

2020

BIENNIAL
ENERGY
REPORT

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2020 BIENNIAL ENERGY REPORT

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Executive Summary

In 2017, the Oregon Department of Energy, recognizing that the energy world has changed dramatically since the 1970s, introduced House Bill 2343 to the Legislature. The bill charged the department with developing a new Biennial Energy Report to inform local, state, regional, and federal energy policy development and energy planning and investments. The report – based on analysis of data and information collected and compiled by the Oregon Department of Energy – provides a comprehensive review of energy resources, policies, trends, and forecasts, and what they mean for Oregon.

What You Can Expect to See in the 2020 Biennial Energy Report

The 2020 report takes a different approach than the inaugural 2018 Biennial Energy Report, which provided deep policy dives on a handful of important energy topics — including climate change, renewable energy, transportation, energy resilience, energy efficiency, and consumer protection. This 2020 report follows recommendations by energy stakeholders to provide shorter briefs on a wider array of energy topics — from energy in the agriculture sector to what’s next for alternative fuels to the effects of the COVID-19 pandemic on energy, and more.

Many sections show that Oregon is on a path toward transitioning to a cleaner, low carbon future. Data and examples included in the report illustrate sustained investments in energy efficiency, affordability, renewable energy, and resource conservation. These efforts have positioned Oregon to successfully tackle today’s energy challenges, which are driven by growing adoption from consumers for cleaner energy, economic innovation, and emerging technologies.

The report begins by looking at **Energy by the Numbers**—detailed information on Oregon’s overall and sector-based energy use, energy production and generation, energy expenditures, and the strategies Oregon has employed to meet growing energy needs. New in 2020 is an energy flow diagram, illustrating energy production and imports to eventual end-use.

Next up is a **Timeline of Energy History in Oregon**, starting with the Missoula Floods that formed our state and ending with 2020’s latest events — including the closure of Oregon’s only coal power plant and new actions to tackle climate change.

The **Energy 101** section aims to help readers understand the first part of the energy story: how energy is produced, used, and transformed. Information is meant to provide a

foundation for those new to energy and those who are already steeped in the sector.

The **Resource and Technology Reviews** section highlights 23 energy resources and technologies — they cover the spectrum of tradition to innovative, from renewable resources to emerging technologies like microgrids and power-to-gas. The topics covered are prevalent in Oregon or of interest to ODOE’s various stakeholders. Many of the technologies offer opportunities to invest in Oregon’s economy by creating energy-related jobs, including those focused on restoring our energy systems when disruptions occur.

The final section includes more detailed **Policy Briefs** that cover decarbonization, the transition of the electric grid, innovation in the natural gas system, cleaner transportation options, and the built environment and Oregon’s communities. The primary purpose of the report — and these policy briefs — is to inform energy policy development, energy planning and energy investments, and to identify opportunities to further Oregon’s energy policies.

The Biennial Energy Report wraps up with a new summary of the process used to develop the report and **closing thoughts** on what’s next. ODOE will kick off discussions in 2021 and reach out to hear new voices on recommendations for energy policy in Oregon over the next two years — and beyond.

The Biennial Energy Report may be found in its entirety at

<https://energyinfo.oregon.gov/ber>

or

www.oregon.gov/energy/Data-and-Reports/Pages/Reports-to-the-Legislature.aspx

The Department of Energy welcomes your comments and questions. Please contact our agency at askenergy@oregon.gov.



The Oregon Department of Energy was formed in 1975 following the oil crisis of 1973. Gasoline prices surged by nearly 300 percent in just seven months; shaping day-to-day life, global politics, and economies for years. That energy crisis – and those that came before and after it – changed how Oregonians think about energy, the economy, and our relationship to natural resources.

It may be too soon to say if we are going through a similar crisis today. The events of the past year have upended our lives, from the COVID-19 global pandemic to the intense wildfires that caused unprecedented loss of life, public and private property, and hazardous air quality statewide. Without the significant reductions in greenhouse gas emissions needed to meet our climate change goals, should we expect the 2020 Oregon fire season to be the new normal?

Earlier this year, Governor Brown signed Executive Order 20-04, which directed state agencies, including the Oregon Department of Energy, to take action to fight climate change. We have already started working on the order's directives: developing new energy efficiency standards, strengthening Oregon's energy code, and supporting transportation electrification. We also continue to provide Oregonians with data and information on contemporary issues to help our communities understand and join the effort. Our 2018 Biennial Energy Report offered a deep dive into climate change and the effects of energy use in Oregon; for 2020, we take a closer look at the resources that power our state, decarbonization and innovation in various sectors, and programs and policies that move our state closer to our climate, energy, and equity goals.

This 2020 Biennial Energy Report looks a little different from our inaugural 2018 report. Even amid the challenges of COVID-19, our stakeholders and partners from across the state generously gave us their time and expertise in surveys, interviews, focus groups, and peer reviews to help us shape this report – and it is a better product thanks to their guidance.



Some of the feedback we heard was to continue to provide data visuals and to create shorter briefs on a greater variety of topics. The *overall* report isn't a quick read, but we hope the shorter sections and technology reviews can serve as helpful standalone resources.

In our 2018 Biennial Energy Report, I wrote that when it came time to publish this 2020 edition, we wanted "to be able to tell a new story about energy in Oregon and about the progress we've made on the state's most pressing energy and climate issues." While we are still not on track to meet our climate goals – and current events are making things seem even more challenging – I feel hopeful.

In addition to laying out really cool energy data, we share some stories in this report that highlight the very best of Oregon. A group of nonprofit partners are collaborating on a "car share" program to test electric tractors across Oregon's diverse agricultural producers. Cities and counties are leading the way by adopting community energy and climate action plans. Oregon State University students and faculty are researching how agriculture and renewable solar can marry for mutual benefit of the farmers, crops, and solar panels. The Portland Clean Energy Fund is providing dedicated funding for climate actions that also advance racial and social justice for communities that are too often left behind.

We hope everyday Oregonians, policy and decision-makers, local leaders, and energy experts use the stories, data, and information in this report as a platform for more informed conversations and to draw on as they address the energy challenges we face today.

Together, Oregonians will continue to take meaningful steps toward a clean energy future. And as the Oregon Department of Energy turns toward its 46th year serving Oregonians, we'll continue our work to support a safe, equitable, clean, and sustainable energy future.

Janine Benner



Director, Oregon Department of Energy



Tribal Land Acknowledgement

The Oregon Department of Energy and its staff acknowledge that indigenous tribes and bands have been with the lands that we inhabit today in the Willamette Valley and throughout Oregon and the Northwest for time immemorial. ODOE's office are in Salem, Oregon, the land of the Kalapuya, who today are represented by the Confederated Tribes of the Grand Ronde and the Confederated Tribes of the Siletz Indians, and whose relationship with this land continues to this day.

About the Oregon Department of Energy

Our Mission

The Oregon Department of Energy helps Oregonians make informed decisions and maintain a resilient and affordable energy system. We advance solutions to shape an equitable clean energy transition, protect the environment and public health, and responsibly balance energy needs and impacts for current and future generations.

Our Values

- We listen and aspire to be inclusive and equitable in our work.
- We are ethical and conduct our work with integrity.
- We are accountable and fiscally responsible in our work and the decisions of our agency.
- We are innovative and focus on problem-solving to address the challenges and opportunities in Oregon's energy sector.
- We conduct our agency practices and processes in a transparent and fair way.

Our Position

On behalf of Oregonians across the state, the Oregon Department of Energy achieves its mission by providing:

- A Central Repository of Energy Data, Information, and Analysis
- A Venue for Problem-Solving Oregon's Energy Challenges
- Energy Education and Technical Assistance
- Regulation and Oversight
- Energy Programs and Activities

www.oregon.gov/energy

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About the Report

