Oregon Department of ENERGY

EO 20-04
Implementation:
Energy Code
Stakeholders

Facilitator: Roger Kainu
November 19, 2020
1:30-3:00pm
<table>
<thead>
<tr>
<th>Topic</th>
<th>Lead</th>
<th>Action</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intro and recap of panel origin and purpose.</td>
<td>ODOE staff</td>
<td>Share meeting description and review of completed work items.</td>
<td>5 min</td>
</tr>
<tr>
<td>September Governor’s report.</td>
<td>BCD staff</td>
<td>Highlights of report and where to access.</td>
<td>5 min</td>
</tr>
<tr>
<td>Latest commercial code progress information.</td>
<td>BCD staff</td>
<td>Commercial code slope and NEEA commercial code report.</td>
<td>5 min</td>
</tr>
<tr>
<td>Commercial adoption of 90.1-2019 – coming soon.</td>
<td>BCD staff</td>
<td>Reduction of regulated energy use and average of additional 10% reduction per cycle.</td>
<td>10 min</td>
</tr>
<tr>
<td>Q/A</td>
<td>BCD/ODOE staff</td>
<td>Question and answer time.</td>
<td>5 min</td>
</tr>
<tr>
<td>2006 residential baseline recap.</td>
<td>BCD staff</td>
<td>Thanks to all involved in substantive discussions and target for 2030.</td>
<td>5 min</td>
</tr>
<tr>
<td>RMSB results for 2021 ORSC energy provisions.</td>
<td>BCD staff</td>
<td>Items removed by committee via stakeholder requests and additional measures added to table.</td>
<td>5 min</td>
</tr>
<tr>
<td>New Baseline for 2021 ORSC energy use.</td>
<td>BCD staff</td>
<td>Measure 7 is 2021 ORSC baseline. 2023 ORSC energy provisions and the ZERH equivalency in April, 2021</td>
<td>5 min</td>
</tr>
<tr>
<td>Q/A</td>
<td>BCD/ODOE staff</td>
<td>Question and answer time.</td>
<td>5 min</td>
</tr>
<tr>
<td>Reach Code proposal template.</td>
<td>BCD staff</td>
<td>Request for submissions – use baseline assumptions – see BCD spreadsheet.</td>
<td>10 min</td>
</tr>
<tr>
<td>Q/A</td>
<td>BCD/ODOE staff</td>
<td>Question and answer time.</td>
<td>5 min</td>
</tr>
<tr>
<td>Open Reach Code discussion time.</td>
<td>All</td>
<td>What do you want to see?</td>
<td>10 min</td>
</tr>
<tr>
<td>Wrap-up</td>
<td>ODOE staff</td>
<td>Determine action steps and announce next meeting.</td>
<td>5 min</td>
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</table>
Thank you for participating!

Executive orders (20-04 and 17-20) driving this work

Some past discussion items:

- Code adoption process
- 2006 baseline assumptions and inputs
- Described ZERH target and equivalency
- Input from NEEA, BCD and ODOE
- Discussed the 2030 target home
- Discussed with stakeholders – weighting factors
- Discussed commercial code – methodology and 2005 baseline study
- Provided overview of Oregon Reach Code
- Shared next steps for 2021 residential code development
- Discussed cost effectiveness analysis
- Provided update of recent RMSB meeting
- Shared BCD work toward code training
- Discussed commercial code, the zero code calculator and BCD outreach efforts
BCD September Governor’s report

• Available at BCD website – Executive Order page
  • [https://www.oregon.gov/bcd/Pages/energy-eo.aspx](https://www.oregon.gov/bcd/Pages/energy-eo.aspx)
  • From BCD Homepage, go to “Codes and Standards”
  • Bottom right of page

• Update issued prior to residential code final actions
  • Residential slope to be updated for next report

• Commercial discussion on next slides
Latest commercial code progress information

- NEEA Commercial Code Report on 90.1-2016 adoption into 2019 OSSC:
  - 9% total site energy improvement from 2014 OEESC to 2019 Oregon Code
  - Did not count 5 code improvements that NEEA captures separately
  - Regulated load reduction well over 10%
Commercial adoption of 90.1-2019

• Reduction of regulated energy use
  • Confirmed in discussions with US DOE/PNNL
    • Federal Determination coming soon

• Adoption process looking for effective date in April 2021
  • 90-day grace period (as usual)

• Average of 10% additional regulated load reduction per cycle
  • ASHRAE 90.1-2022, -2025, and -2028
  • ASHRAE’s current target: 90.1-2028 will be 68% reduction over 90.1-2004
    • Look for link to Nov. 11 presentation from 90.1 Committee Vice-Chairs
    • On a steady glide path to EO 20-04 goal in 2030
90.1-2019 adoption in Oregon

- COMcheck beta testing completing; available for use this month
  - FYI: Oregon COMcheck is “gone”; possible to get desktop version

- Outreach to stakeholders beginning shortly:
  - Minor adjustments & items necessary for statewide use
  - Integration of low rise residential (administrative)

- Overview: coming for meeting January 12, 2021
  - Pre-meeting outreach and follow-up likely
  - After January 12: Ideas to be composed and sent to board
  - Recap of BCD move to use 90.1
    - Will keep simple: NO Oregon specific COMcheck
    - BCD-developed COMcheck supplement form for Oregon

- More training for building officials
  - Outreach to builders and designers
2006 residential baseline recap

• Thanks to all for substantive discussions
• Less confusion moving forward
• Easier, consistent future comparison models
• 2006 Baseline (weighted) is the 100%
• Target for 2030 (EO 20-04): 60% reduction from weighted 2006 Baseline
  • Standard weighting of site energy use (Regional figures from NEEA)
  • Weighted energy use of each code compared to weighted 2006 baseline
  • All comparisons without “plug loads” (only regulated loads under the ORSC)
RMSB results for 2021 ORSC energy provisions

- Starting again in April after Reach Code and Commercial Energy Code
  - Clarifications from ZERH Program
  - Additional Stakeholder outreach for path to 2023 ORSC
- Update on significant revisions by Board via stakeholder requests
  - Heat Recovery Ventilation removed
  - Ventilation option removed
  - 4 ACH50 Codified as “minimum” threshold in Oregon
  - Two new additional measures added to Table N1101.1(2)
- Not fully analyzed yet; future work for review toward meeting EO 17-20 (ZERH-equivalent performance)
  - Also progress toward EO 20-04
- But need starting point for Reach Code proposal analysis now
Baseline 2021 ORSC for analysis

• Reduced window area Measure 7 is 2021 ORSC baseline Additional Measure
  • Prescriptive window cost increasing 20%
  • Easiest to achieve; many homes already achieving
  • Becomes minimum threshold level of performance

• To be used for Reach Code analysis

• Looking forward to restarting look at 2023 ORSC energy provisions and the ZERH equivalency in April, 2021 (after Reach Code and 2021 Commercial Code Adoption)
  • Feedback directly from ZERH program (will get in writing)
  • Energy equivalent of ZERH home (2017 edition)
    • Further outreach meetings seeking additional stakeholders feedback
Reach Code proposal template

• Request for submissions posted first week of November
  • 45 day submission period
  • Proposals will be posted (so anyone can comment/participate)
• January 13 Meeting:
  • Review of submissions
  • Summarize for the boards
• Code Change Application (show)
• Recommend everyone should use same baseline assumptions
  • Starting point: 2021 ORSC baseline
    • BCD has created helpful tools
• Template review:
  • List of sources for 2021 baseline
  • 2021 ORSC Code document (Link soon)
  • US DOE (PNNL)
  • NREL residential modeling guide
    • NIST
  • 90.1 Appendix A for atypical thermal assemblies
  • NEEA sourced regional weighting data

• Proposal has the proponent’s baseline AND modeled results
  • Interested in the improvement
  • Any public proposal should have ability for others to review and comment.
Open Reach Code discussion

What would you like to see?

• A Reach Code sub group?
  • Meeting date?
  • Optional December Reach code meeting (does this group wish to meet?)

• Measure impacts

• Reach and Stretch Codes in other states

• Other items?
• Recording will be available
• Action items identified and distributed
• Next meeting date 12/2
• Any questions, please send to: Roger.Kainu@Oregon.Gov

• Meeting materials:

• BCD:
  https://www.oregon.gov/bcd/Pages/index.aspx