

# GROCERY INCENTIVE WORKBOOK

## STOCK YOUR STORE WITH SAVINGS

### Boost profit margins through energy efficiency

Energy Trust of Oregon knows that reducing building energy use through energy-efficient equipment and systems is one of the best ways to raise a grocer's bottom line. Averaging 1 percent, profit margins in the grocery market are razor thin. This means lowering energy costs could translate directly to an increase in profits. Energy-efficient solutions can also contribute to improved employee and customer comfort and extended store product life.

Energy Trust's market solutions package for grocery stores can help you capture these benefits and earn cash incentives for energy-efficient equipment and building practices. Whether you're planning to build a new store or kicking off a major renovation, this package provides a simple way to pinpoint the best energy solutions for your store.

Energy Trust outreach managers can offer input and feedback as you make energy-related decisions and assist you in completing this workbook. If you have questions or need help getting started, contact the outreach manager listed here.

**Name**

**Email**

**Phone number**

## WHAT IS THE GROCERY INCENTIVE PACKAGE?

This offering presents a flexible step-by-step process for selecting and purchasing energy-efficient systems and equipment that qualify for cash incentives. It is limited to grocery stores that have a significant amount of refrigeration equipment (refrigerated warehouses are not eligible). Qualifying grocery stores fall into two main categories: those with a food service area or commercial kitchen, and those without this feature. We have created tiered incentive options for both categories; the more equipment you install, the higher the bonus.

### Category 1: Stores with no food service area

Category 1 stores DO NOT have a food service area or a commercial kitchen and do not sell hot prepared foods to customers.

|               | INSTALLATION REQUIREMENTS  | INCENTIVE                         |
|---------------|--|-----------------------------------|
| <b>GOOD</b>   | Install <b>three or more</b> unique energy-efficient equipment options.  | Standard Incentive<br>+ 10% Bonus |
| <b>BETTER</b> | Install <b>four</b> unique energy-efficient equipment options. Must include both lighting and refrigeration options.         | Standard Incentive<br>+ 15% Bonus |
| <b>BEST</b>   | Install <b>five or more</b> unique energy-efficient equipment options. Must include both lighting and refrigeration options. | Standard Incentive<br>+ 20% Bonus |

### Category 2: Stores with a food service area

Category 2 stores have a food service area, defined as an area designed for food preparation, storage and/or cleaning that contains a minimum of four pieces of equipment eligible for energy efficiency incentives (cooking equipment, food holding cabinets and dishwashers).

|               | INSTALLATION REQUIREMENTS   | INCENTIVE                         |
|---------------|---|-----------------------------------|
| <b>GOOD</b>   | Install <b>five or more</b> unique energy-efficient equipment options.  | Standard Incentive<br>+ 10% Bonus |
| <b>BETTER</b> | Install <b>six or seven</b> unique energy-efficient equipment options. Must include both lighting and refrigeration options.  | Standard Incentive<br>+ 15% Bonus |
| <b>BEST</b>   | Install <b>eight or more</b> unique energy-efficient equipment options. Must include both lighting and refrigeration options. | Standard Incentive<br>+ 20% Bonus |

## HOW TO USE THIS WORKBOOK

Use this workbook throughout the course of your project to set efficiency targets, select equipment, estimate incentives and facilitate communications and decision making. Your Energy Trust outreach manager will work with you to provide input and guidance on how to maximize the energy efficiency of your building and make the most of our incentives.

**STEP 1** Meet with your Energy Trust outreach manager to discuss efficiency targets and options.

**STEP 2** Determine your project's category and review the eligible equipment listed in this workbook.

**STEP 3** Select equipment and provide required documentation.

**Project name**

**Square footage**

**County of installation**

**Hot water fuel type**

**Heating fuel type**

**Grocery store category**

**Major renovation or new construction**

The following sections present the options for refrigeration, controls, HVAC and other energy-efficient grocery equipment eligible for standard and bonus incentives. Please indicate the equipment you plan to install by completing the tables below.

## REFRIGERATION EQUIPMENT

Grocery stores rely on refrigeration equipment to preserve their products, which can be energy intensive and lead to high energy costs. Installing energy-efficient equipment can help you reduce energy use while continuing to meet your refrigeration needs.

| Equipment Type  | Requirements  | No. of Units | Standard Incentive             | Good Incentive                 | Better Incentive               | Best Incentive                 | Required Documentation   |
|---|---|--------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--|
| Anti-sweat heater controls for reach-in doors (medium temp, 1°F-35°F)           | <ul style="list-style-type: none"> <li>Utilize humidity, dew point or condensation sensor</li> </ul>  |              | \$30/linear ft.                | \$33/linear ft.                | \$34.50/linear ft.             | \$36/linear ft.                | <ul style="list-style-type: none"> <li>Invoices</li> <li>Cutsheets</li> <li>Refrigeration schedules and controls specifications (for VFDs only)</li> </ul> |
| Anti-sweat heater controls for reach-in doors (low temp, < 0°F)                 | <ul style="list-style-type: none"> <li>Utilize humidity, dew point or condensation sensor</li> <li>Stores less than or equal to 35,000 sq. ft. only</li> </ul>  |              | \$40/linear ft.                | \$44/linear ft.                | \$46/linear ft.                | \$48/linear ft.                |  |
| Variable frequency drive (VFD) on condenser fan                                 | <ul style="list-style-type: none"> <li>Add a single VFD to control a multi-fan condensing unit</li> <li>Must be installed on inverter duty-rated fan motors</li> <li>May not be combined with an oversized condenser</li> </ul>   |              | \$100/condenser fan hp         | \$110/condenser fan hp         | \$115/condenser fan hp         | \$120/condenser fan hp         |  |
| Oversized condenser with VFD  | <ul style="list-style-type: none"> <li>For air-cooled condensers, must achieve a temperature differential, TD, of 13 for medium temperature and 8 for low temperature</li> <li>For evaporative condensers, must achieve a TD of 18</li> <li>Condenser capacity is limited to 150% of evaporator load</li> </ul> |              | \$60/ton of condenser capacity | \$66/ton of condenser capacity | \$69/ton of condenser capacity | \$72/ton of condenser capacity |  |
| Cooler doors  | <ul style="list-style-type: none"> <li>New remote-condensing commercial refrigerated medium temperature display cases with factory-installed doors</li> <li>Heat must be provided by a participating utility</li> <li>Site must receive electricity from Portland General Electric or Pacific Power</li> </ul>  |              | \$70/linear ft. of case        | \$77/linear ft. of case        | \$80.50/linear ft. of case     | \$84/linear ft. of case        |  |
| Cooler doors  | <ul style="list-style-type: none"> <li>Gas only with gas heat</li> <li>New remote-condensing commercial refrigerated medium temperature display cases with factory-installed doors</li> </ul>   |              | \$35/linear ft. of case        | \$38.50/linear ft. of case     | \$40.25/linear ft. of case     | \$42/linear ft. of case        |  |
| <b>Condenser type (check one):</b>  |   |              |                                |                                |                                |                                |  |
| <input type="checkbox"/> Air-cooled <input type="checkbox"/> Evaporation-cooled |   |              |                                |                                |                                |                                |  |

# REFRIGERATION CONTROLS

Refrigeration controls are designed to help refrigeration systems operate more efficiently. Floating head pressure controls adjust the head pressure setpoint based on ambient conditions, and floating suction pressure controls adjust the suction pressure setpoint based on case load. Both strategies help reduce compressor energy and improve system efficiency. There is a total of two points within this category, one for single compressors and another for multiplex compressors.

| SINGLE COMPRESSOR  |   |               |   |                                     |                                     |                                     |   |
|--|---|---------------|---|-------------------------------------|-------------------------------------|-------------------------------------|---|
| Equipment Controls   | Requirements  | Compressor Hp | Standard Incentive  | Good Incentive                      | Better Incentive                    | Best Incentive                      | Required Documentation  |
| Floating head pressure controls on single compressor         | <ul style="list-style-type: none"> <li>Connect to single compressor(s) with one hp motor or larger</li> <li>Replace fixed-value with adjustable-head pressure control (must be field-adjusted to pressure of 70°F saturation temperature or lower)</li> <li>Install balanced-port valve or electric expansion valve sized to meet 70°F condensing temperature OR device to supplement refrigeration feed to each evaporator on condenser</li> </ul> |               | Single: \$100/hp<br>Remote: \$60/hp                             | Single: \$110/hp<br>Remote: \$66/hp | Single: \$115/hp<br>Remote: \$69/hp | Single: \$120/hp<br>Remote: \$72/hp | <ul style="list-style-type: none"> <li>Invoices</li> <li>Cutsheets</li> </ul> |
| Temperature (check one):                                     |   |               | Condensor type (check one):                                     |                                     |                                     |                                     |   |
| <input type="checkbox"/> Low <input type="checkbox"/> Medium |   |               | <input type="checkbox"/> Single <input type="checkbox"/> Remote |                                     |                                     |                                     |   |

| MULTIPLEX COMPRESSOR  |  |               |                    |                |                  |                |   |
|---|--|---------------|--------------------|----------------|------------------|----------------|---|
| Equipment Controls  | Requirements   | Compressor Hp | Standard Incentive | Good Incentive | Better Incentive | Best Incentive | Required Documentation  |
| Floating head pressure controls on multiplex compressor                         | <ul style="list-style-type: none"> <li>Saturated condensing temperature, SCT, control uses an ambient following temperature difference strategy, rather than fixed head pressure</li> <li>The minimum programmed SCT will be less than or equal to 70°F</li> <li>Low-temperature, LT, system ambient SCT TD set at 10°F, medium temperature, MT, set at 15°F for air-cooled condenser. LT and MT set at 27°F TD for evaporative condensers.</li> </ul> |               | \$39/hp            | \$42.90/hp     | \$44.85/hp       | \$46.80/hp     | <ul style="list-style-type: none"> <li>Invoices</li> <li>Cutsheets</li> <li>Other supporting documentation (refrigeration schedules, controls specs, etc.)</li> </ul> |
| Floating suction pressure controls, FSPC  | <ul style="list-style-type: none"> <li>Add FSPC thus increasing the suction pressure when possible to reduce the load on the compressor. Suction pressure will float up to the highest point that can still maintain setpoint temperatures at monitored cases on the suction circuit.</li> </ul>   |               | \$15/hp            | \$16.50/hp     | \$17.25/hp       | \$18/hp        |   |
| Compressor type (check one):  |  |               |                    |                |                  |                |   |
| <input type="checkbox"/> Air-cooled <input type="checkbox"/> Evaporation-cooled |  |               |                    |                |                  |                |   |

## EFFICIENT KITCHEN EQUIPMENT

### ENERGY STAR® COOKING EQUIPMENT (CATEGORY 2 PROJECTS ONLY)

Most commercial kitchen equipment is energy-intensive. Selecting and installing ENERGY STAR-certified appliances from the list below can help your kitchen save energy and reduce utility bills.

| Equipment Type                               | Requirements   | No. of Units | Standard Incentive | Good Incentive | Better Incentive | Best Incentive | Required Documentation                                     |
|--|--|--------------|--------------------|----------------|------------------|----------------|--|
| Electric convection oven (full size)         | ENERGY STAR  |              | \$315              | \$346.50       | \$362.25         | \$378          | <ul style="list-style-type: none"> <li>Invoices</li> </ul> |
| Gas convection oven (full size)              | ENERGY STAR  |              | \$315              | \$346.50       | \$362.25         | \$378          |  |
| Electric hot food holding cabinet (any size) | ENERGY STAR  |              | \$350              | \$385          | \$402.50         | \$420          |  |
| Electric griddle                             | ENERGY STAR  |              | \$400              | \$440          | \$460            | \$480          |  |
| Electric fryer                               | ENERGY STAR<br>Vat must be a minimum of 12 inches wide |              | \$225/vat          | \$247.50/vat   | \$258.75/vat     | \$270/vat      |  |
| Gas fryer                                    | ENERGY STAR<br>Vat must be a minimum of 12 inches wide |              | \$1,000/vat        | \$1,100/vat    | \$1,150/vat      | \$1,200/vat    |  |
| Electric steam cooker                        | ENERGY STAR  |              | \$2,500            | \$2,750        | \$2,875          | \$3,000        |  |
| Gas steam cooker                             | ENERGY STAR  |              | \$1,850            | \$2,035        | \$2,127.50       | \$2,220        |  |
| Electric combination oven                    | ENERGY STAR  |              | \$1,000            | \$1,100        | \$1,150          | \$1,200        |  |
| Gas combination oven                         | ENERGY STAR  |              | \$750              | \$825          | \$862.50         | \$900          |  |

## ROOFTOP UNIT (RTU) CONTROLS

HVAC equipment typically accounts for a large percentage of a commercial building's annual energy use. Installing rooftop units with integrated controls can help cut energy costs and save money.

| ROOFTOP UNIT CONTROLS  |   |                         |                               |                                 |                                 |                                 |   |
|--|---|-------------------------|-------------------------------|---------------------------------|---------------------------------|---------------------------------|---|
| Equipment Type   | Requirements  | Cooling Capacity (tons) | Standard Incentive            | Good Incentive                  | Better Incentive                | Best Incentive                  | Required Documentation  |
| Economizer*  | Manufacturer installed economizer on new packaged rooftop unit<br><br>RTU cooling capacity <54,000 Btu/h  |                         | \$30/ton of cooling capacity  | \$33/ton of cooling capacity    | \$34.50/ton of cooling capacity | \$36/ton of cooling capacity    | <ul style="list-style-type: none"> <li>Invoices</li> <li>Cutsheets</li> <li>Mechanical schedule and mechanical plans</li> </ul> |
| Demand Controlled Ventilation (DCV)**                                    | Manufacturer-installed DCV on new packaged RTU with economizer  |                         | \$29/ton of cooling capacity  | \$31.90/ton of cooling capacity | \$33.35/ton of cooling capacity | \$34.80/ton of cooling capacity |   |
| Supply Fan VFD*  | Manufacturer-installed supply fan VFD on new packaged RTU with economizer and DCV<br><br>RTU cooling capacity <110,000 Btu/h<br><br>Supply fan power <10 hp |                         | \$100/ton of cooling capacity | \$110/ton of cooling capacity   | \$115/ton of cooling capacity   | \$120/ton of cooling capacity   |   |
| <b>Heat type (check one):</b>  |   |                         |                               |                                 |                                 |                                 |   |
| <input type="checkbox"/> Electric heat pump <input type="checkbox"/> Gas |   |                         |                               |                                 |                                 |                                 |   |

\* Economizer and VFD incentives only available to sites receiving electricity from Portland General Electric or Pacific Power.

\*\* RTU must not serve a space required by code to have DCV. Contact program for eligible space types. DCV incentives for heat pump heat only available at sites receiving electricity from Portland General Electric or Pacific Power. DCV incentives for gas heat only available at sites receiving gas from NW Natural, Cascade Natural Gas or Avista.

## EFFICIENT INTERIOR LIGHTING

Lighting is a major energy consumer, but it's possible to cut energy costs through energy-efficient equipment, effective controls and careful design.

| RETAIL INTERIOR LIGHTING POWER METHOD (2014 OEESC TABLE 505.5.2(A)) FROM COMCHECK |                |  |                      |  |
|---|----------------|--|----------------------|--|
| Allowable Watts   | Proposed Watts | % Better Than Code<br>(Must be >= 10%) | Estimated Incentives | Required Documentation   |
|   |                | 0%                                     |                      | <ul style="list-style-type: none"> <li>• Invoices</li> <li>• ComCheck documentation</li> <li>• Lighting plans and lighting schedule or location</li> <li>• LED space lighting</li> </ul> |

| ADDITIONAL INCENTIVES  |                                  |                      |  |
|--|----------------------------------|----------------------|--|
| If using the space-by-space method, installing controls beyond what is required by code, or installing exterior lighting, please use the New Buildings lighting calculator, available on our <a href="#">website</a> . |                                  |                      |  |
| Check to Select  | Description                      | Estimated Incentives | Required Documentation   |
| <input type="checkbox"/>   | Exterior lighting/space by space |                      | <ul style="list-style-type: none"> <li>• Invoices</li> <li>• ComCheck documentation</li> <li>• Lighting plans and lighting schedule or location</li> <li>• LED space lighting</li> </ul> |
| <input type="checkbox"/>   | Lighting controls                |                      | <ul style="list-style-type: none"> <li>• Invoices</li> <li>• Lighting plans and lighting schedule or location</li> </ul>   |

**Please note:** Energy Trust will conduct cost-effectiveness tests on lighting projects claiming a reduction in lighting power density, LPD, greater than 60 percent beyond what is required by code. As part of this process, we ask these projects to provide information on incremental costs. In addition, all projects that install LED products must submit additional documentation. Your outreach manager will facilitate this process and provide information and updates as necessary.



## ADDITIONAL SPECIAL MEASURES (FORM 520SM)

Special measures refer to design features that are not defined in this workbook but may qualify for incentives. Energy Trust will assess these on a case-by-case basis. Potential special measures for grocery stores include:

- Heat recovery equipment
- Daylighting controls (where not required by code)
- Demand controlled ventilation on kitchen exhaust hood
- Others

| Check to Select          | Measure Description | Estimated Incentive | Required Documentation   |
|--------------------------|---------------------|---------------------|--|
| <input type="checkbox"/> |                     |                     | <ul style="list-style-type: none"> <li>• Pertinent schedules/contract drawings</li> <li>• Completed Form 520SM</li> <li>• Calculation</li> <li>• Incremental cost</li> <li>• Invoices</li> </ul> |
| <input type="checkbox"/> |                     |                     |  |
| <input type="checkbox"/> |                     |                     |  |

Potential additional Standard Equipment from Form 520S: Standard Equipment Workbook include:

- Dishwasher
- Condensing tankless water heater
- Condensing tank water heater

| Check to Select          | Measure Description | Requirements                                      | Quantity | Estimated Incentive | Required Documentation  |
|--------------------------|---------------------|---|----------|---------------------|---|
| <input type="checkbox"/> |                     | See Form 520S for individual measure requirements |          |                     | <ul style="list-style-type: none"> <li>• Invoices</li> <li>• Cutsheets</li> </ul> |
| <input type="checkbox"/> |                     |   |          |                     |   |
| <input type="checkbox"/> |                     |   |          |                     |   |

**Please note:** Some Standard Equipment may not be eligible for bonus incentive.

# INCENTIVE SUMMARY

**Grocery store category**

**Estimated bonus incentive tier**

**Bonus %**




| Category                      | Selected | Estimated Incentives |
|-------------------------------|----------|----------------------|
| Refrigeration Equipment       |          | \$                   |
| Refrigeration Controls        |          | \$                   |
| Kitchen Equipment             |          | \$                   |
| Rooftop Unit Controls         |          | \$                   |
| Lighting                      |          | \$                   |
| Additional Standard Equipment |          | \$                   |
| <b>Subtotal</b>               |          | <b>\$</b>            |
| <b>Bonus</b>                  |          | <b>\$</b>            |
| <b>Total</b>                  |          | <b>\$</b>            |

Note that any incentives estimates for systems and equipment with variable savings will be provided by your outreach manager. These incentives will be evaluated and estimated by Energy Trust on a case-by-case basis.