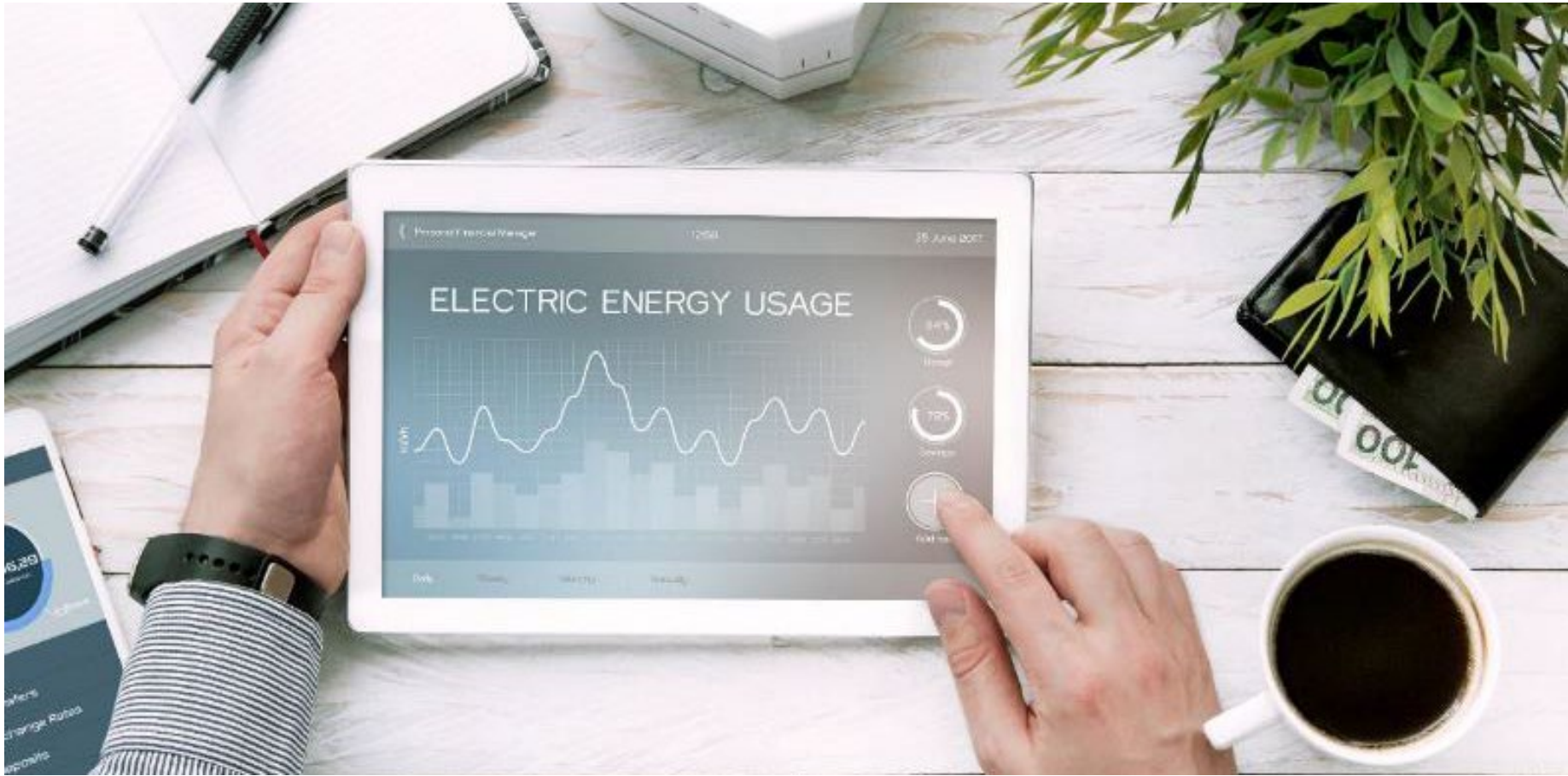


Case Studies



NV Energy Programs

Industry Energy Usage



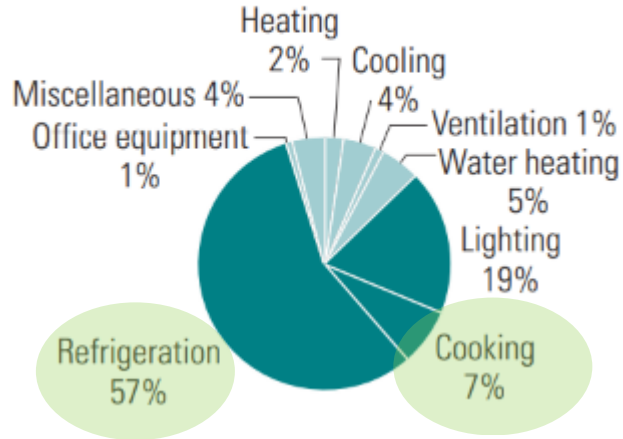


Supermarkets

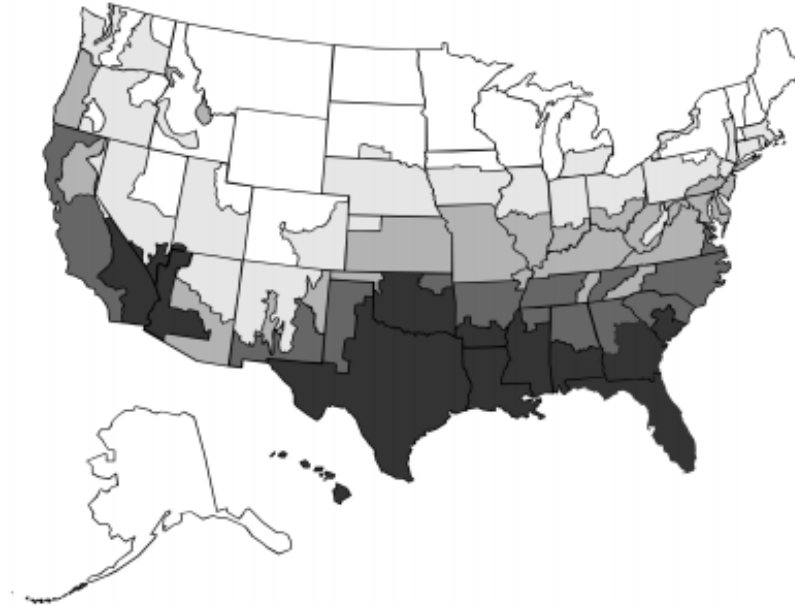
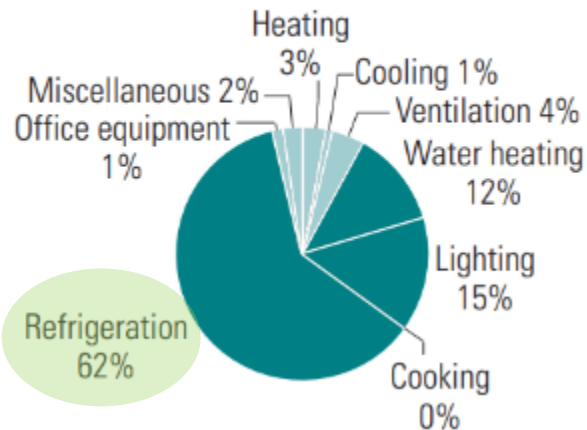
- On average use 50 kWh per square foot per year
- Equates to annual energy cost of more than \$4 per square foot
- For a 50,000 sq. ft. market, energy costs can run more than \$200,000 per year
- Causes 1,900 tons of CO₂
- Large commercial refrigerator used in grocery stores can consume up to 17,000 kWh/year

Supermarket Equipment Energy Usage Review

Climate zone 2



Climate zone 5



Climate zones

- Zone 1 is less than 2,000 CDD and greater than 7,000 HDD.
- Zone 2 is less than 2,000 CDD and 5,500–7,000 HDD.
- Zone 3 is less than 2,000 CDD and 4,000–5,499 HDD.
- Zone 4 is less than 2,000 CDD and less than 4,000 HDD.
- Zone 5 is 2,000 CDD or more and less than 4,000 HDD.

Note: CDD = cooling degree day; HDD = heating degree day

Source: U.S. Energy Information Administration



Restaurant Facts & Figures

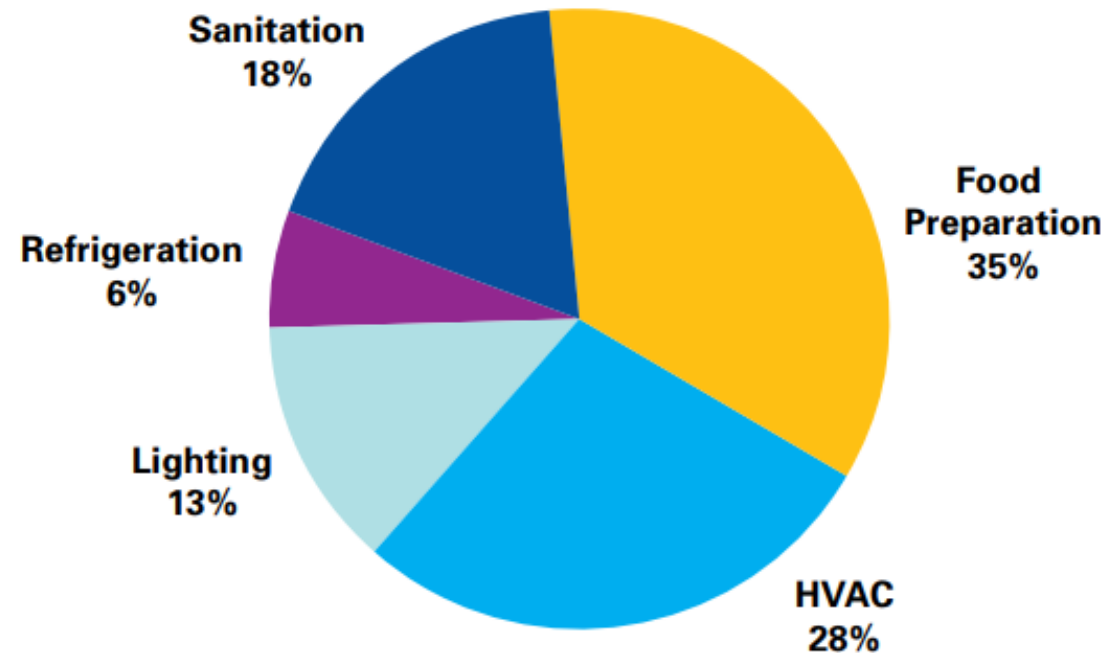
- Use 5-7 times more energy per square foot than other commercial buildings
- High-volume QSRs can use up to 10 times more energy per square foot than other commercial buildings
- Example: typical electric deep fat fryer uses more than 18,000 kWh
- A large commercial freezer can use up to 38,000 kWh/year

Restaurant Equipment Energy Usage Review

Appliances vary in energy usage

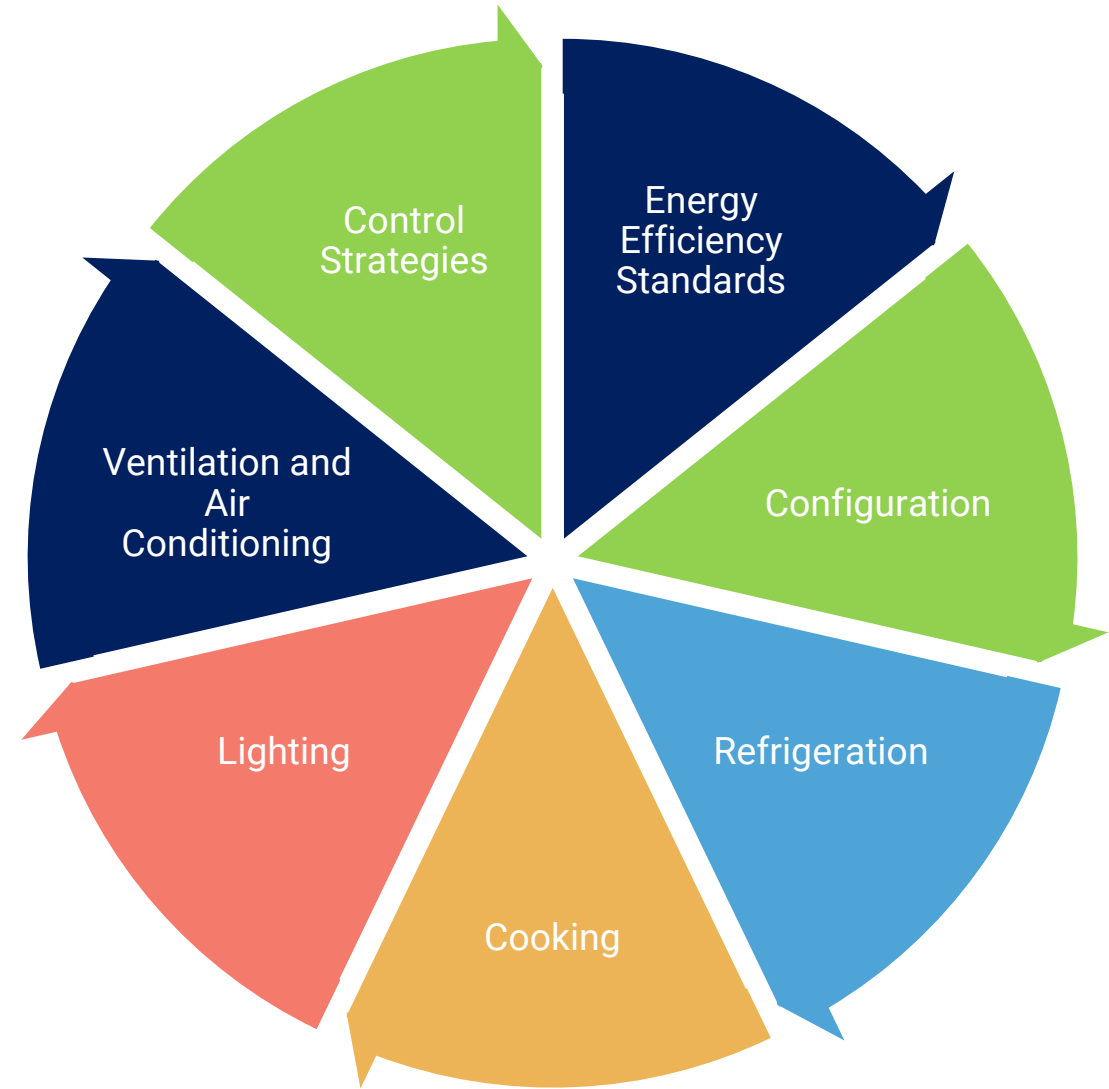
- Refrigeration
 - Refrigerators
 - Ice Makers
 - Freezers
- Cooking
 - Steam Cookers
 - Ovens
 - Fryers
 - Griddles
 - Broilers
 - Ranges
 - Food Holding Cabinets
- Sanitation
 - Dishwashers

Example of the Average Energy Consumption in a Full-Service Restaurant
(British Thermal Units [Btu])

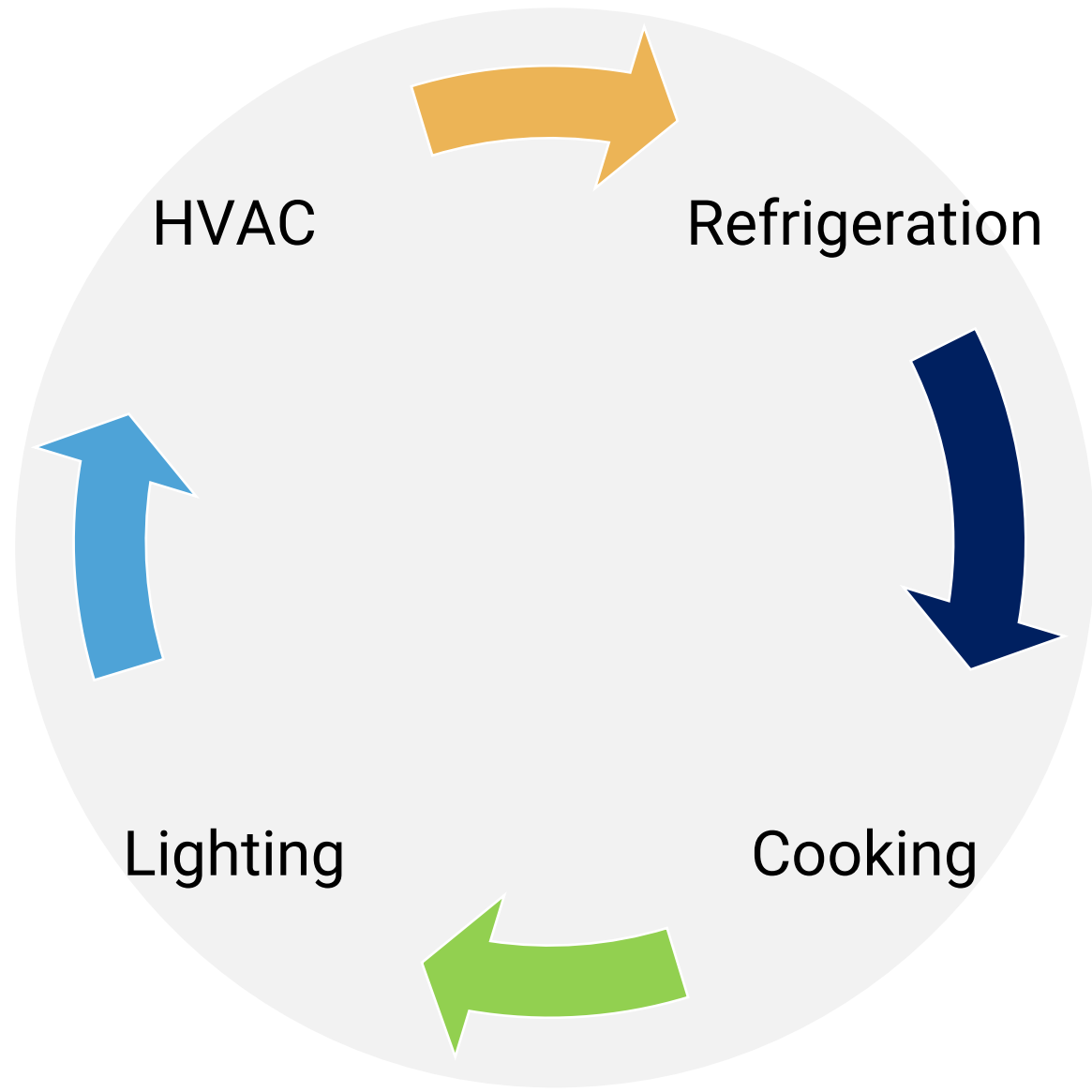


www.energystar.gov

New Construction and Remodeling Efficiency Considerations



How It All Works Together





Control Strategies

Commercial Refrigeration Controls

Adaptive
Controls

Speed
Controllers

Timers &
Dimmers

On-demand
Defrost

Night-time
Set Back

Anti-sweat
Heater
Controls

Wireless
Technology

Leak
Detection

Occupancy Lighting Controls Refrigerated Cases



OCCUPANCY CONTROLS
CAN BE ADDED WHEN
USING LED CASE
LIGHTING



POTENTIAL OF UP TO
ADDITIONAL 10% IN
ENERGY SAVINGS



INTERIOR CASE LIGHTS
TURN ON WHEN WALKING
DOWN THE ISLE, SAVING
ADDITIONAL ENERGY



ADDITIONALLY,
REFRIGERATION COOLING
SAVINGS & EXTENDED
LAMP LIFE

Floating Head Pressure Controls

What is it?

- Controls that allow head pressures and therefore condensing temperatures to float for refrigerated grocery cases

How does it save energy?

- Continuously adjusts the head pressure based on outside air temperatures as opposed to a manual setting
- Cooler outside air = energy savings
- One study reported an average of 23% compressor energy savings



Equipment Considerations

Refrigeration & Freezers

- Account for 25% of energy consumption in food service facilities



Lifetime Savings For Efficient Commercial Refrigerators

TABLE 1. LIFETIME SAVINGS FOR EFFICIENT COMMERCIAL REFRIGERATOR MODELS

Performance	Best Available	ENERGY STAR	Less Efficient
Maximum Daily Energy Consumption	1.13 kWh/day	1.89 kWh/day	4.44 kWh/day
Annual Energy Use	412 kWh	690 kWh	1,621 kWh
Annual Energy Cost	\$36	\$60	\$142
Lifetime Energy Cost	\$299	\$584	\$1,371
Lifetime Energy Cost Savings	\$1,073*	\$788*	=====

*The Lifetime Energy Cost Savings number is rounded up; it is not in error.

Approximately 10% of display cases are medium-temperature, open cases that are good candidates for retrofit

Measures often include doors, fan/fan motors, lighting and controls

50% - 80% reduction in system energy consumption

Retrofit of Open Display Cases

Purchase and Install Considerations

ENERGY STAR

- Commercial refrigerators that earn the ENERGY STAR today are, on average, 20% more energy efficient than other products on the market

Compressor Location

- Bottom-mounted compressors tend to operate more efficiently
- Top-mounted compressors should be considered in commercial kitchens where a lot of flour is used

Door Configuration

- Solid doors are better insulated and easier to clean
- Glass doors allow kitchen staff to see the contents of the unit, which may eliminate unnecessary opening and closing
- Half-height doors tend to be more energy efficient

Additional Features

- Casters allow the units to be easily moved for maintenance and cleaning, make sure they lock!

Maintenance and Usage



Anti-sweat heaters should be checked regularly and turned off when not needed



Make sure gaskets and auto closers are maintained and in good working condition



Ensure regular cleanings for coils



Maintain adequate space and airflow around unit



Set defrost timers

Ice Machines

Savings Fact

- ENERGY STAR are on average 15% more energy efficient

New machines EE technology

- Harvest-assist devices
- High efficiency compressors
- Fan motors and water pumps



Ice Machine Maintenance and Usage

1

Inspect and clean
coils regularly

2

Keep bin lids
closed

3

Adjust purge
water timer

4

Install timers to
reduce daytime
electricity
demand

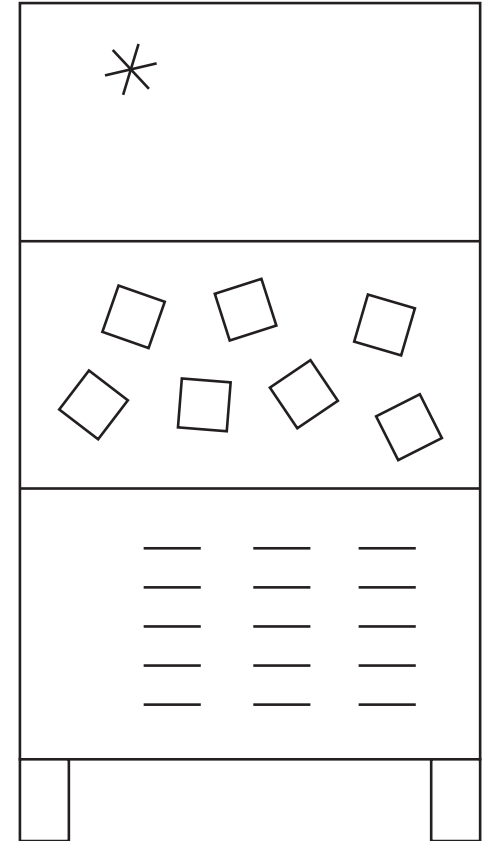
5

Shift ice
production to
night-time mode
when possible

Ice Machines

Purchase and Install

- Choose an appropriate size
 - Larger machines tend to be more efficient
- Avoid open-loop, water-cooled machines as they are more expensive to operate



Cooking Appliances

- Cooking appliances account for about 12% of the electricity bill in a typical restaurant



Steam Cookers

- **ENERGY STAR certified steamers** have a sealed cooking cavity that consumes 60% less energy than a traditional open design system
- **ENERGY STAR connectionless models** can also save 90% or more water when compared with standard steamers
- **ENERGY STAR steam cookers** may incorporate better insulation, improved gaskets and connectionless designs to reduce energy and water consumption



Steam Cookers Maintenance and Usage



Use timer instead
of manual modes



Reduce idle time



Perform regular
maintenance



Maintain door
gaskets

Oven Types

Combination Ovens

- ENERGY STAR models are approximately **30% more energy efficient** than standard models

Convection Ovens

- ENERGY STAR models are approximately **20% more energy efficient** than standard models

Ovens Upgrade Benefits

Improved
insulation and
gaskets

Digital control
features manage
energy more
efficiently

Higher
production
capacity

Improved air
circulation

Faster and more
uniform cooking
processes

Reduction in heat
loss

Improved
working
environment

Maintenance and Usage



Reduce idle time
and turn off back up
ovens when
possible



Cook with full loads



Inspect and replace
gaskets



Tighten hinges as
necessary



Maintain steam
generators for
combination ovens

Fryers

ENERGY STAR **fryers**
are up to **30% more
energy efficient** than
standard models

ENERGY STAR **large vat
fryers** that are up to
**35% more energy
efficient** than standard
models

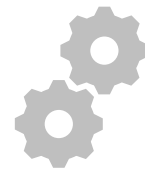
Fryers Maintenance and Usage



Turn off back up
fryers when
possible



Reduce idle time



Calibrate controls



Perform regular
maintenance

Griddles

ENERGY STAR models are 10% more energy efficient than standard models

Seek improved thermostatic controls

Advanced burner design

Highly reflective plate materials

Improved uniformity of temperature across the griddle plate and a higher production capacity

May have variations in efficiency, production capacity and temperature uniformity



Griddles

Maintenance and Usage

01

Reduce idle time

02

Calibrate controls

03

Replace missing control knobs

Broilers

Searing heat requires a great deal of energy

Broilers have simple, non-thermostatic controls

Broiler can be one of the most energy-intensive cooking appliance in the kitchen



Broiler Maintenance and Usage

Manage	Turn Off	Reduce	Replace
Manage preheat time	Turn off unused sections	Reduce idle time	Replace missing knobs

Food Holding Cabinets



ENERGY STAR HFHCs typically feature improved insulation



Insulated ENERGY STAR holding cabinet is approximately **70%** more energy efficient than a standard model

HFHC Maintenance and Usage

Turn Off

Shut off overnight

Time

Use timer

Replace

Replace missing or broken knobs

Sanitation

- ENERGY STAR certified commercial dishwashers can lower energy bills.

Dishwashers

Can be one of the most expensive pieces of equipment in your kitchen

ENERGY STAR are on average **40%** more energy efficient

Select features conserve energy

Dishwasher Maintenance and Usage

Turn Off	Perform	Replace	Run	Use
Shut off overnight	Regular maintenance	Torn wash curtains	Full loads	Auto mode for conveyor style to save energy

Lighting

- Lighting accounts for about 13% of the energy used in a typical restaurant.

Lighting Facts

ENERGY STAR certified lighting uses at least 75% less energy than traditional bulbs

LEDs last 10-50 times longer than incandescent lighting

Energy-efficient lighting is available in a variety of styles, sizes and colors

Lighting Maintenance and Usage

Manage

Brightness and
color

Reduce

Heat added by
inefficient lamps

Control

Occupancy
sensors in
storage areas,
break rooms
and restrooms

Install

LED exit signs

HVAC

- HVAC accounts for roughly 30% of the energy consumption in food service facilities.

HVAC Facts

Electric cooking uses less heat, resulting in lower air conditioning unit temperatures and improves heat controls with superior low heat control

Energy-efficient equipment provides non-energy benefits: improved operating performance, more-uniform cooking, increased comfort

Minimizing ventilation fan speed can result in large energy savings

HVAC Maintenance and Usage

Properly Size

HVAC equipment sized to your space will reduce unnecessary energy costs

Service

Check your HVAC system regularly to ensure it runs at peak performance

Control

Add demand control ventilation to adjust exhaust based on need

Kitchen Hood Ventilation Controls

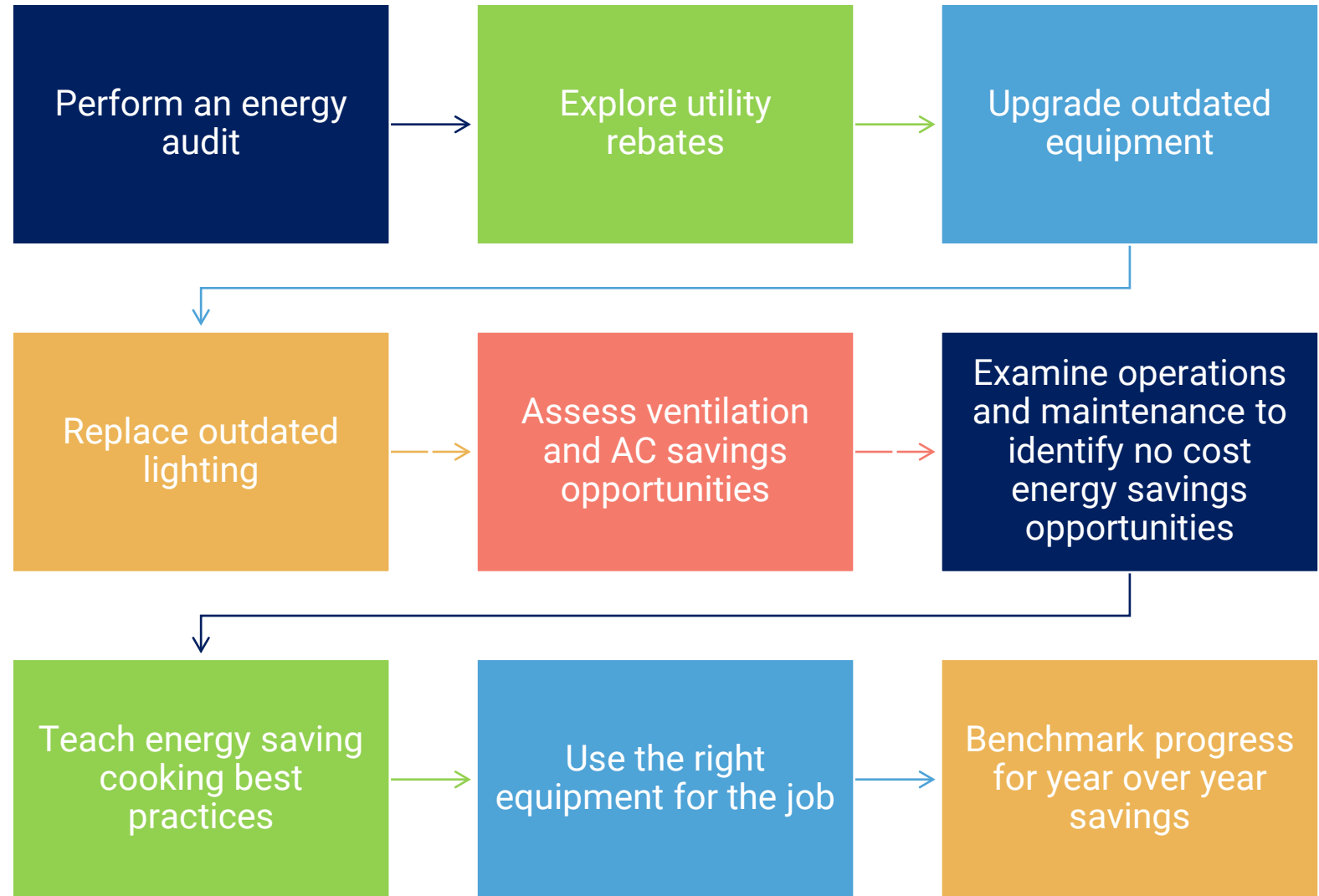
How does it work?

- Modulates fan speed based on demand in response to the presence and level of cooking activity
 - Temperature only
 - Temperature and opacity sensor
 - Infrared cooking activity sensor

Fan energy and HVAC savings

- System savings between exhaust and makeup air of 20% to 50% have been reported

How to Start Saving Energy & Money





Case Studies

Case Study: **Americold Logistics**

Las Vegas

Major renovation of multiple refrigeration warehouses

Implementation approach:

- Refrigeration efficiency upgrades
- LED lighting: replace metal halide and high-pressure sodium fixtures with LED fixtures controlled by occupancy sensors



Case Study: **Whole Foods Market** Henderson

Refrigeration retrofit

Implementation approach:

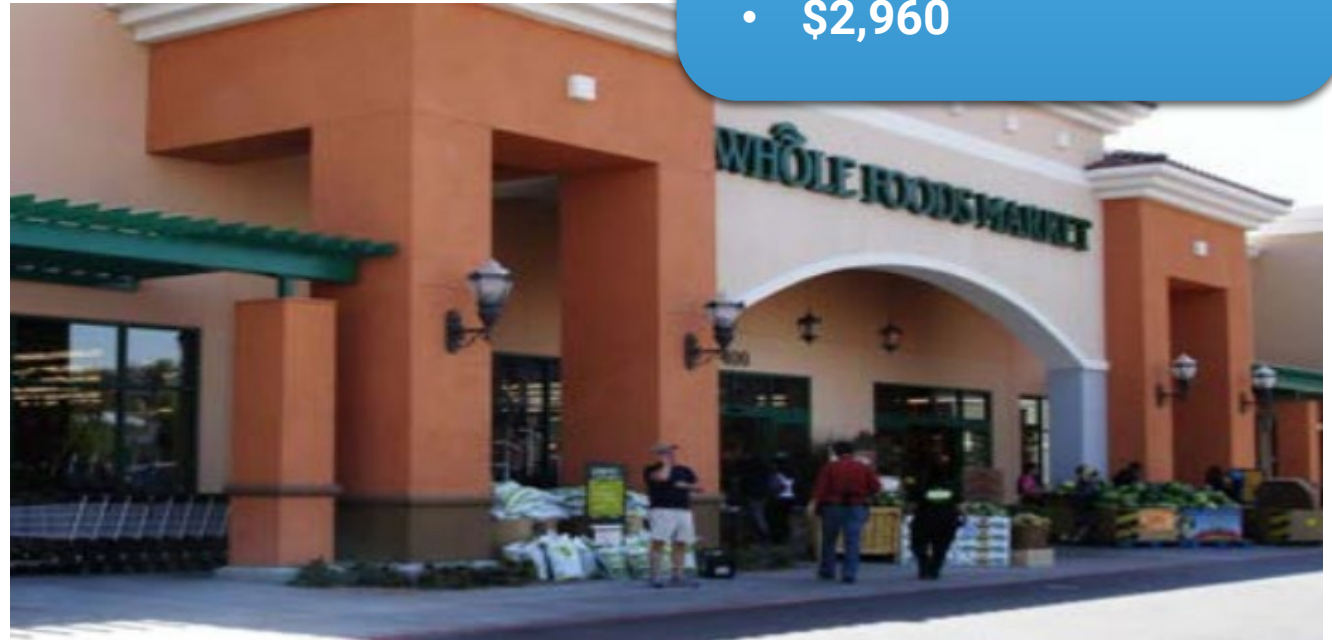
- Installed 27 anti-sweat heater controls on frozen food glass cases and 32 EC motors in the walk-in coolers

Savings:

- Energy: 51,630 kWh/yr

Incentive earned:

- \$2,960

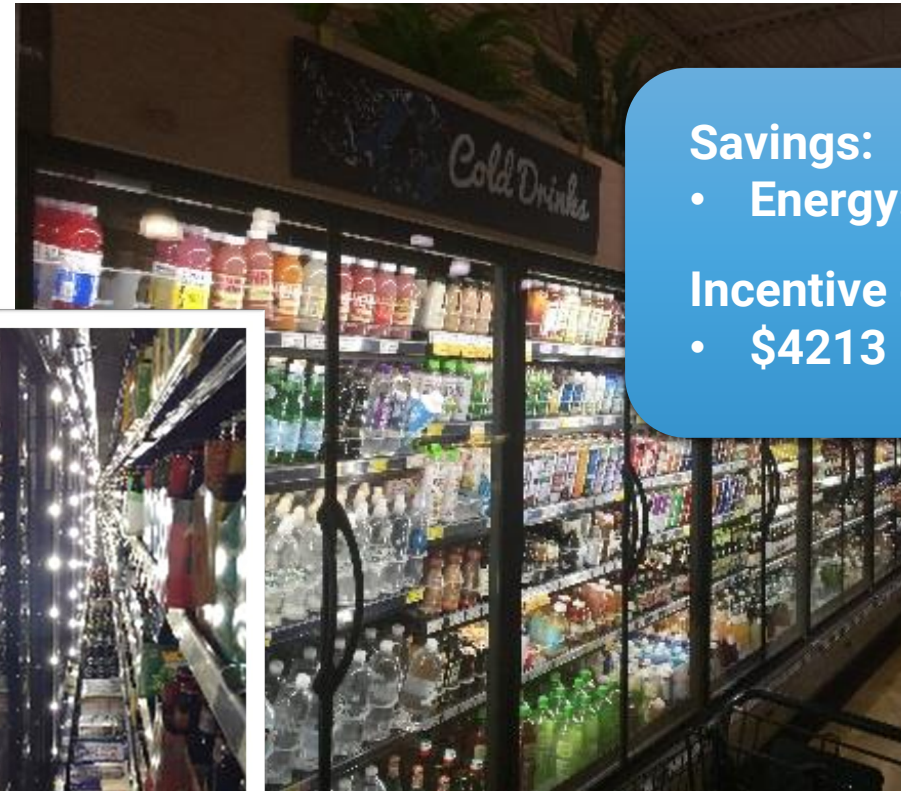
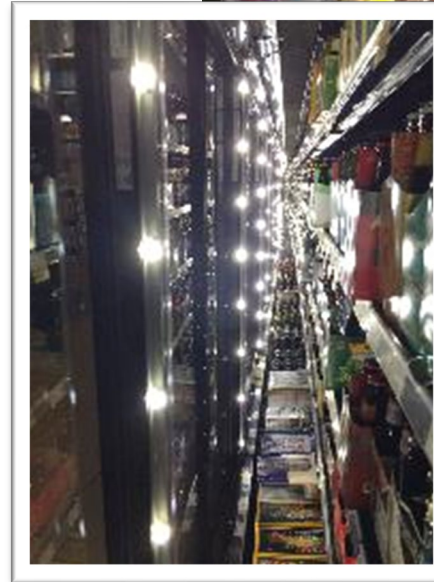


Case Study: **Whole Foods Market** Reno

Refrigeration retrofit

Implementation approach:

- Installed doors on 110 feet of refrigeration cases
- Retrofitted fluorescent case lighting with LED Lighting



Savings:

- Energy: 70,293 kWh/yr

Incentive earned:

- \$4213

Case Study: **Save Mart Supermarkets**

Las Vegas

Refrigeration retrofit

Implementation approach:

- Installed anti-sweat heaters
- Installed lighting controls
- Installed floating head and suction pressure controls

Savings:

- Energy: 995,000 kWh/yr

Incentive earned:

- \$46,769



Additional Projects

A Las Vegas casino/hotel retrofit its ice machines with CEE Tier 2 equipment

- Estimated annual kWh savings: 20,538
- Rebate received: \$1,550

A restaurant replaced its fryer with two high-efficiency fryers

- Estimated annual kWh savings: 2,331

A hotel retrofitted an older steam cooker with a high-efficiency electric steam cooker

- Estimated annual kWh savings: 11,166
- Rebate received: \$750



Upcoming Training

Attend the webinar to learn more about Business Energy Services

Compressed Air & HVAC Systems

Tuesday, June 28th

10:00 AM – 11:30 AM



Business Energy Services Incentives

Business Energy Services

What We Offer

- **Application Support**
- **Technical Services**
- Free Classroom Education & Training
- Non-Profit Agency Grants
- Small Business Project Incentives
- Instant Discounts
- Retrofit Project Incentives
- New Construction Incentives

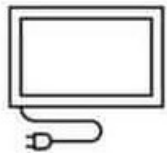


Customer Benefits

- **Reduced Energy Expenses**
- Reduced Carbon Footprint
- Annual Cash Savings
- Improved Comfort

Instant Discounts

No application Needed



Eligible Products

Lighting	Incentive/unit
T8 4' Linear LED*	\$4
T8 2' U-Bend LED*	\$4
1'x4' LED Illuminated Panel & Troffers Containing LED Strip Lights	\$10
2'x2' LED Illuminated Panel & Troffers Containing LED Strip Lights	\$10
2'x4' LED Illuminated Panel & Troffers Containing LED Strip Lights	\$10

Kitchen	Incentive/unit
High Efficiency (HE) Fryer	\$200
Large Vat Fryer	\$200
HE Griddle	\$300
Convection Oven	\$350
Combination Oven	\$1,000
Steam Cooker	\$750
HE Holding Cabinets, Full Size	\$300
HE Holding Cabinets, 3/4 Size	\$250
HE Holding Cabinets, 1/2 Size	\$200

ES = Energy Star, CEE = Consortium for Energy Efficiency, SD = Solid Door, GD = Glass Door, cf = Cubic Feet

Refrigeration	Incentive/unit
Ice Machine ES/CEE I <300	\$50
Ice Machine ES/CEE I 300-500	\$75
Ice Machine ES/CEE I 500-1000	\$125
Ice Machine ES/CEE I 1000-1500	\$200
Ice Machine ES/CEE I >1500	\$250
Ice Machine ES/CEE II <300	\$100
Ice Machine ES/CEE II 300-500	\$150
Ice Machine ES/CEE II 500-1000	\$250
Ice Machine ES/CEE II 1000-1500	\$400
Ice Machine ES/CEE II >1500	\$500
Refrigerator SD ES < 15 cf	\$50
Refrigerator SD ES ≤ 15 cf V < 30 cf	\$75
Refrigerator SD ES ≤ 30 cf V < 50 cf	\$90
Refrigerator SD ES ≥ 50 cf	\$125
Freezer SD ES < 15 cf	\$60
Freezer SD ES ≤ 15 cf V < 30 cf	\$75
Freezer SD ES ≤ 30 cf V < 50 cf	\$80
Freezer SD ES ≥ 50 cf	\$200

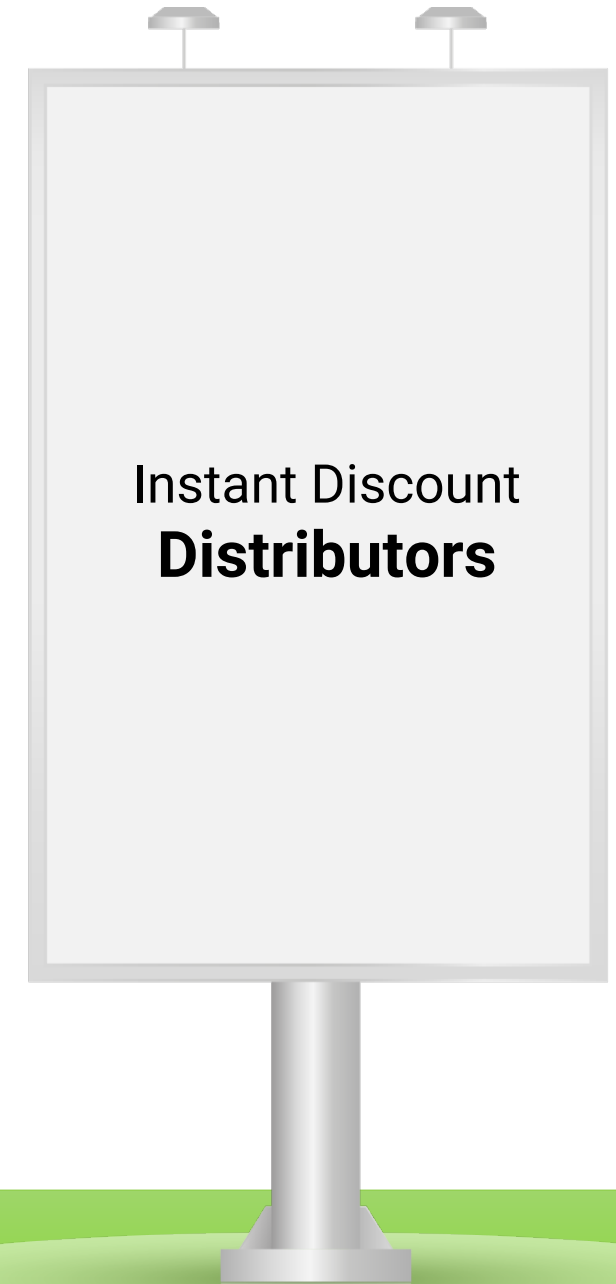
Refrigeration	Incentive/unit
Refrigerator GD ES < 15 cf	\$50
Refrigerator GD ES ≤ 15 cf V < 30 cf	\$75
Refrigerator GD ES ≤ 30 cf V < 50 cf	\$90
Refrigerator GD ES ≥ 50 cf	\$125
Freezer GD ES < 15 cf	\$60
Freezer GD ES ≤ 15 cf V < 30 cf	\$75
Freezer GD ES ≤ 30 cf V < 50 cf	\$80
Freezer GD ES ≥ 50 cf	\$200

Lighting

- Bulb and Driver
- City Electric Supply
- Facility Solutions Group
- Main Electric Supply Company
- Grainger
- Wedco
- Crescent Electric Supply Company
- Bulbman, Inc.
- Regency Lighting
- Vegas Electric Supply
- MCOR Lighting
- Key Power Solutions
- Green Planet Corporation
- Platt Electric Supply
- Have Lights Will Travel
- Discount Lighting
- Gexpro
- GoGreenLighting.com, Inc.
- Nedco Supply
- Sierra Nevada Lighting, LLC
- Codale Electric Supply
- HD Supply Facilities Maintenance
- mySupplier
- USA LED
- Bulbtronics
- Commercial Lighting Specialties
- Las Vegas Lighting
- Capitol Light

Commercial Kitchen & Refrigeration

- Open to apply for all commercial kitchen & refrigeration distributors



Instant Discount Website

BUSINESS ENERGY SERVICES INSTANT DISCOUNT

No applications. No waiting. Big savings.

Our Business Energy Services offers a PowerShift **instant discount** to NV Energy eligible business customer accounts and contractors on the purchase of qualifying lighting and commercial kitchen equipment.

Visit a participating distributor to make your purchase and receive your PowerShift instant discount. Your discount is automatically deducted from the purchase price, so there's no paperwork for you to complete. It's that easy.

Get details on all the incentives and participating distributors below.



nvenergy.com/BES > Incentives & No Cost Offers > Instant Discounts

Instant Discount Website

Website includes:

- Eligible product types
- Participating distributor listing
- FAQs
- Operations Manual

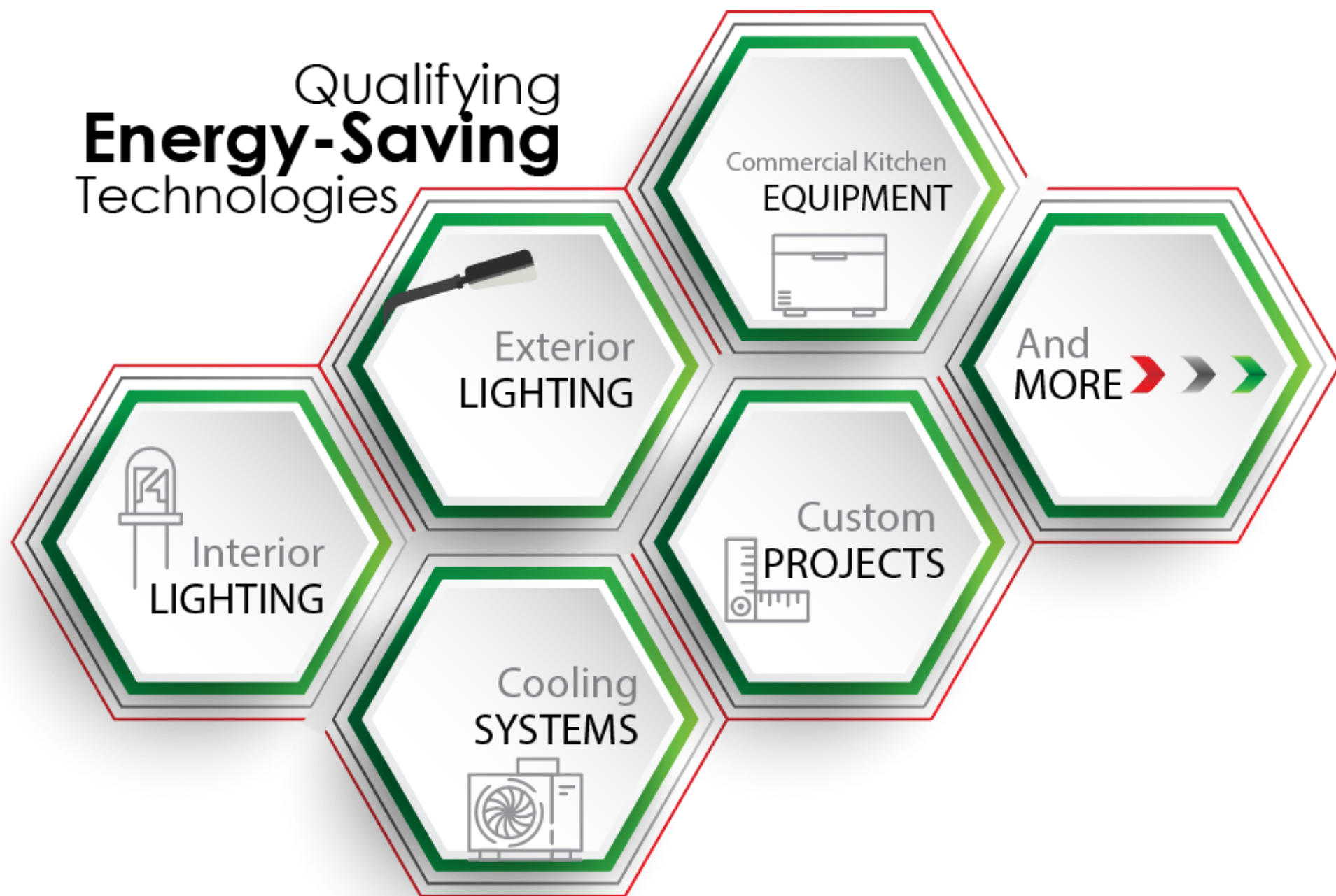
+ Participating Distributors

+ Frequently Asked Questions

FULL PROGRAM DETAILS



Qualifying **Energy-Saving** Technologies



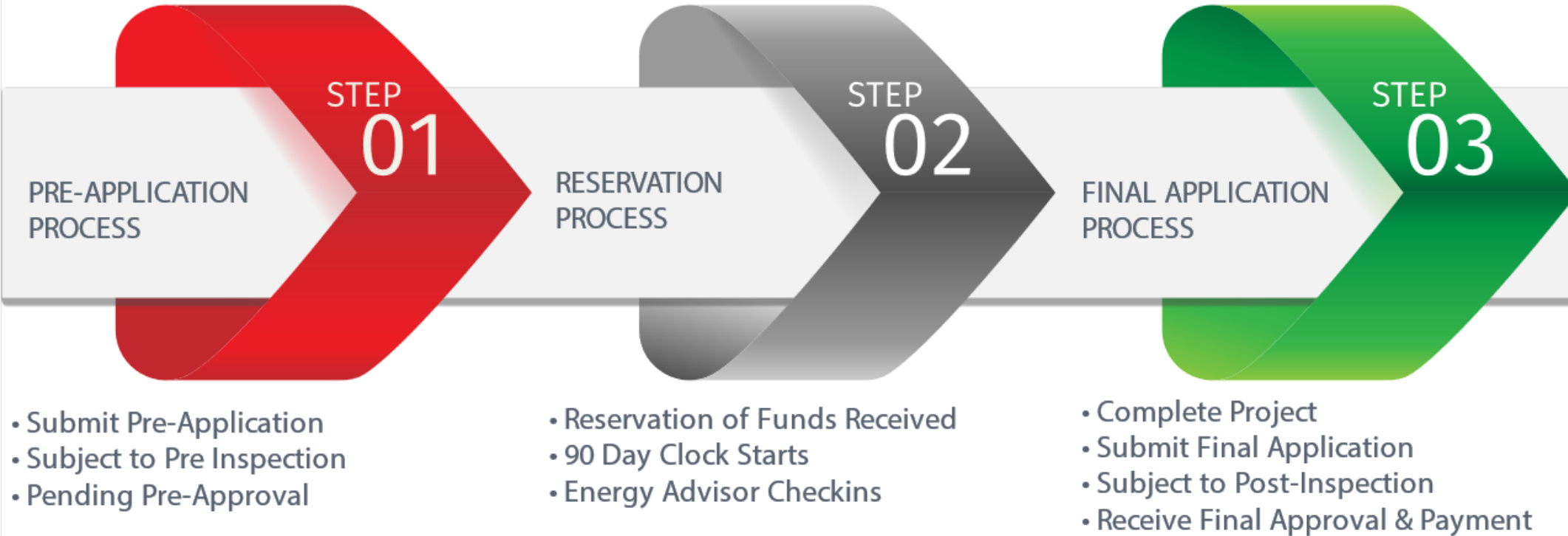


Applying for Incentives

Retrofit and New Construction

Talk with a Business Energy Advisor 1-800-342-6335

Three Easy Steps to Saving



Save
Energy & Money,
Year After Year



► THE APPLICATION PROCESS

More Ways to Save

Business Energy Services 2022 Southern Retrofit Incentive Summary

Retrofit - Interior Lighting			
Measure	Size/Type	Unit	Incentive
Interior Lighting Lamp/Fixture	Interior	Watt Reduced	\$0.25
Interior LED Lamp, Hotel Guestroom	Interior	Watt Reduced	\$0.10
Delamping 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	\$0.25
Exterior Replacing HID 12 Hr	12 Hour Operation	Watt Reduced	\$0.20
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 2022 Business Energy Services Retrofit Specifications document for complete specifications

¹ Incentive varies by transformer size, see application.

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

Retrofit - Commercial Kitchen		
Measure	Unit	Incentive
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

Please note that 4' T8 LED and 1'x4', 2'x2' & 2'x4' LED TROFFERS Illuminated Panels and some kitchen equipment are no longer eligible for incentives though this program. Please see Business Energy Services Instant Discount Program at www.nvenergy.com/bes for details.

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 kBtuh), Qual SEER	Ton	\$12.00
(<65 kBtuh), 1 Additional SEER	Ton	\$8.00
(≥65 & <135 kBtuh), Qual EER	Ton	\$12.00
(≥65 & <135 kBtuh), 1 Additional EER	Ton	\$10.00
(≥135 & <240 kBtuh), Qual EER	Ton	\$18.00
(≥135 & <240 kBtuh), 1 Additional EER	Ton	\$10.00
(≥240 kBtuh) Qual IEER	Ton	\$18.00
(≥240 kBtuh) 1 Additional IEER	Ton	\$10.00
Water-Cooled Units, Qual EER	Ton	\$25.00
Water-Cooled Units, 1 Additional EER	Ton	\$10.00
PTAC/PTHP, Qual EER	Ton	\$50.00
PTAC/PTHP, 1 Additional EER	Ton	\$20.00
Programmable Thermostat	Each	\$25.00
Window Film	Sq. Foot	\$0.70
VSD on HVAC Fans and Pumps	HP	\$50.00
Air Side Economizers	Ton	\$25.00
Retrofit – Custom		
	Annual Energy Savings (kWh)	
Custom Incentive	\$0.05 /kWh	
Retro-Commissioning	\$0.05 /kWh	

LEARN MORE

CALL | 800.342.6335
EMAIL | bes@nvenergy.com
WEB | www.nvenergy.com/bes



AB54 Impacts on Retrofit Incentives

Interior Guest Room LED Lamp/Fixture (Can be used for guest room incandescent, CFL, fluorescent T5, LED lamps or fixture retrofits)								
INCENTIVE: \$0.10/Watt Reduced								
Pre		Post		Pre		Post		
Pre Fixture Description Example: 13W CFL	Post Fixture Description Example: 5W LED Lamp	Location Example: Bathroom, floor lamp or entry	# of Lamps or Fixtures	Watts / Lamp or Fixture	# of Lamps or Fixtures	Watts / Lamp or Fixture	Total Watts Reduced	Calculated Incentive
Due to AB54, the retrofit of A-19, general service, screw-in incandescent lamps are available only for this measure AND the baseline for all such lamps is as follows: <u>40W Inc = 10W</u> <u>60W Inc = 18W</u> <u>75W Inc = 24W</u> <u>100W Inc = 36W</u>								

- A-19 incandescent lamp baselines are only eligible under guest room measures on the retrofit application.
- In guestroom measure group, adjusted baselines are to be used for A-19 lighting.

More Ways to Save

Business Energy Services 2022 Southern 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 - Performance Based / Whole Building	
Approach	Annual Energy Savings (kWh)
Performance Based - 10% Better Than IECC 2009	\$0.05 per kWh
Whole Building - 10% Better Than IECC 2009	\$0.05 per kWh
Performance Based - 5% Better Than IECC 2012	\$0.05 per kWh
Whole Building - 5% Better Than IECC 2012	\$0.05 per kWh
Performance Based - 5% Better Than IECC 2018	\$0.05 per kWh
Whole Building - 5% Better Than IECC 2018	\$0.05 per kWh

Please refer to 2022 Business Energy Services
New Construction Specifications document for complete
specifications

New Construction - Cooling / Misc.			
Measure	Unit	IECC 2009, 2012 & 2018 Incentive	IECC 2012 & 2018 - C406 Incentive
Air-Cooled Units			
(<65 kBtuh), Qual SEER	Ton	\$12.00	\$14.00
(<65 kBtuh), 1 Additional SEER	Ton	\$8.00	\$10.00
(≥65 & <135 kBtuh), Qual EER	Ton	\$12.00	\$14.00
(≥65 & <135 kBtuh), 1 Additional EER	Ton	\$10.00	\$12.00
(≥135 & <240 kBtuh), Qual EER	Ton	\$18.00	\$22.00
(≥135 & <240 kBtuh), 1 Additional EER	Ton	\$10.00	\$12.00
(≥240 kBtuh) Qual IEER	Ton	\$18.00	\$22.00
(≥240 kBtuh) 1 Additional IEER	Ton	\$10.00	\$12.00
Water-Cooled Units, Qual EER	Ton	\$25.00	\$30.00
Water-Cooled Units, 1 Additional EER	Ton	\$10.00	\$12.00
PTAC/PTHP, Qual EER	Ton	\$60.00	\$60.00
PTAC/PTHP, 1 Additional EER	Ton	\$24.00	\$24.00
Flat Plate Heat Exchanger ²	HX Tons	\$15.00	N/A
Variable Speed Drive	per HP	\$60.00	N/A

¹Incentives for projects subject to Section C406 of IECC 2012 & IECC 2018.

²Flat Plate Heat Exchangers are required by IECC 2012 & IECC 2018 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
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 ≥ 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

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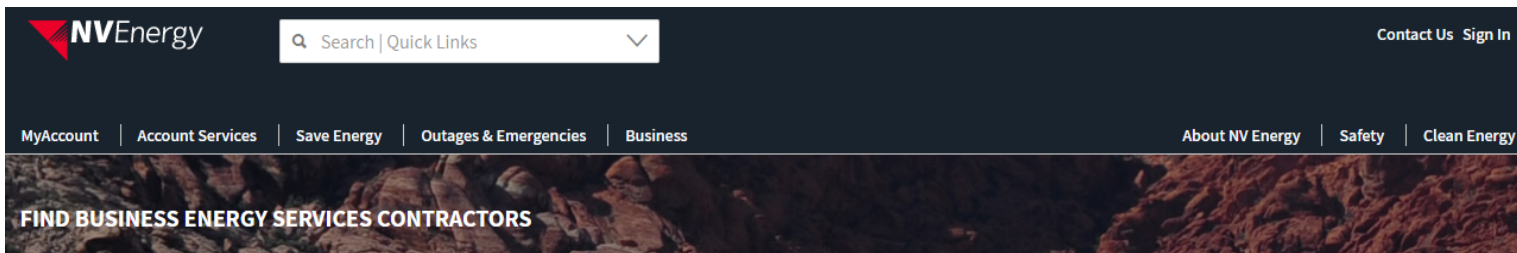
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Search here for contractors in your area experienced in NV Energy's Business Energy Services Incentive Program. Search by the LOCATION of your project, and the SERVICES you are seeking.

NVE TA List

Location: Services:



NVE TA List

Location: Services:

Northern Nevada
Southern Nevada



NVE TA List

Location: Services:

Architectural/Design Services
Boilers
Engineering Services
Equipment Vendor
HVAC Consulting
HVAC Installation
IT Solutions
Lighting Consulting
Lighting Installation
Pump Services
Refrigeration Consulting
Refrigeration Installation
EE/DR



Early Involvement Bonus

Earn a 20% bonus on retrofit applications

North

Applied to first **20M** kWh

South

Applied to first **50M** kWh

Projects must be completed and final documents received by August 1, 2022 to qualify. Bonus is first come, first served, applied to retrofit projects submitted for NV Energy business customers.

Small business, non-profit, instant discount and new construction projects do not qualify.



Ready to Start a Project?

Access Contractors Online



Search here for contractors in your area experienced in NV Energy's Business Energy Services Incentive Program (except Small Business Savings program). Search by the LOCATION of your project, and the SERVICES you are seeking. For Small Business Savings contractors, [click here](#).

Search here for contractors in your area experienced in NV Energy's Business Energy Services Incentive Program. Search by the LOCATION of your project, and the SERVICES you are seeking.

NVE TA List

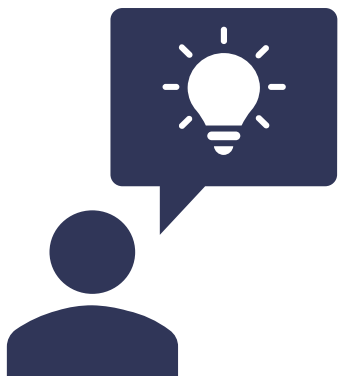
Location: Services:

Contractor	Location	Services
ADAMIK ELECTRIC Las Vegas Cheryl Adamik 702-750-1811 Service@adamikelectric.com http://adamikelectric.com/	Southern	HVAC Consulting HVAC Installation Lighting Consulting Lighting Installation
BIDENERGY INC Philadelphia Tim Mayo 215-732-4480 tim.mayo@bidenergy.com www.bidenergy.com	Northern Southern	HVAC Consulting Lighting Consulting Refrigeration Consulting
ECOGREEN SOLUTIONS, INC. Laguna Niguel Corey Brophy (949) 364-6800 Corey.B@EcoGreen-Solutions.Net www.ecogreen-solutions.net	Northern Southern	Equipment Vendor HVAC Consulting HVAC Installation Lighting Consulting Lighting Installation Pump Services Refrigeration Consulting

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To get a printable list



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Talk with an Energy Advisor

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Email bes@nvenergy.com

Thank You! We look forward to working with you.