Procuring High Efficiency Building Equipment

Jonathan Rivin
Dave Wortman
Adam Helvey
Kaci Radcliffe
Review of Draft Report
Project Overview

• Developing procurement requirements for high efficiency building equipment (EO 17-20, item 3.D.)
  o Energy and Water
  o Include considerations of other product sustainability criteria

• Multi-step process
  o Identifying equipment, certifications/standards
  o Writing requirements and guidelines

• DAS, ODOE, DEQ

• Deadline: June 2019 (FY ‘20)
Process

• Identify building equipment
  o Basis: federal program categories: GPC and FEMP
  o Stakeholder input: state agencies/individuals

• 10 categories (~150 products)
  o Appliances
  o Biomedical/lab
  o Cleaning
  o Electronics/IT
  o Food Service
  o HVACR
  o Lighting
  o Plumbing
  o Vehicles/products
  o Other
Process

• Identify efficiency standards/program recommendations
  o Federal: DOE/FEMP
  o State: Oregon (Codes, Multi-State Appliance Standard Collaborative, SEED)
  o Industry: ASHRAE (90.1)
  o Programs (e.g., Oregon Energy Trust)

• Identify product certifications for high efficiency during usage

• Identify multi-attribute sustainability certifications (life cycle based)
  o High efficiency, and:
  o Other sustainability attributes, such as:
    ▪ Lower toxic chemicals (manufacturing, usage, end-of-life)
    ▪ Best management practices for disposal (end-of-life)
    ▪ No conflict minerals (material extraction - social impact)
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| Air conditioner, commercial |           |           |             |      |       |             |           |             |             |            |      |             |
| Air conditioner, mini |           |           |             |      |       |             |           |             |             |            |      |             |
| Air conditioner, residential | Y        |           |             |      |       | Energy Star |           |             |             |            |      |             |
| Boilers (Commercial) | Y          |           |             |      |       | Energy Star |           |             |             |            |      |             |
| Boilers (Residential) | Y/ME      | Y         |             |      |       | Energy Star |           |             |             |            |      |             |
| Ceiling Fans (Residential) | Y/ME    | Y         |             |      |       | Energy Star |           |             |             |            |      |             |
| Central Air Conditioner | Y        |           |             |      |       | Energy Star |           |             |             |            |      |             |
| Central Air, High Perf |           |           |             |      |       |             |           |             |             |            |      |             |
| Chiller compressor, v |           |           |             |      |       |             |           |             |             |            |      |             |
| Chiller, variable speed |           |           |             |      |       |             |           |             |             |            |      |             |
| Control system, chiller |           |           |             |      |       |             |           |             |             |            |      |             |
| Cooler, indirect evap |           |           |             |      |       |             |           |             |             |            |      |             |
| Cooling Tower/Evapor |           |           |             |      |       |             |           |             |             |            |      |             |
| Electric Chillers, Air-C |           |           |             |      |       |             |           |             |             |            |      |             |
Filtering

• Goal for purchasing high efficiency building equipment
  o Energy and water efficient
  o Includes other sustainability criteria

• ENERGY STAR & WaterSense (or equivalent efficiencies): *minimum efficiency standards*
  o EPA programs
  o Exceed Federal minimum standards
  o Cover wide range of building equipment
  o 3rd party certified
  o Compliance shown to save energy and $$

• Sustainability specifications (eco-labels)
  o 3rd party verified (preferred)
  o Available in US
Develop Selection Guidelines

• Compliant with
  o ENERGY STAR & WaterSense (or equivalent)
  o Sustainability criteria (eco-labels)
    ▪ Multi-attribute priority
    ▪ 3rd party verified priority
  o Product/category based, not universal

• Purchasing selection tree: prioritization/preference guidelines
  o Standards
  o Eco-labels
Selection Tree – Under Development
Other Procurement Considerations

• Cost
  o Total cost (vs upfront cost)

• Facility design
Integrating into Procurement

• Policy
  o Statewide policy under SPP Program

• Training
  o Certified Training
    ▪ Sustainable Procurement
    ▪ Fundamentals
    ▪ Contract Administration

• Procurement Resources
  o Procurement Manual
  o Templated Language
  o Price agreements

• Justification for use of non-certified products

• Metrics
  o Projected energy and water savings
LA FIN
Selecting High Efficiency Equipment

- Fewer attributes > Energy Star/WaterSense or equivalent, DLC (lighting) for example

- Otherwise certifications > federal/state/national efficiency standards, such as Green Seal

- Otherwise federal/state/national efficiency standards
  - Federal standards: > 60 products (4 categories)
  - State (Oregon): 8 products
  - National standard: ANSI/ASHRAE/ICC/USGBC/IES 189.1