

Task Force on Climate-Related Financial Disclosures (TCFD)

In this TCFD-aligned disclosure, we outline our governance and risk management approach for climate change, identify key climate-related risks and opportunities, provide a high-level analysis of implications of a transition climate scenario and a physical scenario, and summarize our current primary metrics and targets related to climate change. As our utility's Integrated Grid Planning (IGP) process continues progressing, we intend to use these long-range planning and climate insights to further enhance our TCFD reporting moving forward.

Governance & Risk Management

What is our approach for governance of climate-related risks and opportunities?

Company strategies are overseen by the Board as a whole and are managed through HEI's strategic planning processes. The Board provides guidance on strategic priorities and plans and approves the overall corporate budget to allocate resources for agreed-upon strategies.

The Board, along with the operating company boards of Hawaiian Electric and American Savings Bank, are involved in frequent discussions about and receive regular reports on important ESG-related risks and strategic matters. Such discussions and reports have included:

- Annual review of company strategy and enterprise risk at board strategy retreats:
 - **2019:** “deep dive” on climate change risk and sea level rise, which included presentations by a leading climate risk analytics firm and by each operating company on climate-related risks and mitigation plans
 - **2020:** update on the integration of material ESG elements, including climate change, into risk management and strategic planning
 - **2021:** “deep dive” on decarbonization strategies, alignment with global climate ambitions, and development of utility's climate targets and pathways to achieve net zero carbon emissions
 - **2022:** analysis of cross-sector decarbonization pathways for Hawai'i to achieve climate objectives
- Quarterly review of progress on strategic initiatives as part of regular board meetings
- Monthly updates on Hawaiian Electric's progress on initiatives to achieve Hawai'i RPS goals and Climate Change Action Plan targets

Each Board committee has responsibilities with respect to oversight of climate-related risks and opportunities, and reports on its activities and recommendations through regular and, as necessary, special Board and/or committee meetings, as listed on the next page.



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Four Elements of Recommended Climate-Related Financial Disclosures



Governance

The organization's governance around climate-related risks and opportunities

Strategy

The actual and potential impacts of climate-related risks and opportunities on the organization's business, strategy and financial planning

Risk Management

The processes used by the organization to identify, assess and manage climate-related risks

Metrics and Targets

The metrics and targets used to assess and manage relevant climate-related risks and opportunities

Source: TCFD, "Implementing the Recommendations of the Task Force on Climate-Related Financial Disclosures" (June 2017)

- The **NCG Committee** is responsible for ensuring all priority ESG issues, including climate-related risks and opportunities, have appropriate Board oversight.
- The **Audit & Risk Committee** is responsible for overseeing (i) the ERM program, which includes management of climate-related risks and (ii) financial and other reporting to ensure transparency and consistency with best practices and standards.
- The **Compensation & Human Capital Management Committee** oversees executive compensation, including establishing incentive goals to drive execution of strategy, as well as human capital management matters such as diversity, equity and inclusion. Several ESG goals, including those related to climate change, are included in executive incentive compensation for HEI and utility executives. This includes goals related to accelerating renewable energy, reducing GHG emissions and improving reliability and electrification of transportation (EoT).
- In addition to the HEI Board committees, the Hawaiian Electric Audit & Risk Committee assists in overseeing the utility ERM program and the ASB Risk Committee assists in overseeing the bank's ERM program.



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What is the oversight process for climate-related risks and opportunities?

The Board has approved a consolidated ERM system recommended by management. The system is designed to identify and assess risks across the HEI enterprise so that information regarding enterprise risks can be reported to the Board along with proposed strategies for mitigating and managing these risks. The structure of the ERM system includes separate chief risk officers at Hawaiian Electric and ASB in addition to HEI's chief risk officer (CRO). The ERM functions for "other" operations of HEI, such as Pacific Current, are performed by the HEI CRO or HEI employees under the supervision of the HEI CRO. Each subsidiary CRO reports directly to the respective subsidiary president and functionally to the HEI CRO, who reviews and evaluates such risks on a consolidated basis. This risk management structure allows for industry-specific risk identification and management at the subsidiary levels while also ensuring an integrated and consolidated view of risk at the holding company level.

Business and strategic planning are designed to develop goals and priorities, establish key performance indicators and identify challenges to successfully implementing company strategy. Management hosts and actively participates in an annual multi-day strategy retreat with the Board, where plans and strategic initiatives across the HEI enterprise are reviewed, providing the basis for the annual budgeting process and update to our multi-year financial forecast. Strategies and progress updates toward achieving key goals, such as the RPS, are discussed with the Board in depth at the retreat, as well as through Board meetings over the course of the year. On an ongoing basis, management plans and executes strategies to achieve organizational priorities, including ESG responsibilities and initiatives.

Future Intent

As the climate change landscape evolves, we will continue to build upon the strong base level of experience and knowledge within senior management and the Board, as well as continue to consider climate change expertise in Board succession planning. The full Board will continue to monitor our sustainability performance and approve updates to our sustainability strategy and goals.

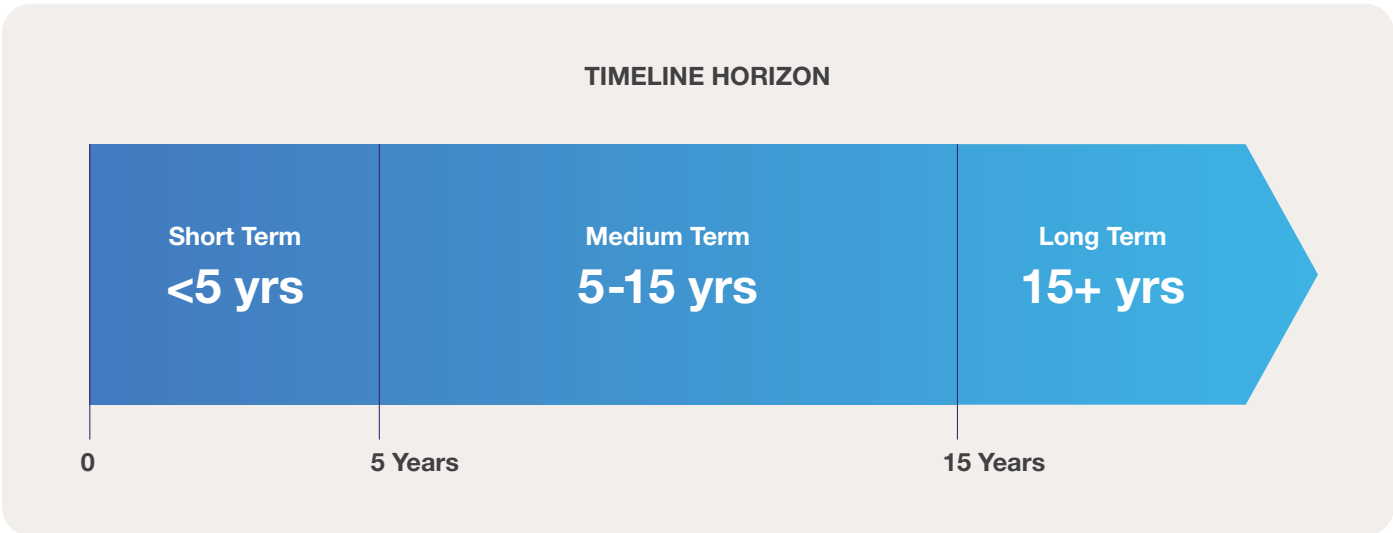


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Strategy

What climate-related risks and opportunities has HEI identified over the short, medium and long term?

In preparation for this report, risks and opportunities were considered for three time horizons — short term (<5 years), medium term (5-15 years) and long term (15+ years).



In line with TCFD recommendations, HEI categorizes risks into five themes: Physical, Technology, Market, Policy & Legal and Reputation. Examples of risks identified through HEI's physical climate risk assessment are provided on the next page and categorized by risk theme and timing.



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Risk Theme Descriptions and Timeline

RISK THEME DESCRIPTIONS	
THEME	DESCRIPTION
Physical	Risks posed to operations and assets by climate change. Physical risks originating from climate change can (a) be event-driven (acute), such as increased severity of extreme weather events (e.g., hurricanes, droughts, floods and fires) or (b) relate to longer-term (chronic) shifts, such as increases in precipitation and temperature, greater variability in weather patterns and sea level rise.
Technology	Risks associated with the substitution of existing products and services with lower emissions options, unsuccessful investment in new technologies and costs to transition to lower emissions technology.
Market	Risks associated with a significant change in consumer behavior and expectations or with consumers seeking new, enhanced and/or innovative goods and services, which may include low-carbon energy solutions and digitalized services. Risks also include other disruptions such as geopolitical and pandemic-related challenges.
Policy & Legal	Risks associated with legislative and regulatory actions to reduce carbon emissions (such as acceleration of energy transition requirements, pricing of GHG emissions, enhanced emissions reporting obligations, mandates on and regulation of existing products and services or new product development) and exposure to litigation. Risks also include financial exposure of stranded assets and increased disclosure requirements.
Reputation	Risks arising from stakeholders' expectations of how businesses prepare for and respond to climate change issues and events. Risks in this area can lead to loss of revenue or market share if these expectations are not addressed.

RISK TIMELINE		
THEME	RISK NAME	TIMELINE
Physical	Flooding (Acute)	Short term
	Sea level rise (Chronic)	Medium term
	Increased frequency of intense/severe storms (Chronic)	Medium term
Technology	Reliability	Short term
	System resilience	Short term
	Unsuccessful investment in new technologies	Medium term
Market	Affordability	Short term
	Increased cost of raw material and key inputs	Short term
	Access to capital to adequately fund investments	Medium term
	Change in customer behavior/expectations (e.g., customer reliance on fossil fuel self-service distributed generation)	Short term
	Negative impacts to state's economy	Medium term
Policy & Legal	Managing public and regulatory policies / expectations / perceptions, including delayed regulatory approvals	Short term
	GHG emissions pricing	Short term
Reputation	Increased stakeholder concern	Short term
	Stigmatization of sectors, technologies and products	Medium term



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Opportunity Theme Descriptions and Timeline

OPPORTUNITY THEME DESCRIPTIONS	
THEME	DESCRIPTION
Energy Source	Opportunities typically associated with the utilization of lower emission sources of energy, supportive policy incentives and new technologies.
Resource Efficiency	Opportunities relating to more efficient energy production and distribution and modes of transportation, increased efficiency in buildings (including water, energy and cooling/heating) and the reduction of water usage and consumption.
Products & Services	Opportunities relating to the development and/or expanded use of goods and services with lower emissions, development of climate adaptation solutions and development of new products or services.
Markets	Opportunities related to expansion of and access to new markets, supporting and facilitating integration of new low-carbon and climate adaptation technologies, products and services, and use of public sector incentives to enable more timely and efficient energy transition and climate adaptation.
Resilience	Opportunities related to improvement of system resilience and reliability, e.g., through resource and/or geographic diversification, system hardening, deployment of new technologies and customer participation in new programs.

OPPORTUNITY TIMELINE		
THEME	OPPORTUNITY NAME	TIMELINE
Energy Source	Increased use of renewable energy sources	Short term
	Growth of decentralized/distributed generation and grid services	Short term
Resource Efficiency	Electrification of transportation and other sectors	Short term
	More efficient transmission and distribution system and operations	Short term
Products & Services	Shift in customer preferences creating opportunities for new energy products and programs	Short term
	Financing physical relocation or reinforcement of properties	Short term
	Financing the renewable energy transition and investing in R&D of negative emissions technologies	Short term
	Water/wastewater management	Short term
Market	Affordable housing	Short term
	Local catalyst for change	Short term
	Sustainable / affordable / resilient community (re-)development	Medium term
Resilience	Hardening of critical infrastructure assets and diversification of geography (e.g., siting of infrastructure at higher elevations and/or other islands within the state)	Short to long term
	Hawai'i as center of climate change research and solutions	Medium term



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What is the impact of climate-related risks and opportunities on HEI's businesses, strategy and financial planning?

Climate change presents a range of risks as well as meaningful opportunities for our companies. With our remote island location, we see many climate-related risks — and our need to address them — as near-term considerations. We also see many of our opportunities the same way. We increasingly incorporate quantitative climate insights into our long-term strategies, as reflected in our proposed climate resilience program and ongoing statewide decarbonization pathways analysis. The paragraphs that follow discuss key risks and opportunities related to climate change that we're addressing and factoring into our strategies and plans.

Risks

Climate change is expected to increase the severity and frequency of hurricanes, flooding and droughts in Hawai'i while leading to rising temperatures and sea level across the state. If not appropriately planned for and addressed, these physical climate change impacts could cause damage to (i) Hawaiian Electric facilities, impacting operations and reliability, (ii) the properties that secure American Savings Bank's residential and commercial loans, impacting the value of that collateral and (iii) the state economy, affecting the financial health of our customer base. We're focused on managing and mitigating physical risks to our operations from climate change and are leaders in community planning initiatives to promote physical and economic resilience in the state.

Hawaiian Electric continues its work to assess resilience threats and prioritize improvements to enhance resilience. This has included an independent review of potential resilience vulnerabilities, using climate risk analytics to refine and prioritize specific needs and engaging with stakeholders to incorporate their perspectives. These considerations are part of our Integrated Grid Planning (IGP) process, which is our in-progress planning effort to determine future generation, transmission and distribution needs for our system.

- Hawaiian Electric engaged a leading consulting firm in electric utility resilience to perform an independent assessment to identify key vulnerabilities to severe natural events. Following this assessment, the consultant report outlined a set of recommendations to ensure quick restoration of power to critical customers, reduce total restoration time and minimize the total amount of damage from a severe natural event. This included recommendations for system hardening, substation flood monitoring, enhanced vegetation management, emergency restoration, damage prediction modeling and additional in-depth studies.
- Hawaiian Electric engaged a leading provider of predictive climate risk analytics software to support initial climate risk analyses for its generation, transmission and distribution infrastructure. The utility used this climate risk analysis to inform decisions about the location, prioritization and timing of investments to improve electric system resilience.
- Hawaiian Electric is also using these analyses to inform its IGP process and planning. The IGP process includes a Resilience Working Group composed of stakeholders representing critical infrastructure providers, emergency management agencies, state and local government energy, planning, climate change and resilience officials, the hospitality and healthcare industries, the military, solar and other renewable energy providers and other stakeholders. Thus far, the Resilience Working Group has identified key resilience threats and associated scenarios; developed recommendations for: 1) the IGP process, 2) utility work outside of the IGP process and 3) key customer and infrastructure partners to improve resilience; developed a taxonomy for categorizing and prioritizing critical customers; and assessed the capabilities and needs of key customers and infrastructure.



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- The utility used insights from these analyses and the IGP Resilience Working Group to develop a five-year, \$190 million Climate Adaptation Transmission and Distribution Resilience Program. The program prioritizes high-impact, cost-effective projects for O‘ahu, Maui County, and Hawai‘i Island to address climate-related vulnerabilities. Program benefits are evaluated against quantified risks, including projected county-level impacts to GDP based on hurricane severity. Key elements of this plan include strategic investments in critical transmission and distribution asset hardening, wildfire prevention and mitigation, hazard tree removal and advanced resilience performance modeling. The program application was filed with the Hawaii Public Utilities Commission in June 2022. The utility is also pursuing federal grant funding for the program through the Infrastructure Investment and Jobs Act (IIJA) Grid Resilience and Innovation Partnerships (GRIP) program to help offset costs to customers. If awarded, the grant would offset about 50% of the program cost.
- In parallel, Hawaiian Electric continues to focus on strengthening its emergency response capabilities through training and development as well as by engaging with community leaders and stakeholders to strengthen broader community resilience.

American Savings Bank regularly monitors its credit exposure in areas at risk of sea-level rise and increased exposure to climate-related weather events. Its appraisal team performs property research to confirm flood zones, and its underwriting decisions evaluate flood zone maps, which consider property location, topography and elevation. The bank requires borrowers with property in a Special Flood Hazard Area, as defined by the Federal Emergency Management Agency (FEMA), to maintain sufficient flood insurance throughout the life of the loan. Should Special Flood Hazard Areas change due to sea-level rise, the bank may require affected borrowers to obtain flood insurance. The bank monitors leading indicators to assess how and when market valuations may reflect potential future climate change impacts and discusses such indicators and any mitigation recommendations with the ASB Risk Committee, HEI CRO and HEI Audit & Risk Committee.

ASB also considers and plans for other physical risks related to climate change, such as the potential for business interruption due to severe weather. To promote resilience and continued customer service, the bank’s core processing is located on the U.S. mainland with back-ups in several different U.S. states. This geographic diversification supports the bank’s ability to serve its customers even in the event of severe storms, flooding or other acute events impacting Hawai‘i.



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Hawai'i economy-wide pathways to net zero

In 2022, Hawaiian Electric worked with a nationally recognized consulting firm to develop long-term, economywide decarbonization scenarios that meet Hawai'i's climate targets.¹ This analysis covers a wide range of sectors across Hawai'i including electricity, transportation, agriculture, buildings, and other commercial activities. The study is being provided to policymakers, stakeholders, and the broader public to help focus efforts, measure progress, and drive action plans.

Among the key findings of the pathways analysis:

- Renewable electricity generation is necessary but not sufficient by itself to meet Hawai'i's decarbonization goals.
- Electrification is a key driver in decarbonization of ground transportation but in aviation and marine transportation decarbonized fuels will be required.
- The pace of GHG reductions will be governed by the lifetimes of energy-consuming equipment, vehicles and buildings, as well as by the timelines to site and develop new renewable resources and the electricity infrastructure to deliver that power to customers.
- Even ambitious efforts to achieve statutory GHG reduction targets may not be enough and more aggressive near-term actions may be required to hit a 2030 target of 50% GHG reductions.
- Energy efficiency and conservation support the net zero goal by reducing the amount of renewable electricity and fuels that must be procured.
- The electrification of transportation and industry will significantly increase the amount of electricity that needs to be generated.
- Carbon dioxide removal — also called carbon sequestration — will be required to achieve net zero, either through increased natural sinks or negative emissions technologies.
- New policies and regulations are needed to ensure the deployment of decarbonization strategies outside the electric sector.

1 Pathways analysis covered the islands served by Hawaiian Electric.



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Opportunities

While climate change presents significant risks, it also offers meaningful opportunities for HEI and its subsidiaries. As the State of Hawai'i strives to transition to a carbon neutral economy and continues one of the nation's most ambitious energy transformations, our companies have opportunities to invest in decarbonization and resilience, advance electrification of our economy to benefit all customers, offer new products and services and partner with our communities to advance a more sustainable future for Hawai'i.

Hawaiian Electric climate change opportunities

- Adding hundreds of megawatts of renewable energy to our system and retiring fossil fuel-based generation to reduce carbon emissions, increase energy independence and promote customer bill stability
- Incorporating battery storage to help integrate increasing amounts of intermittent renewable energy such as solar or wind resources
- Creating opportunities for customers to benefit from and participate in the clean energy transition by providing programs and rate structures to integrate customer-owned distributed energy resources (DERs) that include private rooftop solar, battery storage, energy efficiency and electric vehicles
- Expanding access to clean energy benefits through our community based renewable energy (community solar) program, enabling customers without the ability to add private rooftop solar, as well as qualified low-to-moderate income (LMI) customers, to participate in the clean energy transition and benefit from bill credits
- Enabling the use of customer DERs to provide grid services, supporting reliable grid operations, responding to variability in electricity supply and demand and providing new opportunities for customers to gain value from connection to the grid
- Advancing opportunities to electrify the state's economy, including the transportation sector, and thus reducing Hawai'i's overall carbon emissions; this includes deploying utility-owned fast chargers, proposing make-ready infrastructure to support electric buses and fleets, providing educational resources to help overcome barriers to electric vehicle adoption and collaborating with stakeholders to advance electrification
- Modernizing our grid to facilitate increased integration of clean energy and distributed resources, greater efficiency, resilience, improved reliability and more customer options
- Enhancing the resilience of our system through partnering with key customers, including the military, to develop resilient generation and microgrids that can be isolated from the grid when needed; hardening or reinforcing critical transmission, sub-transmission and distribution circuits; locating equipment outside areas prone to flooding; and considering alternative paths for transmission circuits to increase geographic diversity
- Taking a leading role in developing economy-wide net zero pathways to forecast how Hawai'i's economy will have to adapt to meet the state's ambitious climate change goals and working with stakeholders to share and operationalize insights (e.g., impact of increased electrification on pathways)
- Identifying opportunities to partner with different industries to deploy mitigation strategies that drive efficient infrastructure investment to address climate impact and opportunities
- Earning financial incentives for accelerating the growth of renewable energy on our system through the renewable energy performance incentive



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American Savings Bank climate change opportunities

- Financing customer investments in energy efficiency, renewable energy, storage, electric vehicles and resilience as businesses and consumers throughout Hawai'i work to mitigate and adapt to climate change
- Participating in tax credit programs, such as New Markets Tax Credits (NMTC), to help fund renewable energy and other projects in disadvantaged communities. Through a Hawai'i-based community development entity formed in partnership with the O'ahu Economic Development Board, the bank has helped deploy over \$100 million in NMTCs and plans to apply for future allocations. These allocations bring new investments, services and jobs to underserved, low-income communities and include direct investment in renewable energy projects as part of our state's clean energy transition.
- Deepening customer relationships by offering educational resources to help customers plan for climate change impacts, such as sea-level rise or increased severity of storms, on homes and businesses
- Enhancing the energy and water efficiency of the bank's real estate footprint (reduced in recent years through office and branch consolidations) and incentivizing employees to use low-carbon transportation options
- Reducing reliance on the physical retail branch network, increasing resource efficiency as the bank upgrades facilities and transitions to mobile- and technology-enabled "Anytime, Anywhere Banking"
- Financing the development of sustainable, affordable and workforce housing; such housing can be equipped with features such as solar water heating, solar plus battery storage and efficient water and water reuse systems



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What is the potential impact of different scenarios, including a 2°C or lower scenario, for HEI?

In 2021, we conducted a high-level scenario analysis to assess the potential impact on our business, strategy and financial planning of certain climate scenarios. To inform our analysis of risks and opportunities, we selected one transition scenario, the International Energy Agency's Energy Technology Perspectives (ETP) 2°C Scenario, and one physical scenario, the Intergovernmental Panel on Climate Change's (IPCC) Representative Concentration Pathways (RCP) 6.0.

TRANSITION SCENARIO

ETP 2°C Scenario

Accelerated

(Faster Innovation Case — 1.5°C)

PHYSICAL SCENARIO

RCP 6.0 Scenario

Transition Scenario

In early 2021, we selected the ETP 2°C Scenario as a basis for our analysis. This choice was partially informed by our anticipation of an eventual shift to 1.5°C alignment. The ETP's inclusion of a "Faster Innovation Case" provides an accelerated scenario focused on achieving a 1.5°C target by 2050.

We have since confirmed our view that the accelerated ETP Scenario is appropriate as it

(i) recognizes the importance of decarbonizing economic sectors beyond electricity to reach net zero global emissions by 2050 (in line with a 1.5°C target) and (ii) highlights the role of the electricity sector in enabling broader economy decarbonization.

The accelerated ETP Scenario assumes a transformation of energy generation and consumption to yield a broad reduction in carbon emissions across energy generation, transportation, industry and buildings. Under this scenario, significant increases in renewable electricity generation enable decarbonization of other sectors. As more companies and sectors electrify, electricity consumption is expected to grow significantly. The scenario assumes renewable energy generation, process electrification and other technologies, such as carbon capture, utilization and storage (CCUS) and low-carbon fuels needed to effectuate carbon reductions, are commercially available or sufficiently advanced in their development lifecycle. Policymakers will have a critical role in enabling the transition, for example, by enacting policies to incentivize investment in new technologies and in electrification of the transport, industry and building sectors.



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Key transition impacts under the accelerated ETP Scenario

- **Increase in beneficial electrification.** Electrification of transportation and other sectors would drive increased electricity demand. For our utility, this would require procurement and/or construction of more renewable energy generation to meet renewable energy and decarbonization targets, as well as infrastructure investment (such as make-ready infrastructure for electric vehicle charging) and upgrades to the transmission and distribution system. Increased electrification would enable the cost of such investments to be spread across a larger base, and thus would be expected to reduce the per-unit cost of electricity for customers. However, greater generation needs could exacerbate land use issues (e.g., due to limited availability of land appropriate for siting utility-scale renewable energy projects), making large-scale projects challenging. The utility's goal of net zero emissions from generation by 2045 is consistent with the 2050 economy-wide net zero target identified in 1.5°C scenarios.
- **Increased need for management of diverse sources and services.** Increased reliance on electricity across other economic sectors would stimulate more demand for energy efficiency solutions as well as tools to manage and optimize energy usage. Customers are playing a more active role in energy generation and in providing services to the grid and this trend is expected to continue. Further growth in distributed energy resources (DERs) and aggregation of DERs to provide grid services increases the need for a sophisticated grid and customer programs to integrate and optimize such resources. The role of the utility may include serving as a platform or marketplace that provides and manages a range of customer DERs and services from third-party service providers. A key challenge in this context is optimizing our state's island grids using all available levers, including energy efficiency and other demand-side programs.
- **Affordable/workforce housing and sustainable investment.** The bank would also see greater demand for financing solutions to develop and deliver more affordable, sustainable and energy-efficient housing options.
- **Opportunities to finance the clean energy transition.** Our bank would see greater demand for financing solutions from retail and commercial customers to acquire and install distributed generation and storage assets, invest in energy efficiency and vehicle electrification and pursue other carbon reduction solutions, such as CCUS.
- **Investment in customer relationships.** The changing energy landscape creates opportunities for new customer segments and service offerings. Expanded customer relationships may require additional investments by our utility to adapt to evolving customer expectations. Our bank may also need to invest in additional customer analytics and marketing to develop and deploy new banking products and services for customers investing in clean energy, efficiency and resilience measures.
- **Creation of new jobs and employment opportunities.** The transition to a low-carbon economy and the corresponding evolving role of the utility to include more technology-enabled service delivery will require increased technological skills within our utility workforce. These changes are similar at the bank, as customers increasingly expect technology-enabled banking solutions and as the bank continues to enhance its digital offerings. Hawaii's clean economy transition may also support other industries (e.g., regenerative tourism).



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Physical Scenario

For our physical scenario we selected the RCP 6.0 Scenario. This scenario assumes a moderate approach to developing and integrating low-carbon solutions in the global economy. Under this scenario, global mean surface temperature is forecast to increase by 0.8 to 1.8°C by mid-century and could increase up to 3.1°C by 2100, leading to a range of climate impacts. Our climate risk models also incorporate parameters from the more severe RCP 8.5 Scenario. The Hawai'i State Climate Commission's 2022 Sea Level Rise Report indicates Hawai'i could experience sea-level rise of 1 foot by 2050 and nearly 4 feet by the end of the century (mid-range estimates). Increased temperatures and sea level can lead to higher, more frequent storm surges, increased coastal flooding and erosion, increased inland flooding, more frequent periods of extreme heat and increased storm intensity and frequency. Hotter, drier conditions could also develop on some parts of the islands and could lead to increased frequency of wildfires.

Key physical impacts under the RCP 6.0 Scenario

- **Physical ramifications of climate change.** Climate change could impact our utility's physical assets, increase operational disruptions and negatively affect our customers. This would require further investments to "harden" our system, prevent and protect against wildfires, ensure sufficient geographic distribution of generation and transmission assets to enhance reliability and protect against safety risks to employees and customers. Investments to protect against/adapt to climate change physical impacts in advance are more cost effective than addressing those impacts after they occur.
- **Lending zone shrinkage at the bank.** For our bank these physical impacts necessitate appropriate risk mitigation steps to avoid valuation impacts to loan portfolio collateral. The bank monitors such risks and has identified risk mitigation steps to be implemented if and when needed. As climate-related impacts continue to intensify, the bank may need to cease lending in certain at-risk parts of the islands.
- **Potential impact on tourism and the state economy.** Warmer temperatures, sea-level rise, increased flooding and coastal erosion and greater frequency of severe weather could adversely impact Hawai'i's appeal as a place to live, run a business and visit. Our success is closely tied to the health of Hawai'i's economy, and a decline in tourism, business activity and/or rise in Hawai'i residents permanently leaving the islands could reduce our customer base or impact customers' financial health.

What metrics are used by HEI to assess climate-related risks and opportunities?

HEI tracks a range of metrics to assess, monitor and inform our actions to manage climate-related matters. Several of these metrics are reported in other sections of this report, notably the enterprise-wide GHG inventory. For the utility our primary climate-related metrics are carbon and other GHG emissions, renewable energy performance and system reliability performance. For the bank, key climate-related metrics relate to sea-level rise, including the number and value of mortgage loans in the 100-year flood zone as well as internally monitored indicators of potential future shifts in Hawai'i property market values. As we continue to mature our analyses of climate-related risks and opportunities we may refine and/or expand the metrics we track and report.



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What targets are used by HEI to manage its strategies for addressing climate-related risks and opportunities?

Renewable Portfolio Standard (RPS) and Greenhouse Gas (GHG) targets

Renewable Portfolio Standard (RPS) represents the percentage of net electricity generated by renewable sources. The definition of Renewable Portfolio Standard (RPS) was changed by state law in 2022. It was previously defined as the percentage of electricity sold that came from renewable resources. GHG emissions apply to stack emissions from power generation on Hawaiian Electric's system from both utility-owned sources and independent power producers.

We have aligned our efforts with Hawai'i's state RPS and carbon neutral to carbon negative economy goals. Since the enactment of the 100% RPS mandate, we've continued to accelerate our work to procure more renewable energy; these procurements are expected to significantly reduce carbon emissions within the next few years. Our company and management team are incentivized to continue our efforts to outperform the RPS milestones in both magnitude and timeframe. We have also adopted our own additional GHG reduction goals. We measure our performance against:

- **Hawai'i's statutory RPS requirements**, which are to achieve 100% RPS by 2045, with interim goals of 30% by 2020, 40% by 2030, 70% by 2040. We outperformed the 2020 RPS goal, reaching 34.5% RPS (at the time calculated based on renewable generation as a percent of electricity sales) in 2020. Under the newly redefined calculation, we achieved 32% RPS in 2022. Notwithstanding the change in how RPS is calculated, we still expect to meet the 40% by 2030 requirement ahead of schedule. Hawaiian Electric reports its RPS progress quarterly via its [website](#).
- **Our utility's Climate Change Action Plan goals**, adopted in 2021, are to reduce GHGs in stack emissions from power generation 70% by 2030 (compared to 2005 levels) and achieve or exceed carbon neutrality from power generation by 2045. As of 2022, we achieved a preliminary 22% reduction compared to 2005.
- **Hawai'i's Performance Based Regulation (PBR) framework**, which includes incentives for outperforming the RPS trajectory, faster interconnection of customer DERs and other demand-side incentives in areas such as energy efficiency. Hawaiian Electric reports its performance against PBR metrics via its [website](#).



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Hawaiian Electric has several financial incentives to outperform Hawai'i's statutory

RPS goals:

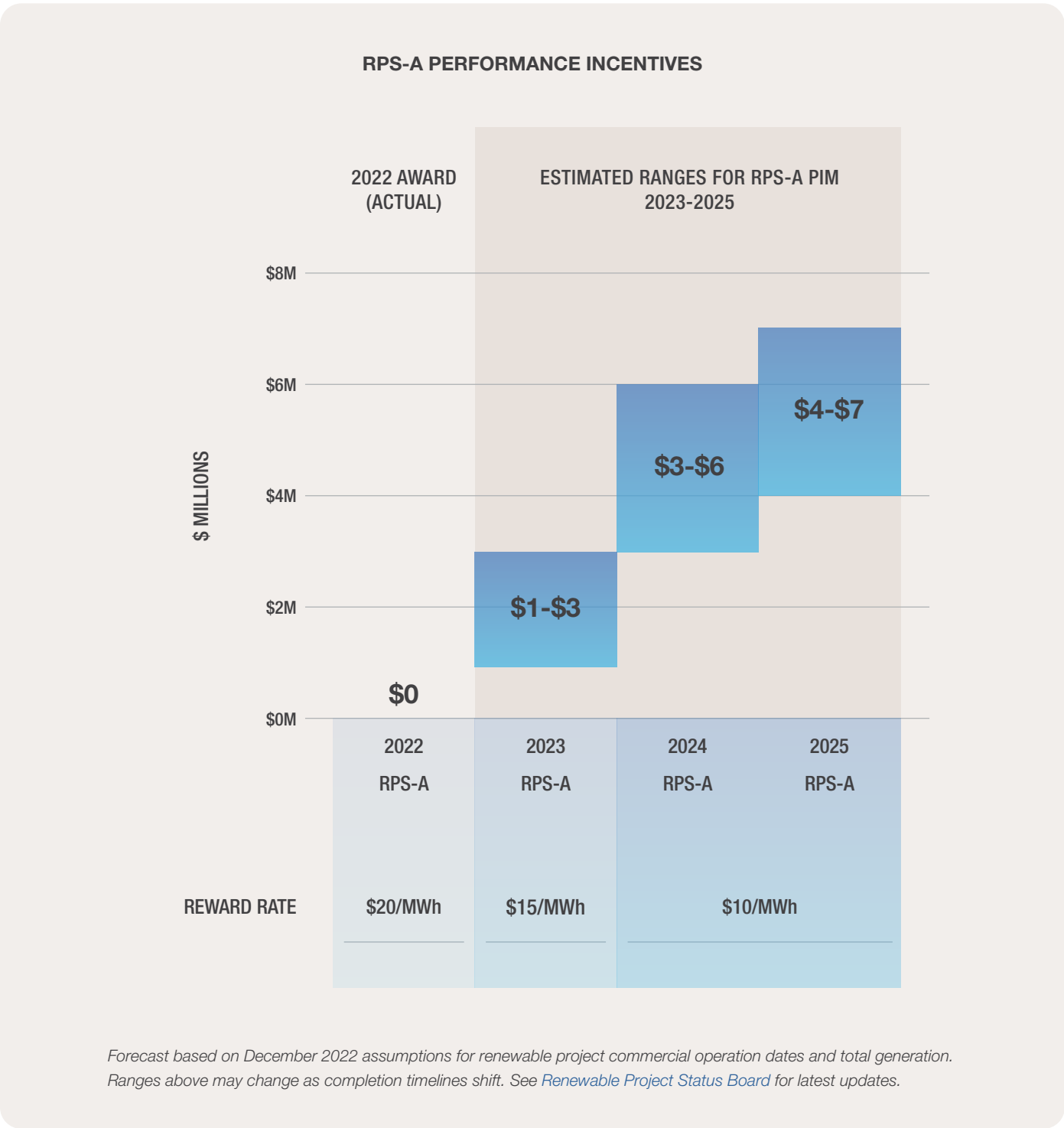
- Should Hawaiian Electric fall short of a statutory RPS milestone in 2030, 2040 or 2045, it could be subject to a penalty of \$20 for each MWh that it is deficient. The penalty may be waived or reduced if the shortfall is due to circumstances outside the utility's reasonable control.
- In 2021, the Public Utilities Commission (PUC) implemented the RPS-A performance incentive to promote accelerated RPS achievement. The utility is eligible to earn a reward of \$15/MWh in 2023 and \$10/MWh in 2024 and beyond should it outperform the RPS-A target each year. The annual RPS-A targets are an interpolation of the RPS goals for 2020, 2030, 2040 and 2045 (definitions of RPS and RPS-A were initially different but have since converged).
 - In 2022, the utility did not earn an award under the RPS-A incentive. Based on assumptions as of February 2023 regarding renewable project commercial operations dates and total generation, the 2023-2025 RPS-A performance incentive ranges are set forth in the adjacent table. Projections may change as completion timelines shift (see [Renewable Project Status Board](#) on Hawaiianelectric.com for latest updates).
- In 2020 the Compensation Committee of the Board established a compensation incentive for HEI and utility executives to encourage executives to work toward achieving higher RPS levels well ahead of statutory requirements.
- Beginning with the 2022-24 performance period, in light of Hawaiian Electric's goal to reduce carbon emissions 70% by 2030 compared to a 2005 baseline, the climate goal component of the long-term incentive plan was updated to measure emissions reductions. For the 2022-24 and 2023-25 periods, 20% of HEI and Hawaiian Electric executives' long-term incentive pay is tied to emissions performance.



This report covers information we have determined to be important from an ESG reporting perspective, which is distinct from the materiality standard used for purposes of our financial disclosures. For additional information regarding HEI, please see our filings with the SEC.

PBR PIMs

As part of PBR, the PUC established several new Performance Incentive Mechanisms (PIMs) designed to incentivize the utility to achieve goals to advance an equitable, affordable clean energy transition. These PIMs include the RPS-A PIM described above.



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