

Customers Energy Trust Has Historically Underserved Board Learning Topic

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November 2023

Since inception, Energy Trust has been charged with investing in cost-effective energy efficiency, helping to pay the above-market costs of renewable energy resources, and delivering services with low administrative and program support costs. These investments resulted in system-wide benefits for everyone, but the direct benefits (like lower monthly bills, comfortable homes no matter the weather, lower operating costs for businesses and more sustainable places to work) went primarily to customers with the financial means to invest in clean energy solutions. Often, those not served by Energy Trust include customers of color, people experiencing low to moderate incomes; customers living in rural areas; small businesses; businesses owned by people of color; and woman-owned businesses, among others. To achieve our vision of clean, affordable energy for all, Energy Trust must do a better job delivering benefits to customers who are experiencing high barriers to participation. This learning paper will provide readers with an understanding of historically underserved customer segments and common challenges that constrain their access to clean energy solutions. It will also highlight new policy directives that position Energy Trust to ensure vulnerable customers are not left behind as the energy system transitions to a low carbon, clean energy future.

Introduction

While Energy Trust of Oregon's traditional program strategies have delivered significant system-wide benefits through cost-effective energy savings and generation, the direct benefits of clean energy have not been realized equitably across our ratepayer communities. Energy Trust's Diversity, Equity and Inclusion plan¹ acknowledges that:

“Our vision . . . is clean and affordable energy for everyone; however, historically, Energy Trust and the energy industry have overlooked groups such as BIPOC (Black, Indigenous and people of color) customers, people experiencing low to moderate incomes, customers that live in rural areas and diverse businesses and contractors.”

This learning paper will explore historically underserved customer segments, income and demographic characteristics, common challenges that constrain access to clean energy solutions and emerging policy directives related to equity and environmental justice. This information is fundamental to Energy Trust's ability to deliver on our vision of clean, affordable energy for everyone. It is already informing our strategies for developing new program designs and approaches for reaching customers we have not served before.

Definitions

Energy Trust's diversity, equity and inclusion efforts sought to initially focus impact on three customer segments: people experiencing low to moderate incomes, customers living in rural areas, and Black, Indigenous and people of color. We refer to these customers as “**customers underserved by Energy Trust**” and “**priority populations** or communities” to recognize that Energy Trust has the responsibility to ensure that our programs are accessible to all customers and to consider specific customers as we design offers.

Environmental justice is a more holistic framework for thinking about the impacts and involvement of all people in environmental policies and programs. In 2023, the Oregon Public Utility Commission established four equity performance metrics for Energy Trust that included reference to environmental justice communities. It's important to acknowledge and understand that even this broader categorization of customers and communities cannot encompass the spectrum of unique experiences, priorities and challenges within each community, or barriers to participating in our programs.

Key Terms

Environmental Justice: The Environmental Protection Agency defines Environmental Justice as “the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. . . . It will be achieved when everyone enjoys the same degree of protection from environmental and health hazards and equal access to the decision-making process to have a healthy environment in which to live, learn, and work.”

Environmental Justice Communities: The Oregon Legislature intentionally provides a broad definition: “Communities of color, communities experiencing lower incomes, communities experiencing health inequities, tribal communities, rural communities, remote communities, coastal communities, communities with limited infrastructure and other communities traditionally underrepresented in public processes and adversely harmed by environmental and health hazards, including seniors, youth, and persons with disabilities.”

Energy Burden: Energy burden refers to the proportion of household income spent on energy costs, including heating, cooling and electricity. High energy costs often impact low-income households disproportionately, as a larger percentage of their limited income is required to cover energy expenses.

¹ [DEI: Diversity, Equity and Inclusion Plan - Energy Trust of Oregon](#)

The state of Oregon says an affordable energy burden is six percent or less. Households that pay more can be characterized as energy burdened or can be said to have a high energy burden. Paying more than 10 percent means the household is severely energy burdened. An **energy affordability gap** is the difference between a household's actual energy costs and an affordable energy burden.

Rural: Refers to a combination of population density and proximity to services and infrastructure. There are a variety of definitions, and several must be considered depending on use. Oregon Office of Rural Health defines rural as “any geographic areas in Oregon ten or more miles from the centroid of a population center of 40,000 people or more;” more sparsely populated communities (six or fewer people per square mile) are referred to as **frontier**.²

Low Income: As defined by HUD's Section 8 program, low income is typically categorized as households with income less than or equal to 80 percent of area median income (AMI). **Extremely-low income** is defined as household income less than or equal to 30 percent of AMI. **Moderate income** is typically considered to be between 80 – 120 percent AMI. Broader efforts may reference customers with income constraints as “low- to moderate-income (LMI).”

Black, Indigenous and People of Color: The term BIPOC collectively refers to individuals from diverse racial and ethnic backgrounds, each with unique experiences and challenges in a society where they are often marginalized. This includes Black individuals of African descent; Indigenous peoples, including those who are and those who are not enrolled in federally recognized Tribes; as well as other People of Color encompassing Latino/a/x, Asian, Pacific Islander, and additional non-white racial and ethnic groups. The term BIPOC emphasizes inclusivity while recognizing the distinct histories, cultures, and systemic challenges faced by these groups within Oregon's socio-economic context.

Historical Context in Oregon

In addition to understanding which customers and communities have been underserved, it's equally important to recognize some of the persistent historical drivers which influence who is able to access Energy Trust programs today. Understanding the historic context and how advocates have reshaped the current outlook on environmental justice and energy policy enables us to develop more comprehensive clean energy programs that impact change for priority communities. For example, institutional barriers such as the State of Oregon's redlining and discriminatory housing practices have echoed through generations, creating disparities in wealth and resource distribution. Today, impacts of these historical barriers persist in areas like homeownership rates, access to capital and housing stock and location – some of the primary factors our research correlates to the likelihood of participation and level of benefits realized from Energy Trust programs.

Furthermore, energy policies designed and shaped without community engagement and input have resulted in disparities in how energy programs engage with environmental justice communities, prioritize service-wide clean energy benefits without considering environmental and cultural impact, and result in saturation in well-resourced regions and populations. For example, Oregon Senate Bill 1149 (1999) originally established the public purpose charge directing funding to a non-governmental entity (Energy Trust of Oregon), Oregon Department of Energy, and Oregon Housing and Community Services (OHCS). This legislation made OHCS responsible for serving customers with low incomes, not Energy Trust. When Oregon Public Utilities Commission docket UM 551 was established to develop cost-effectiveness criteria, it placed restrictions on incentives for energy efficiency measures. Systemic exclusion from these types of policies often do not acknowledge the unintentional advantage or preference given to some customers and communities over others.

Evolving Policy Landscape

Environmental justice is increasingly reflected in national, state and local policies, often creating direct links to energy, particularly access to clean energy. Energy and environmental justice advocates have

² [About Rural and Frontier Data | OHSU](#)

paved the way with calls for structural, procedural, and distributional equity³, resulting in new ways of evaluating progress. One such example is the American Council for an Energy-Efficient Economy (ACEEE) update to its scorecards and benchmarks to better evaluate the equity of state, local and utility actions and outcomes related to decarbonization.⁴

Recent policy developments related to clean energy in Oregon emphasize serving environmental justice communities, sometimes with direct reference to Energy Trust investments. Here are a few examples:

- In 2018, Portland voters passed the BIPOC-led initiative Portland Clean Energy Community Benefits (known as Portland Clean Energy Fund). This program was subsequently established by the City of Portland to provide a clean energy future for frontline communities who are the most vulnerable to climate change.
- Oregon SB 1536 (2022) provided protection for environmental justice communities impacted by extreme weather events such as cold, heat and wildfires. This bill includes allowances for portable cooling devices on rental properties, funding for community cooling spaces (administered by Energy Trust as the Landlord Provided Cooling Spaces program), air conditioner, heat pump and air filter deployment, heat pump rebate and grant programs, as well as requirements for cooling in new construction.
- The Oregon Public Utility Commission has incorporated environmental justice in requirements for Energy Trust and our funding utilities. For example, electric utilities must include representatives of environmental justice communities in Community Benefits and Impacts Advisory Groups to develop and implement their Clean Energy Plans.
- For Energy Trust, Oregon Public Utility Commission performance measures⁵ provide Equity Metrics requiring the organization to increase investments, education, and development of new offers that provide direct benefits to environmental justice communities, and organizations that serve those communities.
- Oregon HB3141 requires 25% of Energy Trust investments in small-scale renewables to benefit Low-Moderate income customers.
- Justice40 is a federal government effort to deliver at least 40 percent of overall benefits from certain clean energy and energy efficiency investments to disadvantaged communities. Oregon Department of Energy is prioritizing equity in applications for this federal funding to help ensure compliance with the Justice40 initiative.

Customer Demographics

Program Participation

Based on principles of least-cost acquisition, Energy Trust's traditional incentive models have favored customers who could afford much of the upfront costs of clean energy projects and simply needed information and a modest incentive to choose the most efficient option. Staffing and outreach resources were historically focused in more densely populated areas, where it is easier and less costly to reach potential customers than in rural communities. This structure skewed benefits towards those with greater financial resources, such as affluent households or larger businesses, resulting in an uneven distribution of services that has not adequately addressed the needs of less affluent communities.

In terms of residential participation, results from the Energy Trust 2022 Customer Awareness and Participation study⁶ show that certain customer segments are receiving the greatest benefit from Energy Trust programs and services, and where gaps remain.

³ ACEEE's Leading With Equity initiative provides energy-specific definitions, describing structural equity as: "decision makers recognize and address historical, cultural and institutional dynamics that have led to clean energy inequities;" procedural equity as: "Decision makers create inclusive and accessible processes for developing and implementing clean energy programs;" and distributional equity as: "Clean energy policies and programs fairly distribute the benefits and burdens across all segments of communities." [Leading with Equity Initiative | ACEEE](#)

⁴ <https://www.aceee.org/energy-equity-initiative>

⁵ [Equity now formally part of oversight for Energy Trust - Energy Trust Blog](#)

⁶ https://www.energytrust.org/wp-content/uploads/2023/04/Energy-Trust-of-Oregon_CAP-Study-Report-2022_Final-wSR.pdf

- White respondents had the highest participation rates, received the greatest financial benefits from participation and had the highest awareness and knowledge of Energy Trust and its offerings.
- Homeowners are served at higher rates than renters.
- Respondents in the Portland Metro region have the highest rates of participation, awareness, and knowledge, and receive the highest financial benefits.

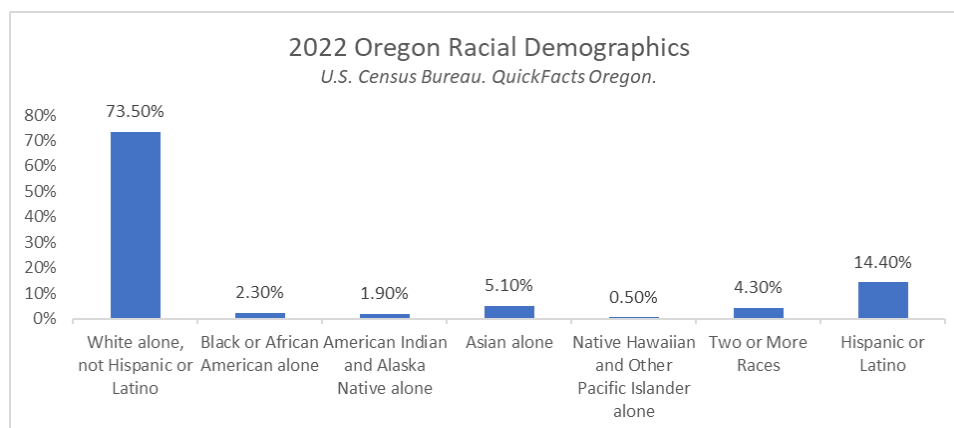
Market Characterization

A significant portion of Energy Trust’s residential customer base experiences a low-to-moderate income, including over half of households in single family homes and a large majority of residents in manufactured homes and multifamily dwellings. These demographics suggest a compelling opportunity for Energy Trust to strategically target services based on income levels and housing type. Below are some additional market characteristics for Energy Trust service areas and greater Oregon:

- **Income:** Low- and moderate-income households combined make up over half of Energy Trust’s eligible residential customer base. An estimated 23% of customers in Energy Trust service area experience low income⁷. About 12% of Oregon’s population live below the poverty line.⁸
- **Housing and ownership:** The majority of residents in multifamily housing and manufactured homes experience low or moderate income; customers experiencing low to moderate incomes are more likely to rent versus own their homes.
- **Geography:** 35% of Oregon’s population lives in rural or frontier areas⁹.
- **Race/ethnicity:** About 25% of Oregon’s population identifies as a race/ethnicity other than white. Roughly 15% of Oregon households primarily speak a non-English language at home¹⁰.
- **Other:** 10% of Oregonians live with a disability^{11, 12}; 19% of Oregon’s population is above 65 years of age, and nearly 25% of Oregon’s population is under the age of 18¹³.

Table 1 provides a breakdown of Oregon’s racial demographics.

Table 1: Oregon Racial Demographics (Percentage)



⁷ [Energy-Trust-of-Oregon CAP-Study-Report-2022 Final-wSR.pdf \(energytrust.org\)](#)

⁸ [Oregon | Data USA](#)

⁹ [About Rural and Frontier Data | OHSU](#)

¹⁰ [Oregon | Data USA](#)

¹¹ Under the age of 65; [U.S. Census Bureau QuickFacts: Oregon](#)

¹² Oregon Health Authority reports even higher numbers, using a presumably broader definition, finding that an estimated 24% of adults residing in Oregon live with some form of “disability or special health care need.” [Oregon’s State Health Assessment 2018](#)

¹³ [U.S. Census Bureau QuickFacts: Oregon](#)

Table 2 shows the distribution of low-to-moderate income (LMI) and market rate households across different housing types and utility areas.

Table 2: Share of Percentage of Households across each utility segmented by income group ^{14, 15}

Customer Segments by Utility Provider

| ETO Oregon Territory | Market Rate | LMI |
|----------------------|-------------|---------|
| Manufactured | 20,000 | 95,000 |
| Multifamily | 83,000 | 273,000 |
| Single Family | 504,000 | 567,000 |
| PGE | Market Rate | LMI |
| Manufactured | 6,000 | 29,000 |
| Multifamily | 76,000 | 201,000 |
| Single Family | 272,000 | 230,000 |
| PAC | Market Rate | LMI |
| Manufactured | 10,000 | 47,000 |
| Multifamily | 15,000 | 121,000 |
| Single Family | 130,000 | 217,000 |
| NWN | Market Rate | LMI |
| Manufactured | 1,000 | 5,000 |
| Multifamily | 16,000 | 27,000 |
| Single Family | 339,000 | 260,000 |
| AVI | Market Rate | LMI |
| Manufactured | 1,000 | 7,000 |
| Multifamily | 1,000 | 5,000 |
| Single Family | 30,000 | 52,000 |
| CNG | Market Rate | LMI |
| Manufactured | 300 | 1,400 |
| Multifamily | 1,000 | 5,000 |
| Single Family | 30,000 | 37,000 |

Source: 2021 American Community Survey 5-Year Public Use Microdata Sample

| ETO Oregon Territory | Market Rate | LMI |
|----------------------|-------------|-----|
| Manufactured | 1% | 6% |
| Multifamily | 5% | 18% |
| Single Family | 33% | 37% |
| PGE | Market Rate | LMI |
| Manufactured | 1% | 4% |
| Multifamily | 9% | 25% |
| Single Family | 33% | 28% |
| PAC | Market Rate | LMI |
| Manufactured | 2% | 9% |
| Multifamily | 3% | 22% |
| Single Family | 24% | 40% |
| NWN | Market Rate | LMI |
| Manufactured | 0% | 1% |
| Multifamily | 2% | 4% |
| Single Family | 52% | 40% |
| AVI | Market Rate | LMI |
| Manufactured | 1% | 7% |
| Multifamily | 1% | 5% |
| Single Family | 31% | 54% |
| CNG | Market Rate | LMI |
| Manufactured | 0% | 2% |
| Multifamily | 1% | 7% |
| Single Family | 40% | 50% |

Source: 2021 American Community Survey 5-Year Public Use Microdata Sample

Barriers and Constraints for Different Communities

Energy Trust has conducted a combination of studies and community engagement activities to learn who is not participating and identify barriers embedded in current program designs. Examples of such research include a Small Business Study on Black Businesses in the Portland-Metro Area (2021)¹⁶ and a Local Government Research Report (2021)¹⁷. Examples of Energy Trust community engagement activities can be found in our Diversity, Equity and Inclusion Plan¹⁸.

The following is a summary of themes we have heard from customers and communities in our research. Importantly, these are only a sampling of customer and community needs, priorities, and barriers; the key takeaway is that each customer and community is unique.

¹⁴ Based on aggregated data from the 2021 American Community Survey.

¹⁵ "Single-family structures include fully detached, semi-detached (semi-attached, side-by-side), row houses, duplexes, quadruplexes, and townhouses." Notably, this is different than Energy Trust's program definitions, which include all multifamily with two or more attached residences as multifamily.

¹⁶ https://www.energytrust.org/wp-content/uploads/2021/12/BlackBusinessQualitativeResearchReport_12012021.pdf

¹⁷ https://www.energytrust.org/wp-content/uploads/2021/12/Energy-Trust-Muni_LocalGovt-Research-Report_Nov2021.pdf

¹⁸ <https://www.energytrust.org/wp-content/uploads/2022/07/2022-DEI-Plan.pdf>

Financial constraints: Customers facing financial constraints may be individuals experiencing low to moderate income or may be businesses and organizations that have limited access to funds and/or tight operating budgets, such as small businesses and nonprofits. Financial constraints can result in a wide range of participation barriers for customers, both direct and indirect. A common barrier is access to funds or financing to pay for energy upgrades; sometimes, even when incentives cover most or all of project costs, customers must pay the up-front cost and wait for reimbursement. Additionally, customers may have competing priorities such as health and safety or deferred maintenance needs that must take precedence over energy upgrades. These scenarios hinder a customer's ability to install energy upgrades regardless of the portion of project costs covered. Energy Trust offers typically only cover energy-related portions of project costs. However, addressing repairs and maintenance needs, even if not related to energy savings, can be critical to making many energy-related projects feasible.

Renters: Individuals living or operating in rented or leased spaces often report being uncomfortable in their spaces and experiencing high utility bills. Renters often have high awareness of their energy use and rely on DIY and low-cost/no-cost solutions to save energy. Opportunities to undertake significant energy improvements are limited and often impacted by the split incentive dilemma, meaning tenants pay the energy and operating costs but are not empowered to make changes to their spaces, while owners of the space are decision makers on most or all improvements, but would not receive the benefit of lowered bills. Conversely, benefits of energy upgrades that appeal to landlords, such as increased property value or space appeal, may in turn bring negative impacts to tenants such as increased rents or displacement. Energy Trust offers for rental properties often require property owners and managers to participate, with fewer opportunities for tenants to participate directly in our programs.

Small businesses: Small business owners often face barriers noted above as they are frequently working out of leased spaces and operating under tight margins. Additionally, small business owners often play a wide variety of roles in their businesses and have a long list of competing priorities on their time and resources. While we have seen many markets begin to rebound, small businesses are still impacted by the lingering effects of the pandemic. Small business owners often share that they use equipment until failure and are likely to seek used equipment upon replacement. Another notable barrier is that Energy Trust often does not offer incentives for specialized or niche equipment that small businesses may use, and custom analysis is not often feasible at smaller sites.

Rural communities: A common theme in Energy Trust engagements with rural communities is the need to develop an understanding of each community and build ongoing relationships. In recent years rural communities across Oregon have been heavily impacted by natural disasters and extreme weather events and many are still focused on recovery efforts; priorities include resilience, affordable housing, community services and infrastructure. Given these priorities, and limited capacity amongst community members and organizations, Energy Trust offers must integrate with or support broader initiatives. Rural communities express a desire to support their local economy, including preference for community members and organizations to conduct outreach and for local contractors to complete the installations. In communities where local contractors are not present, it can be costly and time-consuming to arrange for contractors from other regions to travel to complete projects. Other commonly encountered challenges include: limited offers for homes that primarily heat their spaces with fuels other than electricity or natural gas, which are more prevalent in rural areas; the need for heating and cooling solutions that can perform in more extreme temperatures, which are more costly; and limited opportunities to work with local retailers and distributors to offer instant incentives at point of sale, which can limit access to some offers.

Tribal Communities: With regard to Energy Trust's service area, Tribal communities can refer to one of the nine federally recognized Tribes in Oregon¹⁹, members of non-recognized Tribes and individuals who live anywhere in our service area. Federally recognized Tribes are bound by Federal regulatory requirements, oversight and funding channels that can impact energy-related projects. For example, development of renewable energy projects on trust lands can take longer from conception to development

¹⁹ Federally recognized Tribes in Oregon: Burns Paiute, Confederated Tribes of Grand Ronde, Confederated Tribes of Coos, Lower Umpqua and Siuslaw Indians, Confederated Tribes of Siletz Indians, Confederated Tribes of the Umatilla Indian Reservation, Confederated Tribes of Warm Springs, Cow Creek Band of Umpqua Tribe of Indians, Coquille Indian Tribe, and the Klamath Tribes.

and completion. Every Tribe is unique; each has a unique combination of needs, priorities and local circumstances that may not be reflected in Energy Trust program offers or requirements. Some themes that have surfaced through our engagements include interest in: prioritizing community resources; resilience through natural disasters and environmental factors such as wildfires, droughts, and extreme weather events; and clean energy solutions that build resilience and independence. Tribes may be funding constrained and are also navigating various funding opportunities that come with different administrative processes and requirements. In working with tribal communities, developing an understanding of unique circumstances and needs, highlighting success stories, and partnering with community organizations and individuals is key.

Primary language is not English: Customers whose primary language is not English may experience barriers to participation both from language and cultural accessibility standpoints. Translation and transcreation efforts are growing at Energy Trust; however, most of our marketing, forms and technical services are not available in multiple languages. Outreach and marketing efforts may also not feel culturally responsive or relevant to some. Customers have expressed a desire for more relatable information for their communities. They want the ability to engage throughout the participation process in their primary language, whether that be with Energy Trust representatives or partnering service providers.

What this Means for Energy Trust

Energy Trust can access more savings and generation by serving customers we have traditionally underserved. To achieve this, we must invest in efforts to gain the knowledge and insights required to make programs accessible by removing barriers and building more flexible and responsive offers. Gathering feedback and measuring results of these efforts will be critical so that we can adapt if efforts are not achieving equitable outcomes or meeting community needs. Some characteristics of accessible programs include:

- **Language and cultural accessibility:** Going beyond translation of materials; developing materials that are culturally attuned and resonate with the communities we serve. Connecting communities with offers and service providers that are culturally relevant, accessible and effectively meet their needs.
- **Relevance:** Ensuring that our efforts to improve accessibility are informed by those who have historically been marginalized. Having measures and offers that meet their needs.
- **Simplicity:** Making it easy to learn about Energy Trust and participate in programs; reducing administrative complexities.
- **Holistic solutions:** Another key aspect of accessibility is addressing the interconnected nature of energy and non-energy components of clean energy projects. Finding solutions to support non-energy components will be a critical part of creating access to clean energy solutions for customers.

As Energy Trust continues to deepen our commitment to serve underserved communities, there is opportunity to shift from our traditional program models and approaches to those that are more targeted to specific community priorities. Some of these opportunities include:

- **Inclusive program design:** Co-creating programs and offers with communities.
- **Adapting to community priorities:** This means moving beyond traditional energy benefits to design for broader benefits, such as improved air quality, public health and sustainable local economies.
- **Ongoing engagement:** This work is not transactional; it requires active partnership to evolve our program offers and strategies based on community feedback and needs.

Investing in communities goes beyond providing one-time financial support; it involves capacity building, customized approaches, building long-term relationships and bringing resources over time. Some of the critical pathways to investing in communities include:

- **Funding and financial support:** Seeking and implementing innovative funding solutions for clean energy projects. Leveraging complementary and external funding opportunities enable us to address needs beyond energy, such as critical health concerns resulting from deferred maintenance.

- **Strategic partnerships:** Cultivating partnerships with community organizations to amplify our reach and collective impacts. This may take the form of capacity building, financial or technical support, or other means of supporting community-led outreach, education, and navigation services.
- **Supporting community needs and priorities:** Recognizing health, safety, resilience and sustainability may be more important to a community than energy savings and renewable generation.
- **Education and outreach:** Providing education and outreach across the state to empower communities to make informed choices about clean energy.

Alongside these changes, we also see a need for **evolving our success metrics**. Ideally, how we define success and report progress in the future will reflect our commitment to providing equitable, meaningful clean energy benefits to communities and customers we have historically underserved.