

Energy Trust / Corvallis Energy Challenge

Energy Conservation Recommendations for First United Methodist Church

Most recommendation listed have cash back incentives, visit www.energytrust.org.

Building Shell:

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| S-1 | Seal Attic Penetrations: Check attic area for holes in the building exterior including around piping and exhaust fans, and add insulation, expanding foam, etc. to seal these areas. |
| S-4 | Caulk Windows: Annually inspect window seals and caulk the areas where drafts are detected. In addition, install storm windows or plastic on single pane wood frame windows. If installing plastic, make sure to attach it to the window frames as this is typically where most of the heat transfer happens (versus covering the glass only). |
| S-5/6 | Weather-Stripping/Door thresholds: Replace weather stripping and thresholds on all entrance doors especially the main front entry way. |
| S-7 | Attic or roof insulation: Check attic insulation and replace damaged or missing insulation. |

Heating Ventilation & Air Conditioning:

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| H/C-1 | Programmable Thermostat: During the on-site visit, we did not have access to the computerized system that controls the heating system. Make sure thermostats are set to turn <i>off</i> in areas that are not in use, and <i>down</i> in all other areas after hours. |
| H/C-2 | Thermostat Calibration: Have your programmable thermostats calibrated annually by your HVAC contractor to ensure all thermostats are functioning properly |
| H/C-3 | Air-Conditioning Economizer: Install or repair existing air-conditioning economizer to maximize the efficiency of the air-conditioning units. |
| H/C-7 | HVAC Maintenance: Begin an annual maintenance program for your HVAC system, including tuning the boiler and a general test of equipment. Have your HVAC service provider check for air balancing to ensure all ducts and radiators are free of debris and functioning properly. |
| H/C-12 | Close all Fireplace dampers: For fireplace units that are no longer in use, place additional insulation inside the chimney to reduce heat loss. Also post clear signage that these units are out of commission and should not be used. For fireplace units that are periodically used, design an insulated cover that can be placed on the front of the fireplace to reduce heat loss out of the chimney. |

Domestic Hot Water:

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| HW-5 | Pipe Insulation: Insulate all accessible hot water piping to increase efficiency. |
| HW-7 | Solar Hot Water: Contact a solar hot water contractor to determine the cost effectiveness of using solar hot water at your location. A list of solar hot water contractors has been included with this report. |
| HW-8 | Install aerators: Install aerators on all hand washing sinks through out the facility to minimize flow volume without minimizing flow quality. |
| HW-9 | Fix faucet leaks: Establish a monthly maintenance plan to check for faucet leaks, especially in school rooms. |

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Lighting:

L-1 **Delamp Lighting Reduction:** Delamp and remove ballasts from any T-12 fixtures that are not used or that have burnt-out lamps. Burnt-out lamps and ballasts continue to draw energy while providing no lighting.

L-2 **LED Exit Lighting:** Check all exit lights and determine if they use LED lights. Replace any incandescent exit signs with LED-style.

L-3 **Incandescent to CFL:** There are numerous locations throughout the facility where incandescent lamps have been replaced with compact fluorescent lamps (CFLs). As existing incandescent lamps burn out, replace them with compact fluorescents.

L-5 **Occupancy Sensors:** There are numerous areas that could benefit from occupancy sensors including restrooms and offices. Determine areas where lighting is often left on when room is vacated and install occupancy sensors, or place signage to remind staff and members to turn off lights when leaving rooms.

L-7 **Fluorescent Upgrade:** Change out existing T-12 lamps and magnetic ballasts with T-8 lamps and electronic ballasts. A list of local lighting contractors is included with this summary, or contact your own electrician or lighting specialist.

L-12 **Premature Lighting Burnout:** Have your power utility check in-line voltage into the building to determine if the high rate of burnt-out lights is being caused by inconsistent or too high of voltage.

Refrigeration:

R-2 **Refrigeration Maintenance:** Provide annual maintenance to all kitchen refrigerators. This includes cleaning condenser coils on all units and keeping door seals clean.

Miscellaneous:

M-1 **Turn off Computers and Monitors:** Turn off all equipment after hours, including printers, copiers and coffee machine. Remind employees that sleep mode settings still use energy.

M-6 **Solar Electric:** Contact a solar electric contractor to determine the cost effectiveness of a solar electric installation at your location. Energy Trust incentives and State of Oregon Tax Credits are available, and information is included with this summary.

M-7 **Equipment Replacement:** When replacing any major equipment (heating units, refrigerators, gas ovens, lighting, etc.) contact the Energy Trust of Oregon about cash-back incentives for upgrading your purchase to an energy efficient unit. Contact the Energy Trust at 1-877-510-6800 before beginning the project.

M-8 **Blue Sky Energy Program:** Enroll in Pacific Power's Blue Sky program, to purchase blocks of renewable energy and support new renewable energy development projects. A brochure is included.

M-9 **NW Natural Smart Energy Program:** Enroll in NW Natural's Smart Energy Program and support local clean energy projects such as the use of biogas. A brochure is included.