



**MAUI**  
CHAMBER OF COMMERCE  
VOICE OF BUSINESS

**HEARING BEFORE THE SENATE COMMITTEE ON  
ENERGY, ECONOMIC DEVELOPMENT & TOURISM  
HAWAII STATE CAPITOL, SENATE CONFERENCE ROOM 414  
MONDAY, FEBRUARY 10, 2020 AT 2:50 P.M.**

To The Honorable Glenn Wakai, Chair;  
The Honorable Brian T. Taniguchi, Vice Chair; and  
Members of the Committee on Energy, Economic Development & Tourism;

**TESTIMONY IN SUPPORT OF SB2500 RELATING TO  
THE HAWAII TECHNOLOGY DEVELOPMENT CORPORATION**

Aloha, my name is Pamela Tumpap and I am the President of the Maui Chamber of Commerce, with approximately 650 members. I am writing to share our support of SB2500.

The Hawaii Technology Development Corporation is extremely important to develop and sustain the state's small business innovation research program and manufacturing industry as manufacturing increases the workforce and resources for our community. We believe supporting our local manufacturers is vital to our state's economy and support this bill as it provides funding for HTDC and funding to continue the manufacturing development grant program and small business innovation research program.

Mahalo for your consideration of our testimony and we hope you will support this bill.

Sincerely,

*Pamela Tumpap*

Pamela Tumpap  
President

To advance and promote a healthy economic environment for business, advocating for a responsive government and quality education, while preserving Maui's unique community characteristics.



# ELEMENTAL EXCELERATOR

**Written Statement of Elemental Excelsior**  
**before the Senate Committee on Energy, Economic Development, and Tourism**  
February 07, 2020

**In consideration of [SB 2500](#)  
RELATING TO THE HAWAII TECHNOLOGY DEVELOPMENT CORPORATION**

**Aloha Chair Wakai, Vice Chair Taniguchi, and members of the committee on Energy, Economic Development, and Tourism:**

Elemental Excelsior **submits support** for SB 2500, which appropriates funds to the Hawai'i technology development corporation for the small business innovation research program, manufacturing assistance program, and excelsior program.

Elemental Excelsior is a Honolulu-based non-profit accelerator that supports climate positive startup companies that are helping solve Hawai'i's most urgent environmental problems. Each year, we select 15-20 companies annually that best fit our mission and fund each company up to \$1 million. To date, we have awarded \$36 million to 99 companies resulting in thirty-six demonstration projects in Hawai'i & the Asia Pacific.

Elemental Excelsior has received catalytic support from Hawaii Technology Development Corporation for increased focus on our Hawai'i based portfolio companies and neighbor island pipeline efforts. Hawai'i-based accelerators not only nurture and grow the talent we have within the state to build startups to scale, but also attract talent and solutions to the state, thereby strengthening the entrepreneurial network and business relationships between Hawai'i and the rest of the world. Each year, we evaluate over 500 companies and look for Hawai'i grown startups companies who are helping solve the most urgent environmental problems.

SB 2500 is the first step toward creating catalytic economic development activity: To date, Elemental Excelsior has awarded \$36 million to 99 companies. Most of this funding comes from federal and other off-island resources. These companies have raised more than \$790 million in follow-on funding and generate millions of dollars in revenue. Other states with vibrant innovation economies, such as Massachusetts and California, provide state government funding for a variety of accelerator, demonstration, and educational program support. State support for the innovation economy enables local companies to attract outside investment from entities like the federal government, private, and philanthropic sponsors and solidifies the state's commitment to the long-term development of our entrepreneurial ecosystem and clean energy goals.

Mahalo for the opportunity to provide testimony on this legislation.

Sincerely,

Aki Marceau  
Managing Director, Policy & Community



Written Statement of  
**DR. PATRICK K. SULLIVAN**  
**PRESIDENT/CEO OCEANIT**

Before the  
**SENATE COMMITTEE ON ECONOMIC DEVELOPMENT and TOURISM**

February 10, 2020  
2:50 p.m.  
State Capitol, Conference Room 414

In Support of  
**SB2500 RELATING TO THE HAWAII TECHNOLOGY  
DEVELOPMENT CORPORATION**

To: Chair Senator Glenn Wakai, Vice Chair Senator Brian T. Taniguchi, and  
Members of the Committee

From: Dr. Patrick K. Sullivan, President/CEO

Re: Testimony in Support of SB2500

Honorable Chair, Vice-Chair and Committee Members:

Thank you for the opportunity to submit testimony **in support of SB2500**

The technology industry in Hawaii has grown over the past 12 years and has made significant strides towards achieving the goal of diversifying and stimulating Hawaii's economy. The continuation of the Small Business Innovation Research ("SBIR") grants, Manufacturing Grant and the excelerator program are crucial to move the technology towards prototyping, customer interface, and commercialization,

The objectives of the grants are:

- To support economic growth and the diversification of our economy;
- To launch new ventures based on technology innovations; and
- To support the growth of the tech industry and the creation of intellectual property and innovation in the State.

We strongly urge you to support of SB2500 and we appreciate your continued support of the technology industry.



Statement of  
**Hermann Kugeler**  
**Business Development Manager**  
**Makai Ocean Engineering, Inc.**

before the  
**Senate Committee on Energy, Economic Development, and Tourism**  
Monday, February 10, 2020

2:50pm  
State Capitol, Conference Room 414

In consideration of

**SB2500**

**RELATING TO THE HAWAII TECHNOLOGY DEVELOPMENT CORPORATION.**

Chair Wakai, Vice Chair Taniguchi, and Members of the Committee.

Makai Ocean Engineering, Inc. **STRONGLY SUPPORTS SB2500** that makes an appropriation to HTDC to continue providing grants to businesses through the small business innovation research program, manufacturing assistance program, and excelerator program.

Makai Ocean Engineering, Inc. is a locally-owned and operated technology company based in Hawaii for over 45 years and an active participant in the Small Business Innovation Research (SBIR) grant program. The SBIR program consists of three phases that encourages early stage investment and innovation in technology. Phase 1 provides a very small amount of money that is barely enough for proof of concept research. However, it is the Phase 2 and 3 funding stages that really provide a means of development for companies to transition the idea and research conducted in Phase I, to prototyping to commercialization.

According to HTDC, for every dollar invested through this program, Hawaii companies have attracted 20 federal dollars in return to the state, plus commercialization funding. The Hawaii SBIR program supports projects with vetted technology backed with federal funds. The state matching funds are critical in advancing development, which helps win later phase awards and assists in getting the technology out into the market. The SBIR matching grants assist companies that have a commercially-promising project that has a difficult development plan. Carefully selected matching grants represent more of a “sure bet” in terms of a successful and highly leveraged investment in economic development for the State, and growing our tech sector.

For example, Makai’s subsea cable laying software began as a Phase 1 SBIR (matched by State for \$20k in the year 2000) and then went on to Phase 2 and 3 and became the world’s #1 commercial cable laying software, with over \$30 million in commercial revenues and high tech jobs for Hawaii over the last 18 years. This is a direct multiplier of more than 1,500X for the State’s investment, not counting the indirect benefits of retaining some of the world’s best engineers in Hawaii and the additional technologies they have generated during this time.

Makai has recently completed a Phase 2 SBIR program focused on autonomous underwater vehicles, which could easily surpass the \$30 million cable laying software in terms of revenue to the state. Our federal customer noted that the work we had performed on the underwater vehicle under



the HTDC Hawaii State matching grant program was a key reason we were selected for an additional \$2.1 million award that is currently underway.

In addition, Makai and Referentia were two local companies honored with a national award, the SBIR Tibbetts Award at the Whitehouse in January, 2017. This award recognizes the very best SBIR companies in the country whose technologies have made a strong economic impact in terms of high paying jobs, and displaying success in **actually commercializing federal R&D**. We need this HTDC administered program to make possible more national success stories by local companies. See the Governor's press release about awards here: <http://governor.hawaii.gov/newsroom/latest-news/dbedt-news-release-htdc-small-business-grantees-honored-with-national-tibbetts-award-at-the-white-house/>

Makai Ocean Engineering, Inc. has historically been an engineering services provider, but now, with the help of the State's current manufacturing assistance program, Makai is diversifying into low-volume manufacturing. Makai has been involved in marine-related engineering in Hawaii for over 44 years, and recently began a heat exchanger R&D program. Now, we are ramping up production from a small manufacturing plant for heat exchangers on the Big Island of Hawaii, which is sustaining approximately 8 highly-skilled, high-paying STEM / engineering jobs in rural Kona. We have a strategic advantage for developing and manufacturing low-volumes of these components in Hawaii for two reasons: the U.S. Navy and Air Force's presence in Hawaii, and Makai already owns and operates a marine heat exchanger test facility and marine corrosion lab on the Big Island. As an example, Makai was recently awarded a contract to design a new heat exchanger for the U.S. Air Force's next generation aircraft, and we hope to be manufacturing units over the coming years.

The program limits reimbursement to 20% of qualified expenses capped at \$100,000. Because they are matching funds, a manufacturer is eligible only if they are already making an investment in the local community and providing jobs. The program amplifies these efforts, and shows the State's support for local manufacturers willing to make the investment and commitment to adding jobs, and growing their businesses and the industry in Hawaii.

This is why we **STRONGLY SUPPORT SB2500**, which would provide the state matching funds for federal SBIR programs and manufacturing assistance to enable companies to commercialize new technologies more effectively. Not only would this expansion of funding enable our tech industry to compete and win more Federal monies for technology development and manufacturing, it would provide highly-skilled professional jobs for our keiki here at home.

Thank you for the opportunity to offer these comments.



96-1345 Waihona street  
Pearl City Hawaii 96782

Statement of  
**Robert Paparelli**  
**President**  
**The Patisserie Inc**  
before the  
**Senate Committee on Energy, Economic Development, and Tourism**

Monday, February 10, 2020  
2:50 p.m.  
State Capitol, Conference Room 414

In consideration of  
**SB2500**  
**RELATING TO HAWAII TECHNOLOGY DEVELOPMENT CORPORATION**

Chair Wakai, Vice Chair Taniguchi, and Members of the Committee on Energy, Economic Development, and Tourism.

The Patisserie Inc **supports** SB2500 that appropriates funds to the Hawaii Technology Development Corporation (HTDC) for the Small Business Innovation Research Program, Manufacturing Assistance Program, and Excelerator (Accelerator) program.

My project is concerning the MAP Grant program and we benifitted from this program several times and has increase productive which makes us a stronger company

Thank you for the oppportunity to offer these comments.  
Robert Paparelli



# Chamber of Commerce HAWAII

*The Voice of Business*

## **Testimony to the Senate Committee on Energy, Economic Development, and Tourism**

**Monday, February 10, 2020 at 2:50 P.M.  
Conference Room 414, State Capitol**

### **RE: SB 2500, RELATING TO HAWAII TECHNOLOGY DEVELOPMENT CORPORATION**

Chair Wakai, Vice Chair Taniguchi, and Members of the Committee:

The Chamber of Commerce Hawaii ("The Chamber") **supports** SB 2500, would provide funding for the High Technology Development Corporation (HTDC) and its programs such as the Small Business Innovation Research Program (SBIR) and the Manufacturing Assistance Program (MAP).

The Chamber is Hawaii's leading statewide business advocacy organization, representing about 2,000+ businesses. Approximately 80% of our members are small businesses with less than 20 employees. As the "Voice of Business" in Hawaii, the organization works on behalf of members and the entire business community to improve the state's economic climate and to foster positive action on issues of common concern.

HTDC has assisted SBIR awarded companies since 1988; as a result, Hawaii companies have attracted 20 federal dollars in return to the state plus commercialization funding for every state dollar invested through this program. The federal SBIR grant program has continued its efforts to move companies through grant awards to commercial product sales, and this bill would allow HTDC to continue to provide the necessary support of a commercialization assistance program to all phases in the program for local businesses here in Hawaii.

Continuing to support MAP is also vital to HTDC's mission. This program has become a positive resource to aid companies with their investments for manufacturing equipment, training of their employees on newly purchased equipment, energy efficiency, and feasibility studies. We believe that the continuation of this program will help fuel manufacturing in Hawaii to grow and provide more products for both local consumption and export, and continued funding will help companies in Hawaii to start or grow their operations.

HTDC and its programs actively support and advocate for the specific needs of Hawaii's technology and manufacturing businesses. We have seen a rising demand from local companies wanting to manufacture here in Hawaii in order to maintain quality control, as well as an increasing desire for 'Made in Hawaii' products from consumers globally. HTDC and its programs are integral to the growth and success of these companies who seek information and guidance on what it takes to succeed in Hawaii.

Thank you for the opportunity to testify in support of SB 2500.



Adnoviv, Inc.  
2800 Woodlawn Dr. Suite 297  
Honolulu, HI 96822  
info@adnoviv.com  
www.adnoviv.com

Statement of Natasa Petrovic, CFO  
Adnoviv, Inc.  
before the Senate Committee on Energy, Economic Development, and Tourism  
Monday, February 10, 2020 at 2:50 p.m.  
State Capitol, Conference Room 414

In consideration of SB2500  
RELATING TO HAWAII TECHNOLOGY DEVELOPMENT CORPORATION  
Chair Wakai, Vice Chair Taniguchi, and Members of the Committee on Energy, Economic  
Development, and Tourism:

Adnoviv, Inc. supports SB2500 that appropriates funds to the Hawaii Technology Development Corporation (HTDC) for the Small Business Innovation Research Program, Manufacturing Assistance Program, and Excelerator (Accelerator) program.

I am the chief financial officer for Adnoviv, Inc., a Honolulu startup founded in 2013. Our company would not be here today if not for the help and support provided by the Department of Business, Economic Development, and Tourism (DBEDT) and Hawaii Technology Development Corporation (HTDC). Through the HSBIR's Phase I and Phase II Matching Grants and the Manufacturing Assistance Program, we were able to bring our company from a mere idea to our current position as the startup with five employees and a fully developed product. With HSBIR funding, we expanded our workforce and supported our business operations while going through the product research and development phase. Through HTDC's Manufacturing Assistance Program, we were introduced to the vendor that now manufactures our product, TruePODS™ (True Presence Occupancy Detection Sensors).

At Adnoviv, we strongly believe that our success leads to the state of Hawaii's prosperous future as well. Our intelligent occupancy sensors have the potential to accelerate Hawaii's energy efficiency efforts and to be a crucial part of our state achieving its net zero energy goal by 2045. By financially supporting and promoting innovative companies like Adnoviv through programs such as HSBIR Matching Grants and Manufacturing Assistance Program, state of Hawaii is investing in its own future, while helping local companies train, employ and keep high quality workers. I can personally vouch that the support provided by the DBEDT and HTDC to the local businesses directly benefits Hawaii residents and the state's economy - my own job position was created only after HSBIR Phase II Matching Grant allowed for its funding. Through this form of support in the future, Adnoviv and many other local companies will benefit tremendously on their path to success.

On behalf of Adnoviv, Inc., I respectfully request that the committee approves SB2500.

Thank you for the opportunity to offer these comments.

Sincerely,

Natasa Petrovic, CFO  
Adnoviv, Inc.



February 7, 2020

Statement of  
**Rachel Campbell**  
**Chief Operating Officer/Chief Financial Officer and Owner**  
**VisSidus Technologies, Inc.**

before the  
**Senate Committee on Energy, Economic Development, and Tourism**

Monday, February 10, 2020

2:50 p.m.

State Capitol, Conference Room 414

In consideration of

**SB2500**

**RELATING TO HAWAII TECHNOLOGY DEVELOPMENT CORPORATION**

Chair Wakai, Vice Chair Taniguchi, and Members of the Committee on Energy, Economic Development, and Tourism.

VisSidus Technologies, Inc. **supports** SB2500 that appropriates funds to the Hawaii Technology Development Corporation (HTDC) for the Small Business Innovation Research Program, Manufacturing Assistance Program, and Excelerator (Accelerator) program.

VisSidus focuses on the Research and Development (R&D) of technologies that enable small and inexpensive satellites to collaborate and accomplish tasks that are impossible to achieve with large and costly satellites. Our mission consists of 12 satellites, each satellite the size of a dorm room refrigerator and separated from its neighbor by the length of a football field. Together they form a mile-long radar at 200 miles altitude to generate weekly global maps of soil moisture and plant growth. Such maps are of commercial interest to the agriculture community and scientific interest to earth scientists.

To achieve VisSidus' ambitious vision we embarked on a long, lonely, and expensive journey due to the low technology readiness levels and the high business risks of the mission. However, through SBIR/STTR programs we have been able to secure R&D funding from the U.S. Army Space and Missile Defense Command (SBIR Phase I contract W9113M-16-C-0003) as well as NASA (STTR Phase I contract 80NSSC18P2136). With these contracts and internal funding, we have steadily advanced the state of the art and retired some of the risks. Because of the progress our proposal to NASA for a Phase II STTR, for the coordination and control of satellite swarms, has been selected and we are now eagerly waiting for the final signatures and start date.

A matching grant from the Hawaii SBIR program through the Hawaii Technology Development Corporation would allow VisSidus to hire one full-time radar engineer and two software/computer engineering interns to accelerate both the R&D and commercialization work of a few technologies identified as "low hanging fruit." Compared to the overall scale of VisSidus' vision this may seem to be a small undertaking. However, as founders who are organically growing our business while supporting the community, we learned from Hawaii business leaders that local talent is either underemployed or worse, are leaving the state because of the lack of high-tech jobs. We believe that keeping staff employed is akin to putting food on the table and a roof over the heads of our family. We believe funding from the Hawaii SBIR program will help secure local talent as well as promote undiluted growth thus creating a solid foundation towards commercialization on the path to the full mission

Thank you for the opportunity to offer these comments.

Mahalo,  
Rachel A. Campbell  
COO, CFO  
VisSidus Technologies Inc.  
O: 386-868-2227  
M: 206-617-2445  
[Rachel.campbell@vissidus.com](mailto:Rachel.campbell@vissidus.com)  
590 Lipoa Pkwy, Suite #224  
Kihei, HI 96753

Statement of  
**Gary Yoshioka**  
**President**  
**Diamond Bakery**  
before the  
**Senate Committee on Energy, Economic Development, and Tourism**

Monday February 10, 2020  
2:50 p.m.  
State Capitol, Conference Room 414

In consideration of  
**SB2500**  
**RELATING TO HAWAII TECHNOLOGY DEVELOPMENT CORPORATION**

Chair Wakai, Vice Chair Taniguchi, and Members of the Committee on Energy, Economic Development, and Tourism.

Diamond Bakery Co., Ltd. **supports** SB3005 that appropriates funds to the Department of Business, Economic Development, and Tourism for supporting funding for Hawaii Technology Development Corporation programs: Small Business Innovation Research program, Manufacturing Assistance Program, Accelerator program, and HTDC. In fact, if funds are available, I encourage you to increase funding to these highly effective organizations.

I am writing to you today to express my support for INNOVATE Hawaii and its valuable programs. INNOVATE Hawaii supports small and medium-sized manufacturers, like us, to enhance business productivity, growth, and technical performance through educational programs and customized services.

My company, Diamond Bakery Co., has been a client of INNOVATE Hawaii for the last five years and benefited greatly from the resources and expertise of this organization. INNOVATE Hawaii has helped us more competitively position our business in the following ways:

- Provided information, consultation, and direct support via their expert staff and programs
- **Promoted and supported the application process for the MAP grant program where we have gratefully been the recipient of over \$150,000 in capital equipment grants.**
- Connected us with the local SBDC, who helped us structure and analyze equipment financing options to ensure our financial health.
- Provided active leadership support to our industry association, the Hawaii Food Manufacturers Association and the Hawaii Chamber of Commerce.
- Conducted numerous education programs on critical industry topics such as Global Food Safety, U.S. Food Safety Modernization Act, Activating Social Media Resources.

- Coordinated the development of a customized 48-week Industrial Automation Training Program for our company technicians working in concert with the State Department of Labor and Industrial Relations, Hawaii Chamber of Commerce, University of Hawaii, and Leeward Community College, which will be offered industry wide.
- Supported the development of the first ever State of Hawaii sponsored Food Manufacturing Apprenticeship program in coordination with DLIR, Leeward Community College, and the City and County of Honolulu, in process today.
- Implemented a LEAN manufacturing training program for our company
- Implemented a Design Thinking training seminar for our company.
- Extended the resource network exponentially for Diamond Bakery.

This assistance has had a direct impact on my company's operations and overall performance. It has enriched the roles of my employees with new learning and capability. And it has caused us to increase by two, key management positions to meet the growth and operating needs of our business. We are growing across all key metrics over the last four years. We thank HTDC and INNOVATE Hawaii for their help and support to achieve these results.

INNOVATE Hawaii is an active supporter and advocate for our local business and manufacturing community. This organization works hard to understand the changing needs of businesses in Hawaii, helps us meet current challenges, and provides support to help local businesses not only grow, but prosper.

Their assistance has led to a compounded annual growth rate that has met or exceeded our company targets. Our export business to Japan is growing rapidly, with new customers in the cue, thanks to the State's support of export development.

The building of a strengthened small business, manufacturing and innovation-focused economy in Hawaii is well underway in my view. Having HTDC and INNOVATE Hawaii as a trusted ally and resource is invaluable for both my business and Hawaii's manufacturing sector as a whole. As a strong supporter of INNOVATE Hawaii, I look forward to working together in the future and helping propel Hawaii forward as a global marketplace leader.

Thank you for the opportunity to offer these comments.



1050 Bishop St. PMB 235 | Honolulu, HI 96813  
P: 808-533-1292 | e: info@hawaiiifood.com

#### Executive Officers

**Joe Carter**, Coca-Cola Bottling of Hawaii, *Chair*  
**Charlie Gustafson**, Tamura Super Market, *Vice Chair*  
**Eddie Asato**, The Pint Size Corp., *Secretary/Treas.*  
**Lauren Zirbel**, HFIA, *Executive Director*  
**John Schlif**, Rainbow Sales and Marketing, *Advisor*  
**Stan Brown**, Acosta Sales & Marketing, *Advisor*  
**Paul Kosasa**, ABC Stores, *Advisor*  
**Derek Kurisu**, KTA Superstores, *Advisor*  
**Beau Oshiro**, C&S Wholesale Grocers, *Advisor*  
**Toby Taniguchi**, KTA Superstores, *Advisor*

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TO:

Committee on Energy, Economic Development, and Tourism  
Senator Glenn Wakai, Chair  
Senator Brian T. Taniguchi, Vice Chair

FROM: HAWAII FOOD INDUSTRY ASSOCIATION  
Lauren Zirbel, Executive Director

DATE: February 10, 2020  
TIME: 2:50pm  
PLACE: Conference Room 414

RE: SB2500 Relating to Hawaii Technology Development Corporation

Position: Support

The Hawaii Food Industry Association is comprised of two hundred member companies representing retailers, suppliers, producers, and distributors of food and beverage related products in the State of Hawaii.

The Hawaii Technology Development Corporation (HTDC) is a vital business accelerator that helps diversify and strengthen Hawaii's economy. Manufacturing is an essential industry here in Hawaii providing jobs and local products. The three programs funded by this measure, the small business innovation research program, the manufacturing assistance program, and the excelerator program, all provide opportunities for different types of Hawaii businesses. Grants from these programs are helping businesses create the next generation of Hawaii products and Hawaii businesses. We urge you to vote yes on this measure and we thank you for the opportunity to testify.



Statement of

Greg Rose  
VP Business Development & Strategy  
Intelinair, Inc.

before the  
**Senate Committee on Energy, Economic Development, and Tourism**

Monday, 10 February 2020  
2:50 p.m.  
State Capitol, Conference Room 414

In consideration of  
**SB2500**  
**RELATING TO HAWAII TECHNOLOGY DEVELOPMENT CORPORATION**

Chair Wakai, Vice Chair Taniguchi, and Members of the Committee on Energy, Economic Development, and Tourism:

Intelinair, Inc. supports SB2500 that appropriates funds to the Hawaii Technology Development Corporation (HTDC) for the Small Business Innovation Research (SBIR) Program, Manufacturing Assistance Program, and Accelerator (Accelerator) program.

Intelinair is a technology startup spun out of University of Illinois at Urbana-Champaign. We provide an analytics solution (AGMRI) to deliver crop intelligence to farmers, agronomists, and other members of the agriculture ecosystem. Our solution consists of collecting aerial imagery via airplane, drone, and/or satellites, identifying patterns in that imagery via deep learning or computer vision algorithms, and then cross-correlating those patterns with other data layers (e.g. topography, soil types, weather, equipment data, and more) to identify problems. We then send alerts to users via our iPad app so that growers can make decisions to improve yield and increase profit. Today our primary market is corn and soybean farms in Illinois, Iowa, and Indiana – we analyzed ~1.8M acres last year and will be analyzing ~4M acres this year.

To expand our business, in the past couple years we partnered with Prof. Robert Paull at the College of Tropical Agriculture and Human Resources, University of Hawaii to explore opportunities in specialty crops. Last year we were awarded two SBIR grants: one from the USDA for applying our technology to pineapple; and another from the NSF for applying our technology to coffee. In addition, HTDC generously provided us matching funds to help us further develop our



proof of concept solutions.

As part of these projects we've engaged both Dole (analyzing pineapple, coffee, litchi, and cacao on their 2,000+ acre plantation in Oahu) and Kauai Coffee (analyzing coffee on their ~3,000 acre orchard in Kauai). In doing so we're working closely with Prof. Paull and his student/researcher team. We've also opened a small office in Kauai and have hired an employee there, Bernard Markowicz, to assist us with the project.

So far we've made great progress. We've developed algorithms to count pineapple flowers automatically so we can provide maps for the variable rate application of ethylene to force flowering and intelligence for yield prediction. We've also developed algorithms to recognize coffee trees and alert when there are signs of nitrogen deficiency or water stress.

This is just the beginning. We're working on our Phase II proposals and plan to submit them soon. We are also exploring opportunities for our technology in Brazil (for coffee) and Costa Rica and Honduras (for pineapple). Our intention is to build our Hawaii office with agronomist-engineer teams who can function as a "train the trainer" for our international implementations while continuing to help us develop our solution for these critical crops.

Support from HTDC has been critical to moving these initiatives forward. Thank you for the opportunity to offer these comments.



Written Statement of  
**Len Higashi**  
Acting Executive Director  
Hawaii Technology Development Corporation  
before the  
**Senate Committee on Energy, Economic Development, and Tourism**  
Monday, February 10, 2020  
2:50 p.m.  
State Capitol, Conference Room 414

In consideration of  
**SB2500**  
**RELATING TO THE HAWAII TECHNOLOGY DEVELOPMENT CORPORATION.**

Chair Wakai, Vice Chair Taniguchi, and Members of the Committee.

The Hawaii Technology Development Corporation (HTDC) **supports** SB2500 that appropriates funds to the Hawaii technology development corporation for the small business innovation research program, manufacturing assistance program, and excelerator program.

As part of HTDC's vision to create 80,000 new innovation jobs in Hawaii earning \$80,000 or more by 2030, HTDC supports initiatives aimed at promoting technology and innovation jobs. The Administrative budget includes \$1,000,000 for HTDC's Hawaii SBIR program, \$500,000 for the Manufacturing Assistance Program, \$300,000 for the Accelerator (excelerator) program, and \$36,000 for operations. Last session, these core HTDC programs were appropriated the same amounts but only for FY20. HTDC has administered these programs since 2016.

HTDC believes, at the very minimum, continuation of our existing programs is essential for growing the innovation economy. The programs have a proven track record and every year there are more qualified applicants than available funds.

For the Hawaii SBIR phase 2/3 program, in FY19, 6 out of the 12 applications were funded. \$4.5 million was requested and \$1.425 million was awarded. The applicants brought \$11.0 million of Federal SBIR awards into the state. The reported economic impact of the HSBIR program for 2018 was \$150 million with 589 jobs in Hawaii. For the MAP program, in FY19, 37 out of 69 applicants were funded. \$1.3 million was requested and \$898 thousand was awarded. The companies invested \$13.5 million. The reported impact of the MAP program for 2018 was \$748 million with 2,387 jobs in Hawaii. With the \$500k available in FY20, fewer companies will be awarded and the amounts will be lower. For the accelerator programs, 5 accelerators were funded in FY19. The accelerators were required to provide a minimum of a 1:1 match. All applicants exceeded the minimum requirement. HTDC comments that FY20 awards for all the programs will be made soon. HTDC believes increased funding for all 3 programs would be appropriate.

Thank you for the opportunity to offer these comments.



**SB-2500**

Submitted on: 2/6/2020 9:20:22 PM

Testimony for EET on 2/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
cymbree kailiehu	Testifying for cymz sweet kre8tionz	Support	No

Comments:

Aloha,

My name is Cymbree Kailiehu Owner + Founder of Cymz\_Sweet\_Kre8tionz Bakery. Creating signature confectionary sweets of all kinds. My journey began in 2014, where baking for family and friends was just the beginning of something that Blossomed beautifully into a full time business. Each dessert I create is of the highest quality ingredients available to me. I also incorporate local fresh fruits from growers around the island in collaboration to add to my fruit flavored desserts. Our treats are pleasing to the eye, and just right to the palette. Not over powering of sweetness, but just the right balance. I truly love what I create and make and it most definitely shows through my work.

We recently opened up our own bakery retail shop in the Maui Lani Professionals Row in Kahului, last summer. We have our own fully equipped commercial kitchen that we built out and a retail storefront where we have a beautiful cold display case, where desserts are showcased.

Last year I applied for the MAP grant and was actually selected, and was very excited. With the help of this grant as a small business, I was able to utilize that money to put towards purchasing other needed equipment & packaging for my bakery. Being a small business it is always hard when you build an overhead, commercial kitchen and all the other logistics that come with it. I truly appreciate that grant has helped my aspects of my busienss. I look forward to seeing this grant help other small businesses such as myself.

Thank you for your time.

Cymbree Kailiehu

**SB-2500**

Submitted on: 2/7/2020 12:44:36 PM

Testimony for EET on 2/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Peter Kam	Testifying for Hawaii Business Group Incorporated	Support	No

Comments:

I am in favor of SB2500 as it helps small business in Hawaii to employ more people.

**SB-2500**

Submitted on: 2/7/2020 2:17:06 PM

Testimony for EET on 2/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Gerry Smith	Testifying for Maui Economic Development Board	Support	No

Comments:

Statement of

**Gerry Smith**

**Director of Business Development**

**Maui Economic Development Board**

before the

**Senate Committee on Energy, Economic Development, and Tourism**

Monday, February 10, 2020

2:50 p.m.

State Capitol, Conference Room 414

In consideration of

**SB2500**

**RELATING TO HAWAII TECHNOLOGY DEVELOPMENT CORPORATION**

Chair Wakai, Vice Chair Taniguchi, and Members of the Committee on Energy, Economic Development, and Tourism.

The Maui Economic Development Board **supports** SB2500 that appropriates funds to the Hawaii Technology Development Corporation (HTDC) for the Small Business Innovation Research Program, Manufacturing Assistance Program, and Exceleator (Accelerator) program.

SBIR's are the lifeblood of some of Hawaii's startup tech companies. The difference between being in business in Hawaii vs. the Mainland are the high costs associated with doing business in Hawaii. Matching SBIR funding from the state levels the playing field by helping defray the high costs and allowing our local companies to be competitive. Without this funding, businesses receiving SBIR funding start at a distinct disadvantage.

Please provide as much funding to this important program as possible.

Thank you for the opportunity to offer these comments.

**SB-2500**

Submitted on: 2/7/2020 2:38:53 PM

Testimony for EET on 2/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Eva Lee	Testifying for Tea Hawaii & Company	Support	No

Comments:

Statement of

**Eva Lee**

**Director Founder**

**Tea Hawaii & Company**

before the

**Senate Committee on Energy, Economic Development, and Tourism**

Monday, February 10, 2020

2:50 p.m.

State Capitol, Conference Room 414

In consideration of

**SB2500**

**RELATING TO HAWAII TECHNOLOGY DEVELOPMENT CORPORATION**

Chair Wakai, Vice Chair Taniguchi, and Members of the Committee on Energy, Economic Development, and Tourism.

Tea Hawaii & Company **supports** SB2500 that appropriates funds to the Hawaii Technology Development Corporation (HTDC) for the Small Business Innovation Research Program, Manufacturing Assistance Program, and Accelerator (Accelerator) program.

Our company has been able to manufacture specialty crops in tea for a number of Hawaii growers assisting in expanding businesses in need of value added products for the demanding market. Hawaii tea tourism is on the rise and our manufacturing has provided Hawaii agriculture and tourism through the assistance of HTDC, an honorable corporation with the innovation greatly.

Thank you for the opportunity to offer these comments.

**SB-2500**

Submitted on: 2/7/2020 5:11:16 PM

Testimony for EET on 2/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Ronald Weidenbach	Testifying for Hawaii Aquaculture & Aquaponics Association	Support	No

Comments:

HTDC's Hawaii SBIR matching grant program has been very beneficial to many members of the Hawaii aquaculture and agriculture industry supporting and strengthening innovation in the local food sector and helping companies to bring in millions of Federal research dollars and commercialization assistance. The MEP manufacturing assistance program will help companies move into critical processing and value added product production for local consumption and export, strengthening rural farming communities and the local and State economy. The HAAA strongly supports the mission and valuable work of HTDC and these two outstanding programs. We strongly support the continuing State financial support of HTDC, SBIR, and MEP.

Ron Weidenbach, HAAA President





95-595 Kanamee Street, #326

Mililani, Hawaii 96789-1431

(815) 310-0808

[hawaii@outlook.com](mailto:hawaii@outlook.com)

[www.ryanozawa.com](http://www.ryanozawa.com)

@hawaii A row of social media icons including Instagram, Twitter, YouTube, LinkedIn, Facebook, Messenger, Tumblr, and Pinterest.

February 7, 2020

Aloha e Senator Glenn Wakai, Chair Senator Brian T. Taniguchi, Vice Chair; and members of the Committee on Energy, Economic Development, and Tourism:

I am writing to express my **support** for SB2500 as it relates to the HTDC.

Specifically, I urge your committee to support the HTDC's important and valuable work in supporting small businesses through the SBIR program, supporting local manufacturers through the Manufacturing Assistance Program, and the fostering of new and innovative businesses through accelerator programs.

These programs have allowed Hawaii companies to grow both revenues and the local workforce in important industries that ultimately diversify the Hawaii economy beyond tourism and the military. Whether for economic security, sustainability, or local jobs and professional opportunities, this investment is both an important and valuable one in terms of the gains returned to the Aloha State.

Thank you for your consideration.

**SB-2500**

Submitted on: 2/7/2020 1:41:53 PM

Testimony for EET on 2/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Tom Leonard	Individual	Support	No

Comments:

**SB-2500**

Submitted on: 2/8/2020 12:50:00 PM

Testimony for EET on 2/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Ann Chung	Individual	Support	Yes

Comments:

I STRONGLY SUPPORT AND REQUEST AN AMENDMENT to SB2500 relating to the Hawaii Technology Development Corporation which appropriates funds to HTDC for very successful existing programs: small business innovation research (SBIR), Manufacturing, and Excelerator grants. I urge you to also amend this bill to include another very effective existing grant program = the Alternative Energy grant. These are very successful existing program that has been working for many years. I urge you to continue funding these very important programs. Based on data provided by HTDC, 20 federal dollars are returned to the State for every dollar invested through the SBIR program alone. These existing grant programs are successful in promoting innovation and stimulating economic development by supporting emerging technologies developed by Hawaii companies and creating innovation jobs – high-skilled, high-paying jobs that Hawaii needs. I URGE YOU TO PASS THIS BILL.

Mahalo for this opportunity to testify.

**LATE**

WRITTEN TESTIMONY OF DENNIS FURUKAWA  
FOUNDER, REALGREEN POWER, INC.  
HONOLULU, HAWAII

BEFORE THE SENATE COMMITTEE ON ENERGY & ECONOMIC DEVELOPMENT AND  
TOURISM  
TUESDAY, FEBRUARY 10, 2020  
2:50 PM  
CONFERENCE ROOM 414

SENATE BILL 2500  
RELATING TO HAWAI`I TECHNOLOGY DEVELOPMENT CORPORATION

TESTIMONY IN SUPPORT OF SENATE BILL 2500

Chairperson Glenn Wakai and Members of the Committee:

The purpose of this bill is to authorize funding for the Hawai`i Strategic Development Corporation. I am the founder and CEO of RealGreen Power Inc (RGP), a local Oahu environmental technology company. We are licensees of wastewater treatment technology invented at UH Manoa since 2009. I am writing in support of SB2500.

RGP has developed an alternative means of treating domestic sewage that has been put into good use at Hale Mauliola, the transitional housing facility operated by the City and County of Honolulu, located on Sand Island, and nearby the container port. Installed in 2018, our system treats wastewater on-site, and the treated water is suitable for irrigating landscaping. Our system replaces rented portable bathrooms and portable toilets, which were costing Honolulu \$35,000 per month, for 80 residents. Our treatment system is paired with modular mobile bathrooms which together are currently saving the C&C of Honolulu \$20,000 to \$30,000 per month, compared to the cost of rented bathrooms and toilets. And the facility now houses 100 residents. The cost of the treatment unit and bathrooms was about \$250,000. Therefore, the return on investment for the city is less than 14 months. To date, the C&C has saved over \$250,000 on this investment, and the overall savings over ten years will be over \$3 million. We are actively working to duplicate our success at DLNR sites around the State, starting with harbors and parks that have septic systems that are flooded during storms and 'king tides.' Our goal stop the leaking of pollutants into groundwater and the ocean, and save the State and counties tens of millions of dollars each year in pumping costs.

SB 2500 Testimony by Dennis Furukawa RealGreen Power Inc.

RGP was a recipient of funding from the HSDC Hydrogen Fund in 2012, due to our work with converting biodiesel wastes to renewable energy. We are also a portfolio company of XLR8 UH, and recipients of State of Hawai`i funds through Sultan Ventures. I believe that our success in saving money for the State and C&C of Honolulu in a costly situation is a good example of the benefits of strategic investments. I urge you to fund HSDC through SB 2500, and to the extent possible increase funding in support of technologies that address the impacts of sea level rise on infrastructure.

Thank you for the opportunity to testify in this matter.

By: Dennis Furukawa, CEO  
RealGreen Power Inc.

**LATE**

**SB-2500**

Submitted on: 2/10/2020 6:58:20 AM  
Testimony for EET on 2/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Brian Miyamoto	Testifying for Hawaii Farm Bureau	Support	No

Comments: