



DEPT. COMM. NO. 336
**DEPARTMENT OF BUSINESS,
ECONOMIC DEVELOPMENT & TOURISM**

DAVID Y. IGE
GOVERNOR

MIKE MCCARTNEY
DIRECTOR

RANDALL TANAKA
DEPUTY DIRECTOR

No. 1 Capitol District Building, 250 South Hotel Street, 5th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804
Web site: dbedt.hawaii.gov

Telephone: (808) 586-2355
Fax: (808) 586-2377

January 6, 2020

The Honorable Ronald D. Kouchi,
President and Members
of the Senate
Thirtieth State Legislature
State Capitol, Room 409
Honolulu, Hawaii 96813

The Honorable Scott K. Saiki,
Speaker and Members of the
House of Representatives
Thirtieth State Legislature
State Capitol, Room 431
Honolulu, Hawaii 96813

Dear President Kouchi, Speaker Saiki, and Members of the Legislature:

For your information and consideration, I am transmitting a copy of the Department of Business, Economic Development, and Tourism's 2019 Annual Report, as required by Chapter 201-10, Hawaii Revised Statutes. In accordance with Section 93-16, Hawaii Revised Statutes, I am also informing you that the report may be viewed electronically at: <http://dbedt.hawaii.gov/overview/annual-reports-reports-to-the-legislature/>.

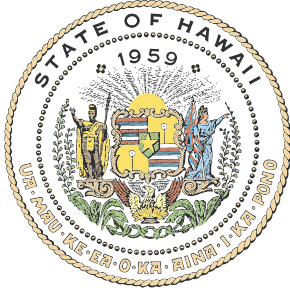
With aloha,



Mike McCartney

Enclosure

c: Legislative Reference Bureau



Department of Business Economic Development & Tourism 2019 Annual Report





Department of Business, Economic Development & Tourism

P.O. Box 2359 • Honolulu, Hawaii 96804 • (808) 586-2355

dbedt.hawaii.gov

This report fulfills the reporting requirement in HRS §201-10 and ACT 100 (SLH 1999)



Director's Statement

Mike McCartney
Director

The Department of Business, Economic Development & Tourism's (DBEDT) 2019 Annual Report fulfills the requirements to the Hawai'i State Legislature in HRS §201-10 and ACT 100 (SLH 1999).

Aloha,

DBEDT's mission is to support the development of a Hawai'i economy that embraces innovation, an economy that is globally competitive, dynamic and productive; and that provides opportunities for all Hawai'i's citizens.

This past year, changes at DBEDT resulted in a shift of some of the program's reporting structure. Act 56 (SLH 2019) merged the Hawai'i Strategic Development Corporation with the Hawai'i Technology Development Corporation and the Hawai'i State Energy Office was made an attached agency in DBEDT fulfilling, Act 122 (SLH 2019).

As we look to the future of Hawai'i, we aspire for sustainable and healthy communities where equal opportunities are shared amongst all who live in our state. Collaboration between public and private organizations and individuals are fundamental in building a sound economic future that encourages innovation and economic stimulation.

As new challenges present themselves, we realize the need to align DBEDT's statutes and mission to current market trends and public interests with a clear and inclusive short and long-term strategic plan. Working in partnership with the legislature and the community, DBEDT will work to improve its effectiveness in building a healthy economic future for Hawai'i.

Mike McCartney



DBEDT Divisions

Director's Office

(808) 586-2355

Administrative Services Office

(808) 586-2442

Business Development & Support Division

(808) 587-2750

Creative Industries Division

(808) 586-2590

Foreign-Trade Zone Division

(808) 586-2507

Research & Economic Analysis Division

(808) 586-2466

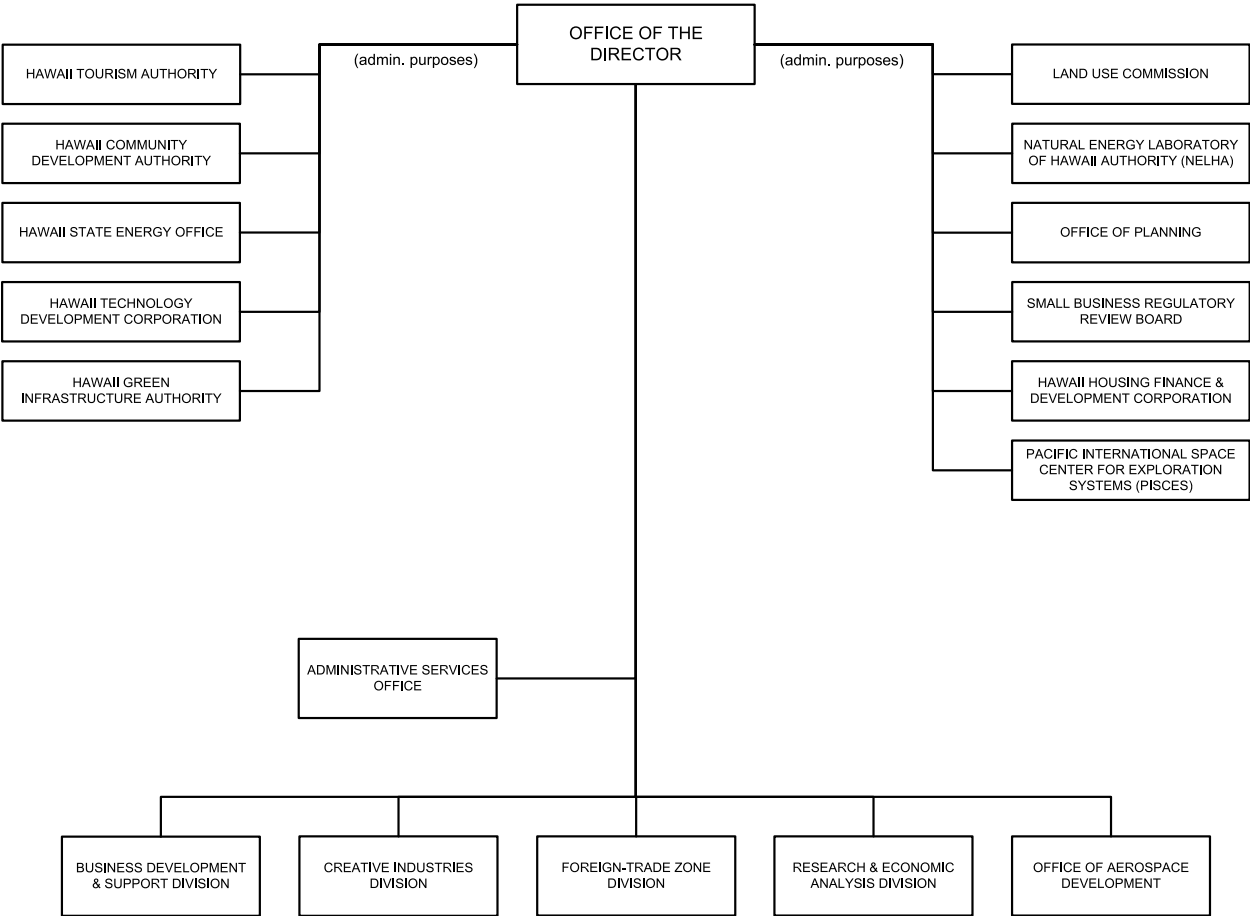
Office of Aerospace Development

(808) 586-2388



DBEDT Divisions and Branches

STATE OF HAWAII
DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM
ORGANIZATION CHART





Business Development & Support Division

invest.hawaii.gov



The Business Development & Support Division (BDSD) promotes business development and diversification in Hawai'i by supporting existing and emerging businesses; attracting new investment and businesses that can create more skilled, quality jobs in the state; working to increase exports of Hawai'i products and services; and assisting community-based economic activities.

The division assists Hawai'i companies and organizations to expand and grow their businesses through a diverse array of activities and promotional programs. BDSD accomplishes these goals by providing technical assistance; individual and group consultations; certifying eligibility for tax credits; approving loans, grants and other financial assistance offered to qualified businesses and organizations; serving as a bridge for international relations and cross-cultural education; and developing stakeholder events and outreach opportunities.

2019 Achievements

BDSD's export promotion HiSTEP (Hawai'i State Trade and Expansion Program) targets growing companies to increase export revenues and capital. In its seventh year, the program has participated in 40 international and domestic trade shows and retail promotions. More than 700 Hawai'i companies from industries ranging from fashion, food, gifts, to life sciences, were featured at various Hawai'i Pavilions produced by the Department of Business, Economic Development and Tourism (DBEDT) in Japan, Taiwan, China and major U.S. cities such as Orlando, Salt Lake City, San Francisco, Las Vegas, Denver, Boston, Philadelphia, San Diego and Chicago.

In October 2019, the division received a \$511,000 grant from the U.S. Small Business Administration (SBA) to continue for the following year its HiSTEP programs of training, company assistance (technical and financial) and trade shows. This is one of the largest competitive grants from the SBA awarded to a state across the nation.



Business Development & Support Division

invest.hawaii.gov

In 2019, the division's efforts, primarily under the banner "Buy Hawai'i, Give Aloha" increased exports by \$17.3 million, which has positively impacted Hawai'i's economy by \$28.5 million. The Hawai'i Pavilion at the Tokyo International Gift Show in 2019, itself had participation represented by 55 companies/products. Results from this show alone topped \$5 million.

In 2019, DBEDT participated for the fourth consecutive year in the Hankyu Hawai'i Fair consumer event, organized by Hankyu Hanshin Department Stores. Nearly 220,000 consumers of all ages attended, resulting in gross revenue of \$1.4 million for 44 Hawai'i vendors.

Hawai'i's overseas offices in Taipei and Beijing promote programs to attract and increase international students at Hawai'i's schools, colleges and universities. They operate the Hawai'i Education Service Centers and work with the DBEDT-organized

Study Hawai'i Education Consortium of 31 public and private schools. BDSD and the overseas offices, in collaboration with Study Hawai'i, hosted a media mission from Beijing and Taipei with 15 journalists participating. With Study Hawai'i, an international student attraction mission to Taipei, Hsinchu and Taichung was organized by the Taipei Office to promote education in Hawai'i. The Division's Study Hawai'i Ambassador Program deputized 508 ambassadors to encourage dialogue among peers, primarily via social media, about Hawai'i as a study destination.

To attract investments into Hawai'i, DBEDT in partnership with the U.S. Japan Council held an investment seminar in Osaka, promoting Hawai'i's collaborative services. Attended by nearly 200 interested investors, the forum focused on our professional services in the resort consulting area and education and training.

In June 2019, the Division received a \$399,500 grant from the Department of Defense, Office of Economic Adjustment, to update the Hawai'i Defense Economy website, conduct a strengths, weakness, opportunities and threats (SWOT) assessment of the defense industry in Hawai'i, and to develop an action plan to meet goals for the future.

In July 2019, the Division also continued the Community Based Economic Development (CBED) program, awarded a grant to the County of Hawai'i for an Elderly Transportation Program in Hamakua to service the seniors of east Hawai'i. CBED also awarded a grant to the Kupuna Care Network in Papakolea, O'ahu, to service the elderly on the homestead.

The Division sponsored and organized the annual Hawai'i Small Business Fair, which was held at University of Hawai'i's Leeward Community College on May 4, 2019. As in past years this business resources fair assisted over 250 entrepreneurs and small businesses. Attendees participated in workshops that provided valuable information on a wide range of business topics.



Business Development & Support Division

invest.hawaii.gov

The Enterprise Zones (EZ) Partnership Program continues to support more than 250 companies from diverse industries, creating jobs in economically-challenged areas of the state. For the most recent tax year for which figures are available (2018), EZ companies reported over 3,835 jobs created or maintained.

2020 Goals, Plans and Measurements (Year-one)

1. Increase Exports by \$20 million

To continue its export programs, the Division won a competitive grant award of \$511,000 from the SBA. The Division's proposal included a series of overseas and domestic trade shows, training and cost share programs. In total, during the seven years that this program has been in operation, DBEDT has won \$3.5 million in grants. DBEDT will participate in seven tradeshow, seven training sessions and provide \$125,000 in company assistance grants.

2. Enhance Investment Environment and Increase Defense Industry Contracting Opportunities

The Federal Tax Cuts and Jobs Act of 2017 authorized a community economic development initiative that provides incentives for investors to reinvest realized capital gains into Opportunity Funds in exchange for temporary tax deferral and other benefits. The Opportunity Funds are then used to provide investment capital in certain low-income communities, or Opportunity Zones (OZ). The Division, as part of its CBED program, along with county partners, identified tracts statewide and officially designated them as Opportunity Zones. The Division has produced profiles and factsheets on Hawai'i's 25 Opportunity Zones and held a series of initiatives to attract Opportunity Fund capital to Hawai'i's Opportunity Zones. In October 2019 workshops were held across the state for Qualified OZ businesses or OZ real estate projects on becoming investment ready for OZ Fund investment. In October 2019 a seminar was held for legal & financial advisors on the tax regulations for OZ Fund formation, investment, and administration. Also, in late 2019, workshops were held for community-based projects to become "investment ready" for Opportunity Fund investors. In 2020 an event will be held for Opportunity Fund managers from Hawai'i and across the US to view a showcase OZ investment ready projects and visit Hawai'i's OZs. The new DBEDT Hawai'i Opportunity Zones website (<https://invest.hawaii.gov/oz>) will be continually updated with new information on OZ Events for 2019 and it will also be used as a networking platform.



Business Development & Support Division

invest.hawaii.gov

The Division, in June 2019, received a \$399,500 grant from the Department of Defense, Office of Economic Adjustment, to update the Hawai'i Defense Economy website, conduct a SWOT assessment of the defense industry in Hawai'i, and to develop an action plan to meet goals for the future.

3. Connect with the International Community

The Division will organize and produce the following international related initiatives:

- The Festival of Pacific Arts and Culture (FESTPAC) is the world's largest celebration of indigenous Pacific Islanders, drawing artists, cultural practitioners, scholars and officials from member nations of the Pacific Community. FESTPAC is held every four years in a different Pacific Island nation, and Hawai'i is host of this showcase of Oceanic arts and culture from June 10-21, 2020. The Department of Business, Economic Development and Tourism (DBEDT) is the host and producer of FESTPAC – Hawai'i 2020 which will feature live performances, cultural workshops, hands-on demonstrations, film, storytelling and more.
- The Hawai'i-Philippines Sister State Symposium and Tradeshow, a convening of Hawai'i's sister states in the Philippines to discuss, promote and enhance relations in business, trade, education, cultural and artistic exchanges.

2021 Goals, Plans and Measurements (Year-two)

1. Increase Exports by \$22 million

To continue its export programs, the Division will compete for a grant award of \$600,000 from the SBA. The Division's proposal will include a series of overseas and domestic trade shows, training and cost share programs. Success will be measured by dollar amount increase in exports, increase in number of companies exporting and new to exports or markets.

2. Enhance Investment Environment and Defense Industry Contracting Opportunities

The Division will continue to hold workshops across the state for qualified OZ businesses or OZ real estate projects on becoming Investment Ready for OZ Fund Investment and will increase its promotion of the Enterprise Zones Partnership Program, especially with the new census creating new zones.



Business Development & Support Division

invest.hawaii.gov

The new DBEDT OZ HI Website (<https://invest.hawaii.gov/oz>) will be continually updated with new information on OZ Events for 2021 and it will also be used as a networking platform.

Obtain a \$750,000 Office of Economic Adjustment/DOD grant to focus on opportunities of the cyber security, ship repair and missile defense industries; and maintain a robust data base of contracting opportunities. Stakeholder meetings to be held periodically to engage community and elicit information. Grant will be for a 1 1/2-year period.

3. Connect with the International Community

The Division will organize and produce the following international related initiatives:

- The Hawai'i-Japan Sister State Symposium and Tradeshow, a convening of Hawai'i's sister states in Japan to discuss, promote and enhance relations in business, trade, education, cultural and artistic exchanges.
- Conduct missions to Fukuoka, Japan and Vietnam to promote investment, trade and educational relations.

2024 Goals, Plans and Measurements (Year-five)

1. Establish and Implement the Office of International Affairs

In 2006, the Hawai'i State Legislature established the Office of International Affairs (OIA) within DBEDT. The office was established to develop policies that promote and strengthen relations with other countries in the areas of international business, economy, culture and the arts; encourage the development of sister relations for artistic, cultural, economic, educational and faith-based exchanges; develop and promote Hawai'i as the economic, trade, commerce, transportation, banking and tourism hub of the Pacific; develop an international affairs and peace education curriculum that includes studies of international affairs and peace initiatives. Because this was an unfunded mandate, the project was never implemented.

Duties of the proposed OIA include the following:

- Administering sister-state relationships and the Hawai'i Sister State Committee;
- Organizing State/DBEDT trade, investment and education missions, some of which involves the governor;
- Producing seminars and events involving visiting delegations from other countries;
- Assisting ethnic community organizations and international organizations with various programs and activities such as conferences and trade shows;



Business Development & Support Division

invest.hawaii.gov

- Creating opportunistic ancillary events such as international forums and conferences;
 - Providing support to the Office of the Governor, as needed, during visits by international government officials;
 - Administering, supporting and guiding the State/DBEDT's overseas offices in Taipei and Beijing;
 - Launching education tourism and international education programs and activities in Hawai'i and overseas;
 - Hosting buyer delegations from abroad who are interested in Hawai'i products and services;
 - Hosting foreign journalist missions for trade and investment;
 - Establishing the Hawai'i Student Ambassador program for foreign students to promote Hawai'i overseas.
 -
2. Increase Exports by \$25 million

To continue its export programs, the Division will compete for a grant award of \$700,000 from the SBA. The Division's proposal will include a series of overseas and domestic trade shows, training and cost share programs. Success will be measured by dollar amount increase in exports, increase in number of companies exporting and new to exports or markets.

3. Enhance Investment Environment and Defense Industry Contracting Opportunities

New Enterprise Zones as a result of the 2020 census will be created. These new zones will be marketed extensively statewide to encourage more businesses to take advantage of this tax incentive program.

Obtain a \$500,000 Office of Economic Adjustment/DOD grant to focus on opportunities of the cyber security, ship repair and missile defense industries; and maintain a robust data base of contracting opportunities. Stakeholder meetings to be held periodically to engage community and elicit information.

The Opportunity Zones program will continue to be monitored to determine success of previous efforts. The program expires in 2026.



Creative Industries Division

cid.hawaii.gov

Creative Industries Division (CID) is the state's lead agency charged with effective development of Hawaii's creative industry clusters, through developing initiatives, infrastructure, and connectivity between sectors to effectuate a framework for a robust innovation and creative economy.

Through tracking the overall growth of Hawaii's creative sectors in arts, culture, music, media, film, design, fashion, publishing and interactive media, CID utilizes the sector specific research data from the Department of Business, Economic Development and Tourism (DBEDT) Research and Economic Analysis division (READ) to establish a baseline of Hawaii's creative economy.

In READ's 2019 Hawaii's Targeted and Emerging Industries Report, Hawaii's creative economy, counted among the high performing sectors showing growth of over 7 percent per year between 2009 and 2019. 54,051 jobs comprised of entrepreneurs, small businesses and companies contribute over \$3.9 billion of the state's gross domestic product (GDP). An increase of 20,775 jobs over this ten-year period underscores the value creative sectors bring to Hawaii's emerging industries portfolio.

Hawaii's film and television industry is an anchor of the state's creative economy. In the past three years, production activity has seen some incredibly high levels. 2019 came in at \$405 million in estimated production expenditures (as reported to date) with an estimated economic impact of \$702 million, estimated taxes generated of \$43 million and a combined production and induced jobs totaling 4,060. As the state's lead agency responsible for advancing the growth of Hawaii's creative economy, CID builds business capacity across 13 sectors to amplify and sustain a vibrant creative ecosystem through three facets; talent and workforce development initiatives, infrastructure development and access to industry leaders and capital to increase global product and intellectual property licensing and distribution. Comprised of the Hawaii Film Office (HFO) and the Arts and Culture Development Branch (ACDB), CID has helped to increase the business capacity and growth of key export pipelines for the media, music and design sectors of Hawaii's creative clusters.

2019 Achievements

HFO supports Hawaii's film and television industry, a cornerstone of Hawaii's creative economy. The branch is responsible for implementing the statutory responsibilities of film permitting, management of the Hawaii Film Studio at Diamond Head and overseeing the management and marketing of Hawaii's film tax credit, which is currently in effect until 2025. In 2019, 45 projects applied for the film tax credit; 12 television series, 7 television specials, 7 national/international commercials, 16 features, several short films, documentaries and music videos.

2018-19 production highlights include: Season 10 of CBS' HAWAII FIVE-O, Season 2 of



Creative Industries Division

cid.hawaii.gov

CBS' MAGNUM P.I., feature films including JUMANJI sequel, HOBBS AND SHAW, GODZILLA VS. KONG, NEXT GOAL WINS, SAME TIME NEXT CHRISTMAS along with locally developed web series SURF HOTEL and PBS television series FAMILY INGREDIENTS.

With newly established administrative rules effective November 17, 2019, along with the new agreed upon procedures CID will expand staffing to support implementation of the \$50 million cap on the Motion Picture, Digital Media and Film Production Tax Credit. The credit is critical and aligns with the goals and objectives of DBEDT's CID, providing the foundation on which to a) develop new infrastructure to accommodate growth and b) to drive the workforce development programs for above and below the line talent development in the state.

Creative Ecosystem Development

CID's Arts and Culture Development Branch (ACDB) handles business and workforce development for Hawai'i's creative ecosystem development, focusing initiatives in the areas of 1) talent/workforce development, 2) infrastructure development and 3) investment and policy development, to establish a continuum of job and business opportunities from education to workforce which are strategically designed to accelerate export of creative intellectual property IP products and services – all key aspects of a thriving innovation ecosystem. CID launched Creative Lab Hawai'i (CLH) Program in 2012 to accelerate skills in business and craft, develop an ecosystem to increase export, attract investment and build the state's creative entrepreneurial capacity. CLH provides entrepreneurs with business and enhanced creative skill sets necessary to monetize their intellectual property and expand distribution channels. CLH and other programs like Ohina Labs positions Hawai'i as a nexus of creative media development in the Pacific. Funded by the Hawai'i State Legislature and the U.S. Department of Commerce, Economic Development Administration, a total of 2,079 individuals have participated in CLH Programs since its inception. Looking forward, CLH will build on the metrics of success which are tracked by the production coming to fruition of media, television, and music placements in national and international film, television, streaming series and commercials.

Infrastructure Development

CID is shaping the vision to develop Hawai'i's media and creative coworking infrastructure. In collaboration with the University of Hawai'i (UH), a new creative media/film studio complex in West O'ahu will support the development of emerging media, traditional film and television industries. Launched in October 2019, Creative Space coworking sites at the Entrepreneurs Sandbox along with post production workforce development coworking at the Homer Maxey Center in the Foreign Trade Zone (FTZ) are necessary, along with a film and media tax credit, to change the trajectory of Hawai'i's future economic landscape. Neighbor Island Creative Space coworking facilities are planned for the neighbor islands in 2020.



Creative Industries Division

cid.hawaii.gov

2020 Goals, Plans and Measurements (Year-one)

1. Workforce/Talent: Build out the pipeline of education-to-workforce opportunities in media, music, design and fashion. Build partnerships between education, government and industry. Measurement: Increased projects for export, new distribution deals for original content from Hawai'i, increased music placement across all media platforms.
2. Strategic Planning (CEDS): Collaborate with neighbor island county economic development offices, EDB's and the Office of Planning to include creative economy goals to strengthen statewide Community Economic Development Strategy (CEDS). Measurement: Creative Economy Strategy articulated for all islands in CEDS 2020.
3. Infrastructure: Attract private sector partners to invest and develop a new Creative Media/Film Studio Complex on O'ahu in the West O'ahu region. CID has completed all elements of the Capital Improvement Project (CIP) research and planning process with the Department of Accounting and General Services (DAGS) and contractor to move forward on the issuance of a public, private partnership via a request for proposal to be issued in 2020. Measurement: Complete an environmental assessment (EA) after partnership secured via internship via a request for proposal (RFP), groundbreaking for facility in FY21.
4. Operations: Improve division staffing capacity, systems, processes, and reporting for Act 275; the Hawai'i Motion Picture, Digital Media and Film Production Tax Credit program using online reporting, improved partnership in workforce development component. Measurement: decreased certification process timeline, improved reporting and granular data in partnership with READ.

1. Workforce/Talent Pipeline Plans

Creative Lab Hawai'i (CLH) Program

CID has developed initiatives which support ecosystem development, building a statewide community of entrepreneurs to increase export and distribution of Hawai'i produced creative media, music and fashion export, while attracting investment in locally developed content. Together with film production location-based business from off shore, CLH and similar programs along with the University of Hawai'i's Academy for Creative Media program have increased the state's artistic entrepreneurial capacity. This initiative and other feeder programs help position Hawai'i as a new nexus of creative and media development in the Pacific Region.

The Creative Lab Hawai'i Program is comprised of three components:

- CLH Media and Music Immersive Accelerators Year Long - (Accelerator to develop original content) Description: development of media project from script to pitch or acquisition/production. Capstone: Participate in industry conference to pitch the property.



Creative Industries Division

cid.hawaii.gov

- CLH Weekend Bootcamp - (Feeder program to accelerator) turning an idea or story into an intellectual property (film, web series, TV series, animation, book, transmedia, game, app).
- CLH Public Programs = (Feeder to weekend bootcamps) keynote and panel presentations during immersive and weekend timeframes utilizing existing mentors from all tracks.

Results:

FY 20 Milestones to Date

Since its inception in 2013 the CLH Accelerator has provided mentorship by industry leaders to over 1,800 Hawai'i residents on O'ahu and the neighbor islands, in immersive programs (20), weekend bootcamps (7) and public panels and keynotes (31) in the focus areas of media, music and fashion design. The results continue to exceed expectations with three feature films financed, produced and distributed, two more in pre-production. Produced films include award winning *How to Win At Checkers [Every Time]* and *Kuleana*. The third feature, *Hanalei Bay* has been released in domestic and foreign markets.

- CLH Media Programs: Seven projects have been produced. Of the seven, two scripts were acquired for Lifetime Television and AMC network, a feature for television was fully funded from foreign sales in Europe, and four were developed partially financed here and filmed in Hawai'i.
 - CLH Media Programs: 44 projects are currently in active development; feature films, television series, web series, animated features and interactive projects.
 - CLH Music Immersive: Over 60 songs recorded and produced in Hawai'i. Of these, three original songs by Hawai'i writers were bought outright by a major studio and 16 songs were licensed for global film, television broadcast and streaming programs as well as placed in international and domestic commercials.
2. Infrastructure Development Projects: Supporting Workforce Development Pipeline
The division partnered with the FTZ and Hawai'i Technology Development Corporation (HTDC) to launch two creative coworking spaces in Kaka'ako; one at the Homer Maxey Center and the other at the Entrepreneurs Sandbox. Each space will feature the tools necessary to create content in media, music and design/fashion. Designed as a compliment to other coworking spaces, the hardware, software and business centric programming solves an access issue to the needs of the greater creative community. The fees collected from the hourly, week and monthly for use of the coworking and studio facilities will be allocated to sustain workforce development and related entrepreneurial programs.



Creative Industries Division

cid.hawaii.gov

Neighbor Island Creative Coworking Sites

A memorandum of agreement with the public access stations will augment this infrastructure project, to deliver the same tools and programming to neighbor islands at public, education and government access centers. Integration of programming will include CLH high school to industry level opportunities.

New Studio with Creative Media Production Facilities

CID has worked with UH leadership and DAGS and General Services and their consultants G70 to complete the initial plans required to obtain an environmental assessment for a site in the West O'ahu region. The two top sites are UH West O'ahu lands and the Kalaeloa Airport hangar site. A request for information was completed in April of 2019 and awaiting release, once State and UH leadership concur on the plan of action due to the passage of SB33/Act 275 which has legal implications on said land transfer from UH to HTDC.

3. Improve Operations of Statutory Programs for Film

Film Permits Online System

Develop Online-based Film Permit Application System:

A beta test system was developed and in operation for a one-year period. HFO is tasked with streamlining the paper based/scan system to an all online system using eHawaii.gov and the Office of Enterprise Technology Services' (ETS) Adobe Suite tools.

Film Tax Credit Management, Data Collection and Reporting

With the increased staffing provided in the 2019 session the division and its film office are improving overall operations. All positions to be filled before end of FY 20.

2021 Goals, Plans and Measurements (Year-two)

Creative workforce development: Complete Strategic Planning statewide (CEDS) and finalize memoranda of agreements between EDB's County OED's and the Office of Planning. Secure federal grants for project implementation.

Infrastructure: Award private sector investor/developer to design, build and operate the Creative Media/Film Studio Complex on O'ahu. CID has completed all elements of the CIP research and planning process with DAGS and contractor to move forward on the issuance of a public, private partnership via a request for proposal to be issued in 2020.

Creative coworking sites: Complete memorandum of agreement with PEG Access Centers on all neighbor islands and O'ahu. Implement training programs and strategic partnerships to open facilities in late FY 21. Integrate CLH and other related entrepreneurial development programs.

Act 228 annual funding awards: Development of procedures completed to enable content creators, filmmakers, artists, post production to apply for seed funding support.



Creative Industries Division

cid.hawaii.gov

2024 Goals, Plans and Measurements (Year-five)

Creative workforce pipeline: Job mentoring and shadowing program in place. Through the strategic alliances with creative industry leaders, integrate core program elements into Career and Technical Education (CTE) Arts & Communications pathway. Estimated jobs needed by FY 24 with a new studio complex completed estimated at 200 per year, based on similar programs in Atlanta, GA.

Infrastructure: Creative Media/Film Studio Complex completion of multi-stage facility including a hub for post-production, visual effects and sound post/composition.





Foreign Trade Zone Division

ftz9.org



The Foreign-Trade Zone (FTZ) Division administers the federal charter that was issued to the State of Hawai'i in 1966 by the Foreign-Trade Zones board in Washington, D.C. Hawai'i has a large and diversified Zone program with its nine authorized general-purpose sites and four subzones. Its strategic Pier 2 location, excellent support facilities, and experienced professional staff make it one of the oldest and most respected Foreign-Trade Zones in the nation. Hawai'i's FTZ was the ninth designated zone in the nation; there are currently over 230 foreign-trade zones and nearly 400 subzones in the U.S. Foreign-Trade Zone. No. 9 (FTZ9) is in its 53rd year of operation.

The FTZ program is a federal program based on the simple idea of removing disincentives related to storing or manufacturing products in the U.S. This is accomplished by allowing U.S.-based companies to defer, reduce or eliminate customs duties on products admitted to the government-authorized zones as they could in a foreign location. This tariff and tax relief is designed to lower the costs of U.S. based operations engaged in international trade, thereby, creating and retaining employment and capital investment opportunities that result from those operations.

Under the rules and regulations established by the Foreign-Trade Zones Board in Washington, D.C., and enforced by the U.S. Customs and Border Protection (CPB), FTZ9 works to establish active zone sites within Hawai'i through companies who can take advantage of this tax and tariff relief. Hawai'i currently has 13 zone sites with six active zones within its project area.



Foreign Trade Zone Division

ftz9.org

The FTZ program is funded solely through its special fund which was established by the legislature such that the program would be supported by those who benefited from the program rather than the general tax payers. The revenues generated by FTZ9 services fully support the operation and maintenance of the division. The division does not rely on any of the state's general fund to underwrite its operations.

The mission of the Foreign-Trade Zone is to help grow the state's economy through the development of jobs, business investment and infrastructure by the development and promotion of international trade and trade activity.

2019 Achievements

This past year, under new rules established by the Foreign-Trade Zones Board, FTZ9 reorganized itself to become an "Alternative Site Framework" (ASF) zone program. This reorganization gives FTZ9 the ability to work with companies outside of its established zone locations to help them become designated and active zone sites. It also streamlines the application process and reduces the timeline down from a year to four months for zone activation. This ASF designation gives FTZ9 the flexibility to offer FTZ benefits to a greater number of Hawai'i companies.

The FTZ9 Pier 2 Hub of International Trade continued to thrive this past year, even under the current uncertain trade environment. The facilities' offices continue to be occupied at 100 percent capacity, with the warehouse nearing 85 percent capacity and the remaining space being used as a buffer to manipulate and adjust cargo as needed. FTZ9 was successful this past year in attracting a greater number of industry resources to the facility and now the program boasts five of the islands' seven customs brokerage houses residing at the Pier 2 facility.

The program continues to support the state's economic development initiative through the growth of international trade. This past year, over \$8.6 billion in cargo transited through Hawai'i's Foreign-Trade Zones, which was a 24 percent increase from the previous year, with exports totaling over \$563 million. The added value of merchandise from the state's FTZs was over \$4.3 billion which was a 21 percent increase from the previous reporting year. 324 firms utilized Hawai'i's FTZs which resulted in direct employment of 2,734 jobs.

FTZ9 continues to work with, and support, partner government agencies and public entities such as Mana Up, the Hawai'i Chamber of Commerce, Ethnic Chambers, the Hawai'i District Export Council, U.S. Export Assistance Center, the Hawai'i Technology Development Corporation, Innovate Hawai'i, Creative Industries Division, the Small Business Development Center, Department of Agriculture, and the U.S. Small Business Administration, to advance the development of Hawai'i businesses within the scope of international trade and to expand trade activity.

This past year, the FTZ's Pier 2, 64 year-old facility underwent a major renovation to replace its aging elevator and chiller systems and to update its restrooms for ADA



Foreign Trade Zone Division

ftz9.org

compliance. These combined \$3.2 million projects were a much-needed improvement for the facility and were completed under budget.

2020 Goals, Plans and Measurements (Year-one)

1. Identify three new zone locations within the state under ASF
 - a. FTZ9 will identify and begin the process to activate three new zone locations within the next year. FTZ9 has already begun reaching out to potential resources and clients and has received positive feedback with leads to potential clients.
 - b. The progress will be measured in the number of identified potential sites.
 - c. Funding for this project will come from the FTZ's special fund and will fall under marketing and zone expansion projects.
 - d. FTZ9 will create a list of potential zone companies through our existing list of companies, import data services, and manufacturing partners. FTZ9 will visit at least two of these companies per month to assess their needs and related viability for FTZ zone status.
 - e. Progress will be measured by the applications FTZ9 begins to process with the intent of establishing zone status for these companies.

2. Complete renovations to the makai side of the Pier 2 facility
 - a. FTZ9 expects these renovations, which are already in progress, to be completed by end of Fiscal Year 2020. The overall goal is to update older portions of the facility in order to bring them up to code compliance and make the space more user friendly and as an attractive place to conduct business. This project also aligns with the state's overall Harbor Improvement Plan, especially relating to Pier 2.
 - b. Funding is through the state CIP fund resources.
 - c. Timetable is to finish the project by end of summer 2019 with contract close out and completion by the end of the year.
 - d. Weekly meetings and, when necessary, ad hoc meetings to discuss roadblocks or issues which will delay the critical completion path to ensure the project moves forward as planned and on budget.
 - e. Final close out of the project will determine the overall success as will be the client satisfaction in the improvements to the facility's space, usability, and life extension to the building.

3. Update and modernize FTZ procedures manual
 - a. The FTZ procedures manual was developed and amended over the course of several years and needs to be updated and consolidated to incorporate the revised Foreign-Trade Zone board rules and customs regulations. This would include the new electronic customs forms, and the



Foreign Trade Zone Division

ftz9.org

compliance with Customs-Trade Partnership Against Terrorism and IMAGE requirements. Further, this manual is the key source as to how inventory, security, and handling and delivery processes are conducted at a Foreign-Trade Zone and must be approved by Customs and Border Protection. The FTZ procedures manual is also used by potential ASF zone clients as a template for proper Foreign-Trade Zone warehouse management and operations.

- b. FTZ9 will review all operational procedures to ensure coverage of existing and newly implemented regulations prior to making any formal revisions to the existing manual. A review of the updated board and CBP regulations will be conducted in relation to the required Operations Manual contents as well as CBP compliance review procedures to ensure each element is appropriately covered in the manual. Once all aspects have been taken into consideration, formal revisions will be made to the FTZ procedures manual.
- c. Progress determination will be through the FTZ weekly management meeting with the final product being delivered to customs for content approval.
- d. Success will be the CBP approval of the updated manual and a smooth implementation of any significant procedural changes.

2021 Goals, Plans and Measurements (Year-two)

1. Identify and activate new zone locations within the state under ASF
 - a. FTZ9 will continue to identify potential Zone ASF locations and activate two new zone locations within CY 2021.
 - b. The progress will be measured in the number of identified and activated sites.
 - c. Funding for this project will come from the FTZ's special fund.
 - d. The list of potential ASF zone clients will be developed through existing client lists, import data services, consulate referrals, and trade partnerships. FTZ9 will visit at least three of these companies per month to assess their needs and related viability for FTZ zone status.
 - e. Progress will be measured by the applications FTZ9 begins to process with the intent of establishing zone status for these companies.
2. Develop FTZ9 trade outreach program
 - a. Develop an outreach program where FTZ connects with potential zone clients and industry partners. Develop training and support seminars to further the FTZ's mission of increased trade activity, job creation, and infrastructure development.



Foreign Trade Zone Division

ftz9.org

- b. Funding will be through the FTZ's special fund.
 - c. Timetable is to have a full program established and engaged by the end of 2021. FTZ is reaching out to the various consulates and ethnic chambers, as well as furthering relationships with Customs and Border Protection, the Hawai'i Pacific Export Council, Department of Agriculture Export Group, Small Business Administration, and the Manufacturing Extension Program. These resources will be used to create import/export training and a resource base to assist clients with trade information and support.
 - d. Success will be measured as to the establishment of relationships and creation of the program with associated client feedback to ensure FTZ is fulfilling expected needs.
3. Refurbish the FTZ9 Hilo Facility
- a. FTZ9 has a zone site in Hilo which it operates and manages. This site includes a 12,000-square-foot warehouse and an approximately 24,000-square-foot fenced, marshaling yard. This facility was erected nearly 25 years ago and needs repairs to the structure. These repairs include rust mitigation, painting, removal of graffiti, and securing of loose side panels.
 - b. FTZ9 will assess the needed repairs with various contactors and develop a repair and maintenance plan to extend the useful life of the building and grounds.
 - c. Contractors will be hired if work cannot be conducted by FTZ maintenance staff with quarterly visits to Hilo by FTZ management to ensure the work is progressing.
 - d. Funding will be from the FTZ special fund.
 - e. Success will be the completion of identified repairs and the ability to fully lease the facility to applicable companies fitting the requirements by FTZ's mission and executive orders for the property.

2024 Goals, Plans and Measurements (Year-five)

1. Modernize the Hawai'i Foreign-Trade Zone Information Processing System (HFTZIPS)
 - a. The HFTZIPS system was developed over 12 years ago and has been a very stable and accurate system for FTZ9's inventory management and accounting. This system has held high regard with critical compliance agency partners such as Customs and Border Protection and the Foreign-Trade Zones board. However, since its inception, new technologies have been introduced which will make intake, processing,



Foreign Trade Zone Division

ftz9.org

- inventory, and dispensing of cargo, as well as the accounting for our services much more efficient with a reduction in potential errors.
- b. FTZ9 will investigate current warehouse systems and processes, then review inventory management technologies, determine a course of action, and implement a new system within the next five years.
 - c. Measurement will be in the process of determining the best solution in relation to new technologies.
 - d. Funding will be through the FTZ special fund as well as available grants for this purpose.
 - e. Progress determination will be through monthly progress updates.
2. Expand the FTZ's energy generation system
 - a. In 2017, FTZ9 installed what has become the largest photovoltaic array in the core downtown area. This system, coupled with other energy saving measures, produces enough energy to nearly fulfill all of FTZ's daily energy requirements. It is FTZ9's intent to further extend this system to reduce its dependence on the electric grid and shift toward renewable energy sources in an effort to achieve the governor's 100 percent renewable energy initiative by 2045. The system would include an additional battery system designed to allow the FTZ to operate 24/7 on renewable energy.
 - b. Funding would be through the FTZ's special fund and any available state programs or federal grants.
 - c. Timetable would be to have the system specifications completed in 2022, procurement completed by the end of 2023, and installation and commissioning in 2024.
 - d. Weekly meetings with updates from those tasked with developing the system and applicable timetables for procurement and installation as those portions of the project are defined.
 - e. The fully commissioned system providing as much energy to run the facility as available, 24/7.
 3. Projected repairs to the Pier 2 facility
 - a. The FTZ Pier 2 shed roof repairs phase two as well as repaving of the FTZ marshaling yard and parking lots.
 - b. FTZ9 complete the repairs conducted in 2016, fully covering the Pier 2 shed roof with appropriate seal coating to fully encapsulate the roof to prevent leaks and water damage. The FTZ marshaling yard asphalt was recovered in 2006 and is beginning to show wear like the parking lots. These drive spaces would be sealed or top coated with asphalt to refurbish the surface.



Foreign Trade Zone Division

ftz9.org

- c. Weekly meetings with updates from those tasked with developing the specifications and applicable timetables for procurement and installation as those portions of the projects are defined.
- d. Funding will be through the appropriation of state CIP funds.
- e. Progress determination will be through monthly or weekly progress updates as outlined in the project contract and contractor timetable.



Hawai'i Broadband Initiative

The Hawai'i Broadband Initiative (HBI) is the foundation toward establishing key strategic infrastructure to lower the cost barrier for transpacific fiber optic cables to land in Hawai'i, to create a robust broadband network in Hawai'i and to extend gigabit broadband to the entire state.

The Hawai'i Broadband Initiative objective is to conduct planning, designing, and construction of a transpacific fiber optic cable landing station using a public-private partnership model.

Currently, most of the transpacific fiber projects are bypassing Hawai'i. The cables will enable consistent broadband service in Hawai'i to keep Hawai'i connected and competitive in the global marketplace.

Taking a holistic approach to the HBI, it is widely recognized that broadband touches the community to provide the foundation for innovation, economic development, healthcare, education, public safety, entertainment, etc. through the entire continuum of broadband connectivity including:

1. Transpacific fiber optic cable and carrier neutral fiber landing station
2. Terrestrial backhaul to connect subsea cables to data centers and aggregation points on-island
3. Wireless broadband deployment including 5G small cells
4. Interisland fiber optic connectivity between the Hawaiian Islands
5. Rural broadband, last mile/first mile and community networks
6. Broadband application drivers: telehealth, big data, smart city, smart grid, machine learning, artificial intelligence, autonomous vehicles, augmented reality, eSports, etc.

2019 Achievements

- The Hawai'i Community Development Authority (HCDA) executed a contract with the firm, Wilson Okamoto Corporation, to provide pre-engineering and planning services for the potential of a transpacific cable landing station. The contract includes a scope to estimate the alignment of the future broadband conduit and terminal as a basis for the environmental assessment (EA).
- The partnership with the Internet Society, Muralnet, Hawaiian Telcom and DBEDT built a rural community network at Pu'uhoonua o Waimanalo. The community network created is an independent internet service provider for the community to serve the residents who would have otherwise been unable to afford internet access.



Hawai'i Broadband Initiative

- DBEDT coordinated a waiver petition with the Federal Communications Commission (FCC) for the spectrum claim of the unassigned 2.5 GHz frequency, currently available to federally recognized tribes or Alaska Native Villages but not Native Hawaiians. While Hawaiian Homelands qualify under the rules as areas where an applicant can claim an available license, there is no Hawaiian 'tribe' or 'village' to claim such a license. Hawai'i's petition included responses from Governor David Y. Ige, U.S. Senator Brian Schatz, DHHL Chairman William J. Aila, Jr. and OHA Chief Executive Officer Sylvia M. Hussey.

2020 Goals, Plans and Measurements (Year-one)

For the Hawai'i Broadband Initiative, 2020 will be an important year which will set the course for the future of Hawai'i's robust and resilient broadband infrastructure and will keep Hawaii competitive in the digital economy for years to come.

- Work with the legislature to secure funding for cable landing project.
- Create the Broadband Consortium as the partnership for the cable landing project.
- Work with the federal government to seek funding for economic development and rural broadband projects.
- Establish team to work on various projects including cable landing, 2.5GHz FCC filing application and federal rural broadband granting program.

2021 Goals, Plans and Measurements (Year-two)

For 2021, if funding is appropriated, work will be done for the cable landing infrastructure in preparation for the South American Pacific Link connection South America to Hawai'i. SAPL plans include landing on Hawai'i Island and O'ahu.

- Tactics/action plan
 - Ocean Networks officially launches its project to land in Hawai'i
 - HCDA work on environmental assessment and Special Management Area Permit Partnership formation
 - With private sector matching, seek federal Economic Development Administration (EDA) grant for Hilo and Kaka'ako
 - \$10 million appropriation applied to permits, surveys and horizontal bores on O'ahu and Hawai'i island.
- How it will be measured
 - Permit approvals on schedule
 - Route surveys on schedule
 - Issuance of request for proposals for installation of subsea horizontal bores



Hawai'i Broadband Initiative

2024 Goals, Plans and Measurements (Year-five)

Establishment of carrier neutral TransPacific fiber landing station in Kaka'ako and Hilo. In phase two of the project add landings on Maui and Kaua'i.

- Timetable
 - Completion target 2023-2024
- Tactics/action plan
 - Partnership for broadband infrastructure is established
 - Ongoing activities to ensure cable systems like SXS, H2 and Southern Cross NextGen land in Hawai'i
 - Support robust terrestrial backhaul options and interisland fiber
 - Continue to support rural broadband and community networks
 - Leverage new technologies like 5G and 2.5Ghz for Hawai'i
- How it will be measured
 - These will be measured by growth and expansion of the innovation economy in Hawai'i.
 - Measured by the presence of hyperscale cloud computing companies like Amazon and Microsoft
 - Measured by the number of community networks established
 - Creation of data centers in support of DOD JEDI Cloud



Office of Aerospace Development

aerospace.hawaii.gov

The Hawai'i Office of Aerospace Development (OAD) provides a focal point within state government to facilitate dialogue and coordination among Hawai'i's government, private and academic sectors, and between state-based entities and overseas organizations, both public and private, to promote the growth and diversification of Hawai'i's aerospace industry. Its primary goals are to identify and promote opportunities for expanding and diversifying aerospace-related industries in Hawai'i, including but not limited to applied optics, astronomy and astrophysics, aviation, space-based applications of dual-use technology, environmental monitoring and remote sensing, satellite communications, and commercial space launch. It serves as a central point of contact for state government to respond to both local and out-of-state inquiries concerning Hawai'i's aerospace-related interests and activities.

2019 Achievements

NASA Road Tour

In August 2018, OAD coordinated with NASA's Office of Small Business programs to host a three-day technology infusion road tour at the University of Hawai'i at Mānoa and the East-West Center to showcase University of Hawai'i system's research capabilities and held the federal small business summit to provide small businesses in Hawai'i with networking and procurement opportunities with the federal government.

High Altitude Platform Station (HAPS) mobile

The High Altitude Platform Station (HAPS) mobile project, also known as "HAPSMobile", is a joint business venture between Japan-based SoftBank and U.S.-based AeroVironment, Inc. The project has designated Lāna'i to test flight its high altitude drones and test its cell signal capabilities through monitoring of Lāna'i hale watershed data collecting sensors in deep valleys and other areas that are communication dead zones. Applied Research Laboratory at University of Hawai'i (ARL at UH), which has been contracted with the Department of Business, Economic Development & Tourism (DBEDT) to manage the Federal Aviation Administration (FAA) Pan Pacific UAS Test Range Complex on Lāna'i, has been instrumental in facilitating the partnership for University of Hawai'i and Pulama Lāna'i with HAPSMobile and in securing the FAA certificate for the high altitude flight. The project's success could lead to Lāna'i becoming a HAPSMobile drone hub for the world, translating to an ecosystem of innovative local education, workforce development, and jobs.

Space Symposium

In April 2019, OAD and PISCES partnered with the four Hawai'i economic development boards (O'ahu, Hawai'i, Maui, and Kaua'i) to showcase Hawai'i's capabilities in aerospace at the 35th Space Symposium in Colorado. Space Symposium is an annual "must attend" industry event that brings together all sectors of the international space community. It provides the state with the opportunity to monitor national and global



Office of Aerospace Development

aerospace.hawaii.gov

trends in aerospace and to establish and foster contacts with commercial, government, and military industry researchers, developers, and investors.

Advanced Maui Optical and Space Surveillance (AMOS) Conference

In September 2018, OAD supported the AMOS conference, a premier national conference organized by the Maui Economic Development Board. The event brought together over 840 participants from government, industry, and academia representing 23 countries to foster important discussion and collaboration in space sustainability, dealing specifically with space situational awareness and space traffic management. AMOS launched its initial EMER-GEN program for young space professional development through courses, networking, and mentoring.

Challenger Center Hawai'i

The Challenger Center Hawai'i at Barbers Point elementary school is part of a global network of Challenger Learning Centers, providing students with hands-on application of knowledge and critical thinking in real-world, space-themed simulation. Students aim to meet mission objectives through teamwork, problem-solving abilities, and communication skills. In 2018, the Center celebrated its 25th anniversary and hosted over 200 missions for 5,039 students and was recognized by the national Challenger Center during an annual conference in Washington, D.C., for most student missions flown in 2017-2018. The Center continues to explore ways to enhance student experience through live student evaluations, mission staff training, and mission module upgrades.

2020 Goals, Plans and Measurements (Year-one)

For FY 2020, OAD will focus on creating a sustainable ecosystem of STEM, workforce development, and job creation in robotics, aerospace and drones (RAD).

Robotics

Working with existing robotics programs and visionaries in the state, OAD will support the work to increase the level of robotics competition in the state by bringing to the state an annual international robotics competition and by promoting the use of robotics in manufacturing, agriculture, and hospitality industries to increase Hawai'i's competitiveness and as part of building a more sustainable business model.

Aerospace

Developing a commercial satellite launch facility in Hawai'i and being a launch ready will enable the state to take the next leap in the aerospace industry, and establish Hawai'i as an education, research & development, manufacturing, and innovative career hub for the small satellite industry. The current proposed launch facility is going through an environmental assessment and the process will include public reviews of the assessment and submitting the spaceport license application to the FAA by end of 2020.



Office of Aerospace Development

aerospace.hawaii.gov

OAD will continue to engage both the national and international players in space through targeted conferences, workshops, and meetings to identify and promote opportunities for expanding and diversifying robotics, aerospace, and drone-related industries in the state.

Drones

The unmanned aerial systems (UAS), aka drones, have huge economic potential with wide array of uses. OAD's focus will be to develop a UAS authority in Hawai'i to be responsible for UAS economic development, policymaking, and managing commercial activities in the state. Without a central authority in the states, various efforts, policies especially, are scattered and confusing. A business model for the state includes a UAS authority that oversees business licensing and operator training and certification for commercial use of drones, maintaining a fleet for government use or for contracted non-government use, and facilitating overall growth in government, private, and academia.

OAD will seek to tackle the following use cases in a structured approach for the state: land/construction surveying, medical organ/specimen delivery, autonomous air mobility, package delivery, precision agriculture, communication, manufacturing, disaster monitoring, structure inspection, traffic management, weather management, crowd control, mapping, conservation, endangered species monitoring, coastal management, STEM, competition, training, licensing, commercial certification, search and rescue, security, surveillance, counter-drone, and law enforcement.

Future Goals, Plans and Measurements (Year-two and year-five)

For FY 2021, OAD will continue to focus on creating a sustainable ecosystem of STEM, workforce development, and job creation in RAD.

Robotics

Continue with increasing the level of competition and work towards robotics program in each elementary, middle, and high schools in the state. Provide college-bound robotics participants with scholarships and collegiate competitors with internship/job offers for winning.

Start implementing use of robotics in manufacturing, agriculture, and hotels.

Aerospace

Continue working towards positioning the state to have satellite and space travel launch capability. Engage at least two companies for aerospace collaboration either directly or through a contracted or an attached agency.

Bring into the state at least one new major aerospace company or have a major expansion of an existing operation.



Office of Aerospace Development

aerospace.hawaii.gov

Drones

Formalize the state UAS authority to oversee business licensing and operator training and certification for commercial use of drones, maintaining a fleet for government use or for contracted non-government use, and facilitating overall growth in government, private, and academia.

Coordinate planning of the UAS traffic infrastructure for the state of Hawai'i. Establish a working group for urban mobility, package delivery, and medical transport.





Research & Economic Analysis Division

dbedt.hawaii.gov/economic

The Research & Economic Analysis Division (READ) works to enhance and contribute to the economic development of the state by providing data and analyses and policy recommendations on economic issues. READ provides economic forecasts that contribute to government and business planning and infrastructure needs assessment. READ also conducts research to assess the status of Hawai'i's industry sectors and the quality of life of Hawai'i residents.

READ produces an average of 50 economic and statistical reports a year, covering all aspects related to Hawai'i's economy and the population. READ collects data and maintains the database on Hawai'i petroleum industry and the state government electricity usage by account.

READ houses the Hawai'i State Data Center and the Federal-State Cooperative for Population Estimates (FSCPE) that partners with the U.S. Census Bureau and publishes Hawai'i data, including the decennial census, the annual American Community Survey, Economic Census, and the annual population estimates.

2019 Achievements

State Data Center sponsored nine workshops in 2019, provided training on Census data products and data mining tools.

READ hosted the Hawai'i Government Complete Count Committee which started operation on April 1, 2019. READ staff have participated five community events promoting 2020 Census by giving presentations and promotional materials.

READ's website received an average of 27,400 page-views a month in FY 2019.

Some of the data products and reports READ produced in 2019 include:

- Daily passenger count data – Cited by Star-Advertiser weekly
- Weekly unemployment claim data with analysis -- Cited by Star-Advertiser weekly
- Weekly photovoltaic permits data with analysis
- The Quarterly Statistical and Economic Report with economic forecast
- The State of Hawai'i Data Book
- Hawai'i's Monthly Economic Indicators and highlights
- Monthly Energy Trend Data and Analysis
- Hawai'i Electricity Industry, 2018 Analysis and Recent Trends
- Annual Updates on Emerging Industries in Hawai'i
- Hawai'i Economic Structure Analysis Using the Industry Level Gross Domestic Product Data



Research & Economic Analysis Division

dbedt.hawaii.gov/economic

- Marine Cargo and Waterborne Commerce in Hawai'i's Economy
- Annual Updates on the Status of the Hawai'i's Creative Industry
- State of Hawai'i Energy Data and Trends
- Solar PV Battery Installations in Honolulu: 2018 Update
- 2019 Hawai'i Quarterly Consumer Debt Report
- Hawai'i Census Data Highlights
- The economic Impact of International Students in Hawai'i – 2019 Update
- Hawai'i Tax Credit for Research Activities for Tax Year 2018

Statewide support from READ includes state government revenue bond and general obligation bond rating and sale activities, and 20 presentations to the business communities on the current and future economic conditions.

2020 Goals, Plans and Measurements (Year-one)

1. Census 2020 – counting everyone once and in the right place
 - Manage the Hawai'i Government Complete Count Committee – conduct monthly meetings and other activities
 - Manage the contract of promoting 2020 Census funded by a \$750,000 state Legislature appropriation
 - Participate in Census Bureau's count review to verify addresses of housing units
 - Statewide responding rate reach 74 percent, higher than the 68 percent experienced in 2010 Census
2. Design and complete the Tourism Data Warehouse
 - A special Tourism Data Warehouse was designed by READ in consultation with HTA Tourism Research
 - Tourism data have many dimensions and need a separate data warehouse to handle the data request
 - Data warehouse will be live in January 2020
3. Comprehensive and timely economic studies
 - Economic Impact of Place-Based Marketing on Agricultural products – Act 258/SB 763
 - Economic structural changes at county level – SCR86/SR63
 - Hawai'i Self-Sufficiency Income Standard
 - Economic impact of minimum wage in Hawai'i
 - Housing demand estimates for 2020-2030 in Hawai'i and its counties
 - Hawaii migration flows: 2013-2017
 - COFA migrants in Hawaii



Research & Economic Analysis Division

dbedt.hawaii.gov/economic

- Hawaii business formation

2021 Goals, Plans and Measurements (Year-two)

1. Dissemination of 2020 Census data

2020 Census data will be available in FY 2021, all data between 2010 and 2020 will be revised after the 2020 population count. READ will work with the U.S. Census Bureau to produce and provide the following:

- Produce analysis and data reports on 2020 Census data products
- Arrange trainings on how to access Census data
- Produce two data reports on Hawai'i demographics, and two reports on economics from the 2020 Census data

2. New data product and report on Hawai'i's aging population

READ will work with the East-West Center and develop methodologies to measuring the aging status for the state and counties for the next 20 years. READ will complete the following:

- a. Produce a dashboard to show Hawai'i aging situation for the next 20 years
- b. Prepare a report on Hawai'i's aging population and their economic impacts
- c. Dashboards and report should be completed before June 30, 2021

3. Develop methodology and models to measure economic impacts and industry performance

- The economic impacts of Hawai'i imports and exports
- Construct the 2017 Hawai'i Input-Output Model
- Complete a total 10 economic studies in FY 2021
- Within 5 percent of errors on economic projections

2024 Goals, Plans and Measurements (Year-five)

1. READ will continue to develop more data products on the resident population, visitors, government, and businesses in Hawai'i. READ will develop and produce the following:

- Produce five analysis and data reports on Hawai'i demographics, businesses, and government
- Develop monthly newsletters on the economic conditions in the state and by counties



Research & Economic Analysis Division

dbedt.hawaii.gov/economic

- Organize trainings on how to access Hawai'i data
4. Data presentation and visualization
- READ will continue renovating READ section of the website and presenting the data more efficiently and user friendly. READ will complete the following:
- a. Produce dashboards to show Hawai'i construction and housing trends
 - b. Develop data warehouse for the data on federal government in Hawai'i
 - c. Renovate the website for State of Hawai'i Data Book
 - d. Renovate the website for the Quarterly Statistical and Economic Report
5. More timely and comprehensive economic studies
- Develop methodologies to measure the success of Hawai'i industries
 - Prepare comprehensive analysis on importance of federal government in Hawai'i
 - Complete a total 10 economic studies in FY 2024
 - Within 3 percent of errors on economic projections





Small Business Regulatory Review Board

sbrrb.hawaii.gov

The Small Business Regulatory Review Board (SBRRB) program is aligned with the Department of Business, Economic Development & Tourism's (DBEDT) mission to support businesses to become economically successful and grow in Hawai'i while staying within state and county rules and regulations that govern their industries. When small businesses run into issues and have concerns regarding regulations, one opportunity is to seek assistance from the SBRRB.

The program is governed by the Hawai'i Small Business Regulatory Flexibility Act (RFA). The purpose of the RFA is to lessen the economic burden on small businesses and improve the state's entrepreneurial climate.

Under the RFA, the SBRRB acts as a gatekeeper for laws affecting small businesses, and an avenue for regulatory change and complaints. Thus, the SBRRB's contribution to sustainable economic development comes from reviewing state and county new and amended administrative rules impacting small business and making recommendations for a rule change or for legislation to the agencies, to the governor or mayors, and to the state Legislature. The SBRRB may also recommend a rule or legislative change based on any request from small business owners for the review of any rule adopted by a state or county agency.

SBRRB's Statutory Mandates pursuant to Chapter 201M, HRS:

- 1) Reviews both pre- and post-public hearing administrative rules and makes recommendations to the governor
- 2) Reviews concerns from small business owners regarding new and proposed rules and makes recommendations to the rule-drafting agencies and governor
- 3) Submits annual reports to the Legislature & governor and 201M-7 Report (existing rule review – every two years)

2019 Achievements

Rule Review:

Since its inception (1998), the SBRRB has reviewed a total of 910 sets of proposed new and amended HAR; 47 sets of HARs were reviewed in 2019.

Outreach:

- 1) Attendance at statewide business conferences:

The following conferences were attended by DBEDT staff and/or SBRRB members:

- Hawai'i Business Leadership Conference (O'ahu) – July 25, 2019
- Hawai'i Small Business Conference (Maui) – May 8-9, 2019
- Hawai'i Economic Association Annual Meeting (O'ahu) – October 4, 2019



Small Business Regulatory Review Board

sbrrb.hawaii.gov

SBRRB Projects:

- Legislative/Government outreach – This is an ongoing project where meetings are scheduled and held with SBRRB members and state’s legislators.
- Agency meetings – This is an ongoing project where meetings are scheduled and held with SBRRB and state agency directors.
- SBRRB website – The recent enhancements/upgrades to the SBRRB website, launched August 2019, improved upon the board’s overall visibility to assist Hawai’i’s business community, rule-making agencies, business chambers and trade organizations.

The newest website feature, “Regulation for Review,” received three requests in 2019 from small business owners and were reviewed.

- DLNR 13-230, 13-256, and 13-257 Ocean recreation and coastal areas
- DLNR 13-94 Bottom fish management
- DLNR 13-231-50 through 70 boat harbors
- SBRRB brochure mailings – 1,089 mailings were completed from September to December

2020 Goals, Plans and Achievements (Year-one)

Goal – Increase Small Business Outreach & Awareness

a) Action plan to accomplish the goals

- New business informational mailings
For a continued effort to improve SBRRB’s outreach and marketing, weekly mailings of the SBRRB brochure to new LLC/small businesses of which *The Pacific Business News* provides a weekly listing. This is expected to help reach newly registered small businesses and raise awareness of the SBRRB and its role within the community.
- Attendance at state-wide business conferences
Hawai’i business conferences are a perfect venue and opportunity to meet with local businesses and organization for outreach purposes.
- Attendance at business association meetings
Business associations represent businesses in a specific Industry and a perfect means to disseminate information about the SBRRB, interact with business leaders in the industry and potentially surface issues pertinent to the majority of businesses in the industry.

b) Timetable

- Mailings
Mailings from the listings in *The Pacific Business News* began in September 2019 and will continue weekly/monthly.



Small Business Regulatory Review Board

sbrrb.hawaii.gov

- Attendance at statewide business conferences.
Attendance at statewide business conferences are on a case-by-case basis, depending on type of venue and location.
- Attendance at business association meetings
SBRRB to identify specific associations and discuss opportunities to attend and present at association quarterly/annual meetings. Timing depending on availability and agenda coordination.

c) Measurements & Targets

- Mailings – weekly/monthly
1,089 mailings completed in 2019
2,500 mailings planned in 2020
- Attendance at statewide business conferences
The following conferences were attended by DBEDT staff and/or SBRRB members.
Hawai'i Business Leadership Conference (Oahu) - July 25, 2019
Hawai'i Small Business Conference (Maui) - May 8-9, 2019
Hawai'i Economic Association Annual Meeting (Oahu) – October 4, 2019
2020 Targets – 3-4 Business Conferences
- Attendance at business trade association meetings
2020: One business association meeting per quarter

Goal – Utilize new website to improve upon communications with small businesses and agencies

a) Action plan to accomplish the goals

- Website improvements
The SBRRB's newly revamped website is an improved, user-friendly tool to assist Hawai'i's business community, rule-making agencies, business chambers and trade organizations in providing current information on the status of state and county new and proposed Hawai'i Administrative Rules (HAR).
The website's highlights include a new layout with a more unified appearance, improved navigation of the site and a new dashboard that includes an up-to-date status of the SBRRB's review of the HAR; an improved webpage for a small business owner's submission of a "regulation for review"; dates for monthly meetings; and an explanation in diagram-form as to how small businesses may get involved in the rule-making process.
- Regulation for Review
For businesses in Hawai'i to be successful, companies must follow state and county rules and regulations that govern their industry and ideally provide an equal playing field for all businesses. Although most businesses want and require



Small Business Regulatory Review Board

sbrrb.hawaii.gov

regulations to maintain level competition, many find the regulations to be overly burdensome and impact their ability to succeed and grow.

One of the newest website features is the SBRRB's "Regulation for Review".

When small businesses run into issues and have concerns regarding administrative rules, the business now has an opportunity to communicate these concerns and seek assistance from the SBRRB via this process.

- Agency meetings

Meetings with SBRRB members and state and county agencies are essential to expand upon communication to form a bridge between the small businesses and government.

Therefore, a partnership must exist between the small business community and state government to conduct outreach and gather information for effective rule development in order to establish an efficient means to regulations.

The county's intervention is also needed as the SBRRB is charged with reviewing county rules and making recommendations to county council or the mayors for appropriate action.

b) Timetable

- Website

Discussions for creating a revamped website began in 2018; it was launched in August 2019. On-going improvements throughout 2020.

- Regulation for review process

"Regulation for Review" was soft-launched in 2017. Process will continue to become more relevant to board business in 2020 and beyond.

- Agency meetings with board members

In January 2019, letters were sent to the state agency directors introducing the respective board members/discussion leaders that are assigned to the various agencies and requesting follow-up meetings.

c) Measurements

- Website

10 percent increase in usage of interactive forms and digital feedback applications in the website allowing small businesses to participate and comment on new rules that impact them.

- Regulation for Review

Since its inception, four small businesses have approached the SBRRB with specific regulatory issues. Reinforcement of this process through business community outreach will facilitate an increase in small business inquiry to issues through the Regulation for Review Process. No specific quantity target, but a goal of addressing each inquiry for action.

- Agency meetings



Small Business Regulatory Review Board

sbrrb.hawaii.gov

During FY 2020, the six meetings were held with board members and agency directors with the DLNR, DLIR, DOH, DHS, DoTax and with DBEDT. Five more agency meetings are planned in 2020.

Goal – Improve board effectiveness

a) Action plan to accomplish the goals

- New Board member orientation
For all new board members, provide an orientation overview including an orientation manual of the board, board members, agencies, typical issues and outstanding items currently in the system.
- Board member attendance
In addition to our efforts to maintain a quorum at each board meeting, in order to conduct board business, having all board members in attendance adds tremendous insight and value to the discussions.

b) Timetable

- New board member orientation
As new board members are added to the board.
- Board member attendance
Monthly board meetings.

c) Measurements & Targets

- New board member orientation
As new board members are added to the board and prior to attending their first board meeting.
- Board member attendance
Board member attendance at 75 percent (Nine meetings per year)

2021 Goals, Plans and Measurements (Year-two)

Goal – Increase Small Business Outreach & Awareness

a) Action plan to accomplish the goals

- Mailings: Continue *The Pacific Business News* mailings and others.
- Attendance at statewide business conferences: Continue attending business conferences around the state.
- Attendance at business trade association meetings: Continue attending industry association meetings.



Small Business Regulatory Review Board

sbrrb.hawaii.gov

b) Timetable

- Mailings: Throughout the fiscal year.
- Attendance at state-wide business conferences: Throughout the fiscal year.
- Attendance at business trade association meetings: Quarterly throughout the fiscal year.

c) Measurements

- Mailings: 250 – 300 mailings monthly.
- Attendance at state-wide business conferences: 3 – 5 business conferences per year.
- Attendance at business trade association meetings: 4 business Industry association meetings per year.

Goal – Improve upon communications with small businesses and agencies through the new website

a) Action plan to accomplish the goals

- Website: Increase usage of website by small businesses and agencies in all aspects of communications with the SBRRB.
- Regulation for Review: Continue to solicit regulations for review.
- Agency meetings: Continue meeting with and follow up with director meetings.

b) Timetable

- Website: Throughout the fiscal year.
- Regulation for Review: Throughout the fiscal year.
- Agency meetings: Throughout the fiscal year.

c) Measurements

- Website: Expect a 10 percent increase in usage of interactive forms and digital feedback applications in the website allowing small businesses to participate and comment on new rules that impact them.
- Regulation for Review: Estimate receiving 5 – 10 requests
- Agency meetings: Continue meetings, if necessary.



Small Business Regulatory Review Board

sbrrb.hawaii.gov

2024 Plans, Goals and Measurements (Year-five)

Goal – Increase Small Business Outreach

- a) Action plan to accomplish the goals
 - Mailings: Continue *The Pacific Business News* mailings and others.
 - Attendance at state-wide business conferences: Continue attending business conferences around the state.
- b) Timetable
 - Mailings: Throughout the fiscal year.
 - Attendance at state-wide business conferences: Throughout the fiscal year.
- c) Measurements
 - Mailings: Anticipate 250 – 300 mailings monthly.
 - Attendance at state-wide business conferences: 3 - 5 business conferences per year.

Goal – Improve upon communications with small businesses and agencies through the new website

- a) Action plan to accomplish the goals
 - Website: The second phase of the website is expected to expand and enhance the interactivity of the SBRRB website allowing small businesses more targeted requests for rules as well as ways to input comments and interact with the SBRRB.
 - Regulation for Review: Continue to solicit regulations for review.
 - Agency Meetings: Continue meeting with and follow up with director meetings.
- b) Timetable
 - Website: Throughout the fiscal year.
 - Regulation for Review: Throughout the fiscal year.
 - Agency meetings: Throughout the fiscal year.
- c) Measurements
 - Website: Expect a 20 percent increase in usage of interactive forms and digital feedback applications in the website allowing small businesses to participate and comment on new rules that impact them.
 - Regulation for Review: Estimate receiving 5 – 10 requests.
 - Agency meetings: Continue meetings, if necessary.



Hawai'i Community Development Authority

dbedt.hawaii.gov/hcda

The Hawai'i Community Development Authority (HCDA) is a redevelopment agency established by the legislature in 1976. Its mission is to establish community development plans in community development districts; determine community development programs; and cooperate with private enterprise and the various components of federal, state, and county governments to bring community development plans to fruition.

The Authority's work should result in economic and social opportunities and aim to meet the highest needs and aspirations of Hawai'i's people.

The designated community development districts are Kaka'ako, Kalaeloa, He'eia, and as of 2019, the new Stadium Development District.

Rules are developed in each district after public meetings and with community input, to implement a community development plan and regulate new development.

The HCDA Improvement District Program has proven to be a successful method of financing and constructing the massive infrastructure improvements that were necessary for the revitalization of Kaka'ako. Sewer and drainage systems, utilities, roads, gutters and sidewalks have been improved and upgraded under this program.

- HCDA spent over \$226 million to improve the infrastructure in Kaka'ako.
- The improved infrastructure has resulted in over \$6 billion in development, and over \$40 million in property taxes.

HCDA Reserved Housing Program is for Hawai'i residents. It reserves at least 20 percent of the residential floor area constructed as reserved housing with buyback and shared equity provisions. Reserved housing units are affordable to residents making 140 percent of the area median income (AMI) or less.

- 36 housing projects have been completed in Kaka'ako under HCDA plan and rules
 - 3 senior housing projects
 - 7 affordable rental housing projects
 - 11 reserved and workforce projects
- 10,579 residential units have been built since 1976
- 3,687 affordable housing units (1 in 3 units in Kaka'ako were affordable)

HCDA Workforce Housing Program generates and creates incentives for developers to build affordable housing. HCDA rules double the allowed density of a project and there is no public facilities dedication requirement for reserved housing.

- 75 percent of units in a project are affordable (≥ 140 percent AMI)
- 1,045 Workforce Housing units were completed, 775 of those units were affordable

Public Facilities Dedication Program creates a revenue stream intended to mitigate the impacts of development by requiring that developers, as a condition of developing,



Hawai'i Community Development Authority

dbedt.hawaii.gov/hcda

dedicate land, facilities, or cash payments for public facilities including infrastructure (i.e. roads, utilities) and open space.

2019 Achievements

A Development Permit for Victoria Place was approved by HCDA, after community input and public hearings. The residential condominium will be located on a portion of the block where the former Ward Warehouse stood. It will include 350 residential units, open space and recreational space, with the adjacent Victoria Ward Park expanding and off-site reserved housing units.

Nohona Hale will soon be complete with 105 small thoughtfully-designed, high-quality units to be occupied by no more than two people. First of their kind affordable micro-units on a mere 10,000 square-foot parcel of HCDA land. Elsewhere micro-unit housing projects provide desirable tradeoffs for housing, with few amenities, but instead great accessibility and convenience to surrounding public facilities and active, mixed-use urban environments. Micro-unit housing can serve changing demographics as well as mixed-income groups, including for example seniors who seek to 'age in place' near transit-rich areas, millennials who prefer an urban-centric lifestyle, and individuals who are vulnerable to becoming homeless.

The Kalaeloa Energy Corridor is well on its way. In March 2019 Phase 1 was completed. It consisted of the installation of underground utility systems on Fort Barrette Road, from Kapolei Parkway to Franklin D. Roosevelt Avenue; and Enterprise Street, from Franklin D. Roosevelt Avenue to Langley Street. Phase II began in July on Enterprise Street, from Langley Street to Midway Street, and is expected to be completed in 2020.

On July 8, 2019 Act 268 was signed into law. It established the Stadium Development District, which includes all state property under the jurisdiction of the Stadium Authority and authorizes HCDA to facilitate the development of all state property within the District.

HCDA is working with the Stadium Authority and the State Department of Accounting and General Services (DAGS) to implement the will of the Hawai'i State Legislature and governor as outlined in Act 268.

2020 Goals, Plans and Measurements (Year-one)

HCDA's first goal in this year is to execute a Memorandum of Agreement, as outlined in Act 268, with the Stadium Authority and DAGS that describes the cooperative relationship between the parties that want to work together to achieve a common goal.

Second, is the great task of soliciting prospective developers for the new Stadium and competing for possible global funding for a private-public partnership in developing the ancillary properties in the Stadium Development District. The solicitation process is expected to continue through 2020.



Hawai'i Community Development Authority

dbedt.hawaii.gov/hcda

Third, the Authority contracted a consultant and has been working with the community on its plans for the Heeia Community Development District and its process to create plans and rules for the area. At a public meeting several community members voiced their appreciation of the improvements made to date and were very supportive of the proposed planning efforts. Plans and rules will be drafted in 2020.

2021 Goals, Plans and Measurements (Year-two)

First, HCDA is working with the State Office of Planning (OP) on a study on developing and submitting a plan to transfer HCDA's control of the Kaka'ako Community Development District to the City and County of Honolulu. The HCDA board and staff have drafted an overview of what such a transfer entails, however, OP will develop a more detailed study of what would need to be done to transfer programs and assets, as well as further information on the state's obligations in the Kaka'ako district. The first phase, the board overview will be completed in year 1 and the second phase by OP is scheduled to be finished in year two.

Second, HCDA is meeting with the community in the He'eia as well as the surrounding neighborhoods, to develop plans and rules for the He'eia Community Development District. In the summer of 2020 HCDA staff will present draft plans and rules to the HCDA board. Meetings with the board will be followed by public hearings, and there will be ample time for the community to provide input both in person, by mail and via the internet.

Third, staff will continue to monitor construction in the districts under development permits the agency has issued. The Ola Ka Ilima Artspace Lofts should be completed, containing 84 residential units available as affordable rentals to working artists; the Nohona Hale micro-units with 105 affordable rentals will be finished; and Aalii with 751 residential units behind the new Victoria Ward Park will include 150 reserved housing units.

2024 Goals, Plans and Measurements (Year-five)

First, assisting with the need for housing in Hawai'i 803 Waimanu – The Block 153 residential units with 143 of them affordable reserved housing is expected to be completed, as well as Koula featuring 570 units plus additional reserved housing at a separate location, yet to be determined.

Second, both Kamehameha Schools and Howard Hughes are expected to be finalizing their master plans in Kaka'ako, with these further build out of their private lands adding to the footage of residential and commercial space.

Third, is to continue reviewing development and renovation permits throughout the districts, manage existing programs, and property management of state lands in the districts. These ongoing activities fluctuate daily and the small very flexible staff go where they are needed within the four HCDA districts to ensure permits, programs, and HCDA properties are all managed properly using districts plans and rules as a



Hawai'i Community Development Authority

dbedt.hawaii.gov/hcda

guideline. These activities can be measured by inquiries, applications, action items, leases, site visits and other documented activity.





Hawai'i Green Infrastructure Authority

gems.hawaii.gov

The Hawai'i Green Infrastructure Authority (HGIA) was constituted in November 2014 to democratize clean energy by making clean energy improvements affordable and accessible to a broader cross-section of Hawai'i's ratepayers, while advancing the state's goal of achieving 100 percent renewable portfolio standard in the electricity sector by 2045.

HGIA administers the Green Energy Market Securitization (GEMS) Financing Program, which includes the Green Energy Money Saver On-Bill Program, and provides low-cost, long-term, flexible financing to Hawai'i's most vulnerable ratepayers, specifically, low and moderate-income homeowners and renters, small businesses, nonprofits and multi-family rental projects.

The GEMS financing program fills market gaps, stimulates private investments and leverages innovative tools to mitigate risks and reach new markets.

HGIA is aligned with the Department of Business, Economic Development and Tourism's (DBEDT) economic development goals and objectives as it posted cumulative excess revenue over expenses at fiscal year ended September 30, 2019 of \$3.2¹ million. In addition to the positive energy and environmental impacts, clean energy projects financed by HGIA contributed over \$12.1 million in state tax revenues and created/retained almost 1,000 local jobs.

2019 Achievements

The following is a dashboard of GEMS impacts, at a glance:

GEMS Impacts at a Glance (As of September 30, 2019)

**Cumulative Excess
Revenues Over Expenses*:
\$3.2 Million**



**Jobs Created or
Retained: 997.0**



¹ Excess revenues over expenses is before some \$2.4 million in "expenditures" for loan repayments transferred to the Hawaii Public Utilities Commission.



Hawai'i Green Infrastructure Authority

gems.hawaii.gov

**Hawaii Tax Revenue
Generated: \$12.1 million**



**Estimated kWh
Produced/Reduced**:
768,533,275**



**Estimated Barrels of
Petroleum Displaced**:
472,014**



**Estimated Metric Tons
Greenhouse Gas
Avoided**: 231,217**



* Excess Revenues over Expenses is before some \$2.4 million in "expenditures" for loan repayments transferred to the Public Utilities Commission.

** Over lifetime of equipment financed.

On April 8, 2019, Governor Ige announced the official launch of the Green Energy Money Saver ("GEM\$") On-Bill Program during a press conference held in his chambers.



Murray Clay, Ulupono Initiative President; James "Jay" Griffin, PUC Chair; Governor David Ige; Gwen Yamamoto Lau, HGIA Executive Director; and Scott Seu, HECO Senior Vice President

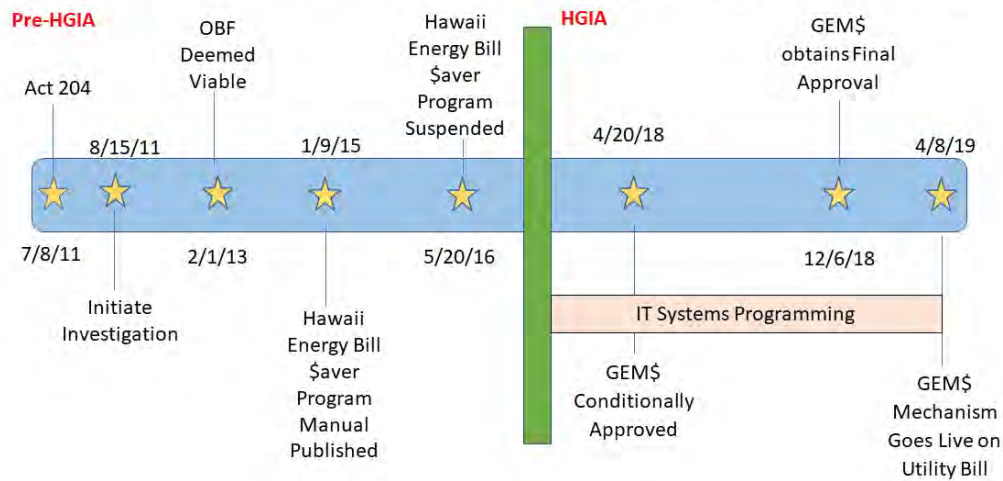


Hawai'i Green Infrastructure Authority

gems.hawaii.gov

The journey of Hawai'i's on-bill financing program began with Act 204, which was signed into law on July 8, 2011 and consummated almost eight years of work invested by the Hawai'i Public Utilities, the Hawaiian Electric Companies and energy stakeholders.

Timeline of Hawai'i's On-Bill Program (2011-2019)



With 43% of Hawai'i's households renting and almost half of Hawai'i's households classified as Asset Limited Income Constrained, Employed (ALICE), or below, it was important to Hawai'i's policy makers and regulators that Hawai'i's on-bill program be designed for low and moderate-income households, renters, non-profits and other hard to reach segments. Accomplishing these objectives, the unique inclusive and comprehensive design of GEM\$ has created a buzz on the national level with published articles and requests to participate in panel presentations and webinars to share GEM\$ with other states and municipalities interested in helping the underserved.

All of these activities are aligned with HGIA's mission, which is to democratize clean energy by providing non-traditional and flexible financing to enable our most vulnerable populations an opportunity to lower their energy costs while going green.

2020 Goals, Plans and Measurements (Year-one)

1. Focus on underserved

Recognizing that while there is a tension and need for timely clean energy adoption in general, HGIA's Board agreed with the Permitted Interaction Group, established to investigate and make a recommendation regarding the allocation of the remaining GEMS loan funds, that while it will slow the pace of loan deployment, the real opportunity and objective of the GEMS program should be to provide access to capital for clean energy adoption to the underserved and hard-to-reach.



Hawai'i Green Infrastructure Authority

gems.hawaii.gov

To effectively manage the use of the remaining GEMS funds to ensure it achieves a key program objective to democratize clean energy for Hawai'i's low and moderate-income families, renters, and other hard to reach segments, effective September 1, 2019, HGIA has set fund allocations for specific segments and will only lend to the following:

Segment	% Allocation
Low and moderate-income (as defined by the U.S. Department of Housing and Urban Development) single-family residential homeowners and renters	20%
Small businesses (as defined by the U.S. Small Business Administration)	15%
Multi-family rental projects	35%
Nonprofits	30%

HGIA sets new program allocations in effort to make green energy 'more affordable'

Sep 9, 2019, 2:48pm HST

The Hawaii Green Infrastructure Authority's new fund allocations for its programs, which were established in an effort to reach different market segments of utility ratepayers, went into effect Sept. 1.



HGIA will focus its marketing and community outreach efforts specifically on these segments for increased penetration and impacts.

- Expand lending to continue to facilitate adoption in alignment with the state's aggressive clean energy goals, which may be achieved and measured in number of ways, such as:
 - Secure additional loan capital
With only \$31.7 million GEMS loan capital available to lend, HGIA will be seeking additional loan capital, which could include but not be limited to state



Hawai'i Green Infrastructure Authority

gems.hawaii.gov

funds, federal grants, intermediary loan funds, impact investment funds, opportunity zone funds or program related investments.

The success of HGIA's ability to source additional loan capital will depend on the legislature's approval to create a vehicle, such as a Clean Energy and Energy Efficiency Revolving Loan Fund, to accept this new loan capital.

- **Launch additional loan products**
Another tactic in expanding lending to facilitate clean energy adoption is to launch additional loan products, which could include but not be limited to 1) leveraging the Green Energy Money Saver On-Bill repayment mechanism to facilitate community based solar projects; 2) introducing a PV + storage loan product; 3) modifying the existing GEM\$ on-bill program to enable HGIA to finance solar hot water heaters for those LMI households with prior disconnection notices; and 4) financing the electrification of state fleet vehicles to EVs utilizing the savings resulting from exercising the option to purchase on existing power purchase agreements (PPA) for a budget neutral impact.

The first three loan products will require approval from the Public Utilities Commission (PUC). The fourth loan product will require approval from the legislature and the PUC.

- **Increase leverage of private capital**
Lastly, exponentially increasing impact with the available funds remaining may be accomplished by increasing the leverage of private to public capital by providing credit enhancements to traditional lenders.

3. Operational risk mitigation

Over the past three years, HGIA's loan portfolio has grown from \$1.1 million at fiscal year ended 6/30/16 to \$90 million at fiscal year ending September 30, 2019.

An important goal during this fiscal year is to mitigate operational risks and increase efficiencies. Operational risk will be mitigated by increasing redundancy in technical expertise, outsourcing accounting functions and leveraging software and technology.

Increased efficiencies will be accomplished by engaging a 3rd party review of HGIA's existing processes, procedures and workflow to recommend enhancements, as may be applicable, based on regulatory, lending and organizational best practices.



Hawai'i Green Infrastructure Authority

gems.hawaii.gov

All of the goals listed above shall be measured and reported on a quarterly basis to HGIA's Board and the PUC.

2021 Goals, Plans and Measurements (Year-two)

1. Continue deploying loan funds to meet the needs of the state
2. Develop automated loan portal
To gain efficiencies and increase accuracy of data, HGIA will work on developing a loan portal to automate its loan approval process, including underwriting, documentation and metric calculations for reporting purposes.
3. Expand lending program
Based on legislation and funding of loan capital, explore expanding lending programs to meet other gap financing needs of the state.

Goal	Time Table	Action Plan	Measurement Criteria
Deploy loan funds	Ongoing	<ul style="list-style-type: none"> • Source and accept loan applications; • Underwrite loans depending on program criteria; • Approve, document and fund loans; • Service loans (including collection efforts) until all loans are paid in full. 	Based on the specific metrics of the individual loan product(s), such as jobs created, tax revenue generated, kWh produced or reduced, etc.
Develop automated loan portal	Complete project by June 2021	<ul style="list-style-type: none"> • Review Hawai'i Annual Code Challenge submission for foundational purposes • Contract with developer to do programming • Launch residential portal • Launch commercial portal 	<ul style="list-style-type: none"> • 9/30/20 – Contract with programmer & begin design work • 12/31/20 – Upload and test metrics for existing loans • 3/31/21 – Launch residential loan & contractor portal • 6/30/21 – Launch commercial loan & contractor portal
Expand lending program	Ongoing	The timeline, action plan and measurement criteria will depend on the needs and resources available, however will likely be in the following categories:	



Hawai'i Green Infrastructure Authority

gems.hawaii.gov

	<ul style="list-style-type: none"> • Identify access to capital gaps within the state; • Identify capital resources; • Procure funding sources; • Design loan products; • Outreach with partners & stakeholders (i.e. contractors, other agencies, private capital sources, etc.); • Incorporate program into existing HGIA infrastructure for greater efficiencies (i.e. loan portal, etc.); • Launch new loan product/program
--	--

2024 Goals, Plans and Measurements (Year-five)

1. Continue deploying loan funds to meet the needs of the state.
2. Expand lending program, as required.
Based on legislation and funding of loan capital, explore expanding lending programs to meet other gap financing needs of the state.

Goal	Time Table	Action Plan	Measurement Criteria
Deploy loan funds	Ongoing	<ul style="list-style-type: none"> • Source and accept loan applications; • Underwrite loans depending on program criteria; • Approve, document and fund loans; • Service loans (including collection efforts) until all loans are paid in full. 	Based on the specific metrics of the individual loan product(s), such as jobs created, tax revenue generated, kWh produced or reduced, etc.
Expand lending program	Ongoing	<p>The timeline, action plan and measurement criteria will depend on the needs and resources available, however will likely be in the following categories:</p> <ul style="list-style-type: none"> • Identify access to capital gaps within the state; • Identify capital resources; • Procure funding sources; • Design loan products; • Outreach with partners & stakeholders (i.e. contractors, other agencies, private capital sources, etc.); • Incorporate program into existing HGIA infrastructure for greater efficiencies (i.e. loan portal, etc.); • Launch new loan product/program 	



Hawai'i Housing Finance and Development Corporation

dbedt.hawaii.gov/hhfdc

The mission of the Hawai'i Housing Finance and Development Corporation (HHFDC) is to increase and preserve the supply of workforce and affordable housing statewide by providing leadership, tools, and resources to facilitate housing development.

The HHFDC is administratively attached to the Department of Business, Economic, Development & Tourism (DBEDT). It is governed by a nine-member board of directors who establish policies and executive direction for the corporation.

Six members are appointed by the governor from each of the counties of Honolulu, Hawai'i, Maui and Kaua'i. At least four members must have knowledge and expertise in public or private financing and development of affordable housing, and one member must represent community advocates for low-income housing. The three ex-officio members are the director of DBEDT, the director of finance, and a representative of the governor's office.

2019 Achievements

In fiscal year 2019, the HHFDC assisted in the delivery of 798 workforce/affordable units while managing assets of close to \$1.3 billion. Since its inception in 2006, the HHFDC has facilitated the development of 10,140 workforce and affordable units statewide and currently has a production plan in place to add 8,133 more units over the next five years.





Hawai'i Housing Finance and Development Corporation

dbedt.hawaii.gov/hhfdc

2020 Goals, Plans and Measurements (Year-one)

In the immediate future, the HHFDC is concentrating on increasing the production pipeline and accelerating the delivery of homes that people can afford while we continue to leverage additional state funding to attract more private investment to develop more housing.

As we move forward, the HHFDC remains focused on strengthening financing tools, streamlining procedures, and working collaboratively with public and private sectors to seek long-term sustainable solutions that will benefit future generations in Hawai'i.

2021 Goals, Plans and Measurements (Year-two)

- **BUILD MORE WORKFORCE AND AFFORDABLE HOUSING STATEWIDE**

Expand and preserve the supply of affordable housing units through joint public/private efforts.

- **IMPLEMENTING ACTION:** Efficiently utilize existing federal, state and county financing programs, including the low-income housing tax credit, Hula Mae Multifamily revenue bond, and the rental housing revolving fund programs, to facilitate the development of affordable units.

HHFDC has 2,526 workforce/affordable units planned for completion in 2021.
1,818 rentals
708 for-sale

- **MEASURES OF EFFECTIVENESS:** Number of rental and for-sale workforce/affordable units completed, project values, direct jobs, indirect jobs and income generated.

- **EXPAND AND PRESERVE THE SUPPLY OF AFFORDABLE RENTAL HOUSING UNITS**

- **IMPLEMENTING ACTION:** Efficiently utilize existing federal, state and county financing programs, including the low-income housing tax credit, Hula Mae Multifamily revenue bond, and the rental housing revolving fund programs, to facilitate the development of permanent rental housing projects in areas suitable for development.

- **MEASURES OF EFFECTIVENESS:** Number of rental units completed which are affordable to moderate-, and above-moderate income households, project values, direct jobs, indirect jobs and income generated.



Hawai'i Housing Finance and Development Corporation

dbedt.hawaii.gov/hhfdc

- FACILITATE THE STATEWIDE DEVELOPMENT OF WORKFORCE AND AFFORDABLE HOUSING IN TRANSIT-ORIENTED DEVELOPMENTS (TOD) NEAR TRANSIT STATIONS

The TOD Council has identified three high priority areas for the state to pursue: Iwilei-Kapalama; Halawa Stadium; and East Kapolei. These areas have enormous potential for TOD development, which would include affordable/workforce housing and market-rate housing.

- IMPLEMENTING ACTION: HHFDC will continue to work collaboratively with other state and county agencies to identify lands with infrastructure capacity for development opportunities.
- IMPLEMENTING ACTION: Form public/private partnerships and/or enter into public/private development agreements to develop mixed-use development near rail stations.

Planned/in construction projects near HART Rail Stations

ArtSpace – 84 units near Ala Moana Station
Nohona Hale – 104 units near Civic Center
Alder Street – 200 units near Ala Moana Station
Kulia @ Ho`opili – 120 units near UH West O`ahu Station
The Central – 513 units near Ala Moana Station
Ililani – 328 units near Civic Center Station
Halawa View Apartments II & III – 300 units near Halawa Station

- MEASURES OF EFFECTIVENESS: Number of workforce/affordable units completed within ½ mile radius of rail stations, project values, direct jobs, indirect jobs and income generated.

2024 Goals, Plans and Measurements (Year-five)

- INCREASE AND SUSTAIN THE SUPPLY OF PERMANENT RENTAL HOUSING THAT IS AFFORDABLE AND ACCESSIBLE TO HAWAII RESIDENTS, PARTICULARLY THOSE WITH INCOMES AT OR BELOW 80 PERCENT AMI. ATTAIN THE LEGISLATIVE GOAL OF 22,500 RENTAL HOUSING UNITS BY 2026.
- EXPAND AND PRESERVE THE SUPPLY OF AFFORDABLE RENTAL HOUSING UNITS THROUGH JOINT PUBLIC/PRIVATE EFFORTS. EXPAND AND MOBILIZE RESOURCES TO BETTER ASSIST HOUSEHOLDS SEEKING RENTAL



Hawai'i Housing Finance and Development Corporation

dbedt.hawaii.gov/hhfdc

HOUSING OPPORTUNITIES, INCLUDING LOWER INCOME HOUSEHOLDS, THE ELDERLY, PERSONS WITH DISABILITIES, AND HOMELESS HOUSEHOLDS. AND, PURSUE SOURCES OF FUNDING FOR RENT SUBSIDIES.

- IMPLEMENTING ACTION: Efficiently utilize existing federal, state and county financing programs, including the low-income housing tax credit, Hula Mae Multifamily revenue bond, and the rental housing revolving fund programs, to facilitate the development of permanent rental housing projects in areas suitable for development (i.e., urbanized areas in proximity to schools, jobs, public transportation, etc.)

- MEASURES OF EFFECTIVENESS: Number of rental units completed which are affordable to extremely-, very low-, low-, moderate-, and above-moderate income households; number of accessible rental units completed; number of family and senior rental units.

- ENCOURAGE INCREASED PARTICIPATION FROM PRIVATE DEVELOPERS AND OTHER STATE ENTITIES TO DEVELOP RENTAL HOUSING.
 - IMPLEMENTING ACTION: Form public/private partnerships and/or enter into public/private development agreements to develop rental housing.

Form partnerships and/or enter into agreements with state agencies to develop mixed-use developments which include rental housing.

Streamline government procedures and reorient policies towards housing production, particularly rental housing.
 - MEASURES OF EFFECTIVENESS: Number of rental projects and units developed as a result of public private/development agreements.

- SUSTAIN A LONG-TERM SUPPLY OF RENTAL HOUSING.
 - IMPLEMENTING ACTION: Assist in the acquisition and/or rehabilitation of rental housing projects.
 - MEASURES OF EFFECTIVENESS: Number of rental housing projects/units preserved.



Hawai'i Housing Finance and Development Corporation

dbedt.hawaii.gov/hhfdc

- INCREASE THE HOMEOWNERSHIP RATE.

Facilitate the private development of affordably priced for-sale residential units, particularly for moderate and above-moderate first-time homebuyers.

- IMPLEMENTING ACTION: Utilize development tools, such as 201H powers and interim construction loans, to assist in the private development of affordably priced homes in areas suitable for development (i.e., urbanized areas in proximity to schools, jobs, public transportation, etc.).

Participate with financial institutions to provide eligible moderate and above-moderate first-time homebuyers with mortgage financing assistance.

Revise the down payment assistance program; amend administrative rules; number of homebuyers assisted.

- MEASURES OF EFFECTIVENESS: Number of development agreements; number of for-sale units completed; number of projects assisted under 201H; number of construction loans.

- ADDRESS BARRIERS TO RESIDENTIAL DEVELOPMENT.

Coordinate and facilitate the production of housing by addressing development impediments including lack of land, infrastructure, and regulations that add to the cost of housing.

- IMPLEMENTING ACTION: Lease suitable state and county land, particularly parcels in TOD areas, for rental housing development.

- MEASURES OF EFFECTIVENESS: Number of leases; number of rental units.

- COORDINATE AND SHARE REGIONAL INFRASTRUCTURE INVESTMENTS BETWEEN STATE, COUNTIES AND PRIVATE DEVELOPERS.

- IMPLEMENTING ACTION: Assist in financing regional state infrastructure improvements in areas of planned growth, such as near rail stations.

- MEASURES OF EFFECTIVENESS: Number of financing agreements; increased infrastructure capacity; number of residential units developed.



Hawai'i Housing Finance and Development Corporation

dbedt.hawaii.gov/hhfdc

- ADDRESS REGULATORY BARRIERS INCLUDING THE LENGTHY LAND USE ENTITLEMENT PROCESS, LACK OF CONSISTENCY AND COORDINATION IN STATE AND COUNTY AGENCY REVIEWS, IMPACT FEES AND EXACTIONS, FISCAL POLICY, AND ADMINISTRATIVE PROCESSES THAT ADD TO THE COST OF HOUSING.
 - IMPLEMENTING ACTION: Examine ways to revive the regulatory and procurement systems to allow for faster expenditure of funds to support residential development, including development to increase infrastructure capacity.
 - MEASURES OF EFFECTIVENESS: Increased efficiencies in encumbering/expending funds.



Hawai'i State Energy Office

energy.hawaii.gov

The Hawai'i State Energy Office (HSEO) is helping drive the state's clean energy agenda with a focus on meeting Hawai'i's commitment to becoming carbon neutral by 2045. HSEO provides energy sector stakeholders with information, analysis, tools and technical assistance needed to carry out Hawai'i's clean energy transformation. In fulfilling its responsibility for energy planning, policy and programs HSEO is pursuing high-impact solutions to promote gains in energy efficiency and break down barriers to renewable energy development. Hawai'i's pursuit of energy independence is stimulating economic growth in an innovation economy, elevating job growth prospects and business opportunities.

An important measure of the progress made toward breaking Hawai'i's dependence on fossil fuels is the renewable portfolio standard (RPS), which represents the percentage of electricity sales coming from renewable sources. The RPS now stands at 27.6 percent, up from 8.3 percent in 2008. With significant amounts of new renewable energy production coming online Hawai'i is well-positioned to meet its 2020 interim RPS target of 30 percent. HSEO also supports an array of programs that are helping the state meet its energy efficiency portfolio standard (EEPS). The EEPS mandates a 4,300-gigawatt-hour reduction in electricity use by 2030 through efficiency and conservation measures.

2019 Achievements

Designing buildings to be more energy efficient can significantly reduce energy waste while contributing to Hawai'i's clean energy goals. As a voting member and an active participant on the State Building Code Council, HSEO was instrumental in the Council's adoption of the International Energy Conservation Code (IECC) with Hawai'i-specific amendments. Gov. David Ige signed the new code in 2017 and since then HSEO has been working with the counties to have their county councils adopt amendments to the IECC for all new construction. Homes and buildings built to the code may use 30 percent less electricity than those built to the previous code. The greatest energy savings in the residential sector will be due to decreased cooling loads, increasing comfort with natural ventilation, and eliminating electric water heating. HSEO's work on energy conservation codes and standards addresses numerous sections of HRS 196.

To enhance the use of contaminated and other previously developed sites in Hawai'i for renewable energy development, HSEO and partners from various state and federal government have developed a statewide database and geographic information system (GIS) map of such parcels. The "Brightfields" map and data base includes information to screen sites for utility-scale PV development potential such as solar resource, estimated output, slope, proximity to transmission, zoning and contamination/cleanup status. The Brightfields map and database, combining five databases and over 10,000 records, provides a publicly-accessible source of preliminary site-specific due diligence information on potential issues, contamination, remediation, compliance, management needs, and capacity for energy output. The Brightfields map, which was largely



Hawai'i State Energy Office

energy.hawaii.gov

completed in FY2019 and became available on the HSEO website in early FY2020, complements existing tools available in HSEO's Developer & Investor Center and Self-Help Energy Suite, including the Renewable Energy Permitting Wizard and the Renewable Energy Projects Directory. HSEO's work on the Brightfields Initiative addresses numerous sections of HRS 196.

There is a growing recognition that more needs to be done to reduce the use of fossil fuel in the transportation sector, and HSEO has taken a leadership role in that regard. HSEO's efforts to date include facilitation of the deployment of zero emissions vehicles and associated charging infrastructure which directly contribute to reducing petroleum use and emissions. Hawai'i was allocated \$8.125 million to mitigate vehicle emissions through the replacement of medium and heavy-duty vehicles as part of a federal settlement with Volkswagen. A spending plan, developed in FY2019 by HSEO under the Volkswagen Settlement Environmental Mitigation Trust, focuses on replacing heavy-duty diesel buses with electric vehicle (EV) alternatives and expanding light duty EV charging infrastructure. HSEO so far has submitted two funding requests to the Trustee. The first is for \$230,087 to replace two City and County of Honolulu diesel transit busses with two battery electric buses. The second is for \$316,494 for financial assistance to private and/or public fleet owners looking to replace older, diesel buses with electric busses. Additional funding requests are in the pipeline. HSEO's work on clean transportation programs is pursuant to HRS 226-18(a)(2).

2020 Goals, Plans and Measurements (Year-one)

1. HSEO continues to refine analytical tools to provide a holistic assessment of Hawai'i's energy eco-system and the interrelationships of sectors and policies such as electricity production, electrification of ground transportation, energy efficiency, and use of distributed energy resources. Two notable projects are the Hawai'i Advanced Visualization Environment Nexus (HAVEN) and another tool known as "engage." HAVEN allows stakeholders to visualize the electric system and land use impacts of the HECO Companies' Power Supply Improvement Plan from the present through 2045. As HAVEN's technology has matured and evolved there has been increasing interest in the platform from a wide variety of stakeholders. Engage is an analytical model that will perform scenario analyses on Hawai'i's comprehensive energy eco-system as well as feed data visualizations for program and policy assessment. Both projects, which are being updated in FY2020, highlight HSEO's ability to leverage resources and expertise from the U.S. Department of Energy. HSEO's work on HAVEN and engage addresses numerous sections of HRS 196.
2. HSEO is moving ahead with a study on carbon pricing requested by the Legislature. HSEO will tap the expertise of the University of Hawai'i Economic Research Organization to conduct the study, which will include whether and how a carbon pricing policy shall be implemented in Hawai'i. The study will be

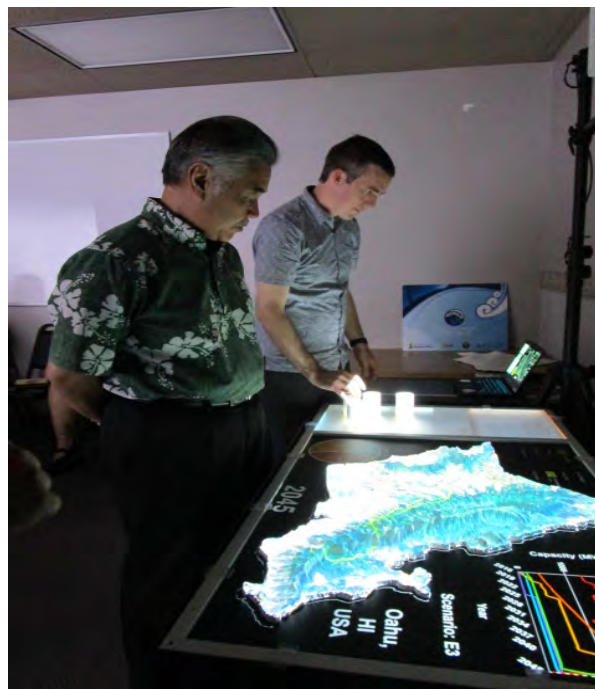


Hawai'i State Energy Office

energy.hawaii.gov

conducted in FY2020. Carbon pricing is intended to assess the external costs of damage from greenhouse gas emissions and to apply those costs closer to those mining and extracting the carbon-based fuels. There is a growing interest among both governments and businesses in understanding the potential role of carbon pricing in the transition to a decarbonized economy. The Study of Carbon Pricing addresses §196-A(b)(1) and Part V of Act 122.

3. The Hawai'i Green Business Program (HGBP) is an integral part of the HSEO's strategy to highlight the leaders in energy efficiency and green building operations and maintenance with its program, forum and annual award ceremony. The +50 by 2020 Initiative will support the expansion of the Hawai'i Green Business Program. As the name suggests, the program's goal is to sign up 50 new businesses by the end of calendar year 2020. HSEO and partners will continue to provide technical assistance and recruit, recognize and promote HGBP awardees at the annual HGBP award ceremony. As a partnership between HSEO, Department of Health, Board of Water Supply, Hawai'i Tourism Authority, Hawai'i Lodging and Tourism Association, Hawai'i Energy, and others, this program and initiative will conduct outreach, site verification visits, collect data on participating Hawai'i Green Business Program businesses, agencies, and events, and will ultimately, build additional alliances and partnerships to help Hawai'i achieve our clean energy goals. HSEO's work on HGBP addresses numerous sections of HRS 196.





Hawai'i State Energy Office

energy.hawaii.gov

Future Goals, Plans and Measurements (Year-two and Year-five)

The Hawai'i State Energy Office is undergoing various changes as part of its transition from a division of DBEDT to an attached agency of the department with a specific statutory mission set forth in Act 122, which took effect on July 1, 2019. One of the things HSEO is working on as part of this transition is the development of long-term goals and action plans to be included in future annual reports. These goals and action plans will reflect the guidance provided to HSEO under Act 122 to serve as the state's primary government entity supporting Hawai'i's clean energy transformation. HSEO's overarching mission is to promote energy efficiency, renewable energy, and clean transportation to help achieve a resilient clean energy economy. Specific actions will include providing analysis and planning to inform policymaking, leading efforts to reduce costs and achieve clean energy goals across all public facilities and providing project deployment facilitation to assist private sector project completion when aligned with state energy goals.



Hawai'i Tourism Authority

hawaiiitourismauthority.org

The Hawai'i Tourism Authority (HTA) is the official agency for tourism in the State of Hawai'i.

HTA is guided by four pillars which are: natural resources, Hawaiian culture, community, and brand marketing.

Its mission is to strategically manage Hawai'i tourism in a sustainable manner consistent with economic goals, cultural values, preservation of natural resources, community desires and visitor industry needs.

HTA aims to manage tourism in a way that helps improve the quality of life for residents and communities across the state. Its marketing now includes teaching visitors to be responsible, with the goal of sustainable tourism.

HTA supports the United Nations 17 Sustainable Development Goals (SDGs), and the UN 2030 Agenda for Sustainable Development. HTA is promoting the visitor industry in alignment with the Aloha+ Challenge.

HTA's measures of success are: visitor satisfaction, resident sentiment, per person per day spend, and total visitor expenditures.

Through its Community Enrichment Program, HTA in 2019 funded 74 events, festivals and nonprofit programs across Hawai'i. The events are often highly attended by Hawai'i's residents.

Through its Kūkulu Ola Program, HTA in 2019 funded 28 nonprofit groups and government programs across the state that help to perpetuate the Hawaiian culture.

Through its Aloha 'Āina Program, HTA in 2019 funded 28 nonprofit and government programs across the state that help to preserve our natural resources.

HTA's programs are funded by the Transient Accommodations Tax (TAT) -- the 10.25% tax that people pay when they stay in legal accommodations across the state.

HTA has shifted its focus to sustainable and responsible tourism. There is greater emphasis and additional resources being directed to programs that benefit the community, Hawaiian culture, workforce training and other destination concerns.

In 2019, in partnership with the Hawai'i Lodging and Tourism Association, HTA launched the first ever Ho'oilina Scholarship, giving a full ride scholarship to ten Hawai'i public school graduating seniors who planned to attend college in Hawai'i, with the goal of becoming leaders in the tourism industry. The program was quickly put together in



Hawai'i Tourism Authority

hawaiiitourismauthority.org

the spring of 2019, with the intention of awarding scholarships to students attending college in the fall.

2019 Achievements

In 2019 there was increased media coverage regarding HTA's shift in focus. HTA also launched a new social media campaign on its Facebook, Instagram and Twitter pages to let people know about how tourism benefits residents through the community, Hawaiian culture and natural resources programs and events it funds. HTA's community grew by more than 20 percent on Facebook, by more than 30 percent on Instagram within a matter of months in 2019, without paying for any advertisement or boosting through interpersonal outreach efforts.

In 2019, HTA also changed the way it funds sporting events. Instead of just looking at the marketing benefit, HTA now heavily weighs the community benefit. Sporting events that receive tourism funding must have a direct and impactful community outreach and engagement component.

When the Los Angeles Rams came to Hawai'i to play a preseason game, the team held numerous community events leading up to the game, including youth football and cheer clinics in June 2019. About 300 youth football players attended, along with 300 youth cheerleaders.

AVPFirst, the nonprofit arm of the pro tour, held 17 youth volleyball clinics across the state over the summer, including clinics on Moloka'i and Lāna'i ahead of the Hawai'i Open. Nearly 500 children attended the clinics.

When the Los Angeles Clippers came to Hawai'i, the team held basketball clinics for more than 400 children and coaches from Hawai'i youth organizations.

2020 Goals, Plans and Measurements (Year-one)

In 2020, HTA is increasing the number of events and programs it supports which benefit the community, host culture, and/or natural resources.

HTA has shifted its priorities away from increasing visitor arrivals and is focusing its efforts on enhancing the quality of life for residents. In 2020, HTA will focus on marketing and brand management aimed at bringing more high-spending, low-impact visitors as part of its sustainable and responsible tourism plan. Each Global Marketing Team contractor has developed an expanded target list of higher-spending, lower-impact market segments. HTA has also added a new question to its Visitor Satisfaction survey, asking if visitors recall hearing or seeing information about safe and responsible travel.



Hawai'i Tourism Authority

hawaiiitourismauthority.org

In 2020, HTA will provide funding to more than 170 events and nonprofit organizations statewide, up from 130 in 2019 – a significant increase in programs that benefit the community, Hawaiian culture and natural resources. They were chosen after submitting a proposal through the RFP process. The programs and events are awarded contracts, rather than grants, so there are deliverables and progress report requirements.

In 2020, HTA will focus on reaching out to partner organizations, elected officials, and community groups to see if, when, and how everyone can work together to achieve destination management outcomes. Milestones and measures will be based on the number of issues identified by island and the number of issues addressed via stakeholder meetings by island.

2021 Goals, Plans and Measurements (Year-two)

In 2021, HTA will continue its goal of increasing HTA-funded events and programs that the community, Hawaiian culture and natural resources benefit from. Regarding the host culture, HTA aims to give increased emphasis to the Hawaiian language by preserving language resources, and by encouraging appropriate use of the language. It plans to maintain or increase the proportion of total budget for HTA cultural programs, specifically for those focused on ʻōlelo preservation or education.

In 2021, HTA will also continue to reach out to lawmakers and community groups to see how it can help with efforts to minimize the negative economic, environmental and social impacts of tourism. HTA plans to maintain or increase the funding to other agencies for improving and managing tourism-impacted natural and cultural sites in proportion to its overall budget. It also plans to increase the number of training sessions for visitor industry partners and managers to encourage responsible tourism.

HTA's goal in 2021 also includes marketing and brand management aimed at bringing more high-spending, low impact visitors. Each Global Marketing Team contractor has developed an expanded target list of higher-spending, lower-impact market segments. The percentage of the marketing budget devoted to high spending market segments will be measured. The meetings, conventions and incentives (MCI) arrivals will also be measured.

2024 Goals, Plans and Measurements (Year-five)

Over the next five years, HTA plans to increase its attention to improving and enhancing visitor-impacted infrastructure and natural resources, such as forests, parks, trails, cultural sites, beaches, and reefs. It plans to encourage and support sustainable and responsible tourism by increasing the number of training sessions provided for visitor industry partners and management. HTA also plans to conduct a collaborative environmental sustainability program with natural resource partners to mitigate visitor impacts and support responsible tourism initiatives.



Hawai'i Tourism Authority

hawaiiitourismauthority.org

Over the next five years, HTA will support Hawaiian programs and cultural practitioners, craftsmen, musicians, linguists, and other artists to help preserve and perpetuate the Hawaiian culture. It plans to establish a system for measuring and reporting the number of accommodations that have on-site cultural practice programs and practitioners, with the results tracked and reported annually. HTA also plans to develop a partnership with recognized Hawaiian cultural organizations to identify sites that are being used appropriately or inappropriately for tourism purposes.

Over the next five years, HTA will work from the premise that what's good for residents is good for tourism. It plans to continue supporting education and prevention programs to improve safety among visitors and residents, in an effort to maintain Hawai'i's reputation as a safe destination. It'll track results through its Annual Marketing Effectiveness Study and Annual Visitor Satisfaction Survey. It'll also invest in more projects that have a positive resident-visitor interaction, celebrate Hawai'i's multicultural heritage, and support better relations between communities and the tourism industry. The effectiveness of the programs will be measured through specific questions on HTA's surveys.





Hawai'i Technology Development Corporation

htdc.org

The Hawai'i Technology Development Corporation (HTDC) is leading the State of Hawai'i's effort to grow the technology industry sector with the objectives of diversifying the economy and creating high-wage job opportunities for the people of the state.

Fiscal year 2018-2019 marked a transition for HTDC as it operated for the first time without the Manoa Innovation Center and the revenue that it provided. Also, at year's end the Hawai'i Strategic Development Corporation statute and mission were added to HTDC.

HTDC continues working toward the 80/80 Initiative: a goal for Hawai'i to create 80,000 new tech and innovation jobs earning more than \$80,000/year by 2030. HTDC is partnering with other agencies and the private sector to build the infrastructure, provide the capital and develop the talent needed for innovation to thrive.

Annually, HTDC conducts an economic impact survey of all its clients. For 2018, 104 companies responded reporting \$560.5 million in revenues, \$277.1 million in income generating \$48.9 million in State taxes, over \$1 billion in economic impact and supporting 3,870 jobs.





Hawai'i Technology Development Corporation

htdc.org

2019 Achievements

1. Completion of construction of Entrepreneurs Sandbox
 - Construction May 2018-March 2019
 - Public-Private partnership with EDA, HCDA, HTDC, State of Hawai'i, Stanford Carr Development
 - Construction completed on-time with \$3 million federal dollars and \$1.4 million private sector dollars
 - Facility is a gathering place for innovators/entrepreneurs to come together – related to HRS 206m-2.a.1, 2, 5,6,7
2. Secure additional Federal Funds
 - \$100,000 additional National Institute of Standards and Technology (NIST) funds for Manufacturing Extension Partnership program
 - \$125,000 Small Business Administration Federal and State Technology Grant to support the Hawai'i Small Business Innovation Research (HSBIR) program
 - \$1,000,000 over three years Smart Talent grant to support workforce training
 - The additional funding was secured by our INNOVATE Hawai'i program. The funding from NIST was in recognition of our perfect 100 on our MEP center scorecard. The other two were competitive grant applications.
 - The funding provides resources for HTDC to support local small businesses – HRS 206M-2.a.3, 4, 5, 6.
3. Provide grants to Hawai'i small businesses and wrap around support services
 - The Manufacturing Assistance Program (MAP) provides grants up to \$100k to help manufacturers expand their business through equipment, training, or energy efficiency. In FY 2019 a total of 37 companies were awarded grants totaling \$898,790 and company invested \$13.46 million matching.
 - The HSBIR program provides grants up to \$500,000 to move companies from the research phase into products. In FY 2019 a total of 22 companies received matching grant awards including five new to the SBIR program. The companies received a total of \$13 million in federal grants awarded.
 - In FY 2019 HTDC provided \$1,425,000 in support for five accelerator programs. The accelerators provide pre-seed investment, training, and mentoring support to startup companies in a structured program.
 - The Hawai'i Office of Naval Research (ONR) matching grant program provides matching grants up to \$500,000 for companies with alternative



Hawai'i Technology Development Corporation

htdc.org

energy research contracts with ONR. In FY 2019 a total of three companies were awarded \$950,000.

- New in FY 2019, HTDC awarded seven companies grants for the R&D Tax Credit grant program a total of \$950,000. The program provides grants to help companies commercialize their technologies.
- The awards are done through a competitive application process.
- The funding provides resources for HTDC to support local small businesses – HRS 206M-2.a.3, 4, 5, 6.

2020 Goals, Plans and Measurements (Year-one)

1. Strengthen resources for innovators

- Program Ramp Up of Entrepreneurs Sandbox
 - Started in June 2019
 - Fill offices, coworking
 - Monthly scheduled tech/business workshops
 - Additional daily/weekly events
- Continue financial support for accelerator programs
 - Provide funding and mentorship for startups
- Advance partnerships on other tech park development projects
 - Hilo Innovation and Manufacturing Center, First Responders Tech Campus, Creative Industries Partnerships
- All HTDC programs measured in economic impact, company revenue, state taxes, jobs
- Additional measurables: total number of activities, total attendance, number of companies through the accelerator programs, private sector engagement/dollar leveraged
- Additional measurables: total number of non-state government paid positions who are supporting HTDC initiatives
- Timeline: Currently working on this through June 2020

2. Provide opportunities for innovators

- Secure additional federal funds
 - Apply for FAST Grant to support SBIR companies, USDA funds to support rural businesses, support the entrepreneurial community
- Continue providing grants to Hawai'i SBIR and manufacturing small businesses and the wrap around support services
 - Capital is a top priority for business growth
 - Hawai'i SBIR and MAP grant are core HTDC programs
 - Provide direct assistance to SBIR companies and manufacturers



Hawai'i Technology Development Corporation

htdc.org

- All HTDC programs measured in economic impact, company revenue, state taxes, jobs
 - Additional measurables: total matching federal dollars, number of business supported with the federal dollars, number of new SBIR and MAP businesses, company investment
 - Timeline: Currently working on this through June 2020
3. Elevate the value of innovation in Hawai'i
- Working on "TRUE" initiative with the local small business community to elevate the priority of technology in Hawai'i
 - Help companies integrate commercial ready technology
 - Creates better engagement with tech sector, potential beta customers
 - Creates more tech job opportunities inside of non-tech companies
 - Builds a larger, more connected community
 - Pilot project with DCCA, DFI for new fintech business
 - Allows for new virtual currency businesses to pilot in the state
 - Improves business climate
 - Potential to attract new tech business
 - All HTDC programs measured in economic impact, company revenue, state taxes, jobs
 - Additional measurables: total number of activities, total attendance, number of companies through the accelerator programs, private sector engagement/dollar leveraged
 - Timeline: Currently working on this through June 2020

2021 Goals, Plans and Measurements (Year-two)

1. Strengthen resources for innovators
- Advancement of Innovation Centers
 - Maturity of Entrepreneurs Sandbox
 - Building demand to reach full capacity
 - Fully developed and engaged with the community
 - Revamp of Accelerator programs
 - Develop next generation of accelerator programs
 - Continue to provide financial support and mentorship for startups
 - Detailing of Kaka'ako Innovation Block plan
 - Leveraging partnerships and community resources to create sustainable model to help move the industry forward
 - Secure additional commitments from non-state sources
 - Innovation and Manufacturing Center (IMC) in Hilo



Hawai'i Technology Development Corporation

htdc.org

- Public-private partnership, working together with the community and state partners on a sustainable working model
 - Secure public/private commitments for project
 - Enhance opportunities for local businesses with workforce training and light manufacturing resources and help meet increasing demands as these industries grow in Hawai'i
 - First Responders Tech Campus
 - Project planning and permitting
 - Creative Industries Partnerships (CID)
 - Work with DBEDT CID and secure additional public/private stakeholder commitments for project
 - All HTDC programs measured in economic impact, company revenue, state taxes, jobs
 - Evaluate existing measuring system for better indicators to measure program performance
 - Additional measurables: total number of activities, total attendance, number of companies through the accelerator programs, private sector engagement/dollar leveraged
 - Timeline: July 2020 through June 2021
2. Provide opportunities for innovators
- Seek additional funding for HTDC programs that support the entrepreneurial community
 - Continue to secure and expand on Small Business Administration Federal and State Technology grant to support SBIR companies, USDA funding for business support in rural areas, EDA grants to further economic development efforts and opportunities, and DOL/DLIR funding to continue much needed workforce development programs
 - Continue funding and grant support for Hawai'i SBIR and Manufacturing small businesses and the wrap around support services
 - Capital is a top priority for business growth
 - Hawai'i SBIR and MAP grant are core HTDC programs
 - Revamp of MAP grant program to include support for workforce development for manufacturers to address challenges with skills gap and employee retention
 - Provide direct assistance to SBIR companies and manufacturers
 - All HTDC programs measured in economic impact, company revenue, state taxes, jobs
 - Evaluate existing measuring system for better indicators to measure program performance
 - Additional measurables: total number of activities, total attendance, number of companies through the accelerator programs, private sector



Hawai'i Technology Development Corporation

htdc.org

engagement/dollar leveraged, state funds received leveraged with federal dollars

- Timeline: July 2020 through June 2021

3. Elevate the value of innovation in Hawai'i

- Continue work on "TRUE" initiative with the local small business community to elevate the priority of technology in Hawai'i
 - TRUE initiative will mostly operate independently with input and guidance from HTDC
 - Companies readily collaborating and implementing new tech projects
- Wrap up of DCCA pilot project - DFI for new fintech businesses in Hawai'i
 - Process in place for new virtual currency companies to do business in Hawai'i
 - Progress measured by engagement with new fintech businesses
- All HTDC programs measured in economic impact, company revenue, state taxes, jobs
- Evaluate existing measuring system for better indicators to measure program performance
- Additional measurables: new companies engaged, tech jobs within companies
- Timeline: July 2020 through June 2021

2024 Goals, Plans and Measurements (Year-five)

1. Strengthen resources for innovators

- Next generation of accelerator programs
 - Accelerators either financially independent from State or new models have evolved. Continue providing capital and mentorship for startups.
- Advancement of Innovation Centers
 - All existing projects operating successfully or under construction
 - New opportunities for development/partnerships identified
 - Better template for accelerating new infrastructure development with public/private funding
- All HTDC programs measured in economic impact, company revenue, state taxes, jobs
- Additional measurables: new projects, federal or private sector engagement/dollar leveraged, state funds received leveraged with federal dollars
- Implement better metrics and more automation in collecting information
- Timeline: July 2023 through June 2024

2. Provide opportunities for innovators

- Revamping of Hawai'i SBIR and manufacturing funding programs



Hawai'i Technology Development Corporation

htdc.org

- Continue grant support for small businesses and provide wrap around support services
 - Capital is a top priority for business growth
 - Hawai'i SBIR and MAP grant are core HTDC programs
 - Retooling of these programs for continuous improvement and to stay relevant in the advancement of tech and manufacturing businesses
 - Continue to provide direct assistance to SBIR companies and manufacturers
 - All HTDC programs measured in economic impact, company revenue, state taxes, jobs
 - Additional measurables: total number of activities, total attendance, number of companies through the accelerator programs, private sector engagement/dollar leveraged.
 - Implement better metrics and more automation in collecting information
 - Timeline: July 2023 through June 2024
3. Elevate the value of innovation in Hawai'i
- Evolution of the "TRUE" initiative, continue to work with the local small business community to elevate the priority of technology in Hawai'i
 - Companies developed tech innovations are on par with /better than global competition
 - New pilot projects identified and started
 - Growing partnerships and connections within the community to work together to provide more opportunities for the state, improving local business climate, attracting new next level tech businesses to the state
 - All HTDC programs measured in economic impact, company revenue, state taxes, jobs
 - Implement better metrics and more automation in collecting information
 - Timeline: July 2023 through June 2024



Land Use Commission

luc.hawaii.gov

The Land Use Commission (LUC) preserves, protects and encourages the development and preservation of lands in the State for those uses to which they are best suited in the interest of public health and welfare of the people of the State of Hawai'i through the implementation of the state land use law, Chapter 205, Hawai'i Revised Statutes (HRS).

The LUC operates by means of a nine-member voluntary commission, assisted and supported by the executive officer, chief clerk, GIS specialist, three planners and one secretary.

2019 Achievements

In 2019, the LUC met all its requirements with regard to petitions filed in a timely manner. Over 24 meetings were held to process and conclude deliberations on a similar number of petitions and motions.

In FY 2019, and since FY 2012, the LUC has met all required action deadlines well within the statutory time period and has reduced the time for response to boundary determinations by 50 percent. In FY 2019 the LUC also initiated and launched an online GIS system. This system, accessible through the LUC website, allows the public access to LUC parcel maps delineating all of the district boundaries for the State of Hawai'i down to the individual parcel.

This year also saw increased enforcement activity. The addition of a dedicated planner to review annual reports and research case files has resulted in various requests for conformance in a number of cases and adherence to environmental community and cultural conditions as well as release of properties by landowners who no longer intended to develop the parcels.

The LUC has also experienced a continuation of the influx of 201H projects, which must be processed within 45 days. The LUC has further increased efficiency in the handling of these matters by making rule changes and working directly with petitioners to ensure a fair but expedited process.

Future Goals, Plans and Measurements

It is anticipated the LUC will hold at least 24 meetings this upcoming year handling various types of petitions including district boundary amendments, declaratory rulings, special permits, Impossible Agricultural Lands petitions and rule amendments. The LUC continued its efforts to upgrade the information of its website by digitizing historical files. Rule revisions and increased efficiencies in processing paperwork have further streamlined the LUC petition process.

Metrics: N/A



Natural Energy Laboratory of Hawai'i Authority

nelha.hawaii.gov

The Natural Energy Laboratory of Hawai'i Authority's (NELHA) mission is to facilitate the private sector in creating sustainable business enterprises based on the resources of cold deep seawater, warm surface seawater, and high solar insolation available at NELHA; to attract federal and other non-state sources of investment for research and development projects in advanced energy, ocean science and other technological fields at the Hawai'i Ocean Science and Technology Park (HOST Park).



2019 Achievements

NELHA continued to make very significant progress again this year in achieving key objectives detailed below. Of note, NELHA was awarded two grant applications for approximately \$2 million each and the establishment of the aquaculture accelerator. Additionally, NELHA made significant strides in building key relationships with other partners and securing agreements for future revenue growth that will provide the resources necessary for implementing additional new projects that will provide a catalyst for future growth. NELHA's budget for FY 2019 remained balanced and continued to maintain operational self-sufficiency.



Natural Energy Laboratory of Hawai'i Authority

nelha.hawaii.gov

Recent accomplishments include:

- NELHA continued maintain 99.99 percent uptime for the world's largest and most advanced seawater system and continued to increase efficiency of the seawater system by 1 percent in terms of power consumption per gallon.
- NELHA continued to upgrade its supervisory control and data acquisition (SCADA) system for seawater and added additional monitoring devices and upgrades, bringing the total number of sensor devices to over 115 and now gives "real-time" information to the desktop regarding 85 percent of total seawater flows.
- NELHA was notified by the Korean Institute of Energy Technology Evaluation and Planning (KETEP) that it was selected as a participating organization for a grant award of \$1.73 million for microgrid development.
- NELHA organized a very successful energy storage conference that included key officials from four national energy labs, U.S. Department of Energy (DOE) program managers, other federal, state and county agencies local utilities, and key private sector representatives and resulted relationship and network building for future projects.
- NELHA completed installation of 178kW of additional photovoltaic panels in the research campus bringing the total PV amount to over 200kW.
- NELHA completed contracts with Sandia National Laboratory and UniEnergy Technologies LLC (UET) to install a 100kW/400kWh energy storage system (ESS) and coordinated efforts with other funding partners (HELCO and Ulupono) to complete ESS purchase, installation and commissioning.
- NELHA received final grant approval of from the U.S DOE is \$1,928,938 and began implementation of a solar desalination project which is planned to produce over 130,000 gallons per day of desalinated water for agricultural use.
- NELHA formed a partnership with Hawai'i Strategic Development Corporation (HSDC), University of Hawai'i Office of Innovation and Commercialization, and UH Ventures to select an operator for an aquaculture accelerator and associated investment fund.
- Secured a three-party grant from the U.S. Economic Development Administration (EDA) for \$275,000 to assist in investment fund development for the aquaculture accelerator.
- Increased land rent revenue increased by 11 percent and signed leases with nine new clients in FY 2019.
- Completed damage assessment of reconstruction costs and submitted and approved by the Federal Emergency Management Agency (FEMA) for \$7.6 million to rebuild buildings destroyed by lava eruption in Puna.

2020 Goals, Plans and Measurements (Year-one)

Seawater System – Maintenance and upgrades.



Natural Energy Laboratory of Hawai'i Authority

nelha.hawaii.gov

1. Continue maintain 99.99 percent uptime and review options to increase efficiency of the seawater system by one percent in terms of power consumption per gallon. Make improvements to pump and controls efficiency by increasing in additional automation and more precise control of pump combinations needed to deliver seawater. Complete plans to install new pumps at the 55" pump station.
2. Select consultant to formulate plans and design of removal of abandoned deep seawater pipelines.
3. Secure three offshore pipes (nearshore).
4. Continue to upgrade SCADA and Water Quality Lab (WQL) with new instruments/monitoring devices controlled by WQL including new nutrient analyzer, upgrading SCADA software and add additional monitoring devices to SCADA system.
5. Initiate microgrid development project to service the 55" seawater pump station to lower or maintain energy costs.

Advanced Energy Projects – Continue efforts to develop energy technology testbed.

1. There is significant value in developing an advanced energy technology test-bed to address electricity delivery and grid integration problems both within the site boundaries and to provide value to a stressed utility operating in an isolated island environment. Continue to engage in discussions with national labs, University of Hawai'i, local utilities, and the private sector to formulate partnerships for new joint projects in the areas of additional PV, grid scale energy storage demonstrations and microgrid development. Complete long-term plan for renewable energy upgrades to HOST Park. Primary emphasis on will be on achieving energy security and resiliency for critical seawater operations in the face of increasing vulnerability (especially during natural disasters) of the electric grid, uncertainty about the cost of oil- based resources, and the availability of increasing amounts of low-cost (primarily solar) renewable energy resources and storage. Specific research and application of advanced technologies focus will include grid visualization, smart metering, energy storage, visualization and operations software, data acquisition and management, and renewable energy integration.
2. Secure consultant for regional seawater air-conditioning study.
3. Complete Phase One implementation of U.S. DOE sunshot grant for a solar desalination project at the Keāhole Solar Power site.



Natural Energy Laboratory of Hawai'i Authority

nelha.hawaii.gov

4. Explore potential application to FEMA's national infrastructure pre-disaster mitigation grant program – building resilient infrastructure and communities (BRIC) for completing an underground electrical transmission line between photovoltaics and ESS at 55" pump station and research campus pump station to increase resiliency in case of disaster.

Aquaculture – Initiate Aquaculture Accelerator.

1. Manage contract for the operation of the accelerator with Hatch Accelerator Fund Management LLC.
2. Work with the University of Hawai'i and manage the U.S. Economic Development Administration grant to assist in the operation of aquaculture accelerator.
3. Manage limited partnership agreement for follow-on venture investment funds with Hatch Accelerator Funds LP for successful business coming out of the aquaculture accelerator.
4. Organize NELHA and NELHA client's participation in the World Aquaculture Conference in February 2020 at the Hawai'i Convention Center and arrange for pre- and post-tours of NELHA and its operations.

Ocean CenterPiece – Continue efforts to “tee-up” this area for future development.

1. Continue efforts for an exploratory well for new potable water resources for NELHA. Obtain final permits required for construction and begin construction of well.
2. Continue to explore additional alternatives for potable water including conservation, brackish wells, desalination and exploration of a deep freshwater aquifer. Request state CIP funds of \$500,000 to assist in planning, design and engineering of a brackish well for NELHA clients and the Kona environs.

Administration – Maintain self-sufficiency and increase performance and relationships.

1. Continue to increase revenue streams within the NELHA board approved business plan through continued efforts to maintain occupancy in research campus, vacant lands in HOST Park and additional customers for WQL work. Overall increase 5 percent over FY 2019 is targeted. Increase utilization of under-utilized assets such as the Gateway Center and Hawai'i deep marine sites. Complete sale or lease of old Hawai'i Deep Marine Incorporated site.
2. Update NELHA Marketing plan to increase focus on attracting new clients.



Natural Energy Laboratory of Hawai'i Authority

nelha.hawaii.gov

3. Work with Office of Aerospace Development and Pacific International Space Center for Exploration Systems (PISCES) to hold an international robotic competition at NELHA for Mars/Lunar landers in the mid-2020.
4. Continue to improve landlord/tenant relationships. Conduct annual satisfaction survey of tenants at NELHA and make improvements to increase satisfaction where necessary. Work with all tenants and initiate NELHA recipe booklet to assist in marketing of all products grown or produced at HOST Park. Produce semi-annual newsletter.
5. Secure funds from FEMA to rebuild buildings destroyed by lava eruption in Puna. Work with Hawai'i Emergency Management Agency, State Risk Management and Puna Geothermal to determine insurance coverage for buildings. Work with FEMA for funds to rebuild buildings at HOST Park in Kona.

2021 Goals, Plans and Measurements (Year-two)

1. Market, manage and operate facilities that provide sites and resources for the development of research and commercial businesses at NELHA's 870-acre HOST Park site in Kailua-Kona.
2. Provide limited support services to allow research and commercial businesses to develop technologies that utilize the natural resources available at Keahole Point, such as cold deep seawater, warm surface seawater and high solar insolation.
3. Operate and maintain transmission and distribution systems at HOST Park for up to 136,000 gallons per minute of deep and surface seawater with 99.99 percent reliability.
4. Maintain the grounds, buildings and roadways for HOST Park.
5. Maintain land use and environmental master permits to facilitate initiation of new business projects at HOST Park.
6. Provide limited technical, clerical, operational and construction support to businesses at HOST Park.
7. Operate and maintain construction and operating equipment used by NELHA and businesses at HOST Park.



Natural Energy Laboratory of Hawai'i Authority

nelha.hawaii.gov

8. Provide informational and educational material and lectures to school classes, community groups, international visitors, legislators and the general public regarding advanced energy technology, ocean science in general and aquaculture more specifically.
9. Manage and maintain at least three historical preserves and a public beach at HOST Park.
10. Enhance revenue and other opportunities through development of the NELHA gateway concept and project, consisting of three primary thrust areas- 1) energy; 2) ocean resources & commercial activities; and 3) public outreach and education. The current focus is on the energy and public outreach/education components which are featured at the federally funded NELHA Gateway Distributed and Renewable Energy Center. The center consists of public outreach, exhibit, conference, and laboratory facilities.

2024 Goals, Plans and Measurements (Year-five)

1. Continue to update plans on a regular basis. The master plan update should be complete by 2022. The updated master plan will be used to continually develop and update our vision, strategic plan, leasing policy, biosecurity policy. Additional plans and key studies include an updated EIS, Special Management Area permit and sub-division approvals (County).
2. Develop additional revenue streams to distribute operating costs over a broader base of clients. Generate additional revenue to cover development costs and make necessary improvements to facilities and infrastructure. Continue to review our non-performing assets and realize the revenue potential afforded.
3. Stretch goal is to become carbon neutral by 2030. Main initiatives include: 1) establish an energy storage testbed; 2) develop an integrated energy district or microgrid; 3) reduce our carbon footprint by adding renewable energy from solar photovoltaic (PV) panels; 4) Work with the University of Hawai'i and US DOE to develop a testbed for hydrogen technologies; 5) expand efforts to assist the private sector in commercialization of ocean thermal energy conversion; and, 6) expand our relationships with the national laboratories and other key players in Hawai'i's energy field such as the Hawai'i Natural Energy Institute and the utilities.
4. Provide consistent customer service by identifying standards of performance, provide proper training and certification to staff, and monitor performance on a



Natural Energy Laboratory of Hawai'i Authority

nelha.hawaii.gov

regular basis. Provide regular feedback to staff on customer service and solicit input from NELHA users.

5. Position NELHA as the leading premier ocean science, aquaculture and advanced energy technology park in the world. Besides the sale of seawater and property leasing, begin to offer additional services and facilities to support “incubation – accelerator – proof of concept” type facilities and programs and other laboratory services as well especially in the field of global aquaculture innovation. Continue to develop the strategy to establish an aquaculture proof of concept center at NELHA and identified as a place for innovation of global aquaculture technologies.
6. The NELHA seawater system is the largest and most advanced in the world. Continue efforts to improve efficiency, stabilize energy costs, maintain adequate reserve fund, upgrade monitoring devices, remote controls, and pump station security, and achieve 99.99 percent uptime.
7. Freshwater has been a significant constraint in the past for preventing the use of existing parcels and the sub-division of land to provide additional parcels for lease. Continue to work with our partners at the state, Hawai'i Housing & Financial Development Corporation and Hawai'i County to increase the freshwater allocation to allow for expansion. Additional options for developing other sources of non-potable water for aquaculture.
8. Make NELHA a better place to work by clarifying work responsibilities by making position descriptions current, provide regular workplace training, provide quarterly feedback on work performance, and find ways to creatively reward employees.
9. The road system needs upgrading, and additional new roads are required within HOST Park to access additional parcels.



Natural Energy Laboratory of Hawai'i Authority

nelha.hawaii.gov

Measures and Quantitative Indicators of Progress

	<u>2020</u>	<u>2021</u>	<u>2024</u>
No. of Tenants/Businesses	50	53	60
Economic Impact (\$M)	104	108	120
Visitor numbers (includes school groups)	20,000	21,000	25,000
Jobs Created	550	570	600
Acres occupied	240	245	280
Percent Increase in Rent Billed	3	3	10



Office of Planning

planning.hawaii.gov



The Office of Planning's (OP) mission is to guide the overall growth and development of the State of Hawai'i through a statewide comprehensive planning framework. OP prepares plans and studies, conducts policy analysis, and facilitates the formulation of state policies and strategies.

OP consists of four programs that collaborate with local, state and federal government agencies, academia, and community stakeholders to provide research, data and policy guidance to support an integrated statewide planning system. Collaboration allows for broad community input in meeting OP's mission and responsibilities. OP is divided into the Land Use Division, which includes the Transit-Oriented Development Branch; the Planning Division, which is divided into the Coastal Zone Management Branch (CZM); the Statewide Geographic Information System Branch (GIS); and the Special Plans Branch.

The Land Use Division coordinates with state agencies and prepares the state's position before the State Land Use Commission to promote sustainable use of limited state resources such as land, water and infrastructure facilities.

The CZM program guides and facilitates activities for the effective management, beneficial use, protection, and development of the coastal zone.

The GIS program leads the state's effort to establish, promote, and coordinate the use of GIS technology and improve data-driven government decision-making.

The Special Plans branch carries out the statewide planning functions of OP as established by the Hawai'i State Planning Act, HRS Chapter 226 and collaborates on updates to the Comprehensive Economic Development Strategy (CEDS) and coordinates statewide sustainability.

In addition, OP serves as lead or co-lead on several initiatives, including:



Office of Planning

planning.hawaii.gov

- Chair of the Greenhouse Gas Sequestration Task Force (GHGSTF) pursuant to Act 15, SLH 2018, which is tasked with establishing a baseline for greenhouse gas emissions within Hawai'i and short- and long-term benchmarks for increasing greenhouse gas sequestration in the state's agricultural and natural environment.
- Co-chair with the Hawai'i Housing Finance and Development Corporation (HHFDC) of the Hawai'i Interagency Transit-Oriented Development (TOD) council charged with planning and facilitating collaboration between the state and counties on smart growth and TOD initiatives.
- Co-chair with the Department of Land and Natural Resources (DLNR) of the Hawai'i Climate Mitigation and Adaptation commission (Climate Commission), established under Act 32, SLH 2017.

2019 Achievements

- Ocean Resources Management plan (ORMP) – The ORMP sets forth the guiding principles and recommendations for the state to achieve comprehensive and integrated ocean and coastal resources management. During FY 2019, OP continued ORMP implementation efforts including an informational briefing for the legislators and public at the State Capitol in January 2019 and a five-year update of the ORMP. The update involves gathering candid feedback and input from state agencies on the effectiveness and use of the ORMP and soliciting feedback at public listening sessions conducted in communities statewide. The ORMP is a requirement under Section 205A-62(1), HRS and is a main component of the CZM program.
- Strategic Plan for Transit-Oriented Development (TOD) – In August 2018, OP published the revised Strategic Plan for the state TOD. This strategic plan was prepared in coordination with the state and county agencies on the TOD Council, and was the culmination of over two years of working with the TOD council agencies to discuss their plans and proposals for TOD. The Strategic Plan includes 65 proposed TOD projects on state and county lands in various stages of planning and development throughout the State. Act 130, SLH 2016 designates OP as the lead state agency to coordinate and advance smart growth and TOD planning in the state.
- Development of web-based applications – During FY 2019, OP developed publicly available web-based applications, including one that displays data from the U.S. Census Bureau's American Community Survey five-year selected profiles. These census demographic profiles provide interactive displays by county with demographic and economic information by census tract or legislative district. OP also developed a mobile application to enable the DLNR Division of Conservation and Resources Enforcement officers to access relevant location-based information in the field,



Office of Planning

planning.hawaii.gov

including parcel ownership, state land use, conservation subzones, cultural sites, and administrative rules that govern permitted and prohibited uses for certain regulated sites. As directed in Chapter 225M-2(b)(4)(B), HRS, the OP is responsible for planning and coordinating the multi-agency statewide GIS Program. One of the primary goals of the statewide GIS Program is to improve the overall efficiency and effectiveness in government decision-making.

- Greenhouse Gas Sequestration Task Force (GHGSTF) – During FY 2019, OP organized the formation of the GHGSTF, which includes state agencies, academia, county representatives, and members from the Senate and the House of representatives. OP served as chair for the task force and administered the \$150,000 appropriated by the legislature to support the following projects: Soil Carbon Inventory and Working Lands Baseline; Soils Health plan for Hawai'i to Implement best management practices to Support Farmers and Ranchers statewide; and Desktop Drawdown analysis in Hawai'i's Natural and Working Lands and Nearshore Waters. Act 15, SLH 2018, established the GHGSTF permanently within the OP for administrative purposes.
- Carbon Offset symposium - OP hosted the Carbon Offset symposium at the Hawai'i State Capitol auditorium on April 10, 2019, to educate and inform state and county stakeholders, GHGSTF members, and the public on the protocol requirements of carbon offsetting and carbon credit markets. The Symposium included presentations from greenhouse gas and carbon market experts on existing programs for carbon offsetting and an interactive analysis of the carbon offset development process analyzing the potential applicability of Hawai'i-based carbon offset projects or their alternatives through greenhouse gas reduction efforts. Act 16, SLH 2018, requires OP in partnership with the GHGSTF to establish a framework for a carbon offset program, report to the legislature, and investigate and establish the carbon offset program.

2020 Goals, Plans and Measurements (Year-one)

In compliance with Act 100, SLH 1999, Part II – Section 7.

- Ocean Resources Management Plan (ORMP) – The ORMP sets forth the guiding principles and recommendations for the State to achieve comprehensive and integrated ocean and coastal resources management. During FY 2020, OP intends to finalize and adopt the updated ORMP. The update involves statewide public outreach and will focus on collaboration among agencies for implementation of ORMP focus areas. Funding for this project will come from the CZM program federal funding.
- Probabilistic Tsunami Design Zone maps - During FY 2020, OP plans to complete the integration of tsunami design zone maps for integration into the American Society of Civil Engineers Tsunami Hazard Tool which will facilitate application into the City and County of Honolulu building codes to strengthen resilience of critical infrastructure for



Office of Planning

planning.hawaii.gov

the Island of O'ahu. Funding for this project will come from the CZM Program federal funding.

- State Transit-Oriented Development (TOD) – During FY 2020, OP plans to complete the state TOD planning and implementation project which sets forth the infrastructure requirements and costs needed to enable development of state TOD projects, and which will provide a schedule and financing strategy for these investments. Agency partners will start planning, design and construction of backbone infrastructure projects to allow greater density around transit hubs. Funding is through the state CIP fund resources.
- Feasibility and implications of establishing a carbon offset program for the State of Hawai'i – During FY 2020, OP plans to finalize and publish the report investigating a carbon offset program in partnership with the Greenhouse Gas Sequestration Task Force. By developing a framework for Hawai'i's carbon offset program, the offsets from our local sequestration of atmospheric carbon and greenhouse gases combined with Hawai'i's coordinated emission reductions will guide Hawai'i to achieve its zero emissions clean economy target by 2045, pursuant to HRS Section 225P-5. Funds have been appropriated by the legislature, Act 16, SLH 2018.
- Periodic review of state land use districts – During FY 2020, OP plans to complete its periodic review of state land use districts as provided in HRS Section 205-18. OP has completed the productions of GIS overlays and analyses to describe the current status of the district boundaries relative to county land use plans, resources, and developments. The project is being undertaken using existing staff resources.
- Tax Map Key (TMK) parcel boundary shift mitigation plan – During FY 2020, OP plans to procure consultant services in order to study options to address TMK parcel boundary displacements/shifts that occur when counties improve their GIS data accuracy and the data no longer align with state data. The displaced parcel boundary alignment affects analysis of GIS data throughout the state. Funds for this project are through the OP general fund.
- Elevation data acquisition – During FY 2020, OP will partner with federal, state, and county agencies and the private sector to acquire high-density light detection and ranging (LiDAR) data to: (1) replace old and lower quality data, and (2) provide new coverage areas. LiDAR data are the primary sources for deriving elevation models and other datasets. Planned data acquisition are for areas on Maui, but other areas may be added, if funding permits. Funds for this project are through the OP general fund and will be used as the state match for federal LiDAR data acquisition funds.



Office of Planning

planning.hawaii.gov

- Strategic plan for statewide GIS program – During FY 2020, OP will review and update the statewide GIS Program’s current strategic plan. GIS Program leads a multi-agency effort to establish, promote, and coordinate the use of geographic information systems (GIS) technology among Hawai’i state government agencies. Funding for this project will come from the CZM program federal funding.

2021 Goals, Plans and Measurements (Year-two)

- Hawai’i 2050 Sustainability Plan – During FY 2021, OP plans to complete the decennial updates to the Hawai’i 2050 Sustainability Plan as required by Act 146, SLH 2019. This new act added new language clarifying that the newly updated Hawai’i 2050 Sustainability Plan “shall serve as the state’s climate and sustainability action plan.” The Hawai’i 2050 Sustainability Plan will embrace the United Nations’ 2030 sustainable development goals as the decennial framework while aligning the Aloha+ Challenge and the various sustainability legislated targets, plans, and initiatives. Funds have been appropriated by the legislature, Act 146, SLH 2019.
- Development of a stormwater guidance manual for local roads, highway, and bridges of County of Hawai’i – During FY 2021, OP plans to complete the development of a stormwater guidance manual and field guide which incorporate best management practice (BMP) protocol for operation and maintenance of local roads, highways, and bridges for the County of Hawai’i. These documents will assist in meeting the necessary management measures of Hawai’i’s Coastal Nonpoint Pollution Control Program (CNPCP). Funding for this project will come from the CZM program federal funding.
- Federal approval of the Section 309 Assessment and Strategy – During FY 2021, OP plans to obtain federal National Oceanic and Atmospheric Administration (NOAA) approval. Every five years the Hawai’i CZM program conducts a self-assessment of its coastal management program within each of the nine enhancement areas. Hawai’i CZM then develops strategies with stepwise approach to reach a stated goal and lead to enhancement in the federally approved Hawai’i CZM program. Work has begun on the assessment and development of the five-year strategy. Funding for this initiative comes from the CZM program federal funding.
- Implement Governance Framework for ArcGIS Online (AGOL) platform - During FY 2020 and FY 2021, OP will work with state agencies to implement a governance framework around the AGOL platform. This will include coordinating with the Office of Enterprise Technology Services to establish AGOL liaisons in state agencies who will be responsible for facilitating and managing the continued growth in the numbers of GIS users, and geospatial content and applications. Funds for this project are through the OP general fund.



Office of Planning

planning.hawaii.gov

2024 Goals, Plans and Measurements (Year-five)

- Section 309 assessment and strategy implementation – OP plans to work on implementation of the NOAA approved Section 309 Assessment and Strategy for FY 2021-2025. Funding for this initiative comes from the CZM Program federal funding.
- Statewide Transit-Oriented Development (TOD) – OP plans to work towards the implementation of the State Strategic Plan for TOD. The Strategic Plan was prepared by the OP in coordination with the state and county agencies on the TOD Council. The Strategic Plan includes 65 proposed TOD projects on state and county lands statewide in various stages of planning and development.
- State TOD on O‘ahu – In FY 2019, OP coordinated the development of the state TOD Master Plan for TOD project implementation and investment on state lands along the Honolulu Rail Transit project’s rail line on O‘ahu. The state TOD master plan sets out the infrastructure and investment needs to enable development of state TOD projects, and provide a schedule and financing strategy for these investments. OP plans to utilize the master plan to assist in track actions needed to facilitate shared infrastructure investments and individual state agency project development.
- Statewide Sustainability – OP Plans to work towards the statewide implementation of the Hawai‘i 2050 Sustainability plan which will embrace the United Nations’ 2030 Sustainable Development Goals and aligning with the Aloha+ Challenge and various sustainability legislated targets, plans, and initiatives.
- Establish a distributed/federated system of GIS servers and data by FY 2024 - OP plans to develop a distributed/federated geoplatform architecture (geodatabases and hubs/portals) and develop a governance plan to manage the proliferation of geospatial data and applications. The federated architecture is expected to be in the statewide GIS strategic plan and will help to manage the growth and proliferation of geodata system in a disturbed fashion.



The Pacific International Space Center for Exploration Systems

pacificspacecenter.com

The Pacific International Space Center for Exploration Systems (PISCES) is a state-funded Hawai'i aerospace center under the Department of Business, Economic Development & Tourism (DBEDT). The Hilo-based center is working to position the state as a leader in space exploration while developing sustainable products and technologies that benefit the islands. Through initiatives in Economic Development, Workforce Development and Applied Research, PISCES provides hands-on work experience to Hawai'i's future scientists and engineers, preparing them to meet the demands of a highly competitive industry while improving the local economy through job diversification, innovative products and new industries.

2019 Achievements

In economic development, PISCES oversaw a market feasibility study for a continuous basalt fiber manufacturing operation in Hawai'i County. Basalt fiber is an emerging trend in the composites industry with similar applications to carbon and fiber glass. It is valued at more than \$100 million and market forecasts expect it to double in the coming decade. The results of the PISCES-led market study were presented and shared through various trade conferences, websites and journals, drawing interest from investors. PISCES began working with a private group interested in developing the operation in Hawai'i, a project that could create a new industry in the state, diversifying and growing the local economy.

Through efforts in applied research, PISCES identified a potential commercialization opportunity for its sintered basalt products. Since 2014, PISCES has been researching the uses of basalt as a construction material for Earth, lunar and Mars construction applications. Hawai'i's basalt is almost chemically identical to the regolith found on the moon and Mars and provides an ideal material for space-related research and development. PISCES' sintered basalt research has resulted in a tile with structural properties exceeding those of commercial concrete and ceramic tiles. The tile is composed entirely of raw volcanic basalt fines drawn from commercial quarries in Hawai'i. During a NASA conference in FY 2019, PISCES met with an entrepreneur interested in commercializing the product. The tiles are undergoing testing through funding provided by the entrepreneur and PISCES is working to identify potential customers and other applications for its use. PISCES' research on sintered basalt has also resulted in invitations to collaborate on research grants and scientific handbooks.

Under workforce development, PISCES planned, funded and executed its sixth-annual STARS (STEM Aerospace Research Scholars) program for Hawai'i high school women. STARS is a summer STEM careers program designed to encourage more young women to pursue jobs in science, technology, engineering, aerospace and related fields. Statistically, women are underrepresented in STEM careers nationwide, accounting for only 25 percent of jobs in STEM despite making up half of the U.S. workforce. In addition to encouraging young women, the STARS program also aims to



The Pacific International Space Center for Exploration Systems

pacificspacecenter.com

increase Hawai'i's STEM workforce to meet a growing demand for skilled labor throughout the state. This year, PISCES secured \$15,000 in funding for the program including a \$10,000 donation from Caterpillar, Inc. and a \$5,000 grant through Hawai'i Community Foundation's Career Connected Learning program. The program graduated a dozen students from schools throughout the state. Responding to post-program feedback surveys, 100 percent of participants said they were more likely to pursue a career in STEM after attending STARS. The program is made possible through partnerships with Hawai'i Science & Technology Museum, Maunakea Observatories, USGS Hawaiian Volcanoes Observatory, NELHA, NASA, DLNR, HI-SEAS, 'Imiloa Astronomy Center and University of Hawai'i at Hilo.





The Pacific International Space Center for Exploration Systems

pacificspacecenter.com

2020 Goals, Plans and Measurements (Year-one)

To grow the local economy, PISCES will continue working with private investors to develop a basalt fiber manufacturing operation in Hawai'i. The next step in the initiative requires validation testing of Hawai'i's basalt to determine the quality of fiber it can produce. PISCES will ship samples to a lab for testing. The cost is being financed by a group of private investors. If the validation tests prove favorable, investors will likely move forward with establishing a manufacturing operation in Hawai'i County. The investment is expected to be about \$80 million, creating upwards of 81 jobs with average annual salaries of \$75,000.

Under workforce development, PISCES is planning to host an international collegiate robotics competition at NELHA's Hawai'i Ocean Science & Technology (HOST) Park in Kailua-Kona in 2020. Called the Hawai'i Space Exploration and Robotics Challenge (Hi-SEARCH), the event is based on NASA's annual Robotic Mining Competition (RMC) but will expand the playing field to international universities. PISCES expects to host up to 20 teams from around the world, including Hawai'i, to compete for a monetary prize. A major heavy equipment manufacturer has agreed to serve as the lead industry sponsor for the event, committing up to \$250,000 in funding. Hi-SEARCH is intended to engage youth in STEM activities, while attracting new visitors to the state and highlighting Hawai'i's value as a proving ground for aerospace and robotics. NELHA's HOST Park offers a high-fidelity lunar analog site for the competition. The event could bring an estimated \$500,000 to \$750,000 in revenue to the state.

During FY 2020, PISCES will expand its basalt research to investigate low energy basalt additive manufacturing. This is a continuation of PISCES' in-situ resource utilization research and presents an alternative approach to developing construction-grade material using basalt and a binder. The technique could revolutionize how additive manufacturing (or 3D printing) is used in large-scale construction like lunar and Mars habitats, sourced from minerals found on the moon and Mars. This type of manufacturing also presents a sustainable method for earth-based construction materials, creating pre-formed construction modules and 3D-printed materials while reducing energy costs. PISCES will submit a grant proposal to NASA in FY 2020 to obtain funding for the project.

2021 Goals, Plans and Measurements (Year-two)

Commercial Application of Sintered Basalt Tiles:

After implementing basalt tiles for a commercial application, the development of a sintering process using a binder to optimize manufacturing process would be developed. Once the process is established, the tiles with binder will be manufactured and submitted to the same ASTM testing as the basalt only tiles were in order to



The Pacific International Space Center for Exploration Systems

pacificspacecenter.com

compare structural, mechanical and thermophysical properties. The development of this process has the potential to lead to new applications that could include but not be limited to: basalt brake pads and launch pad thermal ablation protection tiles.

Tactics/Action Plan & Timetable

- Develop sintering process utilizing binder (Summer-Fall 2020)
- Produce tiles for testing (Fall 2020)
- Testing of Tiles (Fall-Winter 2020)
- Evaluate manufacturing and testing of samples for brake pad application and launch pad ablation protection tiles (Fall 2020 – Summer 2021)

Metrics

- Successful production of a binder-containing tile that is readily replicated and has good visual quality and apparent structural promise
- Production of (20) 3" X 3" binder-containing tiles for structural, mechanical and thermophysical testing
- Results of structural, mechanical and thermophysical tests on the binder-containing tiles
- A paper summarizing the characteristics of the binder-containing tiles and analysis of suitability for new applications such as brake pads and launch pad thermal ablation protection tiles

Advance Composites Manufacturing with Basalt/Carbon Hybrids:

As a result of the work done with basalt fiber, PISCES is working with an interested party who would like to evaluate the commercial fabrication of basalt/carbon hybrid composites parts for automotive, aerospace and other athletic applications.

Tactics/Action Plan & Timetable

- Contact basalt fabric manufacturers to request samples (Summer 2020)
- Contact potential customers for hybrid composite products (Summer 2020)
- Develop molds for parts and manufacture first set of parts (Fall 2020)

Metrics

- Collection of basalt fabric from three manufacturers
- Identification of 20 potential customers for hybrid composite products
- Successful contact of three customers interested in developing or selling hybrid composite products

International Collegiate Robotic Competition:

The first HI-SEARCH event (Hawai'i International Space Exploration and Robotics Challenge) begins planning in FY 2020 but the actual event will take place in FY 2021. HI-SEARCH is intended to engage youth in STEM activities, while attracting new visitors



The Pacific International Space Center for Exploration Systems

pacificspacecenter.com

to the state and highlighting Hawai'i's value as a proving ground for aerospace and robotics. NELHA's HOST Park offers a high-fidelity lunar analog site for the competition. The event could bring an estimated \$500,000 to \$750,000 in revenue to the state.

Tactics/Action Plan & Timetable

- Competition Sept/Oct 2020
- Begin planning next year's event

Metrics

- Number of teams attending
- Number of participants attending
- Number of countries attending
- Number of sponsors and amount raised for event planning
- Estimated revenue brought in to the State by participants
- Overall satisfaction from participants and willingness to return

2024 Goals, Plans and Measurements (Year-five)

Low Energy Basalt Additive Manufacturing:

The next step in the progression of basalt research and development work with a dual use objective is to advance the sintering work using a binder into a construction grade material that can be 3D printed. This technology could have direct applications for space construction as well as in-state construction. It also has the potential to bring in funds through NASA and NSF grants.

Tactics/Action Plan & Timetable

- Enter into cooperative agreements with private parties, space agencies (NASA) or universities to develop the technology
- Apply for grants (NASA, NSF, SBA, EDA, etc...) to fund the work
- Develop and produce a test sample

Metrics

- Number of agreements secured
- Number of grants secured
- Successful production of at least one test sample

Commercial High-Altitude Space Tourism:

PISCES has entered into an memorandum of understanding with a private company that is exploring the possibility of launching space tourism operations out of Hawai'i based on high-altitude balloons. The company is in its early stages and estimates that will be ready to operate in 4-5 years.



The Pacific International Space Center for Exploration Systems

pacificspacecenter.com

Tactics/Action Plan & Timetable

- Support private company as they fulfill local and state requirements by providing information, introductions, and explanations of local processes.

Metrics

- Continued interest of the private company in launching space tourism operations out of Hawai'i.

International Collegiate Robotic Competition:

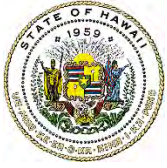
If successful, FY 2024 would see Hawai'i hosting the 4th HI-SEARCH competition. At this point the goal is to bring in a larger group of sponsors to cover the event costs, and perhaps increase the number of teams participating.

Tactics/Action Plan & Timetable

- Competition preparation tasks (July 2023-Sept/Oct 2023)
- Competition Sept/Oct 2023
- Begin planning next year's event (Nov 2023-June 2024)

Metrics

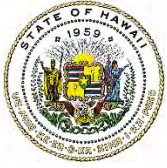
- Number of teams attending
- Number of participants attending
- Number of countries attending
- Number of sponsors and amount raised for event planning
- Estimated revenue brought in to the state by participants.
- Overall satisfaction from participants and willingness to return



DBEDT

Statement of Operating Appropriations, Expenditures, and Encumbrances For the Period July 1, 2017 – June 30, 2018

	General Funds	Adjusted Appropriations	Expenditures & Encumbrances	Balance
G-19-100	BED 100 Business Development & Support Business Development & Support Division	2,567,267	2,408,422	158,845
G-19-103	BED 103 Statewide Land Use Management Land Use Commission	684,083	651,315	32,768
G-19-105	BED 105 Creative Industries Creative Industries Division	1,572,975	1,457,247	115,728
G-19-122	BED120 Hawaii State Energy Office Strategic Industries Division	150,000	142,500	7,500
G-19-128	BED 128 Office of Aerospace Office of Aerospace	1,146,033	1,066,799	79,234
G-19-130	BED 130 Economic Planning & Research Research and Economic Analysis Division	1,543,547	1,347,779	195,768
G-19-142	BED 142 General Support for Econ. Development Office of Director & Admin. Services Office	2,336,970	2,028,405	308,565
G-19-143	BED 143 High Technology Development Corp. HTDC	2,606,372	2,531,341	75,031
G-19-144	BED 144 Statewide Planning & Coordination Office of Planning	1,724,492	1,377,900	346,592
G-19-146	BED 146 Natural Energy Lab of HI Authority NELHA	675,000	649,998	25,002
	Total General Funds	<u>15,006,739</u>	<u>13,661,706</u>	<u>1,345,033</u>



DBEDT

Statement of Operating Appropriations, Expenditures, and Encumbrances For the Period July 1, 2017 – June 30, 2018

		Adjusted Appropriations	Expenditures & Encumbrances	Balance
Special & Revolving Funds				
S-19-302	BED 107 Foreign Trade Foreign Trade Zone Special Fund	2,327,547	2,252,553	74,994
	BED 113 Tourism			
S-19-348	Tourism Special Fund	87,431,365	79,642,760	7,788,605
S-19-361	Convention Center Enterprise Special Fund	<u>54,052,919</u>	<u>24,427,022</u>	<u>29,625,897</u>
	BED 113 Total	141,484,284	104,069,782	37,414,502
S-19-305	BED 120 Environmental & Energy Development Energy Security Special Fund	18,159,773	4,124,788	14,034,985
S-19-367	BED 138 Hawaii Green Infrastructure Authority Hawaii Green Infrastructure Authority	1,021,137	690,446	330,691
S-19-357	BED 143 High Technology Development Corp. High Technology Special Fund	3,923,765	988,006	2,935,759
	BED 145 Hawaii Strategic Development Corporation			
S-19-343	Hawaii Strategic Development Revolving Fund	4,204,128	2,344,222	1,859,906
S-19-308	Hydrogen Investment Capital Special Fund	<u>2,608,516</u>	<u>--</u>	<u>2,608,516</u>
	BED 145 Total	6,812,644	2,344,222	4,468,422
S-19-345	BED 146 Natural Energy Laboratory of Hi Authority Natural Energy Laboratory of Hi Auth. Special Fund	7,881,270	4,629,814	3,251,456
	BED 150 Hawaii Community Development Authority			
S-19-358	HI Community Development Auth Revolving Fund	2,369,052	2,284,652	84,400
S-19-356	Kalaeloa Community Dev District Revolving Fund	<u>514,435</u>	<u>404,022</u>	<u>110,413</u>
	BED 150 Total	2,883,487	2,688,674	194,813
	BED 160 Hawaii Housing Finance & Development Corp			
S-19-314	Administration	6,658,551	5,639,773	1,018,778
S-19-320	Economic Development	2,184,075	1,667,582	516,493
S-19-321	Housing Finance	2,240,486	1,602,704	637,782
	BED 160 Total	11,083,112	8,910,060	2,173,052
	Total Special & Revolving Funds	<u>195,577,019.00</u>	<u>130,698,343.88</u>	<u>64,878,675.12</u>