Briefing Paper: Energy Policy and Strategy in Portland

March 2025

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Executive Summary

Oregon is at a critical juncture in the energy transition because of landmark statewide legislation over the last several years, such as the 100% Clean Energy for All Act and the Climate Protection Program. These developments require a fresh look and reframing of energy policy and practices at the local level. At the same time, the Portland Clean Energy Community Benefits Fund (PCEF) is helping to reshape the local landscape for clean energy investments.

The City of Portland has several key roles in this transition: as a leader in lowering carbon emissions from our own operations, as an energy consumer and ratepayer, as an advocate at statewide legislative and regulatory tables, and as an investor in clean energy projects and energy justice communities.

This document presents a cohesive introduction to energy policy and strategic recommendations for the City of Portland. The intent is to orient and guide Portland's decisionmakers and advisors in energy planning and policy. Each of the strategies presented are well-vetted approaches, with various guides, support documents, and models for success. BPS staff can provide greater detail and specific action plans for each of the strategies outlined in this document. Primary recommendations include:

- Invest in City operations and energy efficiency
  - First, invest in a centralized Energy Management Information System (EMIS) for City facilities to track energy usage, identify energy saving opportunities, and lay the foundation for a connected network of City facilities. Long-term, integrate sophisticated energy management controls to operate City facilities as resilience hubs and as a connected microgrid and virtual power plant.
  - Update the City's Green Building Policy to direct City facilities to achieve net-zero carbon emissions, in alignment with our Climate Emergency Workplan and C40 Net Zero Carbon Buildings Declaration. Adopt policy that eliminates fossil fuel use in City buildings and prioritizes energy efficiency, solar, battery storage, and smart connected devices that can support utility grid-scale decarbonization.
  - Solicit and procure a citywide Energy Savings Performance Contract (ESPC) to conduct investment-grade audits, facility condition assessments, and define a priority list of energy conservation measures that guarantee energy savings and address deferred maintenance. Note: this must be done in concert with long-range facility planning and as part of a coordinated citywide asset management plan.
  - Strategically leverage PCEF revenues to support the implementation of the updated Green Building Policy, equipped with the energy data derived from an Energy Management Information System and delivered via the Energy Savings Performance Contract.
- The City must use its voice as the largest city in Oregon, as a national leader in climate action, and as signatory to C40, to advocate for utility decarbonization and a just energy transition. This includes income-qualified programs, access to net-metering and other policies that promote distributed- and community-scale energy generation, consumer protections, and fair energy rates.
- Advance communitywide policies that achieve net-zero carbon emission goals for new construction and existing buildings by expediting the adoption of energy efficiency, electrification, renewable energy and storage.

North Stars: Energy Goals and Policies

Portland City Council has a strong history of centering energy policy in City government. For example, the City's 1979 Energy Policy (revised in 1990) acknowledged that:

> *"The City faces many issues that affect the health, safety, welfare and sustainability of the community and its residents and businesses. Energy use and supply affect many of these issues and are closely linked to housing, commercial and industrial development, transportation, air and water quality, and waste management … Energy efficiency reduces the amount of money spent on energy and frees up funds for other goods and services, many of which are local."*

Today, energy policy for the City of Portland is guided by ENN-5.08[1], the Renewable Energy Resolution adopted in June 2017, and by Resolution No. 37494[2], the Climate Emergency Declaration of June 2020:

> *"WHEREAS, the City's first preference for meeting energy needs remains energy efficiency, as it has been since adoption of the first City Energy Policy in 1979, and the City remains committed to acquiring at a minimum all cost-effective energy efficiency available with a particular focus on achieving energy efficiency in low-income housing;"*
>
> *"BE IT FURTHER RESOLVED, that the City of Portland adopts a new target of achieving at least a 50% reduction in carbon emissions below 1990 levels by 2030 and net-zero carbon emissions before 2050."*
>
> *"NOW, THEREFORE, BE IT RESOLVED, the City establishes a goal to meet 100 percent of community-wide energy needs with renewable energy by 2050" (updated to 2030 with the Climate Emergency Declaration)*
>
> *"BE IT FURTHER RESOLVED, the City will continue to supply 100 percent of electricity for City operations from renewable energy through a combination of on-site renewable electricity generation, utility-supplied renewables, dedicated off-site renewable resources, and renewable energy credit purchases (REC)"*

The City of Portland's Energy Strategy is also guided by historic State legislation that, if successful, will decarbonize Oregon's energy supply over the next few decades. Both laws will drive unprecedented changes to our energy systems, and both share a common theme that aligns with the mission and core values of the City of Portland – centering community and energy justice throughout the transition.

> *House Bill 2021[3] sets historic precedent for investor-owned electric utilities to reduce emissions from the electricity they provide to customers 80% by 2030 and 100% emissions-free by 2040.*
>
> *The Climate Protection Program[4] mandates a 50% carbon emission reduction from diesel, gasoline and natural gas companies by 2035 and a 90% reduction of carbon emissions from by 2050.*

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[1] City of Portland ENN-5.08 Renewable Energy Resolution

[2] City of Portland Climate Emergency Declaration

[3] House Bill 2021

[4] Department of Environmental Quality: Climate Protection Program 2024

Energy Strategy for City Operations

The City of Portland's new form of government presents a timely and important opportunity to greatly improve energy management systems and maximize returns on investment in energy efficiency by streamlining and scaling the process enterprise-wide, instead of through one-off capital investments.

The City operates dozens of buildings, including office spaces, community centers, fire stations, water pumphouses, garages, training facilities and more. The Bureau of Fleet and Facilities manages various civic and public safety facilities,[5] while individual bureaus manage many of their own buildings and assets. Historically, this has led to competition for funding to address deferred maintenance and facility upgrades. Budget decisions for new construction and major retrofit capital investments are made separate from operations and maintenance budgets. Utility bills are received and paid by various City personnel, without a holistic approach or real-time tracking of energy use and costs.

Today, BPS staff manually aggregate annual City energy bills into a cumbersome spreadsheet to track year-over-year energy use for City operations. In Fiscal Year 2023-2024, City operations used over 125 million kilowatt hours (kWh) of electricity at a cost of **$15.8 million dollars** and consumed over 2 million therms of fossil gas at a cost of **$1.8 million dollars**.

Energy efficiency is the cornerstone of Oregon energy policy and even today, energy conservation is still cheaper than generating new electricity. The next decade will embrace Grid-Interactive Efficient Buildings, or GEBs. GEBs are defined as "an energy-efficient building that uses smart end-use equipment and/or other onsite distributed energy resources to provide demand flexibility while co-optimizing for energy cost, grid services, and occupant needs and preferences, in a continuous and integrated way".[6]

City officials and staff have a responsibility as an energy consumer for government operations. The City of Portland holds the Core Value[7] of fiscal responsibility, and commitment that "every budget decision focuses on fiscal resiliency, climate action, equity and the needs of our most vulnerable populations." Appropriately managing our energy consumption and modernizing our City facilities, particularly our public-facing community hubs, is squarely in line with this core value. Portland's own PAE Living Building[8] is a world-renowned demonstration of the ways in which a building can balance capital investments with energy savings while contributing to community, business, climate, and utility interests.

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[5] City of Portland Facilities

[6] US Dept. of Energy Grid-Interactive Efficient Buildings (GEBs)

[7] City of Portland Core Values

[8] PAE Living Building

Energy Management Information System

Energy management information systems (EMIS) are a broad and rapidly evolving family of software tools that monitor, analyze, and control building energy use and system performance. EMIS can enable significant energy savings, often with rapid payback. An EMIS platform can centralize all the City's energy information and billing, allow for simple benchmarking and utility tracking tools, automate system optimization and diagnostics, and enable grid-interactive building technology. EMIS is considered a best practice by the U.S. Department of Energy and its effectiveness is proven at scale by the Better Buildings Smart Energy Analytics Campaign, which included 6,500 public and private buildings and resulted in an average of $3M annual savings per organization with a 2-year investment payback[9].

Recommendations

- Procure and implement a modern Energy Information Management System to centralize, track, manage, and publish all energy consumption and utility billing for City operations.
  - Centralize City energy bills and payments. Simplify energy accounting and financial impacts from recurring utility rate increases.
  - Track energy consumption and on-site generation in real time. Identify, categorize, and prioritize energy saving opportunities to strategically invest in City facilities.
  - Produce internal and public-facing energy dashboards, for example Portland Public Schools Energy & Utility Dashboard[10]

Green Building Policy

The City of Portland's Green Building Policy, ENB-9.01[11], was established in 2001, then revised in 2005, 2009, and most recently in 2015.

"The City of Portland will incorporate green building practices into the design, construction, remodeling and operation of all City-owned facilities. The intent of these practices is to provide environmental benefits, create local jobs, improve occupant health, enhance employee productivity and generate lifecycle financial savings for the City and its community partners."

The guiding policy direction holds true today, but the outcomes and implementation of the policy are long overdue for an update to direct adoption of modern best practices in buildings, like eliminating fossil fuels, aligning with City net-zero targets, and promoting grid-interactive efficient buildings. The 2015 Green Building Policy is deeply rooted in the Leadership in Energy and Environmental Design (LEED) standard developed by the U.S. Green Building Council. However, in practice, the policy is narrow in scope and only relevant to new buildings with exceptions that are used regularly when climate-

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[9] US DOE Energy Management Information Systems (EMIS)

[10] PPS Energy & Utility Dashboard

[11] City of Portland ENB-9.01 Green Building Policy

friendly alternatives have been value-engineered out of available project budgets. Existing buildings are encouraged to use a Green Tenant Improvement Guide[12] developed in 2004.

It's important to note that a Green Building Policy update should not happen in a vacuum. It needs to include the critical lens of a citywide long-term real estate and asset management plan and the support of the Bureau of Fleet and Facilities. A policy update should also seek to reconcile three conflicting green building policies, the aforementioned ENB-9.01, the Portland Housing Bureau Affordable Housing Green Building Policy[13], and a third section of City Code 33.510.244[14] that requires low-carbon building for certain buildings in the central city.

Despite known challenges, BPS made progress in recent years with input from the New Buildings Institute and resources from Decision Package #17611 to draft recommendations for an updated Green Building Policy. In 2023, Oregon Metro adopted a comprehensive Sustainable Buildings and Sites Policy[15] that also provides a valuable framework for a City of Portland update. If implemented in sequence, the Green Building Policy can drive energy upgrades through an Energy Saving Performance Contract.

Recommendations

- Update the City of Portland's Green Building Policy to align with net-zero targets and promote grid-interactivity.
  - Establish City policy to eliminate fossil fuel in City buildings[16], in line with many Oregon jurisdictions, including Multnomah County[17], Oregon Metro[20], Bend[18], and Portland Public Schools[19], as well as direction from the C40 Cities Climate Transition Framework that "to end the use and support for fossil fuels …cities should use all available powers, such as permitting, advocacy, and municipal operations, supply chain, municipal investments, pension funds, physical and financial assets."[20]
  - Require investment grade technical audits for all City buildings by 2030 and periodic audits thereafter to dovetail with the ESPC strategic recommendation.
  - Align new construction requirements with the Energy Trust of Oregon's award-winning Path to Net-Zero program[21]

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[12] Tenant Improvement Guide

[13] Portland Housing Bureau Green Building Policy

[14] 33.510.244 Low Carbon Buildings

[15] Oregon Metro: Sustainable Buildings and Sites Policy

[16] Green Energy Institute: Regulating Natural Gas in Oregon Buildings a Guide for Local Governments

[17] Multnomah County Resolution 2021-025

[18] City of Bend: Fossil Fuel Free City Buildings

[19] PPS Climate Crisis Response Policy

[20] C40 Cities Climate Transition Framework

[21] ACEEE: Energy Trust of Oregon Path to Net Zero

- Incorporate smart technologies, energy efficiency measures, on-site renewable energy generation, energy storage capabilities, and advanced controls that allow buildings to dynamically adjust their energy consumption based on grid demands.
- Incorporate best practices from BPS' Recommendations to Reduce Embodied Carbon[22], like implementing whole-building life-cycle assessments and/or Embodied Carbon Thresholds[23] for concrete, to address carbon emissions from construction and building materials in addition to operational building emissions.

Energy Saving Performance Contract

An Energy Savings Performance Contract (ESPC) is an agreement between a public agency and a qualified Energy Service Company (ESCO) to make building improvements that reduce energy and water use and increase operational efficiency. ESCOs can help identify, evaluate, recommend, and design energy conservation and generation measures that guarantee energy savings or performance. ESPCs can also offer a strong workforce development component and the ability to finance today's facility upgrades with tomorrow's energy savings.

In Oregon, ESPCs are an approved Public Improvement Alternative Contracting method established through HB 3612 of the 2008 legislative session[24]. Dozens of public entities including cities, counties, school districts, state agencies, and special districts in Oregon have benefited from the use of this progressive design-build style of contracting for public improvement projects. City of Portland bureaus have piloted to varying degrees and demonstrated value in ESPCs, including Parks[25], Water[26], and Bureau of Fleet & Facilities. Projects have included community center HVAC upgrades, pathway lighting, and heating, ventilation, and air conditioning (HVAC) assessments. Of note, phase 1 of Parks' ESPC employed 39% of subcontractors with a Minority, Women Owned, Emerging Small Business designation. To-date the City's ESPC work has been narrow in scope and prohibitive to leverage at an enterprise-wide scale for City facilities. Meanwhile, City Budget Office has consistently noted unfunded major maintenance among the City's most urgent, long-term liabilities[27]. A citywide ESPC presents an opportunity to implement a long-term, stepwise approach to fund our critical infrastructure, assets, and City facilities that will generate ongoing cost savings.

The U.S. Department of Energy supports municipal governments interested in ESPC via the ESPC Campaign[28] to expand and enhance the use of ESPC to achieve significant energy, environmental, and cost savings benefits, with the goal to collectively achieve $1 billion in measured and verified savings by 2030. The campaign offers technical assistance, peer knowledge sharing, and recognition. The use of

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[22] City of Portland: Recommendations to Reduce Embodied Carbon

[23] City of Portland: Sustainable Procurement Embodied Carbon Thresholds

[24] OR Dept. of Administrative Services: Public Improvement - Alternative Contracting Method

[25] Portland Parks & Recreation: Energy Saving Performance Contracting (ESPC)

[26] Portland Water Bureau: Energy Saving Performance Contracting (ESPC)

[27] City of Portland: 2023 Citywide Assets Report

[28] US DOE: ESPC Campaign

performance contracting has expanded in recent years and public-sector ESPC projects have demonstrated average energy savings of 13% to 31%. If implemented citywide, these energy savings could translate to $20 million dollars over the next decade. In addition, an ESPC can reduce ongoing annual operations and maintenance costs by addressing years of deferred maintenance.

Recommendations

- Establish a citywide Energy Savings Performance Contract per City Code Chapter 5, 5.34.880
  - Issue an RFP for a citywide Energy Saving Performance Contract. Dedicate appropriate resources from the Procurement office to expedite to the extent possible.
  - Dedicate funding to the ESPC investment-vehicle to make energy improvements and capture energy saving. Address long-standing deferred maintenance and asset management. Support City buildings in compliance with the State of Oregon's Building Performance Standard[29].
  - Execute and deliver on policy objectives of an updated Green Building Policy, including the phase-out of fossil fuels new on-site solar and storage installations.
  - Clearly demonstrate the business case and return-on-investment of energy-related building investments.

Renewable Energy

The City's Renewable Energy Resolution outlines how the City should meet its renewable goals in order of priority:

On-site renewable electricity generation

The City, its businesses, and residents must all play a role in the energy transition and cannot solely rely on investor-owned utilities to supply emissions-free electricity. Specifically, the City should prioritize on-site renewable electricity generation, which is well-defined in the policy, ENN-5.08. BPS should incorporate on-site generation and battery storage into the Green Building Policy and lead by example in encouraging private businesses to do the same. PCEF Strategic Program 5 prioritizes funding for community-facing resilience hubs with on-site solar and storage. If a future ESPC contract cannot include solar and storage project development, the City should issue a Request for Proposals for Solar Energy System Acquisition and Integration, as it did in 2010 with RFP #11216130.

Utility-supplied renewables

House Bill 2021 requires electric utilities to reduce emissions from electricity delivered to Oregonians 80% by 2030 and 100% by 2040. The bill also sets the policy guidance that utilities do so "to the maximum extent practicable, in a manner that provides additional direct benefits to communities."[31]

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[29] Oregon Building Performance Standard

[30] 112161 Solar Energy Systems RFP

[31] House Bill 2021

How utilities meet these objectives will play out through their annual Clean Energy Plans[32, 33] and Integrated Resource Plans that are reviewed and vetted by stakeholder input and the Oregon Public Utility Commission. The City should make its voice heard in these forums to advocate for maximum community benefits and rapid adoption of utility-scale renewables.

Dedicated off-site renewable resources

The City should consider alternate energy procurement pathways once on-site renewable opportunities are exhausted and if utilities do not supply adequate renewable electricity to meet state mandates. This may include public-private partnerships[34] with large energy users that are nimbler than utilities in building large-scale renewable resources. The City of Portland has existing contracts and technical partnerships that can assist in brokering a power purchase agreement for dedicate off-site renewables. If additional Community Solar subscriptions become available, the City should consider purchasing subscriptions to meet our energy needs while supporting ongoing development of Community Solar projects.

Renewable energy certificates

A renewable energy certificate, or REC, is "a market-based instrument that represents the property rights to the environmental, social, and other non-power attributes of renewable electricity generation."[35] RECs are equivalent to one megawatt-hour (MWh) of renewable electricity. The City of Portland has purchased RECs, per ENN-5.08, dating back to at least 2010 to make claims of emissions-free city operational energy use. RECs have played an important role in supporting clean energy development in the U.S., particularly when the cost of renewable power generation was not competitive with fossil fuel power.[36] However, the RECs are often purchased from other states and delivered without the associated electricity. For example, in recent years, the City of Portland has purchased "unbundled" RECs from renewable wind developments in New Mexico. Critics of RECs argue that corporate REC purchases are unlikely to lead to additional renewable energy production and that we must move towards real-world emissions mitigation.[37]

Regardless of the moral arguments, the City should invest its dollars in renewable projects that directly benefit the Northwest electric grid, provide community benefit, and result in direct emissions reduction. The City should discontinue the annual purchase of Renewable Energy Certificates in FY24-25 but require bureaus to allocate an equivalent and proportional resources to on-site renewables and storage.

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[32] Portland General Electric Clean Energy Plan

[33] Pacific Power Clean Energy Plan

[34] World Resource Institute: How U.S. Cities and Corporations Can Work Together to Advance Renewable Energy

[35] US EPA: Renewable Energy Certificates (RECs)

[36] Washington Post: *Buying renewable energy doesn't mean what you think*

[37] Bjørn, A., Lloyd, S.M., Brander, M. et al. Renewable energy certificates threaten the integrity of corporate science-based targets. Nat. Clim. Chang. 12, 539–546 (2022).

Recommendations

- Prioritize on-site renewables and storage; discontinue the current practice of purchasing Renewable Energy Certificates.
  - Establish City policy that requires on-site renewable energy assessment for city facilities and promotes battery storage.
  - Contract for solar and storage assessments and installation if an ESPC is unable to provide these services or the City does not enter a citywide ESPC.
  - Advocate for rapid decarbonization and a just transition of the electric grid.

Portland Clean Energy Community Benefits Fund

The Portland Clean Energy Community Benefits Fund, or PCEF, invests in community-led and community-informed projects to reduce carbon emissions, create economic opportunity, and help make Portland more resilient as we face a changing climate. To date, PCEF has allocated more than $1.5 billion towards climate action, with more than $740 million to City bureaus[38]. The allocated City Climate Projects include investment in City facilities, namely energy efficiency and renewable electricity for the Portland Water Bureau, Mt. Scott Community Center renovation, HVAC at the Arlene Schnitzer Concert Hall, and adding electric vehicles and charging infrastructure. However, investment in City facilities represents only a fraction of the total spending. The $120 million allocated to public schools across the city for physical infrastructure improvements is an analogous example to the level of investment needed in city facilities.

Recommendations

- Request dedicated funding for citywide facility improvement projects that have direct community-facing impact. Propose significant ($10-25M) annual funding for ESPC projects that meet minimum community benefit criteria.
  - For example, the Climate Emergency Workplan Action Item RH-1 outlines the need to retrofit East Portland Community Center, and the five other large community centers to serve as resilience hubs and emergency shelters in the event of extreme weather, smoke, power outages and other disasters. To date, this work is only planned for the Mt. Scott Community Center.

Considerations for communitywide energy strategy and policy

Large-scale, emissions-free energy generation will be the hallmark of the next decade; however, the core of this work must be done by utilities and state regulators. The City, its residents, and businesses have a complimentary role to play as partners and advocates in the energy transition. As the largest jurisdiction within the state, the City has an important responsibility to Portland and the State, driving policy that reduces energy consumption, promotes energy justice, and moves communitywide

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[38] OPB: *Portland's climate action fund awards $300 million to large-scale projects*

emissions to net-zero. While the City's attempt to establish a "Community-wide Green Tariff" with PGE was unsuccessful (action item E-1 of the Climate Emergency Workplan), city staff and officials must continue to engage the investor-owned utilities, advocating for and passing policy that advances an equitable energy transition, and evaluating new opportunities like alternative energy sources. As outlined in our City Core Values, the city must use its positionality to promote inclusive and equitable energy practices that focus on fiscal resiliency, climate action, anti-racism, and the needs of our most historically oppressed communities.

Investor-Owned Utility Coordination

The City of Portland has two large investor-owned electric utilities, Portland General Electric and Pacific Power, and one large investor-owned gas utility, Northwest Natural. These three entities manage critical generation and transmission infrastructure to earn profit for shareholders and meet the needs of our community. The actions of these investor-minded entities have a tremendous impact on Portlanders, as government we must participate in energy policy forums and voice a strong stance to ensure equitable and beneficial outcomes for our community.

The emissions from energy supplied by investor-owned utilities are the primary contributor to our community's greenhouse gas emissions, making up approximately 46% of our total source-based emissions.[39] Action item E-1 of the Climate Emergency Workplan imagined a municipal green tariff that would accelerate decarbonized electricity supply for participating PGE communities. Ultimately this green tariff was untenable for PGE, partly due resource procurement challenges and partly due to rising utility rates. In recent years, the cost of energy has skyrocketed nearly 50%[40, 41] and significantly burdened our community. Today, 27% of households in Multnomah County are energy burdened, spending 6% or more of their income on energy costs.[42]

Recommendations

- Centralize and establish a formal approach to utility coordination, including government affairs, the City Attorney's Office, and subject matter experts on staff to hold utilities accountable to decarbonization and affordability.
  - Establish process to regularly engage with the Oregon Public Utility Commission regulation of investor-owned utilities. Routinely file testimony and comment in response to community interest, in coordination with energy justice partners, and aligned with adopted city policies.
  - Consider adopting a Utility Advisory Subcommittee of the Sustainability & Climate Commission, similar to the Portland Utility Board, but with focus on the actions of the three investor-owned utilities serving Portland ratepayers.

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[39] Bureau of Planning & Sustainability: Climate and Energy Dashboard

[40] Oregon Capital Chronicle: *State regulators approve more electricity rate hikes for Oregonians in 2025*

[41] Oregon Capital Chronicle: *Oregon regulators approve natural gas rate hikes for some, cuts for others*

[42] OR Dept. of Energy: 2024 Multnomah County Energy Profile

Advocacy and Policy

The change in leadership in federal office leaves climate policy in the hands of state and local governments. In recent years, Oregon and Portland have seen some of the greatest climate wins through advocacy. The passage of House Bill 2021 was led by a community coalition known as the Oregon Clean Energy Opportunity Campaign[43]; the Portland Clean Energy Fund was created by a community of color-led ballot initiative[44]; and in 2024 the City's phase out of gas-powered leaf blowers was largely driven by the coalition advocacy of Quiet Clean PDX[45]. The City of Portland should lean into our strong network of community advocates and lend its voice to frontline communities working for energy justice.

Recommendations

- Align Portland's clean electricity goals with HB2021 state mandates. In making this concession, be clear that utilities must be accountable to state mandates. Advocate for non-compliance penalties at the Oregon Public Utility Commission (OPUC) if utilities do not meet decarbonization mandates.
    - Establish a regular venue for Oregon municipalities and jurisdictions to convene on energy and utility policy to leverage the power of collective government voices on behalf of Oregonians.
- Advocate for energy justice, access, and affordability. Support the community coalition, known as the "Energy Advocates." Sign onto and submit formal comment letters and provide testimony where appropriate.
    - Continue to advocate for and protect net-metering for rooftop solar.[46]
    - Support permanent adoption of temporary administrative rules AR 667[47] to protect against utility disconnections.
    - Revisit solar permit process[48] to expedite and maximize rooftop solar for residents and businesses. Consider the SolSmart[49] pathway, which provides free technical assistance to help local governments and regional organizations accelerate the growth of affordable solar energy in their communities.
- Advance carbon performance standards for existing buildings rooted in the Build/Shift HEART Standards[50] proposal that prioritizes healthy, resilient rental housing retrofits. Propose citywide policies to promote electrification of new construction, like limiting indoor NOx emissions from combustion of fossil fuels.

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[43] Oregon Clean Energy Opportunity Campaign

[44] Coalition of Communities of Color: PCEF Origins

[45] Quiet Clean PDX

[46] Portland Business Journal: *PGE will delay controversial proposal to limit rooftop solar incentive, CEO says*

[47] OPUC Administrative Rule 667: Temporary Rules Related to Protections Against Disconnection

[48] Portland Permitting & Development: Portland achieving results through innovations in its solar permitting process

[49] Sol Smart

[50] BPS: HEART Standards

Citywide Building Stock

The City of Portland has two important policies that seek to improve citywide building stock – the Portland Home Energy Score[51] and Commercial Building Energy Reporting Program.[52] The Home Energy Score policy requires sellers of most single-family homes in Portland to obtain and disclose a home energy score at time of sale. When homeowners invest in improving the energy efficiency of their homes, those costs may be recouped as scores translate into a value that can be recognized by the market. The Commercial Building Energy Reporting policy requires commercial buildings 20,000 square feet and larger to track building energy performance and report this information to the City. Portland's leadership helped inform a statewide effort to establish building performance standards[53] that will require buildings to comply with specific energy use intensity standards beginning in 2028.

Recommendations

- Evolve both residential and commercial energy scoring and reporting programs to further advance energy efficiency and decarbonization citywide.
  - Engage Energy Trust of Oregon on recommendations to further utilize Home Energy Score to promote carbon emissions reductions and indoor air quality benefits.
  - Align Commercial Building Energy Reporting requirements with the State's Building Performance Standards. Expand and centralize the City's commercial program to include buildings regulated by the State requirements, including multifamily residential, schools and warehouses.

Additional Energy Resources

As Oregon transitions towards cleaner energy sources, climate change is significantly impacting existing energy systems causing increased demand for cooling, damaging energy infrastructure through extreme weather events, and disrupting energy delivery and reliability. At the same time, energy demand is growing faster than it has in several decades, led by the proliferation of data centers and industrial growth. The energy transition will include innovative grid-enhancing technology to meet these challenges, and alternative energy resources like hydrogen, renewable natural gas, and nuclear. Each of these technologies have pros and cons that the City should carefully evaluate for our community.

Transmission & Grid Enhancing Technology

Oregon's electric grid and transmission capacity are severely constrained which limits the addition of new emissions-free generation resources. In order to add more renewable power to the grid, we need more capacity on the transmission system. Grid-enhancing technologies, or GETs, maximize the transmission of electricity across the existing system through a family of hardware and technologies. Utilities should take cost-effective steps to make better, more efficient use of the transmission they

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[51] Portland Home Energy Score

[52] Portland Commercial Building Energy Reporting

[53] OR Dept. of Energy: Building Performance Standards

already have before building new transmission lines. However, to meet growing energy demand, utilities will also need to build new transmission lines which come with significant land use and financial costs. Siting transmission comes with a difficult set of land use tradeoffs, as evidenced by the PGE Harborton Reliability Project's[54] proposed transmission work in Forest Park.

Recommendations

- Support utility adoption of grid-enhancing technologies and support permitting of new transmission within the City of Portland under the condition that utilities maximize public engagement and minimize environmental impacts.

Hydrogen

Hydrogen can be produced from diverse, domestic resources. Currently, most hydrogen is produced from fossil fuels, specifically natural gas. Electricity from the grid or from renewable sources is also currently used to produce hydrogen in a process called electrolysis. In the next decade, the Northwest may start to see the proliferation of solar and wind energy used directly to generate renewable hydrogen as new technologies make production methods cost competitive. We are also likely to see hydrogen touted as a decarbonization strategy under false pretenses. That said, Northwest decarbonization pathways will almost certainly need hydrogen in the energy mix, but the City should adopt environmental justice principles, like the framework outlined by Just Solutions Collective[55].

Recommendations

- Support adoption of renewable hydrogen, as defined in ENN-5.08, in which specifically excludes energy derived from fossil fuels. Oppose hydrogen blending in fossil gas pipelines for residential customers.
  - Engage in the Pacific Northwest Hydrogen Hub[56] which is "focused on some of the hardest-to-decarbonize sectors important to our region's economy, such as heavy-duty transportation, port operations, agriculture and industrial operations." A report by the Oregon Department of Energy[57] highlights many of the opportunities in renewable hydrogen to decarbonize our economy.
  - In June of 2024, NW Natural began blending hydrogen into gas pipelines in Southeast Portland without informing customers or regulators. This action by the investor-owned utility poses serious health and safety risks to our community, including potential for explosion and increased exposure to nitrogen oxides (NOx). [58] The City should support SB 685 (2025 session) which would give the OPUC authority to regulate hydrogen projects. Furthermore, BPS recommends that City Council and the incoming Sustainability & Climate Commission take up the issue of health risks and costs to ratepayers posed by hydrogen blending.

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[54] Portland Business Journal: *PGE Forest Park transmission project panned in city report*

[55] Just Solutions Collective Hydrogen Framework

[56] The Pacific Northwest Hydrogen Association

[57] OR Dept. of Energy: 2022 Renewable Hydrogen Report

[58] Portland Hydrogen Blending Letter

Renewable Natural Gas

Renewable natural gas (RNG), sometimes referred to as biomethane, is a cleaner-burning gas that can replace conventional fossil gas. It's often made from organic materials like food waste, animal manure, and landfill waste and comes with a cost premium compared to traditional fossil gas. Portland's Pathways to Net Zero[59] scenario modeling tool includes analysis of the role of renewable natural gas. It is already very difficult to chart a path to 50% carbon reduction by 2030; the model shows that we need to allow for RNG in certain use cases to be a piece of the decarbonization puzzle. However, there is an order of preference when it comes to RNG – it is not preferred for heating buildings. There are more beneficial use cases for it in hard-to-abate industrial applications or in the transportation sector.

Recommendations

- Question NW Natural's use and development of renewable natural gas as a decarbonization or emissions reduction strategy. Advocate for widespread electrification wherever possible.
  - Senate Bill 98[60] was passed in 2019 to establish voluntary renewable natural gas (RNG) goals for Oregon's natural gas utilities, a first of its kind in the nation. The bill includes allowances for up to 30% RNG into the state's pipeline system. However, NW Natural's "Less We Can" RNG campaign[61] has caused intense public criticism over its authenticity and decarbonization benefits. NW Natural's Compliance reports show that the company delivered only 0.15% RNG in 2022 and only 0.91% in 2023[62]. The costs of securing and producing RNG are borne by ratepayers and perpetuates a harmful fossil fuel industry. The Oregon Climate Protection Program outlines a preferred decarbonization pathway for regulated entities, through Community Climate Investments (CCIs) that reduce emissions in environmental justice communities[63] and are backed by advocacy organizations.[64] The City of Portland should advocate for CCIs where appropriate and otherwise support widespread electrification of buildings, homes, and businesses as a preferred decarbonization option to RNG production.
- Support existing RNG infrastructure at the Columbia Boulevard Wastewater Treatment Plant (CBWTP), maximize operational efficiency, but increase transparency with the public about its value and the sales to NW Natural.
  - The City of Portland's stance on RNG has a caveat given its investments into resource recovery at the CBWTP. In 2017, City Council authorized the Bureau of Environmental Services, or BES, to build infrastructure[65] to capture excess biogas produced at the plant that could not be used to produce electricity and instead had previously been flared or burned off on-site. BES subsequently built a CNG fueling station to use the product for fueling city vehicles and entered into a contract with NW Natural to distribute RNG via pipeline. This vision of producing and

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[59] Portland Pathways to Net Zero

[60] Senate Bill 98

[61] Pro Publica: *Oregon's Largest Natural Gas Company Said It Was Going Green. It Sells as Much Fossil Fuel as Before.*

[62] NW Natural: 2022 Renewable Natural Gas Compliance Report; NW Natural: 2023 Renewable Natural Gas Compliance Report

[63] Climate Protection Program: Community Climate Investments

[64] Climate Protection Program Public Comments

[65] Bureau of Environmental Services: City moves to 100% methane recovery

selling RNG to NW Natural came to fruition in 2024 after various project delays. In December of 2024, the federal Department of the Treasury Internal Revenue Service released final rule making on the definition of eligible equipment for energy tax credits[66], which includes biogas equipment that could make BES eligible for a tax credit of potentially $6 million, if the Trump administration maintains these credits.

Nuclear Energy

Portland has a tumultuous history with nuclear energy. Oregon's only commercial nuclear power plant was the Trojan Nuclear Power plant operated by Portland General Electric, located about 40 miles northwest of the city. The plant was plagued by design flaws and other issues, causing temporary closures and expenses to ratepayers. In 1980, Oregon votes passed critical legislation that would prohibit additional nuclear power plants in the state. Despite the longstanding public concerns, the rapid growth for electricity demand and need for carbon-free energy has reopened the conversation about building nuclear generation resources. For example, NuScale Power is a Portland-based global leader in Small Modular Reactor (SMR) nuclear technology and the only developer with a SMR design approved by the U.S. Nuclear Regulatory Commission[67]. NuScale is positioning themselves as a leader "ready to meet the rapidly growing power needs of data centers and AI,[68]" while big tech companies like Amazon are planning to meet energy needs by building SMRs in the Columbia River Gorge.[69]

Recommendations

- BPS recommends that the Sustainability and Climate Commission revisit nuclear development and adopt a policy specific to small nuclear reactors, guided by the City's stance on nuclear energy in ENN-5.08 and ORS 469.595.
  - ORS 469.595 requires that an "Before issuing a site certificate for a nuclear-fueled thermal power plant [in Oregon]…adequate repository for the disposal of the high-level radioactive waste produced by the plant has been licensed to operate by the appropriate agency of the federal government." This statute is currently being challenged during the 2025 legislative session.

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[66] Federal Register Internal Revenue Service: Energy Tax Credit

[67] US DOE: NRC Certifies First U.S. Small Modular Reactor Design

[68] NuScale Power

[69] Oregon Public Broadcasting: *Amazon wants nuclear reactors to power its Eastern Oregon data centers.*

Conclusion

Historic energy policy changes in Oregon have set ambitious and achievable goals to decarbonize our energy supply. At the same time, Portland's government is changing dramatically and presents an opportunity to restructure how we manage our operational energy use and rethink how we approach our community-wide energy needs. Active participation in the energy transition will yield greater affordability and cost savings both for the City and for its residents. However, it will require action and funding to achieve this. For City operations, this means approaching our energy consumption with fiscal responsibility and investing in the modernization of our facilities to shift, generate, and store power to add grid capacity. For our community, this means advancing policy and advocating for outcomes that center our most vulnerable and make our homes and businesses healthier, more affordable, and more adaptable to the impacts of climate change.

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About City of Portland Bureau of Planning and Sustainability
The Bureau of Planning and Sustainability (BPS) develops creative and practical solutions to enhance Portland's livability, preserve distinctive places, and plan for a resilient future.

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