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IN THE SUPREME COURT OF THE STATE OF HAWAI'I

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In the Matter of the Application of

HAWAI'I ELECTRIC LIGHT COMPANY, INC.

For Approval of a Power Purchase Agreement for Renewable
Dispatchable Firm Energy and Capacity.

SCOT-22-0000418

APPEAL FROM THE PUBLIC UTILITIES COMMISSION
(Docket No. 2017-0122)

MARCH 13, 2023

RECKTENWALD, C.J., NAKAYAMA, MCKENNA, WILSON, AND EDDINS, JJ.;
WITH WILSON, J., ALSO CONCURRING SEPARATELY

OPINION OF THE COURT BY EDDINS, J.

Over ten years ago, energy company Hu Honua had a brainwave: it could produce renewable energy by burning trees. The company sought regulatory approval to supply energy to Hawai'i Island using a biomass power plant. Last summer, approval for that energy deal was denied. Hu Honua appeals the

denial, arguing that the Public Utilities Commission (PUC) misunderstood its mandate and held Hu Honua to an unfair standard.

We disagree. The PUC understood its public interest-minded mission. It faithfully followed our remand instructions to consider the reasonableness of the proposed project's costs in light of its greenhouse gas emissions and the project's impact on intervenor Life of the Land's members' right to a clean and healthful environment. It stayed true to the language of its governing statute HRS § 269-6(b) (Supp. 2021) by measuring the project's cost and system impact. And it acted properly within its role as fact-finder when it evaluated Hu Honua by its own statements and promises and, ultimately, found them unconvincing.

Finding no error, we affirm the PUC's decision rejecting the power purchase agreement between Hu Honua and the Hawai'i Electric Light Company, Inc.

I.

In 2012, Hawai'i Electric Light Company, Inc. (HELCO) approached its regulator, the Public Utilities Commission, about entering into a power purchase agreement (PPA) with private company Hu Honua Bioenergy, LLC (Hu Honua). Under the agreement, Hu Honua would convert an abandoned power plant in Pepe'ekeo, Hawai'i. The plant would produce energy by burning

woody biomass – mainly locally-grown eucalyptus trees. HELCO would purchase this energy to service Hawai'i Island's power grid.

In 2017, the PUC granted HELCO a waiver from the competitive bidding process and held a contested case hearing over the PPA. Life of the Land (LOL), a Hawai'i-based community action group dedicated to protecting and preserving the 'āina, sought to intervene in the hearing. They were given limited, rather than full participant, status. The PUC ultimately approved an Amended PPA between Hu Honua and HELCO for a thirty-year term. LOL appealed the decision.

In Matter of Hawai'i Elec. Light Co., Inc., 145 Hawai'i 1, 445 P.3d 673 (2019) (HELCO I), this court vacated the PUC's decision. We told the commission to hold a new hearing. Our remand instructed the PUC to give "LOL an opportunity to meaningfully address the impacts of approving the Amended PPA on LOL's members' right to a clean and healthful environment, as defined by HRS Chapter 269." Id. at 26, 445 P.3d at 698. We also told the PUC to give "express consideration of GHG emissions that would result from approving the Amended PPA, whether the cost of energy under the Amended PPA is reasonable in light of the potential for GHG emissions, and whether the terms of the Amended PPA are prudent and in the public interest,

in light of its potential hidden and long-term consequences.”

Id.

On remand, the PUC devoted its attention to a threshold issue - whether it should “reissue” to HELCO a waiver from the competitive bidding process. Matter of Hawai‘i Elec. Light Co., Inc., 149 Hawai‘i 239, 240, 487 P.3d 708, 709 (2021) (HELCO II). It decided to deny the waiver. Id. Since HELCO now had no waiver, the PUC declined to consider the merits of the Amended PPA. Id.

This time, Hu Honua appealed. Because the competitive waiver issue was outside the scope of HELCO I’s remand, we returned the case. We repeated our remand order from HELCO I. Id. at 242, 487 P.3d at 711.

The PUC held a new contested case hearing on the Amended PPA in early March 2022. Before the evidentiary hearings began, Hu Honua brought several motions centered on Act 82, which had amended HRS § 269-6(b) in 2021. HRS § 269-6(b) is the primary statute governing the PUC’s evaluation of energy projects like the Amended PPA. It requires the PUC to engage in “public interest-minded balancing.” Matter of Maui Elec. Co., Ltd., 150 Hawai‘i 528, 532, 506 P.3d 192, 196 (2022) (Paeahu).

Hu Honua argued that Act 82 changed things. It said the PUC could now only consider GHG emissions from *fossil fuels*.

Emissions from other sources, such as biomass burned to produce renewable energy, had to be kept out of the equation.

The commission rejected this approach. It concluded that Act 82 did not materially alter its statutory obligations under HRS § 269-6(b).

At the hearings, Hu Honua and HELCO maintained that the Amended PPA served the public interest. Yet they admitted that by their own numbers, the proposed project would produce massive carbon emissions - 8,035,804 metric tons over its 30-year term. The vast majority of these emissions would come from the plant's routine operations. Trucking trees to the plant would emit carbon. And when the trees burned, "stack emissions" would rise into the atmosphere.

But Hu Honua made a promise: the project would ultimately be carbon neutral. Hu Honua intended to offset its emissions by planting trees. These trees would sequester, by Hu Honua's count, 8,066,309 metric tons of carbon. That would zero out the project's projected eight million metric ton carbon price tag. If everything went right, it would even make the project carbon negative.

Hu Honua hoped to source all of its "feedstock," that is, the organic matter it hoped to burn for fuel, from locally-grown eucalyptus. Its tree supplier, a sister company to Hu Honua, would initially source eucalyptus from Pāhala, Pā'auhau, and

Hāmākua plantations on Hawai'i Island. According to Hu Honua, those lands have enough trees to fuel the project for nine years. Hu Honua suggested it could help the State by eradicating "invasive species" on Hawai'i Island and burning them as an additional fuel source. Hu Honua also claimed that sourcing feedstock outside of the island would only occur in an emergency.

To meet its sequestration goals, Hu Honua would have to plant a *lot* of trees. The company maintained that the bulk of this tree-planting – expected to sequester 5,882,322 metric tons of carbon – would occur on leased Hawai'i Island land. In Hu Honua's sequestration analysis, it included the three plantations it expected to source feedstock from. The sequestration analysis assumed that no trees would be cut down at these plantations between 2017 and 2021. But in testimony, Hu Honua indicated that harvesting had taken place at the Pāhala location during this period. The company did not demonstrate that it was currently replanting trees on this plantation. In fact, it stated that it does not plan to regrow the Pāhala and Hāmākua plantations at all.

Hu Honua provided the PUC with a "carbon calculator" that indicated its estimated emissions and sequestration numbers. The calculator showed significant increases in sequestration between 2021 and 2029. This implied an expansion in Hu Honua's

current leasing regime. All those extra trees would have to be planted *somewhere*.

But Hu Honua did not present evidence that it had leases secured that extended through the PPA's 30-year term. Rather, Hu Honua indicated that it had non-binding "good faith" lease negotiations that would not be finalized until the PUC approved the Amended PPA.

Hu Honua promised that if its sequestration performance fell short of its estimates, it would buy carbon offsets to make up for the deficit. It pledged up to \$450,000 for this effort, believing that it could buy carbon offsets at the price of \$15 per ton. Hu Honua did not identify the sources of the offsets, only saying that "reputable sources" would sell them. And Hu Honua did not explain how the PUC would verify the sequestration produced through these sales.

To supplement Hu Honua's carbon calculator, HELCO submitted its own analysis. This analysis measured GHG emissions from Hu Honua's project against a baseline without the project. HELCO estimated that Hu Honua's project would prevent 1,464,742 metric tons of emissions from entering the atmosphere. HELCO's consultant reached this number by combining an estimate of GHG emissions that would be avoided because of the project relative to the baseline, and the project's estimated lifetime emissions. HELCO's analysis took the carbon negative lifetime emissions

estimate from Hu Honua's analysis and plugged it into its own. Though HELCO labeled its analysis independent, it in fact relied on Hu Honua's.

On May 23, 2022, the PUC issued Decision and Order No. 38395. It declined to approve the Amended PPA.

In the order, the PUC found that the project would produce massive GHG emissions, and that Hu Honua's promise of carbon neutrality rested on speculative, uncertain assumptions. The commission expressed serious doubts that Hu Honua could actually live up to its sequestration estimates. It pointed out that Hu Honua had no firm plans for leasing land to plant trees. Using the carbon calculator provided by Hu Honua, the commission found that even changes as small as one-percent in Hu Honua's emissions and sequestration estimates would make the project a net carbon emitter. The commission calculated that the back-up money Hu Honua pledged, even if carbon offsets were available at the rate it expected, would only buy 30,000 metric tons of carbon offsets – less than one sixth of the carbon the project (per Hu Honua's own estimates) would emit annually.

The PUC was particularly troubled by the frontloading of GHG emissions in the project. While Hu Honua pledged to be carbon neutral on an annual basis by the end of 2035, the commission determined (again based on Hu Honua's numbers) that the *overall* impact of the project would not be carbon neutral

until 2047, two years after Hawai'i's 2045 zero emissions target came and went. For the first 25 years of the project, Hu Honua would be a significant net emitter. If Hu Honua did not meet its sequestration commitments, the PUC feared that the damage to the atmosphere could not be easily undone.

The PUC also found that the Amended PPA would significantly increase costs for rate-payers. Six years into the project, the fuel price was set to spike 15%, for no discernable reason. That spike - in combination with other pricing terms and adjustments for inflation - meant that the cost would continually rise. Overall, the PUC found that the project would increase the typical consumer bill by an average of \$10.97 a month throughout the full 30-year term. The PUC deemed this a significant bill impact. HELCO stated that there were no realistic modeling assumptions under which the project "could produce a net savings to the system or customer." Based on the project's high GHG emissions, the PUC did not consider these higher costs to consumers reasonable.

The PUC had another big time concern. The commission found that not only would the project fail to accelerate the retirement of fossil-fuel, it would *displace* other, more environmentally friendly renewable resources. Hu Honua said that its plant would only displace the fossil fuel-based Keāhole power plant. However, HELCO, which actually controls energy

dispatch, testified that this claim was "unrealistic" and "contrary to [HELCO's] practices" and "actual operational conditions." HELCO said that it would be "impossible" for the project to avoid displacing other renewable resources. The Consumer Advocate, a statutorily-mandated party to the proceedings, estimated that almost 60% of Hu Honua's generation would replace renewable energy generation. Here, the commission credited the testimony of HELCO and the Consumer Advocate over Hu Honua's. The PUC also credited HELCO's testimony that the Hu Honua project filled no pressing need in its power grid.

Summing up, the PUC found that the proposed project would emit substantially more carbon than it sequestered for at least the first 25 years of operation and raise ratepayer prices for the full term. And the PUC found Hu Honua's promise of eventual carbon neutrality speculative at best. Based on these findings, the PUC concluded that the Amended PPA was not in the public interest. It rejected the agreement.

Hu Honua moved the PUC to reconsider its Decision and Order. The PUC denied the motion in Decision and Order No. 38443.

Hu Honua appealed. It argues that (1) the PUC's order exceeded the scope of the HELCO I remand by considering energy prices, (2) the PUC improperly applied HRS § 269-6(b) by not limiting its comparison of the project to only fossil fuel

alternatives, and (3) violated Hu Honua's due process rights by finding facts not in the record, applying a wrong evidentiary standard, and subjecting Hu Honua to a carbon neutrality requirement.

II.

A.

We begin with the scope of remand. Hu Honua characterizes the HELCO I remand as confining the PUC to the "one discrete issue" of GHG emissions. Considerations of other key issues were "off-limits."

Where, exactly, Hu Honua locates this limitation remains a mystery. In HELCO I, we vacated the PUC's order and remanded for a new hearing. The PUC had to give "LOL an opportunity to meaningfully address the impacts of approving the Amended PPA on LOL's members' right to a clean and healthful environment, as defined by HRS Chapter 269." HELCO I, 145 Hawai'i at 26, 445 P.3d at 698. We said the hearing *must* include "express consideration of GHG emissions that would result from approving the Amended PPA, whether the cost of energy under the Amended PPA is reasonable in light of the potential for GHG emissions, and whether the terms of the Amended PPA are prudent and in the public interest, in light of its potential hidden and long-term consequences." Id.

Then, in HELCO II, this court explicitly considered the scope of the HELCO I remand. We reminded the parties that they were “fixed in the same position they were in following HELCO I” and repeated our remand instructions verbatim. HELCO II, 149 Hawai‘i at 242, 487 P.3d at 711.

Hu Honua seems to feel that the PUC’s consideration of pricing is unfair because back in its 2017 Decision & Order the PUC found the pricing reasonable. But that 2017 Decision & Order was precisely what HELCO I vacated. HELCO I, 145 Hawai‘i at 28, 445 P.3d at 700. Based on the straightforward language of the remand order, the PUC was not only *at liberty* to consider pricing, it was *required* to consider the reasonability of the project’s pricing in light of its GHG emissions. Hu Honua’s insistence that no specific language directs further consideration of energy costs is difficult to understand. Our roadmap was a simple one, and we gave it twice.

Even setting the remand language aside, the PUC has a duty to act in the public interest. See Haw. Const. art. XI, § 1; HRS § 269-145.5(b) (2020) (“In advancing the public interest, the commission shall balance technical, economic, environmental, and cultural considerations . . .”); Paeahu, 150 Hawai‘i at 534, 506 P.3d at 198 (principle that PUC must act in the public interest is “incorporated throughout HRS chapter 269”).

Protecting rate-payers by considering pricing impacts follows from that public interest obligation.

B.

Hu Honua's interpretation of HRS § 269-6(b) is equally strained. "HRS Chapter 269 is a law relating to environmental quality that defines the right to a clean and healthful environment under article XI, section 9 by providing that express consideration be given to reduction of greenhouse gas emissions in the decision-making of the Commission." In re Application of Maui Elec. Co., Ltd., 141 Hawai'i 249, 264, 408 P.3d 1, 16 (2017) (MECO).

HRS § 269-6(b) sets out specific factors the PUC must consider to determine whether the costs of a proposed energy project are reasonable. These include (1) price volatility; (2) export of funds for fuel imports; (3) fuel supply reliability risk; and (4) greenhouse gas emissions. The PUC then subjects these factors to "public interest-minded balancing." Paeahu, 150 Hawai'i at 532, 506 P.3d at 196.

Hu Honua maintains that when applying these factors to a renewable energy project, the "only permissible" comparison for the PUC to draw is with fossil-fuel plants. Considering a proposed renewable energy project's relative impacts or the displacement of other renewable energy projects is, apparently,

out-of-bounds. If Hu Honua is right, the only relevant question before the PUC was: is burning trees better than burning coal?

Neither the language of HRS § 269-6(b) nor the legislative intent behind it supports this blinkered approach. By drawing a hard line between fossil fuel and renewable energy, Hu Honua elides a crucial fact – producing biofuel, unlike producing other kinds of renewable energy such as solar or wind, emits high quantities of GHG emissions. If the PUC couldn't consider Hu Honua's relative impacts and the likelihood that it would supplant other renewable projects, it would be forced to treat a project expected to emit millions of metric tons of carbon as no different from a project expected to emit almost no carbon, merely because both draw on renewable energy sources.

But the legislature intended the PUC to consider "potentially harmful climate change due to the release of harmful greenhouse gases." MECO, 141 Hawai'i at 263, 408 P.3d at 15. We do not lightly assume that the legislature would sabotage its climate goals by limiting the PUC to artificial and unhelpful analyses.

Further, HRS § 269-6 cannot be read in isolation from HRS § 225P-5 (Supp. 2021), another law relating to environmental quality, which sets a state policy of achieving carbon neutrality "as quickly as practicable, but no later than 2045." HRS § 225P-5 mandates that we reduce emissions now, before the

damage done to the environment is irreversible – before action becomes impossible for future generations. Hu Honua's constrained reading of HRS § 269-6(b) does not reflect the legislature's urgency.

Still, Hu Honua insists that Act 82, which recently amended HRS § 269-6(b), alters this analysis. It does not.

Act 82's primary purpose was to exempt minor actions from the HRS § 269-6(b) analysis and to give the PUC discretion to determine on a case-by-case basis whether proceedings involving water, wastewater, and telecommunications projects require the HRS § 269-6(b) analysis. The amendment also made a number of small, non-substantive changes. Most relevantly, it arranged the four factors, previously stated in a sentence, into a numbered list. We don't see how this typographical change in any way touches the substance of the statute.

Hu Honua also invokes the act's legislative history. During the law-making process, language explicitly including biomass was added and then removed from the amendment. Hu Honua takes this as evincing a legislative intent to entirely exempt biomass emissions from consideration. But, taken in context, the legislature's actions indicate its desire to preserve the statute's original language and interpretation. The legislature was acting after MECO and HELCO I, cases that made clear HRS

§ 269-6(b) applied to emissions from biomass plants. Adding language to that effect would have been superfluous.

Also, Act 82's main purpose was to exempt certain projects from the PUC's involved GHG analysis. Had the legislature truly intended to exempt biomass emissions, it would have listed them with the other exemptions.

HRS Chapter 269 defines the Hawai'i Constitution's article XI, section 9 right to a clean and healthful environment, which encompasses the right to a life-sustaining climate system.

Paeahu, 150 Hawai'i at 538 n.15, 506 P.3d at 202 n.15.

Commanding a public agency charged with protecting the right to a life-sustaining climate system to disregard GHG emissions from a particular type of fuel source would undermine HRS Chapter 269. We don't think the legislature intended to go there, much less through a minor amendment bill.

C.

Lastly, Hu Honua asserts that the PUC violated its due process rights by finding its own facts, applying a higher evidentiary standard, and creating a carbon neutrality requirement.

First, the PUC's findings do not indicate that it tried to become its own "expert." Compiling data provided by Hu Honua's expert into a table does not produce new facts, nor does weighing competing evidence and finding, for example, that

HELCO's projections were more credible than Hu Honua's. Under HRS § 269-92 (2020), electric companies must reach full carbon neutrality by 2045. By calculating that Hu Honua's project would reach cumulative carbon neutrality in 2047, as opposed to annual carbon neutrality in 2035, the PUC hewed to its statutory mandate.

Nor does the PUC's critical evaluation of the evidence Hu Honua presented equate to applying a higher evidentiary standard. Rather, it demonstrates a more mundane phenomenon: a fact-finder finding one side's facts unpersuasive.

Hu Honua stresses that it and HELCO were the only ones to introduce expert evidence at the proceeding. If only one side employs an expert, the argument seems to run, that expert *must* be believed. But Hu Honua misunderstands its evidentiary burden. Hu Honua had to persuade the PUC, not the other way around.

Further, treating one side's ability to retain an expert as decisive in proceedings would unacceptably interfere with the due process rights of parties who, while not able to field competing expert witnesses, may have valid attacks to make on the credibility or persuasive force of expert evidence.

Third, Hu Honua argues that the PUC applied a novel and inappropriate standard: whether the project would achieve carbon neutrality. But it was Hu Honua, not the PUC, who introduced

the idea of carbon neutrality into the proceedings. In fact, Hu Honua went further - it pledged to be carbon *negative*. Carbon neutrality was key to Hu Honua's pitch, going directly to the reasonability of its costs in light of its GHG emissions.

As HRS § 269-9 (2020) recognizes, higher energy costs may be justified when the energy source avoids the harmful impacts of fossil fuels. But biomass and fossil fuel sources share one important defect - high GHG emissions. Hu Honua appears to have recognized that its project would not be found reasonable by the PUC if it offered both high costs *and* high emissions. So it argued that its emissions, once offset by tree planting, would amount to zero. How convincing the PUC found this carbon claim is an issue of fact, not the creation of a new legal rule.

Even if the PUC adopted carbon neutrality as a standard, it is not so clear that the agency would have erred.

We have said that an agency "must perform its statutory function in a manner that fulfills the State's affirmative constitutional obligations," Paeahu, 150 Hawai'i at 538, 506 P.3d at 202, and that "[a]rticle XI, section 9's 'clean and healthful environment' right as defined by HRS chapter 269 subsumes a right to a life-sustaining climate system," id. at 538 n.15, 506 P.3d at 202 n.15. The right to a life-sustaining climate system is not just affirmative; it is constantly evolving.

The people of Hawai'i have declared "a climate emergency." S.C.R. 44, S.D. 1, H.D. 1, 31st Leg., Reg. Sess. (2021). Hawai'i faces immediate threats to our cultural and economic survival: sea level rise, eroding the coast and flooding the land; ocean warming and acidification, bleaching coral reefs and devastating marine life; more frequent and more extreme droughts and storms. Id. For the human race as a whole, the threat is no less existential.

With each year, the impacts of climate change amplify and the chances to mitigate dwindle. "The Closing Window: Climate crisis calls for rapid transformation of societies," Emissions Gap Report 2022, <https://www.unep.org/resources/emissions-gap-report-2022> [<https://perma.cc/6JAR-RFZE>]. "A stepwise approach is no longer an option." Id. at page xv.

The reality is that yesterday's good enough has become today's unacceptable. The PUC was under no obligation to evaluate an energy project conceived of in 2012 the same way in 2022. Indeed, doing so would have betrayed its constitutional duty.

Because the PUC's actions aligned with its statutory and constitutional obligations, we affirm PUC Order Nos. 38395 and 38443.

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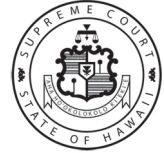
/s/ Mark E. Recktenwald

/s/ Paula A. Nakayama

/s/ Sabrina S. McKenna

/s/ Michael D. Wilson

/s/ Todd W. Eddins



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APPEAL FROM THE PUBLIC UTILITIES COMMISSION
(Docket No. 2017-0122)

MARCH 13, 2023

CONCURRING OPINION BY WILSON, J.

I. Introduction

The State of Hawai'i is in a declared climate emergency. S. Con. Res. 44, 31st Leg., Reg. Sess. (2021). Our Hawai'i State Legislature warned that climate change has increased the average global air temperature by one degree Celsius, which "is already having a dramatic impact on the environment[,]" including "larger and stronger hurricanes,

increased drought and flooding, shifting rain patterns, more and larger wildfires, a hotter and more acidic ocean, and damaged ecosystems, both marine and terrestrial[.]” Id. “Greenhouse gas emissions” are the cause of the emergency and unless reduced, they threaten to “break[.]” Earth’s life sustaining ecosystems and portend “untold suffering” of Hawai‘i’s people. Id. In its emergency declaration, the Hawai‘i legislature called for “an immense increase of scale in endeavors to conserve our biosphere[.]” Id. The climate emergency is intensifying. Four months ago, António Guterres, the Secretary-General of the United Nations warned that “[w]e are on a highway to climate hell with our foot still on the accelerator.” António Guterres, Secretary General’s Remarks to High-Level Opening of COP27 (Nov. 7, 2022).

The Public Utilities Commission (“PUC”) of the State of Hawai‘i is the agency responsible for the “immense increase of scale in endeavors to conserve our biosphere.” S. Con. Res. 44, 31st Leg., Reg. Sess. (2021). It has the daunting task of saving Hawai‘i from the existential threat of climate change by reducing carbon emissions from Hawai‘i’s energy system. In so doing, the PUC protects the constitutional right of Hawai‘i’s people to a life-sustaining climate system. See In re Maui

Elec. Co., 150 Hawai'i 528, 538, n.15, 506 P.3d 192, 202, n.15 (2022) (hereinafter "MECO").

I agree with the Majority that the PUC's consideration and denial of the amended Power Purchase Agreement ("PPA") met its duty under Article XI, section 9 to protect the right of Hawai'i's people to a clean and healthy environment, which subsumes the right to a life-sustaining climate system. I write separately to emphasize that the right to a life-sustaining climate system is also included in the due process right to "life, liberty, [and] property" enumerated in Article I, section 5 and the public trust doctrine embodied in Article XI, section 1's mandate that the State of Hawai'i "conserve and protect Hawai'i's...natural resources" "[f]or the benefit of present and future generations[.]"

II. Factual Background of the Project

Hu Honua appeals from the PUC's order denying the amended PPA and the PUC's order denying Hu Honua's motion for reconsideration of the order denying the amended PPA. Under the amended PPA, Hawai'i Electric Light Company ("HELCO") was to purchase energy and capacity from Hu Honua's tree burning facility on Hawai'i Island (the "Project"). The Project was estimated to emit 8,035,804 metric tons of carbon dioxide ("CO2") over the 30-year term of the amended PPA.

In order to mitigate these significant greenhouse gas emissions, Hu Honua proposed to sequester greenhouse gases, or to purchase carbon offsets, in an amount necessary to ensure that the Project would be net carbon negative by 30,000 metric tons by the end of the amended PPA term (2051). Hu Honua was to sequester carbon (more than 8 million metric tons) through the planting of trees, both on Hawai'i Island and outside of the State. Hu Honua offered its "carbon commitment" as a backstop to ensure the Project would achieve its carbon negativity goals, which included an option to purchase carbon offsets to make up for any deficits in annual sequestration.

The PUC denied the amended PPA because it found that high costs to consumers, coupled with high greenhouse gas emissions and speculative plans for sequestration, did not justify the amended PPA's approval. The PUC was specifically concerned, for example, that land on Hawai'i Island upon which Hu Honua intended to plant trees in order to sequester carbon was not under a lease agreement that lasted the 30-year term of the amended PPA. The PUC also lacked confidence in Hu Honua's sequestration agreement with the National Forest Foundation to plant trees somewhere in the United States. The PUC was concerned about the inadequate amount of detail in Hu Hona's carbon commitment plan. Hu Honua acknowledged that the actual amount of greenhouse gases sequestered by the planting of these

trees would “depend on the tree species, planting schedules, location, survival rate, growth rate, and sequestration rate[,]” all of which were uncertain.

The PUC particularly emphasized the fact that a one percent deviation in Hu Honua’s estimated amount of emissions would result in the Project becoming a net emitter of greenhouse gases. Additionally, according to Hu Honua’s estimates, the Project would not become carbon neutral until 2047. That is, “even if one accepts Hu Honua’s speculative assumptions, cumulative [greenhouse gas] emissions are expected to exceed cumulative sequestration throughout the majority of the amended PPA’s term, up until 2047, at which point total carbon sequestration barely overtakes the accumulated amount of [] emissions.” In light of the fact that ratepayers would experience significant increases to their monthly bills as a result of the Project, the PUC concluded that the terms of the amended PPA were “not prudent or in the public interest.”

Hu Honua directly appealed to this court the PUC’s decision and order denying the amended PPA, arguing that the terms of the amended PPA are prudent and in the public interest.

III. Climate Change is a Sui Generis Emergency

Our review of the PUC’s decision is done with due regard for the climate emergency it faces on behalf of the people of Hawai‘i. Anthropogenic global warming—caused by the

emission of greenhouse gases such as CO₂—has been described as a sui generis emergency; it is the single greatest threat to the natural environment and human societies that “the world has ever experienced.” U.N. Secretary-General, Promotion and Protection of Human Rights in the Context of Climate Change, ¶ 1, U.N. Doc. A/77/226 (July 26, 2022). Despite widespread recognition of the climate emergency, emissions have continued to increase. For example, global emissions were 62 percent higher in 2020 than when international climate negotiations began in 1990. António Guterres, Secretary-General’s Address at Columbia University: The State of the Planet (Dec 2, 2020). Atmospheric CO₂ concentrations are at the highest levels in four hundred twenty thousand years. 2007 Haw. Sess. Laws Act 234, § 1(a). Thus, it is in the context of the dire and undisputed fact that present levels of global emissions will ensure irreversible damage to our climate system that Hu Honua contends the PUC reversibly erred in denying the amended PPA, which would result in the emission of over 8 million tons of CO₂. Hu Honua further argues that the PUC was precluded from comparing the costs and emissions of its tree-burning facility to other low-carbon alternatives such as wind and solar. In other words, as argued by Hu Honua, the PUC’s analysis could only be made by comparing the amount of emissions from wood-burning to the amount of emissions from fossil fuels.

A. The State of Hawai'i bears a constitutional duty to limit greenhouse gas emissions as the declared climate emergency in Hawai'i accelerates

Hawai'i is in a climate emergency and the State bears a constitutional duty to limit greenhouse gas emissions to prevent additional global warming. The Paris Agreement is the leading international treaty on climate change, currently signed by 195 parties¹ and entered into force in November, 2016. It establishes the international goal of "[h]olding the increase in global average temperature to well below 2°C [3.6°F] above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C [2.7°F] above pre-industrial levels[.]" Paris Agreement to the United Nations Framework Convention on Climate Change, art. 2, Dec. 12, 2015, T.I.A.S. No. 16-1104. The most recent international climate negotiations affirmed the goal of preventing the average global temperature from reaching 1.5°C above pre-industrial times. United Nations Framework Convention on Climate Change, Conference of the Parties 26 (Nov. 2021); United Nations Framework Convention on Climate Change, Conference of the Parties 27 (Nov. 2022). Thus, 1.5°C of global warming has been recognized by international political consensus

¹ The 195 parties that are signatories to the Paris Agreement as of February 2023 include the United States, the European Union, China, and India. Paris Agreement, United Nations Treaty Collection (available at https://treaties.un.org/pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-7-d&chapter=27&clang=_en).

as a point of catastrophe. The dire effect of a 0.5°C increase in global average temperature from 1.5°C to 2°C is an emblematic demonstration of this looming environmental catastrophe: the 0.5°C that separates 1.5°C versus 2°C of warming would cause 2.6 times as much extreme heat, 2-3 times more species loss, 2.3 times as great a reduction in crop yields, 2 times the decline in marine fisheries and 29% more coral loss. Kelly Levin, Half a Degree and a World Apart: The Difference in Climate Impacts Between 1.5°C and 2°C of Warming, WORLD RES. INST. (Oct. 7, 2018). Put another way, if we continue to emit greenhouse gases such that the global average temperature reaches 2°C above pre-industrial times, "grievous [] human harms are likely to result: the complete inundation and destruction of low-lying island nations, and a high-risk of casualties affecting millions of people from extreme weather events including hurricanes, floods, and heat waves in sensitive areas." Karl S. Coplan, Fossil Fuel Abolition: Legal and Social Issues, 41 COLUM. J. ENVTL. L. 223, 231 (June 28, 2016) (citing Petra Tschakert, Commentary, 1.5°C or 2°C: A Conduit's View from the Science-Policy Interface at COP20 in Lima, Peru, CLIMATE CHANGE RESPONSES 2, 3 (Mar. 27, 2015)).²

² Global warming above the 1.5°C threshold risks reaching an irreversible climate tipping point. Climate tipping points are "conditions beyond which changes in a part of the climate system become self-perpetuating." David I. Armstrong McKay, et al., Exceeding 1.5°C global warming could trigger multiple climate tipping points, SCIENCE, (Sep. 9, 2022). Once a tipping point is reached, an entire ecosystem could shift abruptly

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Present rates of carbon emissions are predicted to accelerate the climate emergency to approximately 4.8°C by the end of this century. U.S. Global Change Research Program, Climate Science Special Report: Fourth National Climate Assessment, Volume I, Chapter 6 (2017).³ Governments cannot use the 1.5°C Paris Agreement target as a mechanism to delay reducing emissions until that threshold has been met. At present rates of greenhouse gas emissions, global warming to 1.5°C is expected to occur between 2033 and 2035 - or in about 10 years. Noah S. Diffenbaugh, Data Driven predications of the time remaining until critical global warming thresholds are reached, 120 PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCE 6 (Jan 30, 2023). The target for emissions reductions must instead be based on the level of atmospheric CO2 that ensures a life-sustaining climate system.⁴ Andrea Rodgers, et al., The

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into a new state, and be unable to return to its previous condition. Id. For example, if the 1.5°C threshold is passed, the Greenland and West Antarctic ice sheets may experience rapid melting and collapse entirely. Id.

³ This report modeled temperature increases under different Representative Concentration Pathways ("RCP") scenarios. RCP 8.5 represents a "business as usual" scenario (i.e., a "high emissions" scenario) and predicts that there will be between a 3.2°-6.6°C temperature increase by late century (2071-2100). U.S. Global Change Research Program, Climate Science Special Report: Fourth National Climate Assessment, Volume I, Chapter 6 (2017).

⁴ Because the global average temperature has increased by approximately 1.1°C, there is a growing concern that using the 1.5°C threshold as a judicial standard for protecting constitutional rights will

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Injustice of 1.5°C-2°C: The need for a scientifically based standard of fundamental rights protection in constitutional climate change cases, 40 VA. ENVTL. L. J. 102, 108-09, 113, 133-36 (2022). Current scientific consensus, as opposed to political consensus in the Paris Agreement regarding an acceptable increase in global average temperature, suggests that mitigation strategies must be consistent with achieving global atmospheric CO2 concentrations below 350 parts per million ("ppm") by 2100.⁵ Id. at 134-36 (citing Expert Report of James E. Hansen, Ph.D. at 4-5, Juliana v. United States, 217 F. Supp. 3d 1223 (D. Or. 2016)). Limiting atmospheric CO2 levels to below 350 ppm is essential to "preserve coastal cities from rising seas and floods (caused in part by melting of Antarctic and Greenland

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permit governments to perpetuate policies that, in fact, violate fundamental rights. Andrea Rodgers, et al., The Injustice of 1.5°C-2°C: The need for a scientifically based standard of fundamental rights protection in constitutional climate change cases, 40 VA. ENVTL. L. J. 102, 147 (2022) (citations omitted). That is, "once a constitutional standard is embedded in law, history shows that policies that flow from that constitutional standard will inevitably allow full maximization of pollution levels that lead to the brink of that standard[.]" Id. And because the consequences of global warming at 1.1°C are already disastrous and life-threatening, governments cannot use the 1.5°C threshold as a means to continue emitting greenhouse gas emissions up until global warming reaches 1.5°C.

⁵ Decreasing greenhouse gas emissions in order to reduce atmospheric CO2 concentrations to below 350 ppm "would result in a mid-century peak of approximately 1.3°C before temperatures begin to cool again, with global surface temperatures stabilizing at ~1°C above pre-industrial temperatures by 2100 and reducing even further in the twenty-second century[.]" Andrea Rodgers, et al., The Injustice of 1.5°C-2°C: The need for a scientifically based standard of fundamental rights protection in constitutional climate change cases, 40 VA. ENVTL. L. J. 102, 135-56 (2022) (citing Expert Report of James E. Hansen, Ph.D. at 4-5, Juliana v. United States, 217 F. Supp. 3d 1223 (D. Or. 2016)).

ice) [] and otherwise to restore a viable climate system on which the life, liberty, and property" of all people depend. Id. To put the 350 ppm standard into perspective, atmospheric CO2 concentrations measured at Mauna Loa reached a monthly average of 419 ppm as of May 2021, which is comparable to the levels of atmospheric carbon during the Pliocene climatic Optimum, between 4.1 and 4.5 million years ago, when sea levels were 78 feet higher than today. Id. at 119 (internal citations omitted).

Given the current level of atmospheric carbon concentrations, humanity faces an imminent global emergency. The decade of the 2020s is pivotal. Spotlight Hawai'i, Chip Fletcher of the UH School of Ocean and Earth Science and Technology, talks about beach erosion, HONOLULU STAR-ADVERTISER, (Apr. 18, 2022) (available at <https://www.youtube.com/watch?v=eu28UnW-jKo>). The PUC must act urgently to reduce emissions within this decade in order to succeed in leaving future generations a habitable planet. Id.

B. Climate Change Impacts in Hawai'i

Failure to act to reduce atmospheric CO2 concentrations to below 350 ppm over the past three decades has caused Hawai'i's people and the State's natural environment to suffer. Climate change poses a catastrophic threat to "the economic well-being, public health, natural resources, and the

environment of Hawai'i." 2007 Haw. Sess. Laws Act 234, § 1(a). Global average temperature has increased by approximately 1.1°C as compared to pre-industrial times. David I. Armstrong McKay et al., Exceeding 1.5°C global warming could trigger multiple climate tipping points, SCIENCE, (Sep. 9, 2022).⁶ This increase in average temperature has already led to severe consequences for Hawai'i's environment and public health, including more heatwaves,⁷ changing rain patterns and increased periods of drought,⁸ more wildfires,⁹ more intense storms,¹⁰ sea level

⁶ Since 1950, temperatures across the Hawaiian Islands have risen by approximately 2°F. NOAA Nat'l Ctr.'s for Env't Info., State Climate Summaries 2022, Hawai'i (2022) (available at <https://statesummaries.ncics.org/chapter/hi/>). Temperatures in Honolulu have increased by 2.6°F since 1950. Id.

⁷ The frequency of heatwaves has increased dramatically. Under current rates of greenhouse gas emissions, children born in 2020 are predicted to experience between 21 and 39 extreme heatwaves in their lifetime, whereas an adult born in 1960 will experience between 2 and 6 extreme heatwaves in their lifetime. Siri Luthen et al., Born into the Climate Crisis, Save the Children (2021). Given that there are at least 27 different physiological pathways in which a heatwave can kill a human being, continued greenhouse gas emissions endanger our children's lives. University of Hawai'i at Mānoa, Brace yourself for coming heatwaves, there are at least 27 ways they can kill you (Nov. 9, 2017) (available at <https://www.hawaii.edu/news/article.php?aId=8913>). Heatwaves are particularly dangerous to Hawaii's unsheltered, who have no escape from the outdoors. Claire Caulfield, The Heat is Especially Dangerous for Honolulu's Homeless, HONOLULU CIVIL BEAT (July 25, 2021) (available at <https://www.civilbeat.org/2021/07/the-heat-is-especially-dangerous-for-honolulus-homeless/>).

⁸ Over the past 30 years, rainfall in Hawai'i has declined significantly, leading to increased periods of drought. Pacific Islands Climate Educ. P'ship, Climate Change in Hawai'i 11, 20 (2016). Fresh water delivered by rain is essential to life in Hawai'i. Increased temperature coupled with decreased rainfall reduces stream flows and thus harms ecosystems, as well as reduces the amount of freshwater available for drinking and crop irrigation. NOAA Nat'l Ctr.'s for Env't Info., State Climate Summaries 2022, Hawai'i (2022) (available at <https://statesummaries.ncics.org/chapter/hi/>). Drought alone has already

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rise,¹¹ ecosystem destruction,¹² and food insecurity.¹³ As a tropical island state, extreme weather events, sea level rise

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cost Hawai'i millions of dollars in agricultural losses. Tamara L. Farnsworth, County of Maui, Environmental Protection and Sustainability Division, Testimony to the House Committee on Finance on H.B. 1800, H.D. 2, 31st Leg., Reg. Sess., at 4 (Feb. 28, 2022).

⁹ Decreased rainfall coupled with increased temperatures not only reduces the amount of water available for drinking and crop irrigation, but also leads to more wildfires. Clay Trauernicht, Vegetation-Rainfall interactions reveal how climate variability and climate change alter spatial patterns of wildland fire probability on Big Island, SCI. OF THE TOTAL ENV'T (Aug. 28, 2018). The area burned annually by wildfires in Hawai'i has increased fourfold in recent decades, and the stress is largely on native plants. Id. Native ecosystems in Hawai'i are particularly sensitive to fire disturbance; wildfires typically favor nonnative species establishment, leading to habitat loss for native species and long-term conversion to more fire-prone vegetation. Id. Between 2018 and 2021, at least 75,107 acres of land in Hawai'i were lost to wildfires. Simon Romero, How Bad are U.S. Wildfires? Even Hawai'i is Battling a Surge, NY TIMES, (July 5, 2012) (available at <https://www.nytimes.com/2021/07/05/us/hawaii-wildfires.html>).

¹⁰ While rainfall in Hawai'i has decreased on average, it has also become more extreme. NOAA Nat'l Ctr.'s for Env't Info., State Climate Summaries 2022, Hawai'i (2022) (available at <https://statesummaries.ncics.org/chapter/hi/>). Extreme rainfall events are increasing in frequency, which cause runoff, erosion, flooding, and damage to property. Id. In April 2018, for example, communities on the North Shore of Kaua'i experienced 49.69 inches of rain within a 24-hour period, leading to the most extreme flooding conditions in Hawai'i's recorded history. Jake Buehler, The Storm, the Flood, and the Future, Sea Grant University of Hawai'i, (2020) (available at <https://seagrant.soest.hawaii.edu/the-storm-the-flood-and-the-future/>). It was estimated that more than 530 properties were damaged from the flash floods related to this rain event. Id. Additionally, there were more than a dozen landslides which severed highway access to numerous communities. Id.

¹¹ Global sea level rise, caused by additional water from melting ice sheets and glaciers, and the expansion of seawater as it warms, is particularly threatening to Hawai'i. In 2017, and again in 2020, the Honolulu Harbor Tide gauge recorded its highest daily mean water levels observed over its 112-year history. Dep't of Land and Nat. Res., Sea Level Rise Vulnerability and Adaptation Report, Report to the 32nd Leg., Reg. Sess. (Dec. 2022) (available at <https://www.soest.hawaii.edu/crc/publications/OCCL23-Sea-Level-Rise-Report-FY22-1.pdf>). Coastlines along West Maui and the North Shore of Oahu have already experienced significant loss of costal public trust lands. Id. at 5. By 2100, it is expected that there will be a 3- to 4- foot sea level rise. Id. A 4-foot sea level rise would put more

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than half of Waikiki underwater. NOAA, Sea Level Rise Viewer (available at <https://coast.noaa.gov/slr/#/layer/slr/4/17586337.981129467/2417707.0693290164/16/streets/none/1/2050/interHigh/midAccretion>) (last viewed 03/08/2023).

¹² Climate change poses a number of risks to the health and survival of Hawai'i's terrestrial and marine ecosystems. Rising temperatures create expanded ranges for pathogens and invasive species as well as thermal stress for native flora and fauna. Pacific Islands Climate Educ. P'ship, Climate Change in Hawai'i 22 (2016). There has been significant population decline of native plant and animal species linked to rising temperatures and invasive species. For example, climate change has increased temperatures in high-elevation forests, permitting mosquitoes to reach areas that were once malaria-free. USGS, A Climate Change Canary in the Coal Mine - The Endangered Hawaiian Honeycreepers, (May 25, 2022) (available at <https://www.usgs.gov/news/featured-story/climate-change-canary-coal-mine-endangered-hawaiian-honeycreepers>). "A single bite from an infected mosquito can kill and the death rate may exceed 90 percent for some bird species. As a result, many threatened or endangered native birds now only survive in high-elevation forests" where mosquito populations still remain limited by colder temperatures. Id. However, as temperatures continue to rise, Hawaiian forest birds will have no escape. Id. Unlike continental birds, Hawaiian forest birds cannot move northward in response to global warming. Id.

As for marine ecosystems, coral reefs are facing collapse. Climate stressors on coral reefs include sustained high sea surface temperature, leading to coral bleaching, more intense damaging storms, sea level rise and sedimentation impacts, and ocean acidification. Pacific RISA, Caring for Hawaii's Coral Reefs (Mar. 25, 2022) (available at <https://www.pacificrisa.org/2022/03/25/saving-hawaiis-coral-reefs/>). Hawai'i's coral reefs have experienced widespread coral bleaching, specifically after 2019, a year of record heat for Hawai'i. Id. Additionally, rising ocean temperatures have complex effects, which include skewing the sex ratios of sea turtles which can reduce successful reproduction. Hawai'i Marine Animal Response, Habit & Ocean Chemistry Impacts from Climate Change & Sea Level Rise (available at <https://h-mar.org/key-threats/>). With current rates of emissions, "coral reefs may be extinct by the end of the century." Id. Because coral reefs serve as an essential component to the marine food chain, marine ecosystems in Hawai'i could face total collapse by 2100. Id.

¹³ Climate change additionally harms Hawai'i's food production. Increased temperatures, drought and soil salinity threaten the cultivation of crops. Jessica Terrell, Climate Change is a Big Problem for Farmers in Hawai'i, HONOLULU CIVIL BEAT (Sep. 26, 2021) (available at <https://www.civilbeat.org/2021/09/climate-change-is-a-big-problem-for-farmers-in-hawaii/>). For example, corn growers on the North Shore of O'ahu have faced increasing difficulty pollinating their crops. Id. Flooding from extreme rain events also harms food production. One farmer lost nearly an inch of topsoil - which takes at least 100 years to form naturally—due to flooding after the 2018 rain bomb on Kaua'i. Id. On top of this, wildfires

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and chronic flooding are primary concerns. According to the Hawai'i Climate Change Mitigation and Adaptation Commission, 3.2 feet of sea level rise is predicted to occur as early as mid-century. Hawai'i Climate Change Mitigation and Adaptation Commission, Hawai'i Sea Level Rise Vulnerability and Adaptation Report (2017) (available at https://www.soest.hawaii.edu/GG/FACULTY/ITO/GG740/Hawaii_state_Sealevel_Report.pdf). 3.2 feet of sea level rise would render over 25,800 acres of land in the State unusable, 6,500 structures compromised or lost, 20,000 residents displaced, and cause over \$19 billion in economic loss - all within 37 years of today. Id.

Climate change is a human rights issue at its core; not only does it inordinately impact young people and future generations, but it is also a profound environmental injustice disproportionately impacting native peoples.¹⁴ See D. Kapua'ala

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threaten crop and cattle land. Id. The president of the Hawai'i Macadamia Nut Association has questioned if extreme weather events will eradicate the practice of macadamia nut farming in Hawai'i entirely. Id.

¹⁴ There is an "inseparable spiritual - and genealogical - connection between Native Hawaiians and their land and environment...the land, or 'āina, is not a mere physical reality, it is integral to social, cultural and spiritual life." D. Kapua'ala Sproat, An Indigenous People's Right to Environmental Self-Determination: Native Hawaiians and the Struggle Against Climate Change Devastation, 5 STAN. ENVTL. L.J. 157, 168-69 (2016) (citing Melody Kapilialoha MacKenzie et al., Environmental Justice for Indigenous Hawaiians: Reclaiming Land and Resources, 21 NAT. RES. & ENV'T 37 (2007)). Climate change already has, and will continue to exacerbate significant challenges to Kānaka Maoli culture, identity, social welfare, and self-determination efforts. Id. at 171.

Sproat, An Indigenous People's Right to Environmental Self-Determination: Native Hawaiians and the Struggle Against Climate Change Devastation, 5 STAN. ENVTL. L.J. 157, 163 (2016).

IV. Urgent State Action is Necessary

Although climate change is an international issue, the United States is responsible for approximately 20% of the world's historic and cumulative greenhouse gas emissions. Simon Evans, Analysis: Which countries are historically responsible for climate change? CARBON BRIEF (Oct. 5, 2021) (available at <https://www.carbonbrief.org/analysis-which-countries-are-historically-responsible-for-climate-change/>). Unlike jurisdictions in other countries whose courts apply the rule of law to claims seeking protection from knowing environmental damage to a life-sustaining environment,¹⁵ the federal courts of the United States have thus far abdicated responsibility to apply the rule of law to claims that allege knowing

¹⁵ See, e.g., Hof's-Hague, 9 October 2018, RvdW 2018, 13-1396 m.nt. DGJ (Urgenda Foundation/State of the Netherlands, Ministry of Infrastructure and the Environment) (Neth.) (ordering the Dutch government to limit greenhouse gas emissions to 25% below 1990 levels by 2020, finding that "[d]ue to the severity of the consequences of climate change and the great risk of hazardous climate change occurring - without mitigation measures - the court concludes that the State has a duty of care to take mitigation measures"); Ashgar Leghari v. Federation of Pakistan, (2015) W.P. No. 25501/2015, 10 (Pak.) (where a farmer sued the Pakistani national government for failure to reduce greenhouse gas emissions, the court determined that "the delay and lethargy of the State in implementing [its climate] Framework offend[ed] the fundamental rights of the citizens."); Gloucester Res. Ltd. V. Minister for Planning, [2019] NSWLEC 7 (Austl.) (upholding the denial of an application to construct a coal mine, noting that the climate change impacts of the project outweigh its economic benefits).

contamination of the atmosphere with deleterious levels of greenhouse gas emissions.

One of the most prominent examples of a federal court abdicating its responsibility to leave future generations a habitable planet is the Ninth Circuit's reversal of the District Court of Oregon's decision recognizing that youth plaintiffs adequately alleged a violation of their substantive due process right to a stable climate capable of supporting human life in Juliana v. United States, 217 F. Supp 3d 1224 (Dis. Or. 2016), rev'd and remanded, 947 F.3d 1159 (9th Cir. 2020). In a decision consistent with the application of the environmental rule of law to climate claims in other countries, the United States District Court for the District of Oregon aptly explained how "[f]ederal courts too often have been cautious and overly deferential in the arena of environmental law, and the world has suffered for it." Id. at 1262. The concern of the district court proved prescient when it was reversed by the Ninth Circuit Court of Appeals. Another recent example of federal courts refusing application of the environmental rule of law to climate claims is the majority opinion of the United States Supreme Court in West Virginia vs. EPA, 124 S. Ct. 2587, 213 L. Ed. 2d 896 (2022). The majority deprived the federal Environmental Protection Agency of "the power needed - and the power granted - to curb greenhouse gases" from power plants; as the dissent

explained: “the Court today prevents congressionally authorized agency action to curb power plants’ carbon dioxide emissions...I cannot think of many things more frightening.” Id., 142 S. Ct. at 2828, 2644, 213 L. Ed. 2d at 938, 955 (Kagan, J., dissenting). Similarly, the United States District Court for the Northern District of California dismissed a public nuisance-based lawsuit brought by the cities of Oakland and San Francisco against fossil fuel companies, seeking money damages to help pay for projects necessary to adapt to the consequences of a changing climate. City of Oakland v. BP, 325 F. Supp 3d 1017 (N.D. Cal. 2018). While “accept[ing] the science behind global warming” and the “very real” dangers that climate change poses, the United States District Court for the Northern District of California dismissed the suit based upon the proposition that the remedies for the emergency are so political as to render the Plaintiff’s claims nonjusticiable. Id. at 1028-29. Under this novel analysis, the judicial branch of government is precluded from consideration of climate claims: “the problem deserves a solution on a more vast scale than can be supplied by a district judge or jury in a public nuisance case.” Id. at 1029. Likewise, two of the three members of the Ninth Circuit Court of Appeals panel in Juliana v. United States, 947 F.3d 1159 (9th Cir. 2019) dismissed youth-plaintiffs due process and public trust claims against the federal government based on the

proposition that Plaintiffs have no standing because the application of remedies to the climate crisis would be too complex for judicial decision-making. Juliana, 947 F.3d at 1171 (“it is beyond the power of an Article III court to order, design, supervise, or implement the plaintiffs’ requested remedial plan” which would require a “comprehensive scheme to decrease fossil fuel emissions and combat climate change.”). In a formidable dissent, Judge Josephine Staton took to task the Majority’s supposition that youth plaintiffs are barred from bringing claims against the United States for knowingly threatening their substantive due process right to a stable climate capable of supporting human life.¹⁶ As Judge Staton explained, claims vindicating the right to a life-sustaining climate system are redressable by courts; a remedial plan requiring the federal or a state government to reduce greenhouse

¹⁶ Judge Staton described the climate emergency in detail, explaining that:

What sets this harm apart from all others is not just its magnitude, but its irreversibility. The devastation might look and feel somewhat different if future generations could simply pick up the pieces and restore the Nation. But plaintiffs’ experts speak of a certain level of global warming as “locking in” this catastrophic damage. Put more starkly by plaintiffs’ expert, Dr. Harold R. Wanless, “[a]tmospheric warming will continue for some 30 years after we stop putting more greenhouse gasses into the atmosphere. But that warmed atmosphere will continue warming the ocean for centuries, and the accumulating heat in the oceans will persist for millennia[.]”

Juliana, 947 F.3d at 1176 (Staton, J., dissenting).

gas emissions in an amount necessary to ensure a stable climate system is not a remedy that defies judicial decision making so as to render it nonjusticiable:

Our history is no stranger to widespread, programmatic changes in government functions ushered in by the judiciary's commitment to requiring adherence to the Constitution. Upholding the Constitution's prohibition on cruel and unusual punishment, for example, the Court ordered the overhaul of prisons in the Nation's most populous state. See Brown v. Plata, 563 U.S. 493, 511, 131 S. Ct. 1910, 179 L. Ed. 2d 969 (2011) ("Courts may not allow constitutional violations to continue simply because a remedy would involve intrusion into the realm of prison administration.") And in its finest hour, the Court mandated the racial integration of every public school—state and federal—in the Nation, vindicating the Constitution's guarantee of equal protection under the law. See Brown v. Bd. of Educ. (Brown I), 347 U.S. 483, 74 S. Ct. 686, 98 L. Ed. 873 (1954); Bolling v. Sharpe, 347 U.S. 497, 74 S. Ct. 693, 98 L. Ed. 884 (1954). In the school desegregation cases, the Supreme Court was explicitly unconcerned with the fact that crafting relief would require individualized review of thousands of state and local policies that facilitated segregation. Rather, a unanimous Court held that the judiciary could work to dissemble segregation over time while remaining cognizant of the many public interests at stake...

Plaintiffs' request for a "plan" [in the instant case] is neither novel nor judicially incognizable. Rather, consistent with our historical practices, their request is a recognition that remedying decades of institutionalized violations may take some time. Here, too, decelerating from our path toward cataclysm will undoubtedly require "elimination of a variety of obstacles." Those obstacles may be great in number, novelty, and magnitude, but there is no indication that they are devoid of discernable standards.

Juliana, 947 F.3d at 1188-89 (Staton, J., dissenting). The remedy for violation of the right to a stable climate capable of supporting human life is discreet: to reduce greenhouse gas emissions. In comparison, desegregating the schools of the United States is a significantly more complex remedial undertaking.

A request by the Juliana youth plaintiffs for a full *en banc* review of the two-judge Majority provided a further example of the hostile reception of the federal courts to climate claims. The plaintiffs' request to the largest federal circuit in the United States for an *en banc* hearing was denied. Juliana v. United States, 986 F.3d 1295 (9th Cir., Feb 10., 2021) (order denying petition for rehearing *en banc*). Notwithstanding its status as the signature climate case in the United States,¹⁷ and the compelling dissent of Judge Staton, the Ninth Circuit Court of Appeals provided no opinion as to why an issue recognized by all three members of the Juliana panel as an existential "problem approaching 'the point of no return'" Juliana, 947 F.3d at 1166, lacked the importance necessary to gain the consideration of an *en banc* panel of Ninth Circuit appellate judges. Juliana, 986 F.3d at 1296. The Ninth Circuit sent a clear message to young people and future generations who seek protection from knowing environmental damage to a life-sustaining environment: they have no standing to seek redress in the federal courts of the United States.

Thus, it is apparent that "the modern [federal] judiciary has enfeebled itself to the point that law enforcement can rarely be accomplished by taking environmental predators to

¹⁷ Robinson Meyer, A Climate-Lawsuit Dissent That Changed My Mind, THE ATLANTIC (Jan. 22, 2020).

court.” Alfred T. Goodwin, A Wake Up Call for Judges, 2015 Wis. L. REV. 785, 785-86, 788 (2015) (citing Mary Christina Wood, Nature’s Trust: Environmental Law for a New Ecological Age (2014)). The stark failure of the federal judiciary to grant redress to present and future generations alleging knowing destruction of a life-sustaining climate system relegates implementation of the climate rule of law to state judiciaries. See Juliana, 217 F.Supp.3d at 1262 (D. Or. 2016) (“The current state of affairs...reveals a wholesale failure of the legal system to protect humanity”) (citations and quotations omitted), rev’d and remanded, 947 F.3d 1159 (9th Cir. 2020). Unlike the Juliana majority, the Hawai‘i State Supreme Court does not choose to “throw up [our] hands.” Juliana, 947 F.3d at 1174 (Staton, J., dissenting); see, also, Aji P v. State of Washington, 497 P.3d 350, 353 (Wash. 2021) (Gonzalez, J., dissenting) (“The court should not avoid its constitutional obligations that protect not only the rights of these youths but all future generations who will suffer from the consequences of climate change.”) In contrast to the federal judiciary, the Hawai‘i Supreme Court has recognized the constitutional right to a life-sustaining climate. MECO, 150 Hawai‘i 528, 538, n.15, 506 P.3d 192, 202, n.15 (2022).

The PUC's consideration of the Project's greenhouse gas emissions and denial of the amended PPA in the instant case aligned with the urgent need for state action to reduce emissions; and thus gave due protection to the right of the people of Hawai'i to a life-sustaining climate. See Daniel Farber, *State Governmental Leadership in U.S. Climate Policy*, WILSON CENTER (June 23, 2021) (available at <https://www.wilsoncenter.org/article/state-governmental-leadership-us-climate-policy>) ("It is likely that many states will remain ahead of the nation as a whole for years to come, meaning that their emission cuts will continue to augment national efforts."). The PUC found the emission of over 8 million tons of CO2 unacceptable, and in so doing, properly considered the fact that low-carbon alternatives could provide Hawai'i with renewable energy at lower costs and lower emissions.

V. The Right to a Life-Sustaining Climate

The PUC's consideration of the Project's greenhouse gas emissions and denial of the amended PPA fulfilled its duty to protect the fundamental right to a life-sustaining climate system arising under the due process clause of Article I, section 5 of the Hawai'i Constitution, the public trust doctrine enumerated in Article XI, section 1 of the Hawai'i Constitution,

and the right to a clean and healthy environment enumerated in Article XI, section 9 of the Hawai'i Constitution.¹⁸

A. The right to a life-sustaining climate system is guaranteed by the due process clause of Article I, section 5 of the Hawai'i Constitution.

The due process clause of Article I, section 5 of the Hawai'i Constitution guarantees that the State will not deprive a person of "life, liberty or property without due process of law[.]" Article I, section 5 of the Hawai'i Constitution protects both procedural and substantive due process rights.¹⁹ See, e.g., KNG Corp. v. Kim, 107 Hawai'i 73, 82, 110 P.3d 397, 406 (2005). Substantive due process safeguards fundamental rights which are "implicit in the concept of ordered liberty." In the Interest of Doe, 99 Hawai'i 522, 533, n.14, 57 P.3d 447, 458, n.14 (2002) (quoting Washington v. Glucksberg, 521 U.S. 702, 720-21, 138 L. Ed. 2d 772, 117 S. Ct. 2258, 117 S. Ct. 2302 (1997)).²⁰ The identification and protection of fundamental due

¹⁸ See Majority pp. 19-20 (discussing the right to a life-sustaining climate system as included in Article XI, section 9.).

¹⁹ "The basic elements of procedural due process of law require notice and an opportunity to be heard at a meaningful time and in a meaningful manner before governmental deprivation of a significant property interest." Sandy Beach Def. Fund v. City Council, 70 Haw. 361, 378, 773 P.2d 250, 261 (1989).

²⁰ A substantive due process right that is determined to be implicit in the concept of ordered liberty "is subject to interference [by the government] only when a compelling state interest is demonstrated." Sate v. Mallan, 86 Hawai'i 440, 443, 950 P.2d 178, 181 (1998) (quoting Comm. Whole

continued...

process rights is inherent in the judicial duty of all judges of the State of Hawai'i. See, e.g., State v. Quino, 74 Haw. 161, 177, 840 P.2d 358 (1992) (Levinson, J., concurring) ("[A]s the ultimate judicial tribunal in this state, this court has final, unreviewable authority to interpret and enforce the Hawai'i Constitution.") (internal quotations and citations omitted). Fundamental rights that are implicit in the concept of ordered liberty can be enumerated or unenumerated in the constitution. See, e.g., State v. Abellano, 50 Haw. 384, 391-93, 441 P.2d 333, 338-39 (1968) (Levinson, J., concurring) (explaining that the Constitution protects unenumerated rights because "[i]t is fundamental error to argue that the framers believed their subjective intentions were to control the construction of the Constitution in the centuries to come."). In other words, "[t]he genius of the [c]onstitution is that its text allows future generations [to] protect...the right of all persons to enjoy liberty as we learn its meaning." Juliana, 217 F. Supp 3d at 1249 (D. Or. 2016) (quoting Obergefell v. Hodges, 135 S. Ct. 2584, 2598, 192 L. Ed 2d 602 (2015)), rev'd and remanded, 947 F.3d 1159 (9th Cir. 2020).

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Rep. No. 15, in 1 Proceedings of the Constitutional Convention of Hawai'i of 1978, at 1024 (1980)).

Determination of whether a right is protected by substantive due process requires inquiry into whether the right "is so rooted in the traditions and collective conscience of our people that failure to recognize it would violate fundamental principles of liberty and justice that lie at the base of all our civil and political institutions." KNG Corp., 107 Hawai'i at 82, 110 P.3d at 406 (internal citations and quotations omitted); see, also, Baehr v. Lewin, 74 Haw. 530, 556, 852 P.2d 44, 57 (1993) (internal citations and quotations omitted). It is beyond cavil that a life-sustaining climate system is implicit in the concept of ordered liberty and lies "at the base of all our civil and political institutions." KNG Corp., 107 Hawai'i at 82, 110 P.3d at 406 (citations and quotations omitted). Indeed, a stable climate is the foundation upon which society and civilization exist in Hawai'i and throughout the globe. See Minors Oposa v. Sec'y of the Dep't of Env't'l & Ntural Res., G.R. No. 10183, 33 I.L.M. 173, 187-88 (Jul 30, 1993) (Phil.) ("[U]nless the rights to a balanced and healthful ecology...are mandated as state policies...the day would not be too far when all else would be lost not only for the present generation, but also for those to come - generations which stand to inherit nothing but parched earth[.]").

On the present trajectory of greenhouse gas emissions, Hawai'i will become increasingly less habitable due to sea level

rise, floods, wildfires, drought, extreme weather events, food insecurity, and ecosystem destruction. See supra n. 6-14.

Climate change impacts will cause an increased number of weather-related deaths, damage property throughout the State, threaten the livelihoods of many (including farmers and fishers), and devastate recreational opportunities—including beaches—that are the life's blood of the tourist industry. Id.

Without an "effective response to climate change" that prevents catastrophic climate change impacts, "the integrity of the rule of law" itself is subject to collapse. Cinnamon P. Carlarne, U.S. Climate Change Law: A decade of Flux and an Uncertain Future, 69 AM. U.L. REV. 387, 477 (Dec. 2019). The effects of failing to reduce atmospheric CO2 concentrations to below 350 ppm will lead to "social, political and economic chaos, and in that chaos[,] the rule of law cannot survive." Tom Burke, Rule of law and climate change (June 30, 2021) (available at <https://www.e3g.org/news/lcaw-rule-of-law-and-climate/>); Francois Kunc, Climate change may pose threat to rule of law, says Supreme Court judge Francois Kunc, AUSTRALIAN FINANCIAL REVIEW, (Oct. 11, 2018) ("At its worst, inadequately mitigated climate change could undo our social order and the rule of law itself... It is no longer either difficult or alarmist to imagine a day when, in extremis, the defen[s]e, external affairs and immigration powers of the Commonwealth [of Australia] are

invoked to support measures not seen since World War II to deal with the social, political, economic and physical effects of climate change.").²¹ Thus, the due process clause of Article I, section 5, which protects against the deprivation of life, liberty and property, requires the State of Hawai'i to act to ensure that there is a life-sustaining climate system capable of supporting the health and survival of Hawai'i's people and the rule of law itself.

The conclusion that the due process right to "life, liberty [and] property" under Article I, section 5 subsumes the right to a life-sustaining climate is supported by the fact that a life-sustaining climate system underlies all other constitutional guarantees. Juliana, 217 F. Supp. 3d at 1248-49 (D. Or. 2016) ("Often, an unenumerated fundamental right draws on more than one [c]onstitutional source. The idea is that certain rights may be necessary to enable the exercise of other rights, whether enumerated or unenumerated"), rev'd and remanded, 947 F.3d 1159 (9th Cir. 2020). In other words, the right to a life-sustaining climate system is deserving of

²¹ Rights which this court has concluded are not "implicit in the concept of ordered liberty" are far from the right to a life-sustaining climate system. See, e.g., State v. Mallan, 86 Hawai'i 440, 445, 950 P.3d 178, 183 (1998) (the right to possess and use marijuana is not a fundamental right implicit in the concept of ordered liberty); see, also, State v. Mueller, 66 Haw. 616, 628, 671 P.2d 1351, 1359 (1983) (the right to engage in sexual conduct for a fee is not a fundamental right implicit in the concept of ordered liberty).

fundamental status as essential to our scheme of ordered liberty because it is "preservative of all rights." Yick Wo. v. Hopkins, 118 U.S. 356, 370, 6 S. Ct. 1064, 1071 (1886). For example, this court has recognized "that parents have a substantive liberty interest in the care, custody, and control of their children protected by the due process clause of article 1, section 5 of the Hawai'i Constitution." In the Interest of Doe, 99 Hawai'i at 533, 57 P.3d at 458. If there is no guarantee of a stable climate system capable of supporting human life, our present children and future generations stand to inherit "nothing but parched earth[.]" Minors Oposa v. Sec'y of the Dep't of Env't'l & Natural Res., G.R. No. 10183, 33 I.L.M. 173, 187-88 (Jul 30, 1993) (Phil.) Thus, the right to "care, custody, and control" of one's child becomes meaningless without an environment enabling parents to safely raise their families. In the Interest of Doe, 99 Hawai'i at 533, 57 P.3d at 458. A stable climate system is fundamental to Hawai'i's constitutional guarantees, including "the right to personal security[,]"²² and the right to bodily integrity.²³ If the PUC continues to permit

²² See, e.g., State v. Bonds, 59 Haw. 130, 134, 577 P.2d 781, 784 (1978) (citations and quotations omitted).

²³ See, e.g., State v. Yong Shik Won, 137 Hawai'i 330, 372 P.3d 1065 (2015) (explaining the right to bodily integrity in the context of unreasonable searches and seizures).

energy projects which emit high levels of greenhouse gases, it will be contributing to the destruction of resources essential to public health and Hawaiian culture, which in turn undermines all fundamental rights guaranteed by the Hawai'i Constitution.

B. Article XI, section 1 of the Hawai'i Constitution mandates that the State of Hawai'i act to protect and conserve a life-sustaining climate system for present and future generations

The right to a life-sustaining climate also arises under the public trust doctrine enumerated in Article XI, section 1 of the Hawai'i Constitution. Article XI, section 1 bestows upon the State the duty to protect and conserve natural resources, including the climate system, for the benefit of present and future generations. Article XI, section 1 declares that "[f]or the benefit of present and future generations, the State and its political subdivisions shall conserve and protect Hawai'i's natural beauty and all natural resources, including land, water, air, minerals and energy sources" and that "[a]ll public natural resources are held in trust by the State for the benefit of the people." (emphasis added). This mandate adopts "the public trust doctrine as a fundamental principle of constitutional law in Hawai'i." In re Waiāhole Ditch Combined Contested Case Hr'g, 94 Hawai'i 97, 132, 9 P.3d 409, 444 (2000)

("Waiāhole").²⁴ The public trust doctrine establishes the State of Hawai'i as a fiduciary over all natural resources and requires the State to hold those resources in trust for the benefit of present and future generations. See, e.g., Ching v. Case, 145 Hawai'i 148, 177-78, 449 P.3d 1146, 1175-76 (2019). Thus, Article XI, section 1 prohibits the State of Hawai'i from taking action that "substantially impairs the public interest" in a trust resource. King v. Oahu R. & L. Co., 11 Haw. 717, 725 (1899).

The climate system is a "natural resource" held in trust by the State for the benefit of present and future

²⁴ The public trust doctrine, however, exists independently of the constitutional mandate in Article XI, section 1 of the Hawai'i Constitution, as this court explained in Waiāhole:

Other state courts, without the benefit of such constitutional provisions, have decided that the public trust doctrine exists independently of any statutory protections supplied by the legislature. See, e.g., National Audubon Soc'y v. Superior Ct. Of Alpine Cty., 33 Cal. 3d 419, 658 P.2d 709, 728 n.27, 189 Cal. Rptr. 346 (Cal.) ("Aside from the possibility that statutory protections can be repealed, the noncodified public trust doctrine remains important both to confirm the state's sovereign supervision and to require consideration of public trust uses in cases filed directly in the courts"), cert. denied, 464 U.S. 977, 104 S. Ct. 413, 78 L. Ed. 2d 351 (1983); Kootenai Env'tl. Alliance v. Panhandle Yacht Club, Inc., 105 Idaho 622, 671 P.2d 1085, 1095 (Idaho 1983) ("Mere compliance by [agencies] with their legislative authority is not sufficient to determine if their actions comport with the requirements of the public trust doctrine. The public trust doctrine at all times forms the outer boundaries of permissible government action with respect to public trust resources.").

Waiāhole, 94 Hawai'i at 132, 9 P.3d at 444.

generations. The climate system "is an interactive system consisting of five major components: [1] the atmosphere, [2] the hydrosphere, [3] the cryosphere, [4] the land surface and [5] the biosphere[.]" A.P.M. Baede et al., The Climate System: an Overview 87 (B. Bolin and S. Pollonais eds., 2001) (available at <https://www.ipcc.ch/site/assets/uploads/2018/03/TAR-01.pdf>). The climate system also encompasses all other natural resources, including "land, water, [and] air." Haw. Const. art XI, § 1. In order for all other natural resources mentioned in Article XI, section 1 to be conserved for future generations, the level of atmospheric CO2 must be reduced to below 350 ppm. That is, Hawai'i's natural beauty, land, water, air, minerals and energy sources all depend upon a stable climate system, and a stable climate system is only possible if atmospheric CO2 concentrations are limited to below 350 ppm.

The urgency of the climate crisis compels protection of the climate system as a fundamental natural resource under Article XI, section 1. The public trust "does not remain fixed for all time, but must conform to changing needs and circumstances." Waiāhole, 94 Hawai'i at 135, 9 P.2d at 447; see, also, Reppun v. Board of Water Supply, 65 Haw. 531, 553, 656 P.2d 57, 72 (1982) (acknowledging that "the continued satisfaction of the framers' intent requires that the [riparian] doctrine be permitted to evolve in accordance with changing

needs and circumstances"); Matthews v. Bay Head Improvement Ass'n, 95 N.J. 306, 471 A.2d 355 (N.J. 1984) (extending the trust to privately owned beaches, in recognition of the "increasing demand for our State's beaches and the dynamic nature of the public trust doctrine[.]"). At current levels of greenhouse gas emissions, average global temperature is expected to reach the 2°C threshold above the 1850-1900 average by 2045. S. Con. Res. 44, 31st Leg., Reg. Sess. (2021). Given the unprecedented life-threatening emergency that will result if atmospheric CO2 concentrations are not reduced to below 350 ppm, and the increasing necessity to urgently reduce emissions in order to reach that goal, the State bears a public trust duty to protect and conserve a life-sustaining climate system for present and future generations.

In applying the PUC's public trust duty to its decision whether to approve or deny the amended PPA, Article XI, section 1 of the Hawai'i Constitution requires the PUC to consider the Project's contribution to, or mitigation of, the climate emergency. An agency's constitutional public trust obligations are independent of its statutory mandates, but they operate in tandem. MECO, 150 Hawai'i at 538, 506 P.3d at 202; see, also, Lāna'ians for Sensible Growth v. Land Use Comm'n, 146 Hawai'i 496, 506, 463 P.3d 1153, 1163 (2020). In particular, (i) Hawai'i Revised Statutes ("HRS") § 269-6(b) (2021), requiring the

PUC to consider greenhouse gas emissions associated with a PPA; (ii) HRS § 225P-5 (2022), requiring the State of Hawai'i to reach carbon negativity by 2045; and (iii) Senate Concurrent Resolution No. 44 declaring a climate emergency, provide definition to the PUC's public trust obligations with respect to the climate system.

First, under HRS § 269-6(b), the PUC is mandated to consider greenhouse gas emissions in deciding whether to approve a PPA. A primary purpose of this provision is to combat "air pollution" and "potentially harmful climate change" stemming from "the release of harmful greenhouse gases." In re Maui Elec. Co., 141 Hawai'i 249, 263, 408 P.3d 1, 15 (2017) (quoting H. Stand. Comm. Rep. No. 1004, in 2011 House Journal, at 1332).²⁵ Second, pursuant to HRS § 225P-5, there is a statewide target to "sequester more atmospheric carbon and greenhouse gases than emitted within the State as quickly as practicable, but no later than 2045[.]" The zero-emissions target by 2045 arose from the legislature's recognition of the "immediate and long-term threats to Hawai'i's economy, public health, natural resources, environment, and way of life" that climate change poses. H.

²⁵ In addition, under HRS § 269-145.5(a), "[i]n advancing the public interest," the PUC is directed to balance "technical, economic, environmental and cultural considerations associated with modernization of the electric grid." (emphasis added).

Stand. Comm. Rep. No. 15-22, in 2022 House Journal, at 2.

Third, in Senate Concurrent Resolution No. 44, the legislature declared a "climate emergency." S. Con. Res. 44, 31st Leg., Reg. Sess. (2021). It found that global warming has increased the average global air temperature by one degree Celsius, which "is already having a dramatic impact on the environment[,]" including larger and stronger hurricanes, increased drought and floods, shifting rain patterns, more wildfires, ocean acidification and damage to marine and terrestrial ecosystems.

Id. The legislature further cited the fact that greenhouse gas emissions have "pushed Earth's ecosystems to their breaking point" and that "planet Earth is facing a climate emergency" which will take "an immense increase of scale in endeavors to conserve our biosphere" in order "to avoid untold suffering[.]"

Id.

The legislature has thus defined the climate emergency posed by global warming to be a dire threat to Hawai'i. To conserve the climate system for present and future generations, and to act in accordance with its public trust and statutory duties, the PUC must make reduction of greenhouse gas emissions the primary consideration in deciding whether to approve or deny a PPA.

C. The PUC's consideration of the Project's greenhouse gas emissions and denial of the amended PPA protected the constitutional right to a life-sustaining climate system

The right to a life-sustaining climate system arising under Article I, section 5's due process clause, Article XI, section 1's public trust mandate, and Article XI, section 9's right to a clean and healthy environment was duly complied with by the PUC in its consideration of the Project's greenhouse gas emissions and its denial of the amended PPA. The Project was estimated to emit 8,035,804 metric tons of CO₂ over the 30-year term of the amended PPA. For context, Hawai'i's statewide emissions limit was 11,660,000 metric tons of CO₂ in 2020, and is 10,960,000 metric tons of CO₂ for 2025. Department of Health, Hawai'i Greenhouse Gas Emissions Report for 2017 (Apr. 2021). Had the PUC approved the amended PPA, the PUC would have subjected Hawai'i's electrical grid to reliance on a net carbon emitter until the year 2047 - two years after the State is statutorily required to reach carbon neutrality pursuant to HRS § 225P-5. Accepting Hu Honua's speculative sequestration plans²⁶

²⁶ In order to reach its goals of carbon negativity by 2051, Hu Honua would have to plant approximately 3.1 million trees, but no lease was secured where those 3.1 million trees could be planted. Hu Honua also proposed to plant trees in order to sequester carbon outside of the State of Hawai'i, presumably in contravention of HRS § 225P-5's mandate to "sequester more atmosphere carbon and greenhouse gases than emitted within the State[.]" (emphasis added).

to be true, the Project was estimated to be carbon negative by 30,000 metric tons of CO2 by 2051. Carbon negativity by 30,000 metric tons is a very small margin; if Hu Honua's calculation of the Project's cumulative emissions was off by less than one percentage, the Project would become a net carbon emitter.²⁷ Approval of the Project and the resulting emission of 8,035,805 metric tons of CO2 would not serve the public interest given the constitutional right to a life-sustaining climate and the current climate emergency. In addition, the PUC found that the Project would lead to an increase in the monthly bills of ratepayers.

Consistent with the people of Hawai'i's constitutional right to a life-sustaining climate system, the PUC was required to consider the Project's greenhouse gas emissions as compared to other low-carbon alternatives (e.g., solar and wind power). Hu Honua argues that the PUC's determination of whether the Project was in the public interest was limited to comparing the effects of the Project to those of a fossil fuel-based alternative. Hu Honua's argument would blind the PUC - the steward of Hawai'i's energy system - to other alternative energy sources necessary to ensure that Hawai'i meets its legal duty to

²⁷ 30,000 metric tons equates to 0.3733% of the Project's total emissions of 8,035,805 metric tons. Thus, if the Project emitted 0.3733% more than Hu Honua calculated, the Project would remain a net carbon emitter in 2051.

reduce atmospheric CO2 concentrations to below 350 ppm. The PUC must evaluate every proposed PPA in light of the climate crisis and the need to reduce atmospheric CO2 concentrations to below 350 ppm, and in doing so, must compare every project's level of emissions to the lowest-emitting alternatives.

Given the climate emergency, and the need to limit atmospheric CO2 concentrations to below 350 ppm in order to leave Hawai'i's future generations a habitable earth, approval of the amended PPA would violate the people of Hawai'i's right to a life-sustaining climate system. Because the PUC properly evaluated the Project's emissions—and found them to be unacceptably high given the impending climate emergency—it complied with its duty to protect the right of Hawai'i's people to a life-sustaining climate system.

VII. Conclusion

We are facing a sui generis climate emergency. The lives of our children and future generations are at stake. With the destruction of our life-sustaining biosphere underway, the State of Hawai'i is constitutionally mandated to urgently reduce its greenhouse gas emissions in order to reduce atmospheric CO2 concentrations to below 350 ppm.

I join with the Majority opinion. In concurrence, it is noted that in this time of dire climate emergency, the people of Hawai'i have the protection of the right to a life-sustaining

climate system derived from substantive due process pursuant to Article I, section 5 and the public trust doctrine enshrined in Article XI, section 1 of the Hawai'i Constitution.

/s/ Michael D. Wilson

