

Ashland Net Zero Possibilities



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Advancing Net Zero in Ashland

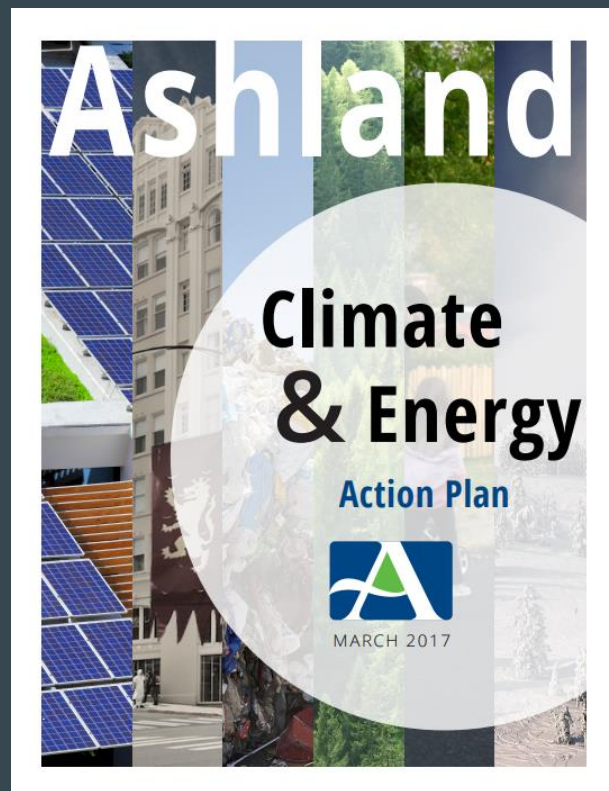
Why?

- Supportive Community
- Climate Recovery Ordinance / Climate Plan
- Buildings \approx 25-50% of Ashland Carbon pollution

What opportunities?

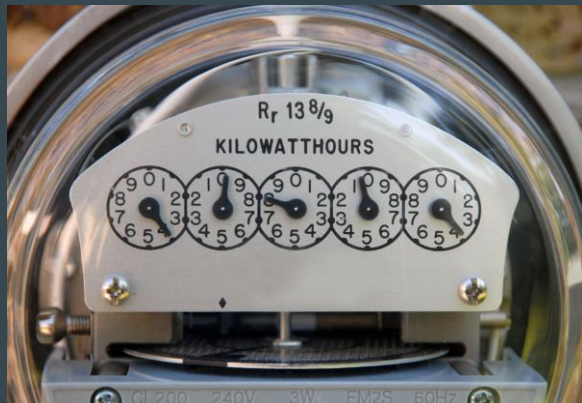
- Existing Buildings
- New Construction
- Renewable Energy

What's the answer? **We aren't sure yet.**



Net Zero - What's allowed ?

- Electricity only
- Total fuel energy
- Embodied energy
- Do RECs count?
- Ready or Verified?



A promising path...

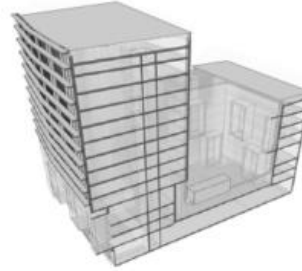
ZERO CODE™

Commercial • Institutional • Mid-Rise/High-Rise Residential Buildings

1 Design an energy efficient building

Efficiency Standard: ASHRAE 90.1-2016 minimum;
ASHRAE 189.1-2017; others

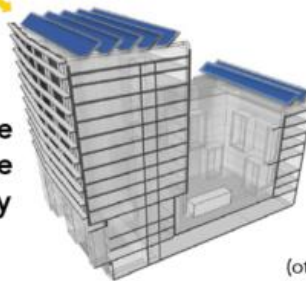
- Efficient building envelope / daylighting
- Passive heating / cooling / ventilation
- Efficient systems / equipment / controls



2 Address the remaining building's energy needs with:

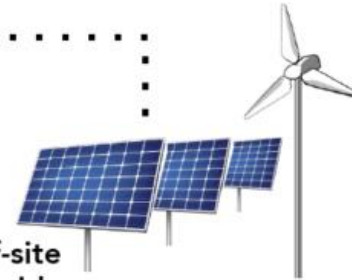


on-site
renewable
energy



and/or off-site
renewable
energy

wind • solar • hydro
(other non-CO₂ emitting sources)



What's a path for Existing Building Efficiency ?

Currently in Ashland

- Energy audits
- Efficiency incentives
- New electrification programs
- New inventory assessment tool

Maybe someday

- Expanded home energy loans
- Home energy score requirements

What's a path for **New Construction Efficiency** ?

Currently in Ashland

- Land use code - generous density bonus
- Progressive development requirements
- ZERO member City

Opportunities

- Amend local land use code
- 2021 IECC Code revision
- Advance State building code (ZERO)
- **Parallel, early adopter code**

What's a path for **expanding renewables** ?

Currently in Ashland

- Municipal Electric Utility
- City-funded solar incentives
- **Virtual net metering**

Opportunities

- Land use code changes: solar reserve, orientation, PV ready
- Utility RPS, solar farm planning
- Community Solar / Off-site solar



ZERO

ZERO ENERGY READY OREGON

Zero Energy Ready Oregon (ZERO) is a coalition working to support Oregon on a path to zero energy homes and buildings in ways that benefit all Oregonians.



nbi new buildings
institute

zero
energy project



SIGA  1966



ZERO Priorities

- ZERO will work to ensure that Executive Order 17-20 is implemented by facilitating technical assistance and stakeholder engagement.
- ZERO will develop a zero energy roadmap to set a clear course for how the state can achieve zero energy building codes by 2030 by addressing current barriers. The Roadmap will emphasize the perspectives of low-income populations, people of color and other frontline communities often previously excluded from these state level policy conversations.
- ZERO will produce and deliver a comprehensive “Communications Toolkit” that provides key market leaders with unified messaging about the value of zero energy buildings to Oregon Communities.

Oregon Executive Order EO 17-20



Accelerating Efficiency in Oregon's Built Environment to Reduce Greenhouse Gas Emissions and Reduce Climate Change

“It is the policy of the State of Oregon to achieve zero energy ready buildings as a standard practice in buildings across the state.”

Elements of EO 17-20 include:

- Leadership-by-example in state buildings
 - Benchmarking
 - Energy Targets
 - ZE by 2022
- Building code improvements
- Existing building retrofit strategy
- Life cycle costing “off ramp”

ZERO: Focus on Executive Order 17-20

2018 Policy Priorities

1. 2018 Commercial Code Proposals
2. Cost Analysis tool – Building Energy Efficiency Working Group (BEEWG) and Residential Manufactured Structures Board sub committee
3. Residential Code - defining what US DOE Zero Energy Ready program standard "equivalency" means in Oregon
4. Ensure processes are transparent and well-informed

Office of the Governor State of Oregon



EXECUTIVE ORDER NO. 17-20

ACCELERATING EFFICIENCY IN OREGON'S BUILT ENVIRONMENT TO REDUCE GREENHOUSE GAS EMISSIONS AND ADDRESS CLIMATE CHANGE

WHEREAS, climate change presents a significant threat to our livelihoods, economic security, environment, health, and well-being.

WHEREAS, there has been an increase in extreme weather events, including more frequent and intense heat waves and wildfires. According to the Oregon Climate Change Research Institute and other regional studies, the best available science indicates Oregon is at risk of serious impacts to its natural resources due to climate change.

- Water resources are being affected by decreased winter snowpack, changes to seasonal runoff patterns, decreased precipitation in Eastern Oregon, and increased intensity and occurrence of flooding.
- Agricultural resources are being affected by increases in temperatures.
- Ocean acidification is increasing and there are changes in ocean currents.
- Significant parts of the Oregon coastal region, stretching 363 miles, will be impacted by an expected rise in sea level up to 1 to 4 feet by 2100, incurring billions of dollars of damages and losses to roadways and structures.
- Climate change impacts threaten the State's agricultural, fishing, timber, recreation, and tourism industries, thereby threatening the livelihood of the State's residents and an important source of Gross State Product for the state.

Looking Ahead - National Code Advancement Opportunity

2021 IECC

- Buildings use over 40% of the energy used in the United States, including 70% of the electricity.
- Oregon energy codes is based on the national International Energy Conservation Code (IECC)
- Local governments have the power to move this national model base energy code forward
- Must renew membership or join ICC by March 29, 2019 and vote

