CULTURAL NARRATIVE

PREPARED FOR HAWAIʻI STATE ENERGY OFFICE

INTRODUCTION

Hawai'i is uniquely poised to lead the way in renewable energy use and development, given the government's adoption of a progressive energy policy and an abundance of renewable energy sources.

In 2008, the State of Hawai'i partnered with the U.S. Department of Energy to form the Hawai'i Clean Energy Initiative (HCEI), a long-term, collaborative effort to transform Hawai'i's energy ecosystem and, in the process, create a model for other states to follow. This laid the groundwork for a set of energy goals and policies designed to reach one of the most ambitious energy targets in the nation: by 2045, one hundred percent of the electricity in Hawai'i is to be produced by renewable energy sources.

The Hawai'i State Energy Office (HSEO) was established in 2019 to serve as the primary government entity for supporting HCEI. As more and more of HCEI's implementation targets are met, renewable energy projects will occupy and utilize an ever-increasing share of land and resources. They will, in turn, become an increasingly visible and impactful part of the experience of living in Hawai'i—for some communities more than others. Therefore, in service of its mission to promote energy efficiency, renewable energy, and clean transportation, HSEO has determined that it must invest in its own community outreach and engagement capabilities.

DTL is a Hawaiian strategy studio and has been contracted by HSEO to assist in the development of those capabilities. As a Hawaiian strategy studio, DTL strives to utilize methodologies that align with Hawaiian values, traditions, and ways of gathering, organizing, and interpreting information. A core component to this work is the documentation of a mo'okūauhau—a genealogy of people and place.

Mo'okūauhau forms the basis for this Cultural Narrative, with the intention that it provides HSEO's stakeholders with a deeper understanding of their relationship to the cultural history of Hawai'i so that they may be more effective in their work, equipped with a better understanding of their kuleana (responsibility or duty) to Hawai'i and its people. The common denominator in every renewable energy project is a utilization of natural resources, and this Cultural Narrative is, in essence, a brief genealogy of natural resource management, use, and development in Hawai'i. Special attention is paid to how this cultural history impacts the community's engagement on matters of renewable energy.

This Cultural Narrative is divided into two sections: Yesterday and Today. Yesterday uses the theme of mālama 'āina (care for land) to introduce some foundational aspects to the pre-contact culture of Hawai'i that have relevance to renewable energy development at the community level today. The Today section uses the theme of aloha 'āina (love of land) as a framework for understanding how Hawaiian culture and history animate civil society in ways that are meaningful for community engagement.

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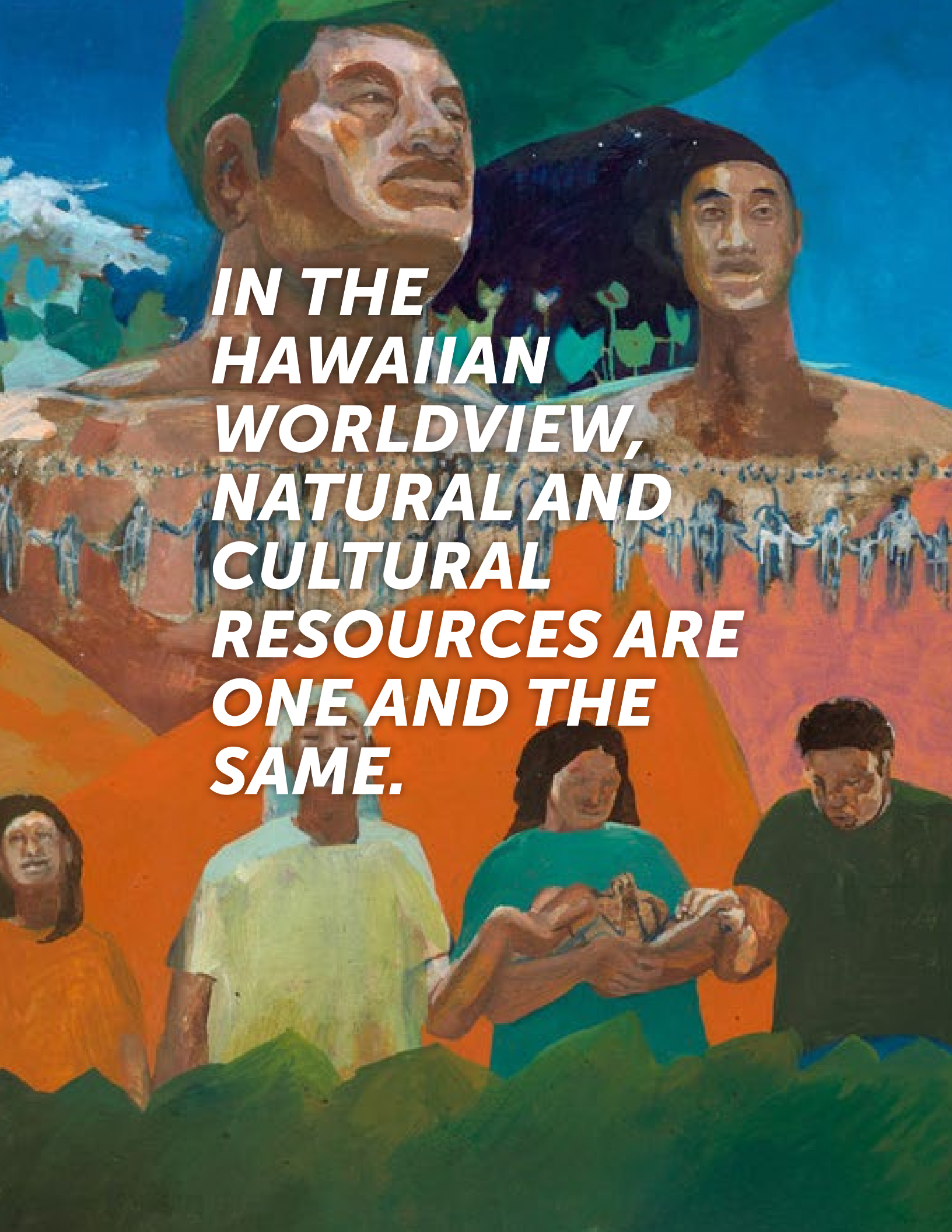

IN THE HAWAIIAN WORLDVIEW, NATURAL AND CULTURAL RESOURCES ARE ONE AND THE SAME.

YESTERDAY

The traditional culture of Hawai'i was grounded in the Hawaiian peoples' expansive and intimate knowledge about the places where they lived—their natural features, weather patterns, the location of useful plant and animal species, et cetera. The customary practices and beliefs that dictated daily life in old Hawai'i is in no small part a function of the fact that for hundreds of years, Hawaiian society was, by and large, a society of planters. According to the anthropologists E.S. Craighill Handy and Elizabeth Green Handy, who collaborated with the preeminent expert on all-things-Hawaiian, Mary Kawena Pukui, "planting was a universal occupation throughout Polynesia; but nowhere else was it a systematic and engrossing occupation to the extent that it was in Hawaii" (Handy 16).

If it's possible to express the complexity of traditional Hawaiian culture in simple terms, one such concept would certainly be "mālama 'āina." To mālama 'āina is to take care of and look after the land, to maintain it in a condition that sustains humankind, who need it for their survival. "Mālama" is "to take care of, tend, attend, care for, preserve, protect, save, maintain" (Pukui 232). The word "'āina" is defined as "land," and it tends to be used in the broadest possible sense of the word, encompassing not merely the physical land itself but the life-sustaining essence of its nature. In fact, it's actually a compound word comprised of verb "'ai" and "na" that together mean "that which feeds." It's common today to frame 'āina and mālama 'āina in these larger, existential terms.

The Yesterday section that follows introduces some of the fundamental aspects to mālama 'āina—from its cosmogenic origins and supernatural morphology to its more practical day-to-day applications in traditional Hawaiian society. As strong and sustaining as the bonds between 'āina and kānaka (people) had long been, over the last two hundred-plus years, the general thrust of history has led to a splintering and severing of those bonds. The end of Hawai'i's isolation from the rest of the world came with the arrival of Captain James Cook in 1778, and as American and European interests in Hawai'i expanded, the presence and influence of Hawaiian people and culture on the land diminished. The consequences of this breakdown in mālama 'āina reverberate today, especially when it comes to matters of land and resource use, so the Yesterday section concludes with a brief overview of some of the forces that weakened the traditional bonds between 'āina and kānaka.

ʻĀina and Kānaka: The Foundations of Land, People, and Culture in Hawaiʻi

In the Hawaiian worldview, natural and cultural resources are one and the same. This relationship permeates all aspects of Hawaiian beliefs and practices—even today. Its origin can be seen in one of the principal creation stories, a chant known as the Kumulipo, which orders the origin of plants, animals, and humans along a shared, unbroken chain. It's this conception of humankind's existence that gives rise to mālama ʻāina, a core feature of the Hawaiian cultural value system that is expressed through the care and stewardship of the environment and its natural resources.

Similarly, the various forms of the natural environment, both animate and inanimate, are believed to be embodiments of Hawaiian gods and deities. From the heavens and volcanoes, to the forests and the planting fields, to the shoreline and ocean depths—not to mention the winds, rains, clouds, stars, and the many useful living things—all have some connection to a complex pantheon of akua (gods), kupua (demigods), and ʻaumakua (deified ancestor gods). These gods and deities are the subject of moʻolelo (stories) that the Hawaiian people told and retold across generations. These moʻolelo explain how things came into existence.

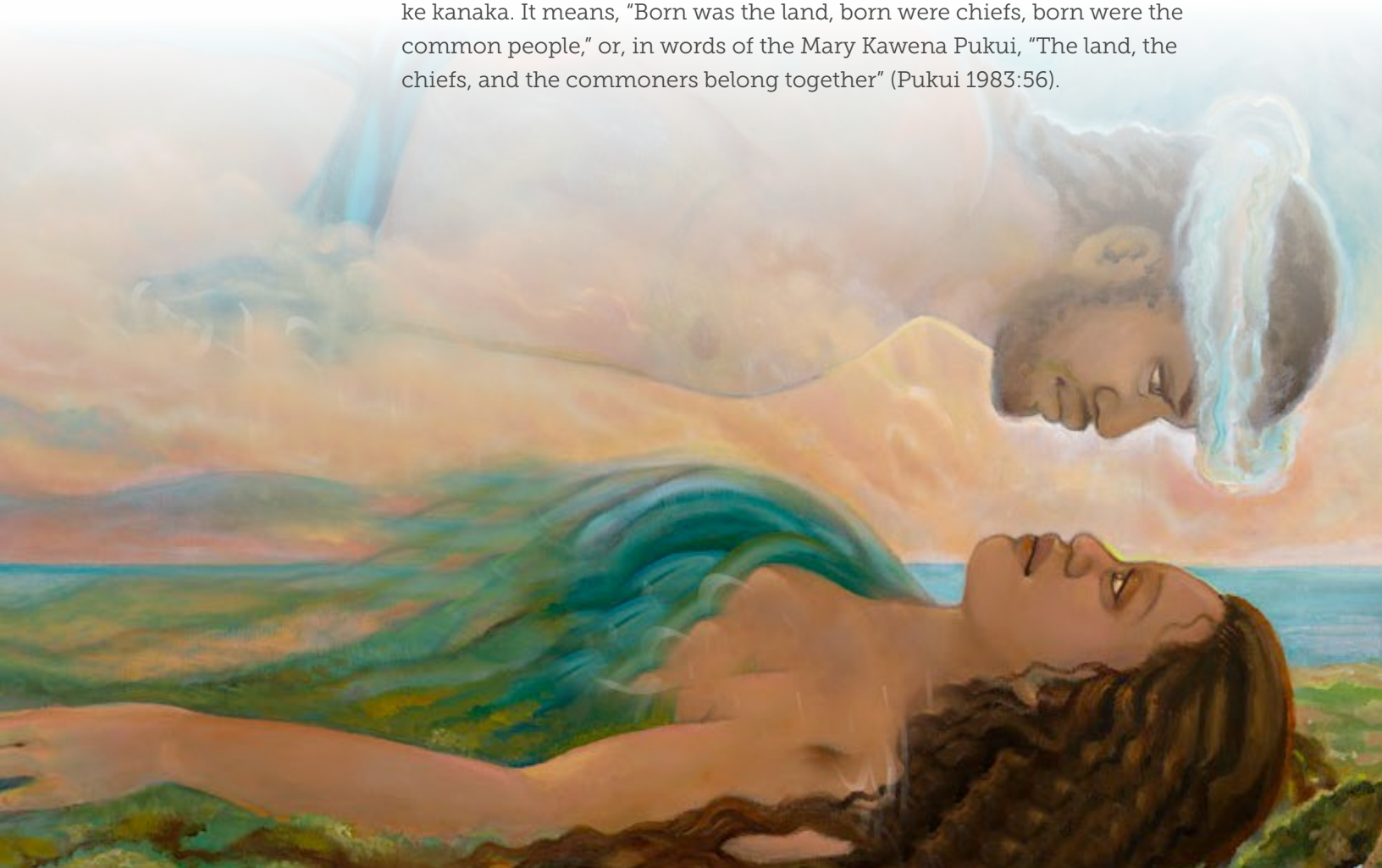
The Kumulipo

The Kumulipo is a cosmogenic, genealogical prayer chant. It represents the oldest and least altered form of Hawaiian cosmogenic genealogies. For this reason, it stands as one of the best examples of a truly Hawaiian conceptualization of life's origins.

Across 2,102 lines, the Kumulipo unfolds like an epic poem. Its length, complexity in ideas and language, and the ancient context in which it was composed make it extremely difficult to summarize, and thus, the following synopsis will necessarily omit many important details.

If there is one theme that is that runs through the Kumulipo, it is that the world takes shape through processes of conception and birth from parent sources. It is not, on the contrary, willed into existence by a supreme being. Each succeeding generation is born from the mating of a male and female who are at first the personifications of cosmic forces and later, the human ancestors of the child for whom the Kumulipo was dedicated.

There's an ʻōlelo noʻeau (Hawaiian proverb or poetic saying) that presents these ideas in the succinct terms: Hānau ka ʻāina, hānau ke aliʻi, hānau ke kanaka. It means, "Born was the land, born were chiefs, born were the common people," or, in words of the Mary Kawena Pukui, "The land, the chiefs, and the commoners belong together" (Pukui 1983:56).



The Kumulipo was first translated from Hawaiian to English by Queen Lili'uokalani between the years 1895 and 1897, the year it was published. She received the text from her brother David Kalākaua, who had it printed as a 66-page pamphlet in 1889. The Kumulipo was of special significance to their family because it linked them not only to their ancestors within their genealogical line, but to the primary gods, the cosmos, and the plants and animals named in the Kumulipo.

The first half of the Kumulipo explains that in the beginning there was pō or darkness, and from this darkness, came life. Pō birthed two children, a son named Kumulipo and a daughter named Pō'ele. The natural world was then created through the union between Kumulipo and Pō'ele. The first child born to them was the coral polyp, which created the foundation for all life in the sea. Born in continuing sequential order are all of the useful plants and animals in Hawai'i, who serve as 'aumakua or guardians that continue to watch over Native Hawaiians today. In the last 8 wā humans are born, including Papahānaumoku and Wākea, the Earth Mother and Sky Father.

The genealogy of Papa and Wākea is critical in forming the relationship between Native Hawaiians and the 'āina. Their union created most of the principal Hawaiian Islands, and the hundreds of generations of their human descendants. Their mating also produced a daughter, Ho'ohōkūkalani. The nī'aupi'o (familial mating) union between Wākea and Ho'ohōkūkalani produced their first child Hāloanakakalaukapalili, who was stillborn and buried in the earth. From his burial place grew the first kalo plant, the Hawaiian people's most important crop. A second offspring, named Hāloa in honor of his elder brother, was the first man and is the ancestor of all Native Hawaiians. The Hawaiian people referred to themselves as "kalo kanu o ka 'āina" or "taro planted on the land" (Pukui 1983:157)

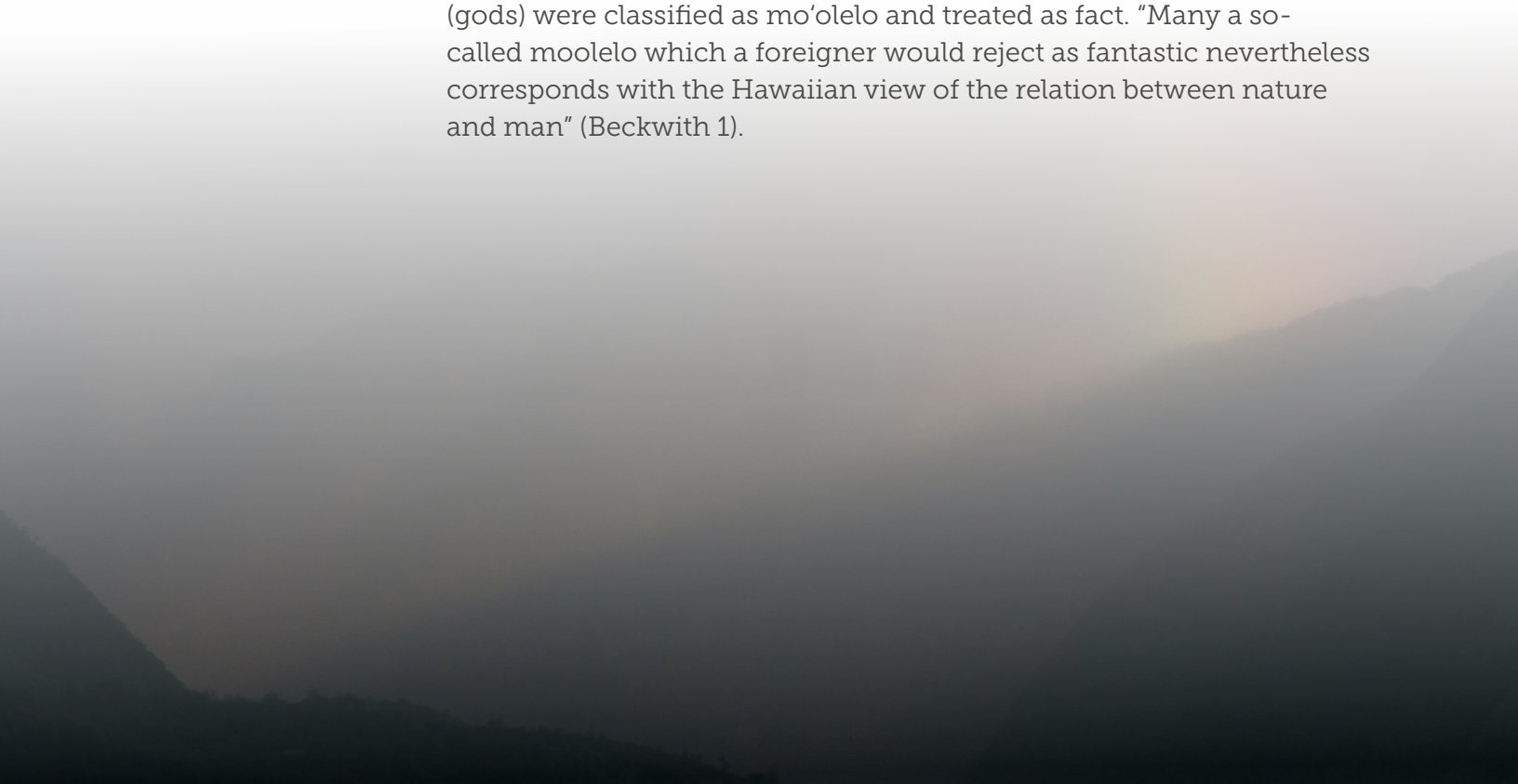
In traditional Hawaiian society, it was the duty of younger siblings to love, honor, and serve their elders. Mālama 'āina—a cultural value that stresses mankind's care for the land and natural resources—stems in part from the responsibility to respect and care for the older sibling, the kalo plant, and all natural and cultural resources.

The Hawaiian Gods of Nature

The story of Papa, Wākea, their daughter Hoʻohōkūkalani, and the stillborn child Hāloanakakalaukapalili is one of countless stories that the ancient Hawaiians maintained to explain the origin of all aspects of the world around them. In Hawaiian ways of perceiving their world, the gods are in nature: in the plants, animals, and natural phenomena like thunder, rain, wind, and waves. The Hawaiian word for a Worship of these gods through prayer, offerings, and the observation of other rituals were a part of daily life in ancient Hawaiʻi.

Until the introduction of writing in the 1820s by American missionaries, Hawaiʻi's culture was an oral culture, and the stories of both historical figures and events, as well as gods, deities, and unexplained phenomena, were passed on through memory and recitation across generations. The folklorist and ethnologist Martha Beckwith, who wrote *Hawaiian Mythology*, the seminal book on Hawaiʻi's mythological traditions, is careful to note that the Hawaiian people treated some stories as fact and some as fiction. A story treated as fact, "one which is supposed to follow historical events" is a moʻolelo; a story of fiction, "or one in which fancy plays an important part" is a kaʻao (Beckwith 1). Moʻolelo were intended to inform the listener, kaʻao to amuse and entertain.

As fantastical as they sound to our ears today, the stories of the akua (gods) were classified as moʻolelo and treated as fact. "Many a so-called moolelo which a foreigner would reject as fantastic nevertheless corresponds with the Hawaiian view of the relation between nature and man" (Beckwith 1).



Pele, Ka Wahine ʻAi Honua: Pele, the Earth-Eating Woman

Pele is perhaps the best-known of the Hawaiian akua, and there are innumerable chants, songs, and prayers that have been composed in her honor. In the traditional Hawaiian belief system, the volcano at Kīlauea on Hawai'i Island is the dwelling place of Pele. In mo'olelo, Pele is depicted as the head of a family of a dozen or so fire gods who are each manifestations of some aspect of volcanic activity.

Often referred to as Madame Pele or Tūtū Pele, she is known for her power, passion, jealousy, and fierce temperament. Revered for her beauty but also for her ability to destroy, Pele symbolizes the power of natural forces. She manifests herself in many forms, but she is most visible in the lava, active eruptions, and steam found on Hawai'i island.

The mo'olelo concerning Pele are lengthy; they cover the entire island chain and have various subplots, but the two main storylines tell of the following: (1) Pele's migration to Hawai'i and the establishment of her home at Kīlauea; and (2) her relations with her sister Hi'iakaikapoliopele, who Pele sends on a journey to Kaua'i to fetch Pele's lover Lohiau.

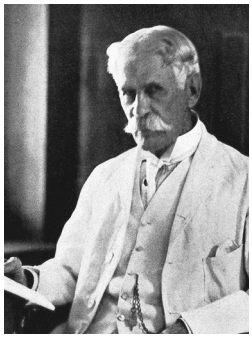
There are variations in the details of how and why Pele sailed from her distant homeland to Hawai'i, but most mo'olelo agree that she reached the northernmost islands in the Hawaiian chain along with several of her brothers and sisters, all of whom are associated with natural phenomena such as rain, wind, thunderstorms, and ocean waves. Pele travels eastward from island to island, searching for a place to bury her sacred fire without striking water, an element hostile to her fiery nature. After her fire is extinguished on each of the islands, Pele finally settles on Hawai'i Island as her new home.

When Pele's spirit leaves her physical body while in a deep sleep, she falls in love with a young chief named Lohiau who lives on Kaua'i. Pele sends her sister Hi'iaka to bring Lohiau to her, insisting that she return within forty days. Hi'iaka's journey

is filled with many adventures, and when she finally reaches Kaua'i, she finds that Lohiau has died. Hi'iaka uses her powers to revive the chief, but she is unsuccessful in meeting her sister's deadline. Fearing that Hi'iaka has betrayed her, Pele becomes furious and destroys Hi'iaka's sacred 'ōhi'a forest and turns her friend Hopoe into stone. In retaliation, Hi'iaka embraces Lohiau in full view of her sister. An enraged Pele sends waves of fire and lava at the couple, killing Lohiau. Hi'iaka again restores Lohiau to life, with some versions of the legend saying that the couple returned to Kaua'i.

The epic struggle between the sisters continues to this day. With each eruption, lava flows destroy what life lies in their paths, but soon thereafter, they become beds for 'ōhi'a seedlings. In Hawaiian ways of perceiving, Pele and Hi'iaka embody the eternal cycle of destruction and renewal that drives creation.

Ka Wai a Kāne: The Waters of Kāne



Nathaniel Emerson

In ancient times, wai, or fresh water, was a physical manifestation of Kāne, a principal akua in the Hawaiian religion. Many Polynesian cultures recognize him as a central deity, and in the Hawaiian mo'olelo, he comes from a foreign land generally referred to as Kahiki.

One of the clearest accounts that we have, as to the importance and sacred nature of water in the Hawaiian belief system, comes from Nathaniel Emerson (1839-1915), the son of missionaries who took great interest in the traditional, practices, and beliefs of the Hawaiian people. Among the mele oli (chants) he collected is one from Kaua'i and dedicated to Kāne. At the start of each verse, the mele asks, "where is the water of Kāne?" Each verse then describes an aspect of the hydrological cycle and attributes all of it to Kāne: the continuous movement of water above (in the form of clouds, rain, and rainbows), below (as underground aquifers), and on the surface of the earth (as streams and springs). Emerson equates the significance of freshwater in the Hawaiian culture to nothing less than the Holy Grail: "To the Hawaiian mind the aspiration and conception that most nearly approximates to [the legend and myth of the Holy Grail] is that embodied in . . . The Waters of Kane [sic]" (257).

One reason for Kāne's connection to water is because of 'awa (kava); he needs water to prepare the drink that's made from the root of the 'awa plant. In the mo'olelo, Kāne is often accompanied by another major god named Kanaloa, who serves as Kāne's complementary opposite, the yin to his yang. They are depicted traveling from place to place, creating freshwater springs as they go. Kāne does this by thrusting his long digging stick, a tool called an 'ō'ō, into the ground and causing wai to burst forth.

As an example, there are also several important springs located in Oʻahu's Mānoa Valley that are associated with Kāne. The moʻolelo starts with Kāne and Kanaloa at the beach in Kahala when they begin their search for drinking and bathing water. The two akua make their way to Mōʻiliʻili, and having little luck there, Kanaloa becomes frustrated and begins to tease Kāne, questioning his water-finding ability. A short while later, Kāne locates a source at Kānewai. He thrusts his ʻōʻō into the ground and out pours cool, clear wai. They satisfy their thirst for ʻawa and rinse the sand from their bodies.

The area where the spring was created became known as Kānewai, a historically important kalo-growing land located on the University of Hawaiʻi campus. The sand reference may have been used to explain the presence of a large limestone and sand deposit located near Kānewai, where rock quarry once operated in more recent times (1889 to 1949). The moʻolelo continues with Kāne and Kanaloa continuing on their journey and creating a chain of springs throughout Mānoa: Huelani, Wailele (present-day Mid-Pacific Institute campus), Kapunahou (present-day Punahou School), Kaʻaipū, and finally, Waʻaloa near a waterfall at the back of the valley called Waiakeakua.

"Wai" is word for freshwater, and it is also the root words for wealth and law: waiwai and kānāwai. It is often suggested that the reduplication of "wai" in waiwai and kānāwai underscores the centrality of fresh water in traditional Hawaiian society. Healthy watersheds and continuous mauka-to-makai stream flow were essential for farming and fishing, recharging ground water supplies, feeding estuary systems, and supporting native stream life.

The Story of Māui Snaring the Sun

The character of Māui is a well-known trickster in Hawaiian and Polynesian mythology. There are many variations of the Māui stories, but they all depict a series of great feats—his discovery of fire, for example, or his attempt to draw the islands together with his supernatural fishing hook.

One of his feats involves ensnaring the sun. Because the days are so short, Māui's mother Hina is having trouble drying her kapa, a natural textile that the Hawaiians made from the inner bark of a plant called wauke. In one version of this tale, Māui climbs Haleakalā, and while the sun is overhead, he manages to capture it using a rope he fashioned from coconut husks. Some of the sun's rays are broken off, and the sun promises to move more slowly if Māui agrees to let him go. This resulted in longer days in the summer and shorter days in the winter.

The Ocean and Kanaloa

For Hawaiians, the sea was, and continues to be, an intimate and essential part of daily life. Lawai'a (fishermen) were highly skilled and greatly respected, and passed their vast knowledge down from generation to generation. The ocean was divided into numerous smaller divisions beginning from the nearshore to the deeper open waters, supporting abundantly productive, but sustainable, fisheries. Channels between islands were also given names and served as connections between communities. Today, marine resources continue to play a significant role in physical and spiritual sustenance, and ocean stewardship remains deeply embedded in Native Hawaiian culture.

Native Hawaiians are celebrated for being courageous voyagers who mastered the immense Pacific Ocean, using only the stars, winds, and currents as a guide. Kanaloa is known throughout the Pacific as the akua of the ocean and patron of voyaging and navigation, and is often represented by a squid. According

to moʻolelo, Kanaloa was the first to arrive in Hawaiʻi by way of Ke-ala-i-kahiki (the course to Tahiti), making landfall at Kahoʻolawe. The island of Kahoʻolawe was called Kanaloa or Kohemalamalama in honor of this event, and it was a place where kahuna (experts) and navigators were trained for early Pacific migrations. In legends and chants, Kāne and Kanaloa were also portrayed as complementary powers, traveling together to open up fresh water springs.

The Wind Gourd of Laʻamaomao

In addition to identifying significant places and aspects of the land and sea, the Native Hawaiians recognized the unique features of the winds and rains. They understood that there were distinct types, with different levels of intensity, duration, timing, sound, and direction, and they identified them as such through naming.

In the epic moʻolelo of Pākaʻa (a story principally about the nature of a relationship between an aliʻi and his personal attendant), we learn about Laʻamaomao, a deity who controls all the winds of Hawaiʻi, which are stored in an ipumakani (wind gourd). The keeper of the gourd is able to summon the winds by chanting their names, and the moʻoleo is an important work because it contains chants that record the local wind names of all the major districts across the Hawaiian Islands.

Mālama ʻĀina: Care for That Which Feeds

In Hawai'i, more so than anywhere else in Polynesia, planting and farming evolved into a highly sophisticated and systematic practice that played a central role in the development of culture and society. The backbone of Hawaiian society were the planters, who prepared, planted, and harvested their own plots of land and lived in extremely close contact with the natural world around them. In Hawaiian thinking, the land was the chief, and man was its servant. Man needed the land, but the land had no need for man.

Mālama ʻāina is the concept that captures the basic duty at the heart of the relationship between people and the land. To mālama ʻāina is to take care of and look after the land, to maintain it in a condition that sustains humankind, who needs it for their survival. The word "ʻāina" is defined as "land," and it tends to be used in the broadest possible sense of the word, encompassing not merely the physical land itself but the life-sustaining essence of its nature. In fact, it's actually a compound word comprised of verb "ʻai" and "na" that together mean "that which feeds." It's common today to frame the concept of ʻāina in these larger, existential terms.

The Traditional Hawaiian Land Tenure System

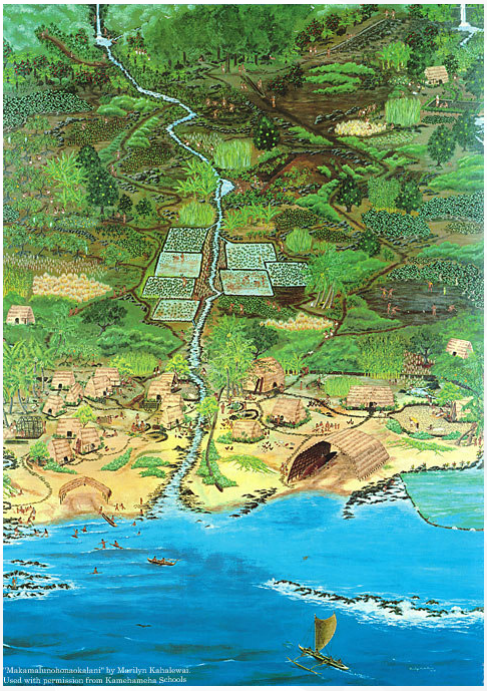
The pre-contact Hawaiian economy was completely self-sufficient, supported by a land tenure system that gave people access to the widest possible spread of resources. A fundamental building block of this system was the ahupuaʻa, which divided each island into subdivisions that radiated outward from the central mountain ranges and cut across each locality's ecological zones. There are exceptions, but the classic ahupuaʻa is a large, wedge-shaped slice of land with borders running from the mountain peaks to the nearshore fisheries and generally following prominent landforms—ridge lines and valley walls, for example. By design, an ahupuaʻa contained everything its residents needed to sustain themselves: medicinal plants, hard woods, and freshwater from the uplands; vegetable and fruit crops from the midlands; and fish, seaweed, and salt from the sea.

Ancient Hawaiian society was stratified between the chiefs above and the common people below. The commoners made up the larger class, and as a collective, they were known as makaʻāinana, literally "people that attend the land." The chiefly class was known as aliʻi, and it was further stratified by degrees of rank.

Hawaiʻi land tenure system was organized into territories whose governance arose from political power and not kinship, as is seen other Polynesian societies. Every ahupuaʻa was under the control of a chief who received it from a supreme aliʻi who reigned as king or queen. This usually happened during a period of land redistribution that occurred once a new king or queen came into power, either by succession or by conquest. The aliʻi relied on local land managers called konohiki to oversee their lands and maintain productivity.

Although the ruling chiefs fell in and out of power, the makaʻāinana could expect a fair degree of stability in their rights to live, cultivate, gather, and fish from most areas within their ahupuaʻa, so long as they provided the chief with tributes of food, goods, and labor. Because the aliʻi relied on the makaʻāinana for their own provisions, it was

in their interest to appoint capable konohiki who treated people fairly. The makaʻāinana were not necessarily bound to any lands or chief and could relocate if it was in their best interest. So the chiefs had an obligation to be pono—to be respectful, good, and just.



The Ahupua'a System: A Model of Sustainability

Energy can be defined in several ways, but for the purposes of this discussion, it is the ability to do work. All civilizations throughout history have had to learn how to convert energy from one form to another in service of doing work. The Hawaiian planters relied primarily on their hands and feet to do much of the farming work, but when it came to irrigation, they exhibited extraordinary ingenuity, planning, and skill by harnessing the energy of water moving from mauka (down to the sea—what we often refer to as "mauka to makai"

Kalo (or taro) was the Hawaiian people's crop of choice—superior to 'uala (sweet potato), mai'a (banana), and 'ulu (breadfruit), food crops that factor more heavily into traditional diets in other parts of Polynesia. Kalo was grown throughout Polynesia, Melanesia, and South-East Asia, but it was cultivated with an unmatched level of intensity and skill in Hawai'i, where there were at least several hundred varieties adapted for the various localities, soils, and terrain. There were two general types of planting: kalo malo'o, or taro grown in rain-watered regions without irrigation; and kalo wai, or taro grown alongside streams, ditches, and in flooded paddies called lo'i.

Kalo responds especially well to irrigation, so growing kalo in a flooded lo'i was the preferred method of cultivation. As long as water circulates freely through a lo'i and does not become stagnant, the kalo grows quickly and produces excellent corms.

To accomplish this, the Hawaiian people developed sophisticated irrigation systems that redirected stream and spring water through a network of lo'i connected by a series of stone-paved ditches called 'auwai. Carried by the natural slope of the land, the water flowed into the first lo'i. The lo'i were laid out in terraces so that the water could flow from one to the next, working its way downslope, moving slowly enough not to sweep away soil or young plant shoots, but quickly enough that the water temperature remained cool. Excess water returned to the stream. This practice allowed others downstream to also use it to irrigate their plants.

The development of loko i'a, or fishponds, along the shorelines and especially near the mouths of streams further maximized the productive yield of an ahupua'a. The Hawaiians developed fishponds to a greater extent than any other group in Polynesia, and they are considered a modern engineering marvel. Seaweed, shellfish, and fish like 'ama'ama (mullet) and awa (milkfish) thrived in the mixture of fresh and sea water. These ponds enabled communities to move beyond mere harvesting of natural populations into fish production, which greatly enhanced the supply of food and societal development.

Disruptive Forces in Post-Contact Hawai'i

Hawai'i's long isolation ended with the arrival of Captain James Cook in 1778. From circa 1790, the population of foreigners residing in Hawai'i began to grow, slowly at first, but their presence brought new customs and practices, new ways of organizing land and labor, new technologies, new threats and, for a few, new opportunities. Throughout the eighteenth and nineteenth centuries, these forces altered the careful balance that had long existed in Hawaiian society.

Population Loss Caused by Disease

One of the most consequential was a general and persistent decline in the population of Hawaiians. Hawai'i's long isolation had insulated it from the ravages of old-world diseases. But with the flow of trans-Pacific trade came syphilis, gonorrhea, whooping cough, smallpox, influenza, and other respiratory ailments that caused widespread death and infertility. According to the historian Seth Archer, "Hawai'i was home to half a million people in the eighteenth century. By 1850 the population had been reduced by as much as 90 percent" (Archer 2). As a consequence of fewer and fewer people being on the land, a lot was lost: homes, gardens, farming plots, and fishponds, along with the knowledge, stories, and cultural practices connected to these people and places.

The Sudden Privatization of Land Through the Mahele

Simultaneous with these demographic changes was the Mahele (also known as the Great Mahele), which transformed the centuries-old communal land tenure system into one of private ownership that mirrored those found in the United States and Europe. It has been theorized that one reason for King Kamehameha III's decision to privatize land was to preserve his and his subject's interests in their lands should the Hawaiian Kingdom fall to a foreign power like the United States, England, or France. By creating a system foreign governments would recognize, the hope was that the Hawaiian people would not be dispossessed. Unfortunately, the Mahele process itself was flawed and left the great majority of Hawaiians—the maka'āinana or the common folk—owning less than one percent of land in Hawai'i. And the fact that land could be bought, leased, and sold drove the dispossession that Kamehameha III may have hoped to prevent.

The Mahele was a multi-step process that began in 1845 and effectively ended a little more than five years later. First came the establishment of a Board of Commissioners to Quiet Land Titles (also known as the Land Commission Board), whose job was to review and award land claims. Those who intended to secure title to any lands they claimed a possessory interest submitted their claims to the five-member Land Commission Board. The Board then determined the validity of those claims and issued a Land Commission Award (LCA) to successful claimants. The land was then surveyed, and upon payment of a commutation fee to the government, a Royal Patent was issued, which conferred free and clear title to the patent-holder.

The actual dividing up of the land began in 1848. Because of the old land system's communal nature, preliminary determinations needed to be made as to who owned what among the following parties: the king, the chiefs, the konohiki, and the maka'āinana living on and working the land. At the outset, it was decided that King Kamehameha III would select and retain certain lands as his own property, not government property. These became known as the Crown Lands. The intent was that the remaining lands would then

King Kamehameha III (Kauikeaouli)

be divided roughly into thirds: one-third for the government, one-third for the chiefs and konohiki, and one-third for the maka'āinana. These three land categories were classified, respectively, as Government Lands, Konohiki Lands, and Kuleana Lands.

This first phase of the division occurred between King Kamehameha III and more than 240 chiefs and konohiki. Between January and March of 1848, each of them met with the king and decided which lands they would retain and which they would give up. The ali'i and konohiki claims were typically for entire ahupua'a or smaller, whole subdivisions within ahupua'a. These agreements didn't confer legal title; they simply extinguished the rights of each party in the land of the other. They were still obligated to go through the Land Commission process and pay the commutation fees in order to receive Royal Patents. Rather than pay a monetary fee, the ali'i typically paid in land by transferring roughly one-third of their total lands to the government, and they were added to the inventory of Government Land.

For the maka'āinana, it took the passage of the Act of August 6, 1850, commonly known as the Kuleana Act, to facilitate the process of taking title to their own landholdings, which became known as Kuleana Lands. The maka'āinana were permitted to make claims for any lands that they actually cultivated, and their claims would need to be supported by testimony from their neighbors. The Act waived payment of a commutation fee, although a survey was still required in order to obtain a Royal Patent, which conferred free and clear title to the land awarded under the Land Commission Award.

The Shift from a Subsistence Economy to a Market Economy

The traditional Hawaiian economy was a subsistence economy. Farming as a commercial enterprise was a foreign concept. The Hawaiian people were indeed expert in the ways of farming, but there was never a profit motive; the notion of a "market" or "marketplace" did not exist. Growing, gathering, hunting, fishing, and making things for oneself and one's 'ohana, supplemented by practices of gifting and exchange, defined the economy of pre-contact Hawai'i.

Trade with European and American ships familiarized the Hawaiian people with notions of supply and demand. Kamehameha—who was Hawai'i's king when the islands became linked to the trans-Pacific trade routes—recognized the value of trade, and he engaged in it himself. He understood, for example, that a monopoly on pork or sandalwood could command higher prices, and yet he also endeavored to ensure that deals were fair and faithfully executed.

'Iliahi (Hawaiian sandalwood)

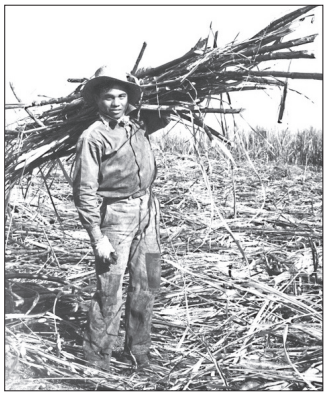
Hawai'i first true export was 'iliahi, a native sandalwood that American traders collected in Hawai'i, usually in exchange for various foreign goods, and sold in China. The sandalwood trade grew in importance after the War of 1812. Kamehameha maintained a monopoly over the trade, and under his orders, the wood would be cut, gathered, and transported to the ships. Relying on large populations of maka'āinana to gather wood meant that there would be no one to farm or fish, and whole communities risked going hungry. So Kamehameha tried to balance a desire for sandalwood, which enabled the purchase of items such as ships, and the needs of his people to farm and fish for their livelihoods.

Kamehameha's tight control over the sandalwood trade eased Hawai'i into this new world of commerce, but after his death in 1819, his son and successor Liholiho allowed other ali'i to engage in the trade, and the results were disastrous. These ali'i embarked on a spending frenzy, facilitated by American traders promoting all manner of foreign goods and luxuries and paid through the labors of the maka'āinana who were ordered to go into the mountains and gather the

wood. By 1829, just ten years after Kamehameha's death, the 'iliahi trees had grown scarce, and the trade in sandalwood dried up.

With Hawai'i now serving as a trade outpost came demand from ship captains for supplies of food, wood, water, and salt, and the maka'āinana found opportunities to sell and trade. Beginning in 1800, the fur trade brought American ships to Hawai'i as they made their way between China, Alaska, and up and down the North American west coast. Around 1820, whaling added to, and then supplanted, the demand for provisions that came in through the fur trade. Whaling ships used Hawai'i as a stopover between the United States and Japan, where whales were hunted primarily for their blubber, which was processed into whale oil and used for heating, lighting, and as an industrial lubricant. In the spring and summer, hundreds of whaling ships would arrive and spend months at a time in Lahaina and Honolulu. The whaling industry lasted for over half a century, peaking in the 1850s and coming to an end in 1880.

The Rise and Dominance of the Sugar Industry



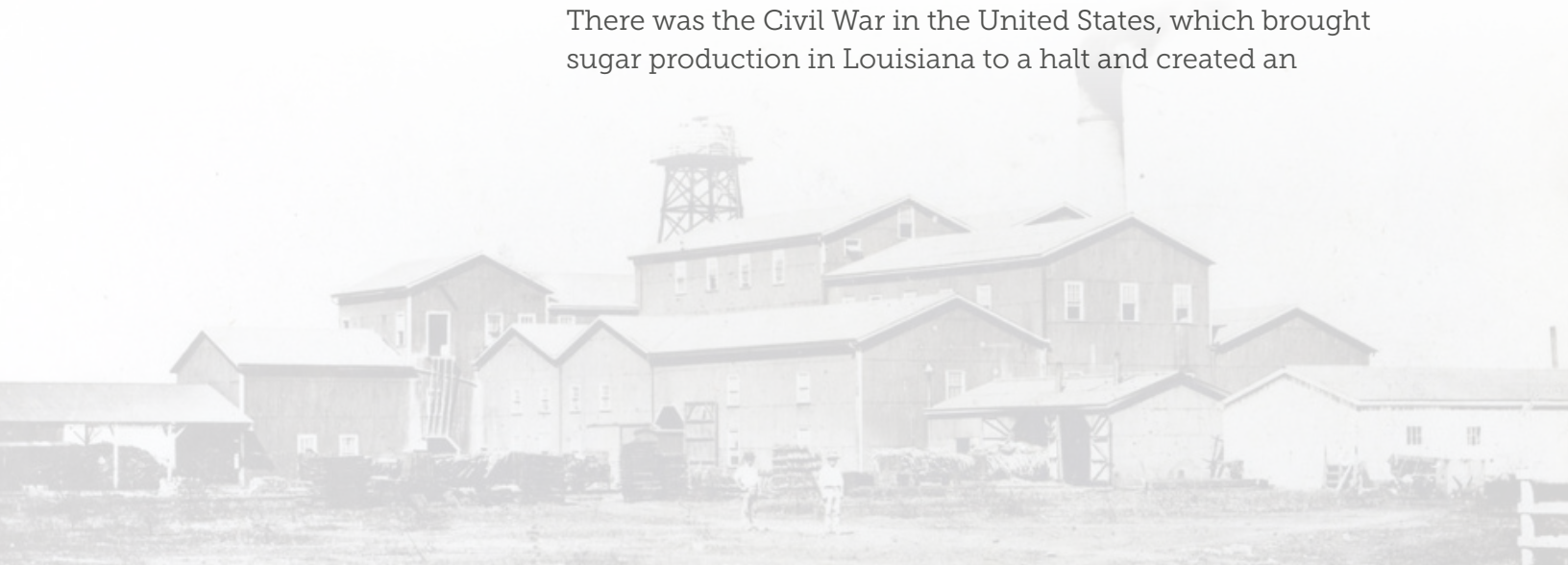
Worker on the sugar plantation

By the 1850s, the development of a commercial agriculture industry was a goal shared by many. The missionaries viewed it as a means of further molding the Hawaiian people into something that reflected their own ideal of the land-holding, industrious, civilized, New England yeoman farmer. King Kamehameha III and his advisors had also taken up the charge, and the King's interests reflected a desire to see his nation and people achieve greater independence and strength.

At this moment in time, sugar was just one of many commodities being produced in Hawai'i for several different markets. Crops like wheat, kalo, and rice were grown for domestic consumption. Demand for potatoes, vegetables, sugar syrup, and molasses came from the Pacific trading ships. And then there was sugar, pulu (tree fern wool used as pillow and mattress stuffing), goat skins, and coffee, which were exported to places like China, Oregon, and California.

Sugarcane and sugar production started to gain predominance in the two decades between 1860 and 1880, which MacLennan identifies as "the link between the earlier failed commercial plantations of mid-century and the powerful industrial plantations that dominated the landscape when Hawai'i lost its independence" (MacLennan 1997:97).

A number of factors provided fuel to Hawai'i's fledgling sugar industry during this period, turning it from an incidental crop to the dominant agricultural commodity. There was the Civil War in the United States, which brought sugar production in Louisiana to a halt and created an



opening in the market for Hawaiian sugar between 1860 and 1866. The whaling industry, which had peaked in 1846, was in decline, and the slowdown in demand for other agricultural goods like potatoes and various vegetables concentrated interest and investment around sugar. Innovations in agricultural technology, production capacity, financing, and operations management helped a new class of sugar planters overcome some of the problems that plagued their predecessors. There was also the introduction of a new cane variety from the Marquesan Islands in 1854 proved to be well-suited for industrial-scale production. Momentum was further supported by the Hawaiian government, whose need for income led to decisions around immigration and foreign trade policy, the sale and leasing of Government and Crown Lands, and investment in infrastructure that were designed to bolster industrial sugar.

It didn't take long for sugar's growing influence to disrupt the economy, and the changes were met with both enthusiasm and dismay. Those who favored investment in sugar mills and plantations stressed the opportunities for wealth and job creation, which came at a time when the whaling trade had all but vanished. In an 1864 article, The Pacific Commercial Advertiser framed the then-nascent industry in this way:

> ***The following glance at the present and ever growing enterprises for the production of sugar will show that it is, and promises to be the great staple of the islands, deserving the fostering care of the government, not only for the wealth which it brings to the nation, but for the employment which it gives to almost every branch of industry, as well as commerce. ("Sugar Plantations of the Sandwich Islands" 1864)***

Others saw how sugar cultivation diverted time, labor, and resources away from subsistence agricultural practices in ways that were particularly detrimental to the Hawaiian population. In 1867, a food shortage in Lahaina had become dire enough to prompt an investigation into the cause of the famine by a four-person committee made up of D. Kahaulelio, S.W. Nailiili, M. Ihihi, and D. Baldwin. The committee found that the money to be made in sugar was leading the Kuleana tenant farmers of Lahaina to neglect their own subsistence practices. This was compounded by the fact that more and more resources, including water and breadfruit trees, were being devoted to commercial cane. Here is an excerpt from the committee's report that shows how transformative and sudden the effects were on Lahaina. Written by D. Kahaulelio (and translated by Kepā Maly), it was published in the Hawaiian-language newspaper *Ka Nupepa Kuokoa* on April 13, 1867:

> ***With the arrival of the sugar mills at Lahaina, the men have devoted themselves to planting sugar cane. Thus, many of the people have left the planting of their Kuleana lands—the kalo [taro], uala [sweet potato], maia [banana], uhi [yam], and such—with expectations that they shall satisfy their hunger by this work.***
>
> ***Also, as a result of this work at the sugar plantations, much of the water of the streams has been taken, and the taro lands of the Kuleana are dry. They are as if nothing. In the year past, and in this year, there has arisen a great dispute between the Hawaiians and the foreigners, between Hawaiians and Hawaiians, women and their husbands, children and children, about the water. The reason for this dispute, is that the water now goes to the sugar cane, and the taro lands are without.***
>
> ***Also, because so many people have begun to plant sugar cane, a food which once protected (sustained) the people in times of famine has been mistreated. It is the ulu [breadfruit]. This food, is a food that was greatly loved by the offspring of Lahaina, who would always glance to the breadfruit trees, looking to see if the breadfruit was ripe, ready to fall to the ground. In that way the children of Lahaina were sustained. But now, with the extensive planting of sugar cane, many of the breadfruit trees have been cut down and the wood become fuel for the mill.***


THE ACTIVISM THAT WE SEE TODAY CAN BE FRAMED WITHIN THE CONCEPT OF ALOHA ʻĀINA, WHICH TRANSLATES TO MEAN "LOVE OF LAND."

TODAY

A major corollary to the ancient and long-standing cultural connection between ʻāina and kānaka is the contemporary activism around matters of land and resources in Hawaiʻi. Indeed, the culture of Hawaiʻi, which is founded on the supremacy of ʻāina, is a predicate for the community's engagement around how ʻāina is managed, who has access to it, and what today's uses mean for Hawaiʻi's future. As explained in the Yesterday section, ʻāina is more than simply land, it is "that which feeds" and encompasses the widest breadth of nature's life-sustaining resources. Renewable energy development may be in its early stages, but its dependency on both land and natural resources explains why the industry has already been drawn into the struggle over ʻāina.

Led largely by activists and cultural practitioners from the Native Hawaiian community, the roots of the present-day struggle go back to the 1893 overthrow of the Hawaiian Kingdom, but it's really a continuation of the activism that grew from the cultural awakening of the late-1960s and 1970s, a period known as the Second Hawaiian Renaissance (the first occurred during the reign of King David Kalākaua from 1874 to 1891).

The activism that we see today can be framed within the concept of aloha ʻāina, which translates to mean "love of land." Like mālama ʻāina, it exemplifies the revered position that land occupies in a Native Hawaiian worldview, and it is sometimes used interchangeably with practices related to environmental stewardship. But the concept of aloha ʻāina goes a step further in the way that it functions as a key organizing principal for political movements in Hawaiʻi.

The Today section that follows uses aloha ʻāina to contextualize the community's engagement around renewable energy development in Hawai'i. There are two examples that best illustrate how aloha ʻāina exerts force in the renewable energy space: the attempted development of geothermal energy at Wao Kele o Puna on Hawai'i Island and the development of wind energy at Kahuku on O'ahu. Both developments were met with community opposition and suffered from a lack of community engagement. And although they happened thirty years apart and were complicated by their own specific set of issues, when they are contextualized within a framework of aloha ʻāina, we see more clearly how culture impacts renewable energy development. This is especially apparent where there is a failure on the part of industry to listen and engage the people who practice aloha ʻāina, even when it may not be explicitly viewed or expressed as such. Before delving into those events, let's first further define aloha ʻāina and document the two most significant chapters in its evolution: the Native Hawaiian people's resistance to annexation by the U.S. and the fight to end the U.S. military's bombing of Kaho'olawe.

Defining an Aloha ʻĀina Framework

Aloha ʻāina is one among many values within the Hawaiian value system, and like so many Hawaiian ideas and concepts, aloha ʻāina can mean different things to different people. For the purposes of this cultural narrative, we will define aloha ʻāina in a way that makes it useful for understanding how a community might view renewable energy development and, in that regard, the manner in which Hawaiian scholar Dr. Jon Kamakawiwoʻole Osorio considers the history of Kahoʻolawe within the context of aloha ʻāina is the approach we will follow.

Dr. Jonathan Kamakawiwoʻole Osorio

Aloha ʻāina should first be thought of as an organizing principle for grassroots movements in Hawaiʻi, big and small. Expressions of aloha ʻāina can be found in a wide-range of community efforts, from restoring loko iʻa (fishponds) and loʻi kalo (taro fields), to returning streamflows to farming communities, to ending destructive military exercises on land in Hawaiʻi. Osorio calls it the "primary symbol of cultural identity" among those who participate in political activism from a Hawaiian perspective, and when he writes that aloha ʻāina "is an integral part of Hawaiian consciousness and unifies a number of seemingly disunited Hawaiian organizations," he posits that aloha ʻāina is present in movements that aren't necessarily regarded as such (Osorio 139).

There are three key ideals that animate aloha ʻāina in Osorio's analysis. They are the ideals that unify people, that cause them to act, to resist, to seek to have their voices heard. They are helpful for the purposes of this cultural narrative, because they give aloha ʻāina a framework. Osorio identifies them as: "self-sufficiency and autonomy, sovereignty over the land, and the need to care for the land as a vital resource" (142).

Because all three of these ideals intersect with renewable energy projects in ways that are especially meaningful for community engagement, aloha ʻāina is the lens that will be used to bring the cultural-historical narrative of energy in Hawaiʻi to the present day. Before we trace the evolution of aloha ʻāina, let's first establish a basic understanding as to how these three ideals manifest themselves in community.

1

Aloha 'Āina Is: To Care For the Land as a Vital Resource

The Yesterday section of this narrative established the cultural underpinnings of mālama 'āina. Mālama 'āina is such a well understood and widely shared value because of the many ways in which land in Hawai'i is perceived as vital. It is 'āina; literally, "that which feeds." It is imbued with a complex spiritual nature. It is kin, deserving of dutiful care and respect. It is the domain of countless wahi pana, or culturally significant places.

The vitality of Hawaiian land is not exclusive to Native Hawaiian people or communities. Land is a precious resource on an island where there isn't that much of it. The high price of land, for example, makes land for affordable housing vital. Hawai'i's reliance on imports makes farmland vital. The sheer beauty of a place that residents and kama'āina are lucky enough to call home is its own source of vitality. All of these things are, to varying degrees, in competition with the use of land for renewable energy projects, and when a development threatens the care of land or an aspect of its vital nature, it offends the most widely shared ideal of aloha 'āina.

2

Aloha 'Āina Is: To Seek Self-Sufficiency and Autonomy

An offshoot to mālama 'āina is the notion that when we take care of the land, it takes care of us. The ahupua'a system is held up today as a model for Hawai'i future, even in urban Honolulu, because it brought families and communities a kind of self-sufficiency that Hawai'i has not known in generations. Self-sufficiency helps to ensure a sense of autonomy, or the ability to make decisions independently and determine what's best for one's own community. Renewable energy holds the promise of self-sufficiency and autonomy for Hawai'i, but it also risks perpetuating aspects of Hawai'i's high-cost, monopolistic energy market that make communities feel less self-sufficient and less autonomous.

This threat to self-sufficiency and autonomy is especially acute in: 1) any community that must bear new or additional burdens without receiving any clear benefit in exchange, and 2) neighbor island and rural communities, particularly those communities who engage in fishing, hunting, gathering, farming, and other subsistence practices.

3

Aloha ʻĀina Is: To Achieve Sovereignty Over the Land

Among the resident population in Hawai'i, this ideal is unique to the Native Hawaiian people. It stems from the 1893 overthrow of the Hawaiian Kingdom, the key points of which will be covered in the following section. But the sovereignty issue is not limited to state sovereignty. It also draws upon the forces that reduced Native Hawaiians' personal and/or familial sovereignty over lands—indeed, entire ahupua'a—that once fed, housed, and otherwise sustained their kūpuna (ancestors). As already covered in the Yesterday section, the Mahele's land privatization scheme dealt the biggest blow, but the demographic and economic changes of the 19th century generally made the Native Hawaiian people worse off and weakened their personal and/or familial attachments to ancestral lands.

The Native Hawaiian people are unlike the federally recognized Native American and Alaska Native tribal entities, in that they have not yet established a government-to-government relationship with the United States. Despite being a matter of ongoing debate, even within the Native Hawaiian community, some form of self-governance and nationhood status for the Native Hawaiian people has wide support and is, to a limited degree, already being carried out through the Office of Hawaiian Affairs, a quasi-state agency.

Securing a land base is a necessary aspect to Hawaiian self-governance, and the lands that legal and political scholars view as a starting point for negotiations are the 1.8 million acres that were "ceded" by the self-proclaimed Republic of Hawai'i to the United States when Hawai'i became a U.S. territory in 1898. These lands are typically referred to as "ceded lands," a title that some reject because it obscures the fact that the lands were illegally seized. Included among these lands are roughly one million acres that constitute the Crown Lands and the 200,000 acres held in trust by the Department of Hawaiian Home Lands. When renewable energy developments occur on these ceded lands, they encroach upon the sovereignty question.

The Political Foundations of Aloha ʻĀina

The phrase "aloha ʻāina" began to appear in the Hawaiian language newspapers in the 1860s, and in the 1890s, it was adopted by a Native Hawaiian-led grassroots movement that resisted Hawaiʻi's annexation to the United States. The events that led to the U.S. taking control of Hawaiʻi at the turn of the 19th century were rife with unlawful and unethical acts. Knowledge of these events is more widespread today than ever before, and the basic position of the modern Hawaiian sovereignty movement is that Hawaiʻi was never legitimately incorporated into the territory of the U.S. This interpretation of history informs an important aspect to aloha ʻāina, so to better understand it, one must first know the history of Hawaiʻi's annexation.

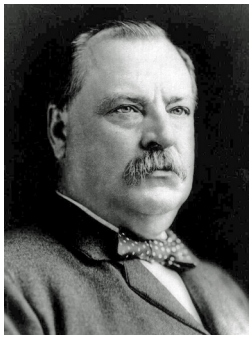
On January 17, 1893, with the support of a rogue American diplomat and U.S. Navy troops, a small group of pro-American politicians and businessmen—who called themselves the Committee of Safety—mounted a coup of the Hawaiian government. They did this in response to Queen Liliʻuokalani and her preparations to promulgate a new constitution that, among other things, would have restored certain executive powers to the monarch and expanded voting rights to a greater share of the Native Hawaiian population.

Queen Liliʻuokalani

Because these changes would have acted as a check on the outsized influence that opponents to the Hawaiian form of government enjoyed, they revolted under the pretense that American lives and property were under threat. To avoid the risk of bloodshed, Queen Liliʻuokalani yielded her authority, under protest, to the superior force of the U.S. with the expectation that, once government leaders in Washington D.C. learned what had been carried out by its own citizens and agents, the U.S. would reinstate Liliʻuokalani as the constitutional sovereign of the Hawaiian nation, a nation whose status had been recognized by the world's major powers.

The coup facilitated the immediate installment of a governing entity controlled by a powerful bloc of Honolulu's pro-American class. They called themselves the Provisional Government and, as the name implied, their self-formed "government" was intended to serve as a stopgap. The ultimate goal of those who seized power from the Queen was to annex Hawaiʻi to the United States and thereby secure and expand their economic and political power. The Provisional Government was designed to temporarily replace the Hawaiian Monarchy until the terms of annexation could be settled with the U.S.

President Grover Cleveland

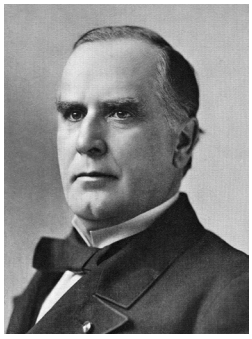


President Grover Cleveland

Annexation, however, stalled. President Grover Cleveland came into office months after the overthrow and initiated an investigation that confirmed the United States' complicity in a lawless coup. A treaty of cession had been drafted, but Cleveland withheld his support, which put the prospect of annexation on hold. Seeing the need to wait for a more favorable political climate in Washington D.C., the members of the Provisional Government rebranded themselves the "Republic of Hawaii" and restructured the institutions of government to secure their control. In other words, "they changed the name but not the substance" (Kuykendall 649).

Following Queen Lili'uokalani's dethronement, two parties formed (one for men and one for women) to rally support for the monarchy: Ka Hui Hawai'i Aloha 'Āina (the Hawaiian Aloha 'Āina Organization) and Ka Hui Hawai'i Aloha 'Āina o Nā Wāhine (the Women's Hawaiian Aloha 'Āina Organization). Those who worked to retain the sovereignty of the Hawaiian nation called themselves "ka poʻe aloha 'āina," or "the people who love the land." In English, the name Ka Hui Hawai'i Aloha 'Āina has been translated as The Hawaiian Patriotic League, leaving little confusion as to the oneness, in the Hawaiian mind, in the love of country and the love of 'āina.

The landmark achievement of these aloha 'āina groups was the mobilization of a massive petition drive that helped to defeat the passage of a treaty of cession under Cleveland's successor, President Willam McKinley. Unlike President Cleveland, President McKinley supported Hawai'i's annexation, so once in office, he re-submitted the treaty to Congress for ratification in the summer of 1897. The treaty purported to cede the Republic of Hawaii's sovereignty along



President William McKinley

with the Crown and Government Lands—all of which were seized in violation of law and basic democratic principles—to the United States.

The U.S. Constitution gives the president the power to make treaties, with the advice and consent of two-thirds of the U.S. Senate. The Senate doesn't technically ratify a treaty. It passes a resolution of ratification, and when the parties to the treaty exchange their respective ratification instruments, the treaty becomes a legally binding agreement between countries. In 1897, the Senate was made up of ninety members, so a resolution of ratification reeded at least sixty votes to pass.

Back in Hawai'i, the branches of Ka Hui Hawai'i Aloha ʻĀina plus a third group called Hui Kālai'aina coordinated a mass petition drive, sending

Representatives of the Hui Aloha ʻĀina o Na Kane, 1893

representatives throughout the islands to collect signatures from those who opposed annexation. Nicknamed the Kū'ē Petitions ("kū'ē" is the Hawaiian word for "resist"), the language in the header at the top of every page reads, "We, the undersigned . . . earnestly protest against the annexation of the said Hawaiian Islands to the said United States of America in any form or shape." In total, 38,000 signatures were collected from a Hawaiian and part-Hawaiian population that numbered approximately 40,000.

Four delegates traveled to Washington D.C. in November of 1897 to present the petitions to the U.S. Senate and persuade as many senators as they could to oppose the treaty. Prior to their lobbying effort, there were reportedly 58 senators who intended to vote yes on the ratification resolution. Just two more were needed to pass it. By February of 1898, at the end of the delegates' time in D.C., the pro-annexation vote count was down to 46, and the treaty was effectively dead.

Just a few months after the Hui Hawai'i Aloha 'Āina groups helped to secure the treaty of cession's defeat, war broke out between Spain and the United States in 1898. The sudden usefulness of Hawai'i, strategically located between the Spanish territories of Guam and the Philippines and the West Coast, renewed calls for its annexation. Where else but Hawai'i, the pro-annexationists argued, could the U.S. military refuel and restock its ships?

To accomplish the transfer of land and sovereignty, the U.S. used not a treaty but a joint resolution. Congress drafted and passed the Newlands Resolution on July 4, 1898, and McKinley signed it three days later. One of the problems that Hawaiian sovereignty advocates have with the Newlands Resolution, and this was a point of controversy even then, is that using a joint resolution to seize foreign territory is a violation of the U.S. Constitution and lacks precedent under international law. A joint resolution is a legislative vehicle for domestic policy. They are like bills and require the support of just a simple majority of both houses of Congress and the President's signature to pass. The Newlands Resolution was not a bilateral agreement between two nations, and thus, the argument goes, there was never any effective transfer of sovereignty from the Republic of Hawaii to the United States.

Hawaiian sovereignty remains a question in matters of land and resource use and development in Hawai'i because of the unlawful and undemocratic way in which it was seized from the Hawaiian people. The events described above took place more than a century ago, but by no means has their significance diminished with time. The aloha 'āina movement of the last fifty years is evidence of the durability of the injustice and the search to find answers to the unresolved question of Hawaiian sovereignty.

The Aloha ʻĀina Movement Today

The present-day aloha ʻāina movement was born during the Hawaiian cultural renaissance of the late-1960s and 1970s. This period saw a generation of young Native Hawaiians take an active interest in knowing their history and language (ʻŌlelo Hawaiʻi, the Hawaiian language) and reviving traditional cultural practices that had virtually disappeared from contemporary life in Hawaiʻi. This cultural renaissance fed an attendant consciousness about the unique injustices suffered by the Hawaiian people—alongside concerns related to overdevelopment, lack of affordable housing, and the harms of tourism—and sparked widespread activism around issues related to land, access, and political sovereignty that continues to this day.

What this recent history of aloha ʻāina activism tells us about renewable energy development is that a community's response to land and resource development is often complex. Here in Hawaiʻi, it is as much about preserving a way of life as it is about the fight for cultural and economic self-determination and an expression of beliefs and practices that connect history, spirituality, and livelihood to the natural environment. Rarely is it a simple not-in-my-backyard matter. By understanding the cultural ideals that move people to act, the renewable energy industry can be a more effective community partner and work with stakeholders in ways that reinforce these ideals.

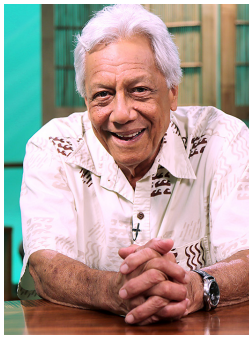
This next section looks at three significant periods in the genealogy of aloha ʻāina as a force for activism around land and resource use issues, with a focus on renewable energy. It begins where it all started: the fight to end the U.S. military's bombing of Kahoʻolawe in the 1970s. Kahoʻolawe laid the groundwork for the effort to stop geothermal energy development at Wao Kele o Puna in the 1980s and early-1990s. The Kahuku community's resistance to the Nā Pua Makani wind energy development, which culminated in over 160 arrests and a monthlong effort by protestors to physically block the delivery of wind turbine parts to the installation site, is the latest example of aloha ʻāina.

Protecting Kaho'olawe

The wellspring of aloha 'āina's resurgence as a political and cultural force was the movement to end the bombing of Kaho'olawe. As early as the 1920s, the U.S. military had subjected the smallest of the eight main Hawaiian islands—nicknamed the "Target Island"—to a barrage of small arms, artillery, naval gunfire, and aerial bombing exercises. Most shockingly perhaps was the detonation of 500 tons of TNT in 1965, an exercise intended to simulate the effects of an atomic blast on Navy ships. By the 1970s, the island was littered with debris, shrapnel, and unexploded ordnances.

Protect Kaho'olawe 'Ohana

In 1976, Native Hawaiian activists organized in a grassroots fashion to form the Protect Kaho'olawe 'Ohana (PKO) and bring an end to the bombing of Kaho'olawe. Its leaders carried out a series of unauthorized landings and occupations on the island in peaceful protest of the military's destructive practices. This was an island that many believed was not worth the trouble of saving. It was uninhabitable and except for its fishing grounds, Kaho'olawe had little in the way of natural resources. Yet here were these young Native Hawaiian activists, risking their lives, reputations, and careers to defend Kaho'olawe in and for itself. Here's how one of PKO's founders Noa Emmett Aluli described their fundamental mission:



Dr. Noa Emmett Aluli

> ***The occupation of Kaho'olawe in 1976 was originally planned to draw Congressional recognition to the reparations and restitution claims due Kānaka 'Ōiwi (Native Hawaiians) because of the illegal overthrow of our Kingdom. When we got there, however, we felt a deep cultural connection, and became driven to preserve the island as a spiritually and culturally significant place. (Aluli 211)***

PKO adopted Aloha 'Āina as the group's official motto, in part because it distinguished PKO from platforms within the Hawaiian political community that pressed for monetary reparations. PKO's founders—George Helm, Noa Emmett Aluli, and Walter Ritte—contested the fundamental issue of how land and resources were being used and managed. They sought mentoring from kūpuna (elders) and integrated their cultural knowledge into PKO's methods and tactics. They turned to Hawaiian cultural practices, particularly those with

a spiritual component, to restore mana (supernatural or divine power) and call the ancient gods back to Kaho'olawe. They spent months promoting their cause in classrooms and civic group meetings, "spreading an idea that was easily grasped by Hawaiians and often misunderstood by those who were not" (Osorio 146). In what Osorio calls the most "eloquent testimony to the concept of Aloha 'Āina" (150), newspaper columnist Samuel Amalu wrote the following excerpt in the Honolulu Advertiser, just days after PKO's first landing at Kaho'olawe:

> ***And if we as a people have looked upon earth as holy through all our history, can it be any wonder that we are outraged when we find aliens and strangers who come upon our lands, our earth, only to defile her? Is it any wonder that the native Hawaiians do feel a sense of outrage when their own Navy bombs Kahoolawe and continues to bomb Kahoolawe no matter how many protests are made to cease the bombing. . . . There is only one concern that truly affects all the people of Hawaii and especially the native Hawaiian people and that is that the earth of Hawaii, the very earth, is being injured and hurt.***

After more than ten years of protests, court battles, occupations, and negotiations, the bombings came to a halt. In 1990, despite opposition from the U.S. Navy, President George H. Bush signed an executive order that abruptly ended the practice. In 1994, the United States transferred title, which it obtained as a result of the illegal overthrow and annexation, to the State of Hawai'i. The State Legislature created the Kaho'olawe Island Reserve Commission (KIRC) to oversee the island's management. The Navy agreed to clear the island of ordnance and assist in ecosystem restoration over a ten-year period. Should a Hawaiian governing entity organize and obtain recognition from the United States, state law requires that "management and control" of the Kaho'olawe and its waters be transferred to that entity (HRS §6K-9).

As KIRC director Sol Kaho'ohalahala recognized, "Aloha 'āina and the navy's bombing target range on the island of Kaho'olawe were in direct conflict. The movement to stop the bombing of Kaho'olawe was significant and symbolic of the struggle that we faced as a people disenfranchised in their own island home" (Reflections of the Past Thirty Years).

Defending Pele at Wao Kele o Puna

Wao Kele o Puna is located on Hawai'i Island and is the largest lowland rainforest in the Hawaiian archipelago. Its cultural significance is threefold. First, the area holds great spiritual and religious importance by nature of being located in the moku (land district) of Puna, a district regarded for its close association with Pele, the volcano goddess who dwells at Kīlauea. Second, Wao Kele o Puna has long been a place where Native Hawaiians collected plant and animal resources for subsistence and cultural purposes, so it supported the community's self-sufficiency. And third, the lands were former Government Lands under the Hawaiian monarchy that were ceded to the U.S. and later transferred to the State of Hawai'i when Hawai'i obtained statehood 1959. The Admission Act—the federal law that admitted Hawai'i to the union—provides that these lands are to be held by the state as a public trust for five trust purposes, and one of those purposes is "the betterment of conditions of native Hawaiians" (Section 5(f), Admission Act, Pub. L. No. 86-3, 73 Stat. 4).

In the 1980s, Wao Kele o Puna was at the center of a legal battle over the development of geothermal energy. The controversy started in 1982, when the Campbell Estate, once one of Hawai'i's largest private landowners, applied for a Conservation District Use Permit from the Board of Land and Natural Resources (BLNR) in preparation for geothermal drilling. The Campbell Estate owned a 25,807-acre parcel of forested conservation land located on Hawai'i Island called Kahauale'a. It planned to drill dozens of geothermal wells, convert

Wao Kele o Puna

the energy into electric power, and transmit it to O'ahu via an undersea cable. The plan drew swift opposition from members of the surrounding community and resulted in several contested case hearings. In January of 1983, while the matter was pending before the BLNR, Kīlauea erupted. Lava poured over Campbell Estate's land and made geothermal development at Kahauale'a untenable.

In an effort to resolve this and other issues, the State proposed a land exchange. It would trade its 27,785 acres of land located in the adjacent Wao Kele o Puna Natural Area Reserve for Campbell's Kahauale'a land. The proposal shocked many because it would mean trading away a pristine and ancient 17,000-acre lowland forest that was supposed to be protected in perpetuity. The BLNR approved the land exchange in 1985, which gave rise to a third contested case hearing, this time involving the Pele Defense Fund, a non-profit that opposed geothermal development on two basic grounds: 1) that drilling into Kīlauea was a form of desecration and violated the religious rights of Pele practitioners who believed that the extraction of geothermal steam was tantamount to draining Pele of her life force and 2) that Native Hawaiians would be prevented from exercising their traditional subsistence, cultural, and religious practices.

The Pele Defense Fund challenged the development and land exchange in both state and federal court, and although the litigation strategy did not prevent the development from moving forward, it did reaffirm and create precedent in other areas of the law. One case in particular stands out—Pele Defense Fund v. Paty—for building on existing precedent with regard to the right of Native Hawaiians to enter undeveloped private and public lands for purposes related to Hawaiian custom and tradition.

The Pele Defense Fund also helped organize what was at the time, the largest peaceful protest since the Vietnam War in Hawai'i. On March 5, 1990, 1,500 Pele practitioners and supporters attempted to enter Wao Kele o Puna and march to a drilling site to conduct religious ceremonies. The police were called, and 141 arrests were made for trespassing. At trial, some of the Pele practitioners relied on expert testimony that substantiated their constitutional right to exercise their religious practices freely. Dr. Pualani Kanaka'ole Kanahele, for example, a respected kumu hula (hula teacher) and expert in the Pele traditions, provided testimony that clarified the responsibility that practitioners have to heal land that has been desecrated and restore balance when Pele has been disrespected (A Nation Rising, 195-196).

Harnessing the Wind at Kahuku

The attempt to develop geothermal energy at Wao Kele o Puna established a clear precedent: although renewable energy development is generally good for Hawai'i, that doesn't mean the community will support it. In the nearly thirty years since that attempt, nothing has reinforced that precedent more clearly than the Nā Pua Makani wind farm development in Kahuku.

Wind energy development on the North Shore did enjoy community support at first. In 2011, Boston-based First Wind developed O'ahu's first wind farm when it constructed twelve turbines in Kahuku. In 2012, the company developed a second wind farm, the Kawailoa Wind Project, which is a dozen or so miles from Kahuku and consists of thirty turbines located on former sugar plantation land owned by Kamehameha Schools. Initially, neither development elicited strong opposition from community members or the North Shore or Ko'olauloa Neighborhood Boards.

Once the turbines at Kawailoa went up though, their high visibility took North Shore community members by surprise. Ten of the turbines are situated along the ridge that overlooks Waimea Valley, and several of them loom over the highway. Their proximity to a culturally rich area like Waimea also left some people questioning the turbines' impact. And, as the community would eventually learn, the turbine blades were killing dozens of Hawai'i's only specieis of native land mammal, the 'ōpe'ape'a (Hawaiian hoary bat). In late-2012, amid growing community concern, First Wind decided to scrap plans to add five more turbines at its Kahuku wind farm.

Just as the North Shore community had begun to digest the visual, cultural, and environmental impacts of living in proximity to two wind farms, a plan to add another ten turbines in Kahuku had been set into motion. Champlin/GEI Wind Holdings, the original developer for the Nā Pua Makani wind project, entered into a power purchase agreement with HECO in October of 2013, and

the PUC approved it on December 31, 2014. As word of the project made its way through the community, resistance met it from the start. It wasn't simply a matter of aesthetics or harm to the native bat population; the development's proximity to homes and schools set off health and safety concerns, and flaws in the regulatory approval process sent Nā Pua Makani down a long and litigious path. The community's opposition culminated in a month-long standoff in 2019, whereby residents of Kahuku and their supporters locked arms across roadways to prevent delivery trucks from transporting turbine parts.

These tactics, of kū kia'i and kapu aloha, were directly inspired by those used to block the construction of the Thirty Meter Telescope atop Mauna Kea. Kū kia'i is to stand guard in protection, and kapu aloha is a code of conduct, informed by Hawaiian practices and values, that maintains the pono (a standard of behavioral correctness) nature of a cultural protest. The Kū Kia'i Mauna movement at Mauna Kea, with its clear and direct connection to the Native Hawaiian community, is unquestionably a sustained act of aloha 'āina. In regards to Kahuku, it bears mentioning that not everyone opposed to Nā Pua Makani would necessarily consider their resistance to be an act of aloha 'āina. Nevertheless, what aloha 'āina works to protect or achieve are ideals shared by communities across Hawai'i, and not just Native Hawaiian ones.

Chief among the aloha 'āina ideals that Nā Pua Makani failed to engage is the Kahuku community's autonomy. Many residents decided early on that they didn't want any more turbines in their backyard and that Kahuku had contributed its fair share to Hawai'i's green energy future. Before any outreach even occurred, HECO and the developer were locked into a contract, which the PUC approved even in the absence of a completed environmental impact statement. Outsiders made the decision for Kahuku, and the sense of powerlessness that creates within a community can simultaneously stoke aloha 'āina's appeal for autonomy.

On the matter of caring for 'āina, few places are considered more vital than one's own neighborhood, and the essential meaning of "'āina"—of "that which feeds"—can be interpreted in multiple ways. By no means is the care of 'āina limited to agricultural or conservation lands like at Wao Kele o Puna. The proximity of Nā Pua Makani to homes and schools compelled community members to protect the things that make Kahuku so vital: its comfort, safety, and beauty. An additional aspect in this case was the threat the turbines posed to the 'ōpe'ape'a. Not only is it listed as an endangered species by U.S. Fish and Wildlife Service, but it has been interpreted in the language of the Kumulipo (the Hawaiian creation story), thereby establishing a genealogical connection between the 'ōpe'ape'a and the Hawaiian people.

The third aspect of aloha 'āina—claiming or achieving sovereignty over the land—had perhaps the least influence in driving the community's response, especially when comparing Kahuku to Wao Kele o Puna. This may have something to do with the fact that ceded lands were not in play. The Nā Pua Makani project site is situated on land that's owned by the State of Hawai'i, but it was acquired after statehood in 1959. There is less of a nexus to the land base issue that's so central to the Hawaiian sovereignty effort. Nevertheless, "sovereignty" can be interpreted in ways that lead communities or groups to enforce, or prevent the enforcement of, authority over lands and resources.

TOMORROW

In the Hawaiian worldview, natural and cultural resources are one and the same. This relationship permeates all aspects of Hawaiian beliefs and practices – even today. Honoring and sustaining the energy of ʻāina (land) has always been in our nature, and the Hawai'i State Energy Office (HSEO) plays an important role in redefining a new relationship between communities and the energy ecosystem.

By respecting the role that energy has played within the Hawaiian cultural value system, which has long respected nature's life-giving and life-sustaining energy, HSEO is committed to build pilina (connection) with ʻāina and kānaka (man).

HSEO stands ready to educate, inform, and provide communities with the tools and resources needed to meaningfully engage and contribute to Hawai'i's clean energy transformation that is underway.

APPENDIX A:

A BRIEF HISTORY OF HAWAI'I'S ENERGY SECTOR

Electricity Lights Up the Kingdom of Hawai'i

Hawai'i has been an energy pioneer from its Hawaiian Kingdom days. It was during King David Kalākaua's reign (1874-1891) when innovations in power generation and distribution made electricity a practicable alternative. There's no question that Kalākaua understood its potential, and he actively promoted the adoption of these new technologies. As early as 1874, he signed a law encouraging companies to submit proposals to transmit electricity.

On October 19, 1879, Thomas Edison tested what was to become the world's first successful incandescent lamp. Among those who noted that achievement was King Kalākaua. In 1881, King Kalākaua and his attorney general arranged to meet Edison in New York during the course of a world tour. The king was interested in whether electricity could someday replace the gas lamps that lit Honolulu's streets but ran out of fuel long before daylight and left the city dark. Kalākaua was also said to be extremely interested in the potential for geothermal energy, and supposedly consulted Edison about the idea of using volcanic energy to make power and transport it to the different islands through underwater cables.

On the night of July 26, 1886, over 5,000 people gathered on the grounds of 'Iolani Palace to watch Hawai'i's first electric lights illuminate the palace. The demonstration was organized by Charles Otto Berger, a Honolulu-based insurance executive with mainland connections.

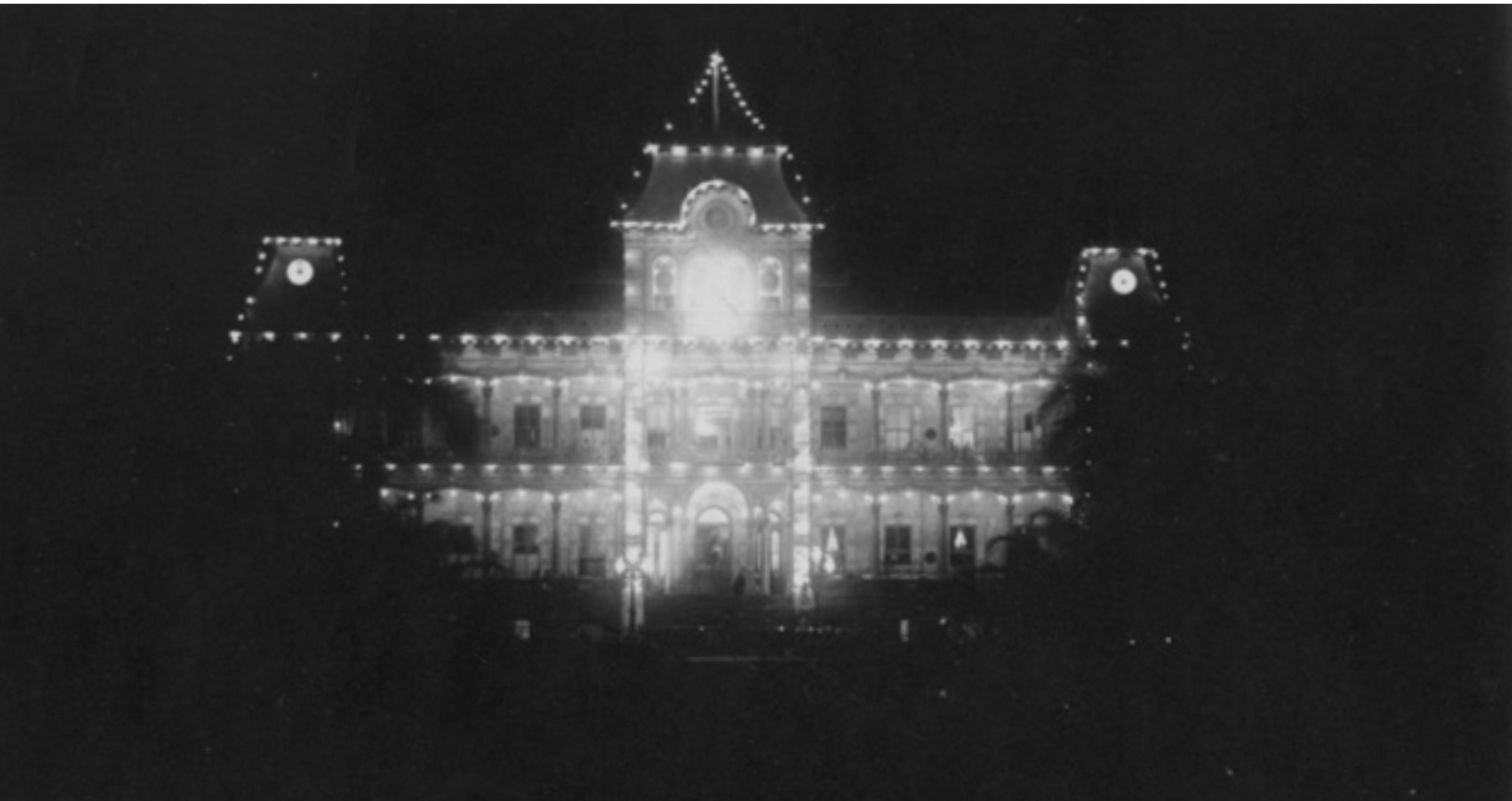
Shortly after the electricity demonstration at the palace, Kalākaua installed an electrical system on the palace grounds. The plant consisted of a small steam engine and a dynamo for incandescent lamps. On November 16, 1886, King Kalākaua's birthday, 'Iolani Palace became the world's first major government buildings to be fully lit with electricity, even before the White House. Arc lights illuminated King Kalākaua's birthday jubilee around the palace, which was described as "light as day." The Royal Hawaiian Band played music through the night, while guests dined and hula dancers performed until past midnight.

After this landmark event, the pace of electricity development increased considerably. King Kalākaua made the decision to use the energy of flowing water to drive the turbines of a power plant built in Nu'uanu Valley. In 1888, the legislature passed an act to "Authorize the Hawaiian Government to Contract for the construction of Inter-island Submarine Electric Telegraph Cables" to connect the islands, though it is unclear if any proposals were actually submitted.

On March 23, 1888, the first use of hydropower west of the Rockies took place in Honolulu when Princess Ka'iulani, the Kings' niece, threw the switch that illuminated the town's streets for the first time. The Honolulu Gazette wrote of that moment: "At 7:30 p.m. the sound of excitement in the streets brought citizens, printers, policemen and all other nocturnal fry rushing outdoors to see what was up. And what they did see was Honolulu lighted by electricity. The long looked for and anxiously expected moment had arrived."

Despite its initial success, the Nu'uanu plant experienced technical problems providing enough power for Honolulu's growing population, and by 1890, the legislature was wrestling with how to expand the government-owned system. By this time, there were several private electrical generators in operation on O'ahu, including one at the 'Iolani Palace that provided light for the streets of downtown Honolulu and almost 800 private residences.

Kalākaua may have been enthusiastic about electricity's many applications, but there's no evidence that he actively supported the formation of the company that later became the Hawaiian Electric Company (HECO). On November 25, 1890, he set sail for San Francisco, where he later died on January 20, 1891, five months before HECO's predecessor formed. Queen Lili'uokalani ascended the throne on January 29, 1891.



Hawaiian Electric Company

Around this time, the firm of E.O. Hall & Son began installing small generating plants in homes and at sugar plantations. In 1891, four men met to form the co-partnership that preceded HECO's incorporation: E.O. Hall's son, William W. Hall (the manager of E.O. Hall & Son), Edwin Oscar White (the former manager of the Nu'uanu plant), William V. Lockwood (the Kingdom's Superintendent of Electric Lights), and Jonathan Austin (the Kingdom's Minister of Foreign Affairs), in whose electric fan-cooled law office this meeting took place. The co-partnership was registered on May 7, 1891.

Another five months later, the co-partnership was dissolved and HECO was incorporated on October 12, 1891, with total assets of $17,000 and William W. Hall as its first President. Notice of incorporation was made in the Hawaiian Gazette newspaper on October 20, 1891. It is worthwhile to note here that on October 3, 1891, Maui Electric Light and Power Company was organized as an incorporated joint stock company. William W. Lockwood was vice-president of both companies, as evidenced in the same Hawaiian Gazette article.

After the 1893 overthrow of the Hawaiian Kingdom, the Provisional Government gave HECO an exclusive franchise to furnish electric light and power to Honolulu. The franchise was obligated to provide power to everyone on the island who could pay. Honolulu had a population of 60,000 in 1901. The city was developing rapidly, and so was HECO. During this time, the company acquired its largest competitor in the industry, People's Ice and Cold Storage Company, to provide electric refrigeration.

Hawai'i was annexed by the United States in 1898, so when HECO's franchise ended in 1904, it requested a new contract from the U.S. Congress granted HECO a perpetual franchise in exchange for rate reductions, and the company installed electric meters and introduced a sliding rate scale.

Around 1910, momentum was building to bring the increasing powerful utility under public regulation. Anti-HECO forces, led by William R. Castle (who, not coincidentally, was an executive of the Honolulu Gas Company), accused HECO of charging excessively high rates. They lobbied for the introduction of a bill before the Territorial Legislature that led to the creation of a Public Utilities Commission (PUC).

In the years before World War I, HECO experienced steady growth. The company installed Hawai'i's first steam turbine in 1907, and by 1911, the company's total electrical energy output reached 4 million kilowatt-hours, with the transmission system extending from Moanalua to Diamond Head and from Honolulu's waterfront to Nu'uanu Valley. By this time, the company's customers included the U.S. Army, the U.S. Navy, pineapple canneries, and sugar plantations. The rapid expansion of sugar plantations during this period led to the development of extensive irrigation systems and hydropower systems. By 1922, HECO had constructed lines to serve Wailupe and Kuli'ou'ou, Schofield and Pearl Harbor, Kahuku and Lā'ie, Lualualei and 'Ewa. The following year, families in Kailua and Lanikai had electricity.

After the Pearl Harbor attack on December 7, 1941, Honolulu was placed under a strict blackout, and the government spent $300,000 to reinforce HECO's primary power plants against further air attacks. The need for electric energy persisted. HECO power plants at Honolulu and Waiau furnished more than one million kilowatt-hours of electricity each day at the height of the war effort. Over the course of the war, HECO's kilowatt-hour sales went from less than 2 million to more than 12.5 million kilowatt-hours. Income also climbed from $5.3 million to $9.3 million, and generating capacity went from 82,500 to 117,500 kilowatts. The wartime blackout was lifted in May 1944 and martial law ended that fall.

From the post-war era through statehood, Hawai'i's economy came to be dominated by military spending, tourism, and construction, which resulted in a boom in energy production and use. In 1959, the development of the jet engine would brought unprecedented numbers of tourists to Hawai'i. In 1964, HECO stock was offered for the first time on the New York Stock Exchange, 73 years after the company's initial capitalization of $20,000 in 1891.

Despite having to give up a degree of control to outside shareholders, HECO's commitment to its Hawai'i customers and the local market deepened. HECO used its new capital reserves to improve residents' access to electricity and power. It invested in new distribution and transmission lines, including a connection from its Waiau Power Plant in Pearl City to the Ko'olau Substation on O'ahu's windward side. It installed new power generating facilities. And its 1968 acquisition of Maui Electric Company (MECO) and 1970 acquisition of the Hilo Electric Light Company (now known as Hawaii Electric Light Company, or HELCO) provided each company with the resources they needed to better serve their own respective territories. In 1971, HECO connected service for its 150,000th residential customer.

The oil crisis of the 1970s caused a drastic reduction in energy use, and a serious concern about the price and availability of fuel oil. In 1971, the company filed for its first rate increase since 1955. In response to a rising environmental consciousness and realizing that Hawai'i is especially vulnerable to interruptions in oil supply and increases in oil prices, HECO began to consider alternative systems. HECO tested a wind turbine at Kahuku on O'ahu in 1980 and a geothermal generator on Hawai'i Island in 1982. Pilot projects involving ocean thermal energy conversion were also initiated.

In the early-1980s, HECO created Hawai'i Electric Industries (HEI) as a holding company to own HECO along with MECO and HELCO. By the second quarter of 1983, the HEI restructuring had received all the proper approvals from the Securities and Exchange Commission, the Hawai'i PUC, the Internal Revenue Service, and stockholders.

During the 1980s and 1990s, HEI acquired several companies unrelated to energy. Again, the company was faced with public criticism about becoming a large monopoly in the islands. HEI later sold off all these companies, except for American Savings Bank. This period was marked by rapid growth.

Maui Electric Company (MECO)

Maui was the first island to have electricity. On the night of September 22, 1881, the first electric lights came on at the mill owned by sugar baron Claus Spreckels. On April 1, 1921, almost 30 years since then, a group of business leaders met and formed the Maui Electric Company, Ltd. to provide reliable electric service to the central valley communities of Wailuku and Kahului.

During World War II, the wartime power requirements of several bases, including Camp Maui in Kokomo and Kahului Naval Air Station caused power shortages for the sugar plantations. Nearly 50% of the power generated by Hawaiian Commercial & Sugar (HC&S) was delivered by MECO to the military. After the war, the population soared and so did electricity demand. The price for sugar tripled, and as the plantations expanded, they used most of the power generated by their own operations rather than provide it for MECO's utility customers. Maui Electric took over the task of providing electric service to its customers and the various plantation camps and villages owned by HC&S, and began to construct its first power plant.

In 1964, MECO merged with Hana Light & Power in 1964 and then with Lahaina Light & Power in 1967. The customer base increased to 13,250 and Maui Electric was now servicing the entire island. On November 1, 1968, MECO became a wholly owned subsidiary of HECO.

Hawai'i Electric Light Company (HELCO)

The first lights went on in Hawai'i Island in 1890 at the small Hilo Boarding School. A water-driven dynamo had been installed on the school's irrigation ditch, and was being used to light the study hall and the principal's cottage. The machine was capable only of powering about 12 bare bulbs from dusk until 10:00 p.m. The school had pioneered another achievement by attaching a half-ton ice plant to the dynamo, and thereby producing the town's supply of ice. The schoolboys delivered ice to Hilo residents by pushcart before and after school. Acting on requests from citizens, trustees of the boarding school applied to the Provisional Government for a franchise to generate electricity, which was granted by the legislature in 1894. The company that was to become HELCO started modestly, installing lights for free to any home willing to try them. The electrical lighting and ice businesses were so popular that by 1901, the company could not keep up with demand. Company directors began exploring sites for a second power plant, and decided to merge with Hilo Electric & Refrigerator Company, which happened to own prime land on Wailuku River and had extensive water rights. Water from the boarding school ditch was combined with that of the river, and the company's first alternating current hydro generator (250 kilowatts) was installed at the Pu'ueo station on the Wailuku River.

Demand for power continued to grow. During this time, small electric companies were forming on the west side of the island to support the growing sugar and coffee industries. The 1919 Territorial Legislature, House Bill 211, allowed Hilo Electric to expand its franchise

"to manufacture, maintain, distribute and supply all of the regions and villages of South and North Hilo, Hamakua and Puna." In 1921, the company formed a subsidiary to maintain the transmission and distribution lines and also expanded its merchandising department, offering electrical appliances and lighting fixtures. The ice business boomed with the perfection of the internal combustion gas engine and its use by sampan fishing boats, which meant that these boats could travel farther and longer than ever before. A larger, more advanced ice-making plant was installed, which could produce slabs of ice weighing over 1,000 pounds each. The ice business declined when the electric refrigerator hit the market, and Hilo Electric abandoned the venture in 1947 after more than 60 years. The utility experienced tremendous growth and prosperity in the 1930s when it took over the entire distribution systems of sugar mills at Hamakua and Ola'a.

By 1956, Hilo Electric had purchased or merged with all these smaller companies and by 1963 Hilo Electric had received the franchise for the whole island. In 1970, HELCO became a wholly-owned subsidiary of HECO.

Kaua'i Island Utility Cooperative (KIUC)

The Kaua'i Island Utility Cooperative (KIUC) is a non-profit electric cooperative that has operated the island's only utility since 2002, when it acquired Kaua'i Electric from Citizens Communications Company (formerly known as Citizens Utilities Company).

As a cooperative, KIUC is owned and operated by its own customers, who are members of the cooperative and elect the board of directors that governs the company's business and affairs. KIUC exists solely to provide its members with electricity, and when the cooperative takes in more money than is needed to operate the business, members are credited shares of the excess margins, whose allocations are based on the amount of electricity members used during the year. This is what's known as patronage capital, and periodically, the money is returned to members in the form of a refund.

The origins of KIUC date back to 1999, when Citizens Communications first decided to sell Kaua'i Electric, which it had owned since purchasing the utility from Alexander & Baldwin in 1968. A group of local business people came together to form a co-op, and the parties struck an initial deal for $285 million. The price was widely viewed as too high, and the Public Utilities Commission rejected the deal. Two years later, KIUC and Citizens Communications negotiated a second deal with a price tag of $215 million, and the PUC approved the sale in September of 2002.

KIUC serves approximately 29,000 residential member-owners and 3,000 commercial member-owners across 550 square miles of service area. The company set a goal of generating 70% of its output from renewable energy sources by 2030, and it has already achieved close to that figure. In 2021, 69.5% of its fuel mix came from renewable energy sources, the highest of the counties in the state for the third straight year.

Establishment of the Public Utilities Commission

The Public Utilities Commission was established in 1913 with the passage of Act 89 in response to growing concern over HECO's government-sponsored monopoly on electric power. Following a model created by the federal Interstate Commerce Commission, state commissions began to deviate from traditional governmental organization – they are headed by a non-partisan, bipartisan, or elected plural body that operates semi-autonomously, in a quasi-judicial manner.

Act 89 went into effect on July 1, 1913 with three part-time commissioners appointed by the governor for one-, two- and three-year terms. Act 127, also passed in 1913, governed the PUC's work, and Acts 135, 136, and 152 gave the PUC jurisdiction over certain franchises. Act 120 of 1913 also required utilities to pay fees for the maintenance of the PUC, which is used to employ attorneys, clerks, engineers, and accountants, among other positions to accomplish the PUC's work.

The PUC solidified its organizational structure and started producing investigative reports on individual utilities. The PUC adopted a narrower definition of "utility" to include businesses that involved the transportation of passengers, transportation of freight, telephone, telegraph, wireless telegraphy, light, power, heat, cold, water, gas, oil, storage and warehouse business.5 The public began to doubt the usefulness of the PUC, which led to a reorganization in 1933 with 5 part-time commissioners, two from O'ahu and one from each of the neighboring counties.

Statehood in 1959 decreased the Commission's autonomy greatly as the newly instituted state constitution mandated no more than 20 executive departments. The Commission was moved under the Department of Treasury and Regulation, which later became the Department of Regulatory Agencies, and was renamed the Public Utilities Division (PUD).

In 1976, after years of debate on the effectiveness of a commission with 5 part-time commissioners, 3 of which were commuting from neighbor islands, the Commission structure changed to 3 full-time commissioners, removing the neighbor island commissioner representation requirement, while establishing PUC assistant positions in the neighboring counties. The Commission was then moved to the Department of Budget & Finance. The director of the DRA became the consumer advocate and the PUD became the Division of Consumer Advocacy (DCA).

With the enactment of Act 108, Session Laws of Hawai'i 2014, the state legislature transferred the Commission to the Department of Commerce and Consumer Affairs and also provided the Commission with increased administrative decision-making authority. Act 108 also specifically designated the DCA Executive Director as the Consumer Advocate.

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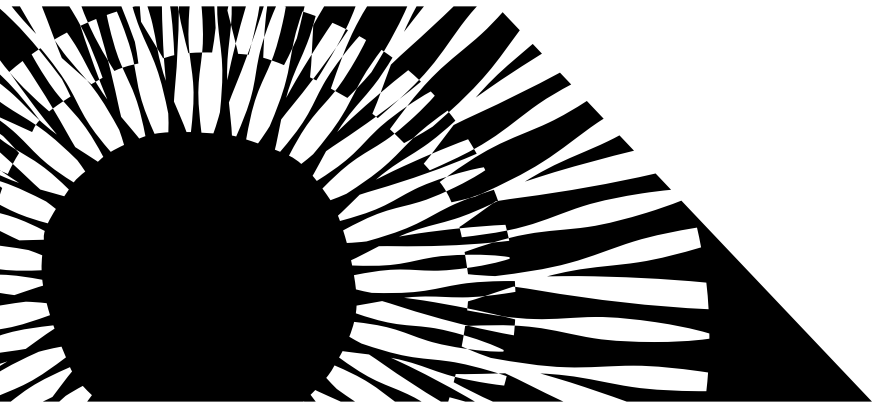

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