



Owatonna Public Utilities
Partnering in Energy Solutions Program

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Minimum Standards and Practices Guidelines

PURPOSE:

Owatonna Public Utilities (OPU) wants to ensure their Customer that they will receive quality materials and workmanship when utilizing any of the Energy Solutions Partners (ESP) introduced through its Partnering in Energy Solutions Program.

Each contractor and consultant joining OPU's Partnering in Energy Solutions Program will follow with the high quality standards outlined in this document.

The requirements set forth in this document represent best practices in energy efficient equipment as known to OPU at the time of publication. They are intended to help ensure that customers receive equipment that is of high quality and good value. Since best practices will evolve over time, ESP's are encouraged to provide feedback to OPU and make suggestions for improvement to the document. Such suggestions must include the rationale for the requested change. OPU will evaluate all requests, but reserves the right to determine whether or not a requested change will be made.

GENERAL ESP REQUIREMENTS:

- Code/Standards Compliance: ESP's are required to comply with all applicable codes and industry standards which shall include but not be limited to the following:
 - National Fire Protection Agency (NFPA):
 - Comply with applicable provisions of ANSI/NFPA 70 "National Electric Code", pertaining to construction and installation of electrically operated components of packaged roof top air handling units.
 - Comply with applicable provisions of ANSI/NFPA 90A, "Air Conditioning and Ventilating Systems".
 - Comply with the applicable provisions of NFPA 54 "National Fuel Gas Code" pertaining to the construction and installation of natural gas consuming end-use equipment
 - Underwriters Laboratory (UL):
 - Provide electrical components which have been listed and labeled by Underwriters Laboratories.
 - CSA International
 - Provide fuel burning equipment which have been listed and labeled by CSA International
 - National Electrical Manufacturers Association (NEMA) Compliance:
 - Provide electrical components which meet or exceed minimum NEMA standards.
 - Provide lighting products that meet or exceed NEMA/CEE high performance

lighting system specifications.

- American Society of Heating Refrigeration and Air-Conditioning Engineers (ASHRAE) Compliance:
 - Provide refrigerant coils complying with construction and testing standards of ANSI/ASHRAE 15 Safety Code for Mechanical Refrigeration.
- Air-Conditioning, Heating and Refrigeration Institute (AHRI) Certification:
 - Package roof top air handling units and their components shall be factory tested in accordance with the applicable portions of AHRI-430 “Standard for Air Handling Units” and shall be listed and bear the label of the Air Conditioning and Refrigeration Institute.
 - Geo-Thermal systems and their components shall be rated in accordance with AHRI-320, AHRI-325 and AHRI-330.
 - Where applicable, gas-fueled space heating and water heating equipment efficiency must be tested and certified by the GAMA (Gas Appliance Manufacturers Association). GAMA testing and certification is sponsored by the AHRI.
- International Ground Source Heat Pump Association (IGSHPA) Certification:
 - Installing contractors of geo-thermal systems shall have at least one employee who is IGSHPA certified present at all times during the installation of the system.
- Illumination Engineering Society (IES) Standards:
 - Comply with all standards for interior and exterior lighting quality and recommended lighting levels.
- Documentation: ESP’s are required to provide the Customer with the following minimum documentation:
 - Product Data: Submit manufacturer’s specifications for all equipment supplied showing dimensions, weights, capacities, ratings, efficiencies, electrical characteristics installation instructions, wiring diagrams detailing wiring for power and controls, etc.
 - Maintenance Data: Submit maintenance instructions and schedules, including lubrication requirements, filter replacement, motor and drive replacement components and recommended spare parts lists.
- Rebate Assistance: ESP’s shall fill out rebate forms on behalf of the Customer, complete necessary calculations and provide documentation required to file for applicable Conserve and Save® rebates.
 - All equipment must meet the Equipment Eligibility Requirements found on the Terms and Conditions page of all commercial Conserve and Save® rebate applications.

MINIMUM EQUIPMENT STANDARDS

The performance and efficiency of equipment is continually changing and improving. All equipment shall meet the minimum efficiency requirements and all terms and conditions of the applicable rebate application in effect at the time of installation. The current application is available at www.owatonnautilities.com

Document Revision List

06/18/2007 Updated Warranty on linear fluorescent lamps. Added Document Contributors and Sources List section. Added Document Revision List. CP

3/24/2009 Reduced minimum burn time for instant start ballasts from eight (8) hours to two (2) hours. Added recommendation that lamps controlled by occupancy sensors should use programmed start ballasts. Added paragraph to the Purpose section stating that changes to the standards recommended by contractors will be evaluated. RW

6/22/2009 Removed T-8 requirement of 800 series phosphor and 80+ CRI rating. Changed minimum efficiency of Packaged Air Cooled Chiller from 0.65 to 1.25 kW/ton. Added Questline - A Service of Tech Resources, Inc. to the list of Consultants. SH

4/2/2014 Major update to Minimum Equipment Standards to reference current rebate requirements rather than list in detail for all equipment categories.

4/28/14 Added Natural Gas code requirements to consolidate Electric and Natural Gas documents