## Built Environment Efficiency Working Group

### State of Oregon

Implementing [Executive Order No. 17-20*](#)

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<td><strong>Energy Efficiency Leadership in State Buildings</strong></td>
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| ODOE and DAS to establish energy use intensity (EUI) targets for all state owned existing buildings, and for remodels after the date of the executive order. State agencies not meeting targets will work with ODOE and DAS to undertake retrofits. | ODOE, DAS | Ongoing | • **Completed/Continuing**: EUI targets have been established using ASHRAE Standard 100 where applicable, and are available in ODOE’s SEED Biennial Report. Targets have also been established for DAS buildings that do not currently have an EUI target under ASHRAE Standard 100.  
• ODOE continues to work with state agencies to benchmark energy consumption and is available for assistance on energy efficiency improvements. |
| ODOE to report and track energy use in state owned buildings. | ODOE | Ongoing | • **Completed/Continuing**: ODOE is currently tracking and reporting agency building level Energy Use Intensity (EUI, kBtu/square foot/yr) through the SEED Biennial Report and individual report cards to state agencies. ODOE is also exploring new methods for energy data analysis. Agencies participate by reporting energy consumption data to ODOE through Energy Star Portfolio Manager, with guidance from ODOE. |
| ODOE and all agencies benchmark and identify buildings for retrofits. | ODOE | Ongoing | • **Completed/Continuing**: ODOE and agencies have benchmarked buildings to national high performance targets, where applicable, and will continue to do so. As more data is gathered and performance trends are developed, ODOE and agencies will work to identify specific buildings for retrofit opportunities. |
| ODOE to develop database of eligible state-owned buildings. | ODOE | 6/1/2018 | • **Completed**: Energy Star Portfolio Manager database is used by agencies and ODOE to track energy consumption by eligible state-owned building (over 5,000 square feet and 10 kbtu/square foot/year).  
• May 2018: [Summary Report](https://www.oregon.gov/energy/Get-Involved/Pages/BEEWG.aspx) posted to BEEWG website |
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| 3B| ODOE and DAS work with agencies to make state-owned new office and commercial space buildings able to operate as carbon-neutral. | DAS, ODOE            | Applies to buildings permitted after 1/1/2022 | • This item does not have a near term deadline, but this will be incorporated into existing SEED program for new state construction. The DAS 2018 Sustainability Plan and new Energy Management Policy both identify the need to develop guidance for designing carbon neutral-ready buildings. The Oregon Resilience Building (ORB) is planned to be designed to this standard as an example to inform this guidance.  
• Staff research into existing frameworks such as Architecture 2030 for potential applicability to state construction, which will match well with state energy code developments. |
|   | ODOE and DAS analyze feasible options with DEQ for embodied carbon consideration in building materials. | ODOE, DAS, DEQ       | Ongoing          | DAS and the Oregon Sustainability Board have engaged DEQ to evaluate embodied carbon in concrete. Collaboration will continue. |
| 3C| ODOE and DAS develop plug load strategy.                                         | ODOE, DAS            | 1/1/2019         | • Completed  
• December 2018: Statewide Plug Load Strategy document completed and posted to BEEWG website.  
• 2018 development work included:  
  o Stakeholder involvement from CIO Council, DHS/OHA Joint Facilities Committee, ISCN and DAS OSCIO to mobilize input in strategy development.  
  o Coordinated grant-funded research paper from ACEEE on plug load best practices.  
  o Two state agency plug load strategy workshops |
|   | Updated DAS policies for behavior-based efficiency.                              | DAS                  | 1/1/2020         | Developed draft engagement plan for updated DAS Resource Conservation Policy. Stakeholder input began in July 2018 and work plan is being refined.  
• Worked with New Buildings Institute to conduct grant-funded policy research and prepare best practice paper to inform the effort. |
| 3D| ODOE and DAS to develop procurement requirements for equipment, including water and energy efficiency. | ODOE, DAS            | FY 2018-19       | • Completed/Continuing  
• June 2019: Procurement requirements developed. Summary report for state energy efficient procurement uploaded to BEEWG website. |

*View the [Executive Order](#) for complete directives and additional information.  
More about the BEEWG: [www.oregon.gov/energy/Get-Involved/Pages/BEEWG.aspx](#)  
Updated: 7/1/2019
| 3E | ODOE to analyze state building costs, including lifecycle energy or water use costs or savings, upon facility energy and water upgrades. | ODOE, state agencies | Ongoing | • Incorporated into existing SEED process for new state construction.  
• DAS, ODOE conducted research into existing water lifecycle cost tools that are available.  
• ODOE incorporating lifecycle cost analysis of water reduction measures into SEED lifecycle cost analysis calculator, which is already used to analyze state building lifecycle energy savings when considering energy upgrades for state buildings. |
| ODOE and DAS develop a tool to inform high performance energy use targets and carbon neutral requirements for state buildings | ODOE, DAS | 1/1/2019 | • Completed  
• December 2018: [Summary document](#) on work, analysis tools, and directive completion uploaded to BEEWG website.  
• Agency benchmarking through ENERGY STAR Portfolio Manager. |
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| 4A | BCD and Advisory Boards to amend code to require solar readiness requirements and exemptions for residential buildings. | BCD | 10/1/2020 | • Each board has been provided with an overview of the specific directives in the EO.  
• Agency research and stakeholder outreach.  
• This was a focus item at the April 16, 2019 BEEWG public meeting. |
| 4B | BCD and Advisory Boards to amend code to require solar readiness requirements and exemptions for commercial buildings. | BCD | 10/1/2022 | • Each board has been provided with an overview of the specific directives in the EO.  
• Agency research and stakeholder outreach.  
• Focus item for April 16, 2019 BEEWG public meeting. |
| 4B | BCD and Advisory Boards to amend code to require Level 2 EV charger readiness requirements and exemptions. | BCD | 10/1/2022 | • **Residential code**: The next code update will be finalized in fall 2020 and development of this code update starts in 2019. The development process of the code update will likely involve EV ready requirements. The specific prescriptive code requirements for what “EV-ready” means will be discussed in the code development process. No prescriptive code language has been detailed yet.  
• **Commercial code**: EV ready requirements were not included in the process for the 2019 code update. It will be included in the discussion for the next commercial code update in order to meet the 2022 deadline.  
• Focus item for April 16, 2019 BEEWG public meeting. |
| 4C | BCD and Advisory Boards to amend code to require USDOE Zero-Energy Ready Homes Standard. | BCD | 10/1/2023 | • Each board has been provided with an overview of the specific directives in the EO.  
• Agency engagement with US DOE Zero Energy Ready Homes program.  
• Agency research and stakeholder outreach.  
• Focus item for April 16, 2019 BEEWG public meeting. |
| 4D | BCD and Advisory Boards to amend commercial code to exceed IECC and ASHRAE 90.1 and meet or exceed measureable prescriptive energy efficiency portions of | BCD | 10/1/2022 | • Each board has been provided with an overview of the specific directives in the EO.  
• 2019 OESC development is currently underway.  
• BCD Boards met on February 6, 2019 and provided a recommendation to BCD for ASHRAE 90.1-2016 to serve as the next |
| 4E | ASHRAE 189.1. | ODOE and BCD provide report to Governor on key, expanding industries with potential to realize significant cost savings and energy savings through building code amendments. | ODOE, BCD | 1/1/2019 | Completed  
December 2018: “Expanding Industries and Building Code Amendments” report completed, provided to Governor’s Office, and posted to BEEWG website. |
| 4F | ODOE and stakeholders identify and adopt appliance standards, aligning with other leading states. Report and analysis to governor. | ODOE | 11/1/2018 | Completed  
November 2018: Improved State Standards for Appliances opportunities report complete, delivered to the Governor’s Office, and posted to BEEWG website.  
2018 work included ODOE research into available opportunities, data collection, and monthly collaborative discussions with other states.  
Two industry stakeholder meetings held in 2018 for an appliance standards legislative concept. |
| 4G | BCD and Advisory Boards to amend code to require high-efficiency water fixtures in all new buildings. | BCD | 1/1/2020 | Each board has been provided with an overview of the specific directives in the EO. |
| 4H | BCD and Advisory Boards to develop standards and amend code for water capture and safe reuse. | BCD | 10/1/2025 | Each board has been provided with an overview of the specific directives in the EO. |

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| **5A** | PUC working with ETO on development of meter-based savings pilot programs. | PUC | 1/1/2019 | • **Completed**  
• December 2018: [Report](#) that documents the work associated with this directive and how the EO requirements have been met uploaded to BEEWG website.  
• In 2018, PUC worked with ETO to accomplish this directive. |
| **5B** | ODOE, PUC, OHCS assess energy use in all affordable housing building stock. Develop 10-year plan to achieve maximum efficiency. Include Best Practices from ETO and BPA. OHCS expansion of multi-family, green, manufactured replacement and value assessment (NEBs). | OHCS, ODOE, PUC | 1/1/2019 | • **Completed**  
• Significant stakeholder involvement and outreach throughout 2018.  
• December 2018:  
  o “10 Year Plan on Reducing the Energy Burden in Oregon Affordable Housing” completed and uploaded to BEEWG website  
  o “How-To Guide and Methodology” for the Oregon Affordable Housing Assessment tool completed and uploaded to the BEEWG website |
| **5C** | ODOE and PUC support and assist private sector partners for data share of projected energy use reduction in the region. Data made available to public to inform energy efficiency policies, as appropriate. | ODOE, PUC | 1/1/2020 | • Interagency coordination ongoing.  
• PUC and ODOE completed scoping document  
• Outreach to stakeholders to begin in July 2019 |
| **5D** | ODOE and PUC evaluate the state’s distributed resources needed to improve Oregon’s recovery from a disaster. Report to the Governor. | ODOE, PUC | 1/1/2019 | • **Completed**  
• December 2018: Report complete, delivered to the Governor’s Office, and posted to BEEWG website. |

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| 6            | ODOE, BCD   | 12/1/2019| • Agency meeting focused on cost analysis held 4/4/18.  
|              |             |          | • Public meeting for input on cost tool held 5/8/18.  
|              |             |          | • BCD has requested advisory boards to provide input to the division. Subsequent to receiving input, BCD and ODOE will work together to compile all input received into a common cost-analysis tool for review.  
|              |             |          | • Focus item for April 16, 2019 BEEWG public meeting. |

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