



# ENERGY VENTURES

## Honolulu

SUPPLEMENTAL  
CURRICULUM

Local Spark\* Fellow  
Adrienne Kleid  
(650)307-3967  
[adrienne@sparkcleanenergy.org](mailto:adrienne@sparkcleanenergy.org)

Created in partnership with Spark\* Clean Energy Series  
for those studying from Hawaii.

# CONTENTS

Energy Ventures  
Honolulu 2015

**Forward**

**Accelerators & Incubators**

**Hubs & Shared Space**

**Competitions & Awards**

**Local Resources**

**Books**

**Labs & Research Institutions**

**News Sources**

**Community Resources**

# FORWARD

Energy Ventures  
Honolulu 2015

Thank you for joining us for the Spark\* Clean Energy Ventures Series here in Honolulu. Spark\* is here to provide you with the resources you need to get your own clean energy venture started. This handbook and the meetings in Honolulu are designed to help you form a team and give you the local tools and resources to be successful. These meetings are intended to be in conjunction with the free open online course Entrepreneurship 101 from MIT, which provides an overview of entrepreneurship skills. However, the online course lacks information on energy systems, which these meetings will help to provide, along with workshops on business skills you will need in your near future. While Spark\*'s hope is that you will go on to join the Cleantech UP competitions, this course can also help prepare you to apply for one of the local incubator or exceleator programs locally. This handbook is essentially a directory of the who's-who's within the energy landscape of Oahu and the resources available that you may find useful. Articles and other materials about the most up to date information about events on Oahu and other helpful topics will also be made available and will likely be discussed during the meetings. Resource links will also be made available is a recommendation is made or an event or website is mentioned during a meeting.

Aloha,

Adrienne Kleid

Honolulu Energy Fellow

## Meeting Dates

Tuesdays, 5:30pm - 7:30pm

November 17th      January 26th

December 1st      February 2nd

December 8th      February 9th

## Resource links

✓ Spark\* : [Sparkcleanenergy.org](http://Sparkcleanenergy.org)

✓ Sign up for the course: [http://action.sparkcleanenergy.org/hawaii\\_energy\\_ventures\\_series\\_kickoff](http://action.sparkcleanenergy.org/hawaii_energy_ventures_series_kickoff)

✓ Our local Facebook networking site: <https://www.facebook.com/SparkCleanEnergyHI/>

✓ Articles & mentioned resources: [http://action.sparkcleanenergy.org/hawaii\\_evs\\_content](http://action.sparkcleanenergy.org/hawaii_evs_content)

✓ MIT Entrepreneurship 101: <https://www.edx.org/course/entrepreneurship-101-who-customer-mitx-15-390-1x-0>

Location provided by  
our partner



Pioneer Plaza  
900 Fort Street Mall #1888  
Honolulu, HI 96813

# ACCELERATORS & INCUBATORS

Energy Ventures  
Honolulu 2015

*Benefit from Hawaii rebranding itself as a paradise for start ups.*

**Programs you can apply to expand your start up and get up making your idea a success.**

## Energy Exceleator

Energy Exceleator operates as a program of the Pacific International Center for High Technology Research (PICHTR). PICHTR was founded in 1983 to tackle the challenges of Hawaii's oil dependency. In 2008, the state adopted one of the most aggressive renewable energy standards by setting a goal of 70% clean energy by 2030. We began working to support energy innovation in Hawaii through a program called Hawaii Renewable Energy Development Venture, which funded energy innovation with \$9M of support from the U.S. Department of Energy.

<http://energyexceleator.com>

## XLR8UH

XLR8UH is a first of its kind Proof of Concept Center and Venture Accelerator. In March of 2014, the Vice President of Research and Innovation (VPRI) funded XLR8UH with monies to be used towards investing in the commercialization of Hawaii IP and startups. XLR8UH educates, mentors, and invests in the University of Hawaii's world-class research and talent. Our founders range from students to post docs, faculty, and alumni. XLR8UH is one of the first university investment programs in the nation to take an equity stake in the companies it invests in, revolutionizing the way innovation is commercialized at universities.

<http://www.xlr8uh.com>

## Blue Start Ups

Blue Startups is a technology accelerator founded by Henk Rogers, founder of Blue Planet Software (sole agent of Tetris®). Blue Startups concentrates on helping scalable-technology companies including Internet, software, mobile, gaming and e-commerce compete on a global scale. A member of the Global Accelerator Network, Blue Startups follows the Techstars mentor-driven accelerator model, reaching networks in Hawaii, Asia and the Silicon Valley. Blue Startups is fast becoming a nexus of entrepreneurial activity in Hawaii, and between Asia and Continental U.S.

<http://bluestartups.com>

## High Technology Development Corporation

High Technology Development Corporation (HTDC) is a state agency established by the Hawaii State Legislature in 1983 to facilitate the development and growth of Hawaii's commercial high technology industry. The State views high technology as an important driver in the diversification of Hawaii's economy and one that provides quality, high-paying jobs for Hawaii residents.

<http://www.htdc.org>

## VERGE Accelerate

VERGE Accelerate focuses on elevating and accelerating early-stage entrepreneurs working to address market opportunities at the intersection of technology and sustainability.

<https://www.greenbiz.com/events/verge/honolulu/2016>

# HUBS & SHARED SPACE

Energy Ventures  
Honolulu 2015

---

## Protohub Honolulu

---

Downtown

ImpactHUB operates as a co-working, event and program space for members. This year they completed the year long on-boarding process to achieve Impact Hub status joining 82 Impact Hubs in major cities around the world focused on creating innovative and sustainable impact locally rooted and globally connected.

Membership includes:

- ✓ beautiful city and ocean views
- ✓ a kitchen
- ✓ blazing fast wi-fi
- ✓ free coffee and organic tea
- ✓ Herman Miller ergonomic chairs (we sold what we needed to and kept enough for this space!)
- ✓ refreshing air conditioning
- ✓ industrial printer
- ✓ a small meeting room for \$15/hr for Members (otherwise \$35)
- ✓ a large conference/training room for up to 18 people for \$35/hr for Members (otherwise \$75)

---

## Real Office Center

---

Chinatown

Our mission is to provide a platform for startup companies and the creative community. A ROC in home base that will have everything needed to stimulate and foster the growth of emerging innovators. Extending ROC's Ohana to Hawaii through our friendly staff, emphasis on education, and capital and corporate sponsors, we are here to support the growth and success of O'ahu's entrepreneurs.

---

## Box Jelly

---

Kaka'ako

BoxJelly is a co-working space which services monthly memberships, as well as meeting & event space reservations for members and non-members alike.

More than just an office or business center, BoxJelly thrives from the interactions that its members have with one another and the space. The emphasis on community helps to foster a collaborative environment, from which innovation is bred.

---

**Hawaii State Public Library is a surprisingly good resource.**

---

There is an entire section of books dedicated to business skills, entrepreneurship guides, and how to run a sustainable business.

They also provide space to rent for meetings at some of their locations, application to rent a space can be found on the website. <http://www.hawaii.boe.net/AdminRules/Documents/Standard%208-206.2%20amended%20EXHIBIT%203%20Rqst%20to%20use%20Library%20Fac.pdf>

# COMPETITIONS & AWARDS

Energy Ventures  
Honolulu 2015

*Info on Spark\* Clean Energy competitions*

## Spark\*'s Collegiate Cleantech UP Competitions

On June 25, the U.S. Department of Energy selected Spark\* Clean Energy to administer the 2016-2018 Cleantech University Prize ("Cleantech UP Hub") program, supporting and training the next generation of energy innovators and entrepreneurs. Spark\* Clean Energy is responsible for training student entrepreneurs, developing a national clean energy prize, and serving as a coordinating body for student energy entrepreneurship training across the nation. The Energy Ventures Series is designed to be a preparation for entering into these competitions. Winning a regional competition, and going on to win the national competition will earn students venture capital and help with starting their venture. Top students from each region will be invited to 3-day VentureWell commercialization training, and will have access to their fallow on services and possible funding.

The three closest competitions to Hawaii are listed below, with First Look West at Cal Tech being the one that Hawaii students are anticipated to attend. Other Cleantech UP collegiate competitions that are open to students nationally are the MIT Clean Energy Prize (MIT), and Rice Alliance for Technology and Entrepreneurship (Rice University).

### First Look West

*California Institute of Technology  
Pasadena, CA  
Southwest Region  
Application Opens 10/21/2015  
Application Deadline 2/15/2016  
Event date: 5/18/2016*

### Berkeley Cup

*University of California Berkeley  
Berkeley, CA  
Northwest Region  
Application Opens 9/1/2015  
Application Deadline 10/10/2015  
Event date: 2/19/2016*

## National Competition

Spark\*'s National Conference on Student Energy Innovation will be held during the summer. The National Conference brings together student leaders from the around the country to discuss issues in energy businesses, advocacy, policy, and finance, including the collegiate energy landscape. The conference showcases the winners and runners-up of the regional competitions, who compete for \$100,000 in cash prizes. The Conference will provide opportunities to network with professionals across the energy community.

# LOCAL RESOURCES

---

Energy Ventures  
Honolulu 2015

---

## HNL Soup

---

HNL Soup is a micro-granting dinner celebrating and supporting community projects in Honolulu. SOUPs are hosted every other month at a rotating venue.

Three projects with a community-focused benefit are chosen to pitch. At the end of the soup dinner, the crowd casts their vote for which project they'd like to assign the benefit of the community chest!

<http://www.hnlsoup.org>

---

## Hawaii Green List

---

Need to find an organization? Want to know what's going on in Honolulu? Green List Hawaii is a membership supported Sustainable Community Association. We publish the Hawaii Business & Community Resource Directory, Hawaii Community Events Calendar, Go Green Buy Local Newsletter, and the GreenList Blog.

Green List Hawaii believes in the values of sustainability and promotes local businesses, Made in Hawaii products, environmental organizations, community groups, educational resources and local events.

<http://www.greenlisthawaii.com/about-us.html>

---

## NELHA

---

Located on the Kona coast of the big island, Hawaii's innovative green economic development park plays a significant role in Hawaii's growth in ocean energy technologies and sustainable development. HOST Park's applied energy zone houses enterprises that test renewable energy technologies on the cusp of commercialization. Activities at the park fulfill statewide priorities and complement the visitor industry in West Hawaii. They are home to an OTEC facility, which uses the temperature difference between surface and deep water to produce energy and desalinization. Using the water produced by the OTEC facility enables a variety of research from sea horse farming to intensified solar.

<http://nelha.hawaii.gov/>

# BOOKS

Energy Ventures  
Honolulu 2015

**These books will train you to close loops and think in systems for a better understanding of sustainability and creating a sustainable business model.**

---

## Thinking in Systems

---

by Donella Meadows & Diana Wright

*Thinking in Systems*, is a concise and crucial book offering insight for problem solving on scales ranging from the personal to the global. Edited by the Sustainability Institute's Diana Wright, this essential primer brings systems thinking out of the realm of computers and equations and into the tangible world, showing readers how to develop the systems-thinking skills that thought leaders across the globe consider critical for 21st-century life.

Some of the biggest problems facing the world—war, hunger, poverty, and environmental degradation—are essentially system failures. They cannot be solved by fixing one piece in isolation from the others, because even seemingly minor details have enormous power to undermine the best efforts of too-narrow thinking.

---

## Cradle to Cradle

---

by William McDonough and Michael Breungart

"Reduce, reuse, recycle" urge environmentalists; in other words, do more with less in order to minimize damage. Instead, why not challenge the notion that human industry must inevitably damage the natural world?

In fact, why not take nature itself as our model? A tree produces thousands of blossoms in order to create another tree, yet we do not consider its abundance wasteful but safe, beautiful, and highly effective; hence, "waste equals food" is the first principle the book sets forth. Products might be designed so that, after their useful life, they provide nourishment for something new - either as "biological nutrients" that safely re-enter the environment or as "technical nutrients" that circulate within closed-loop industrial cycles, without being "downcycled" into low-grade uses (as most "recyclables" now are).

Elaborating their principles from experience (re)designing everything from carpeting to corporate campuses, the authors make an exciting and viable case for change.

---

## Confessions of a Radical Industrialist

---

by Ray C Anderson and Robin White

In 1994, Interface founder and chairman Ray Anderson set an audacious goal for his commercial carpet company: to take nothing *from* the earth that can't be replaced *by* the earth. Now, in the most inspiring business book of our time, Anderson leads the way forward and challenges all of industry to share that goal.

With practical ideas and measurable outcomes that every business can use, Anderson shows that profit and sustainability are not mutually exclusive; businesses can improve their bottom lines and do right by the earth.

# Labs & Research Institutions

Energy Ventures  
Honolulu 2015

Within the UH system there are several labs and research facilities dedicated to research on clean energy. These facilities would be useful to contact to create and test prototypes, or for help overcoming a specific problem you encounter.

## Renewable Energy & Island Sustainability (REIS)

The REIS Center was established in 2009 and funded through an internal University of Hawai'i at Manoa grant on sustainability. Faculty come from the College of Engineering and eight other schools and colleges to work on cutting edge research and education problems in renewable energy and island sustainability (REIS). Current funding includes a Department of Energy (DOE) grant on work force training in Strategic Training and Education in Power Systems.

<http://manoa.hawaii.edu/reis/>

## Hawaii Natural Energy Institute

Research on Photovoltaics, Ocean Energy, Wave Energy, OTEC, Wind Energy, Alternative fuels including biomass, Methane Hydrates, Batteries & Fuel Cells, and Grid Integration

From their website:

“The Hawaii Natural Energy Institute (HNEI), a research unit of the School of Ocean and Earth Science and Technology (SOEST), University of Hawai'i at Manoa (UHM), conducts research of state and national importance to develop, test and evaluate novel renewable energy technologies. The Institute leverages its in-house work with public-private partnerships to demonstrate real-world operations and enable integration of emerging technologies into the energy mix. Founded in 1974, HNEI was established in statute in 2007 to address critical State energy needs.”

<http://www.hnei.hawaii.edu>

## Digital Fabrication Lab

Part of UH's school of architecture, has the resources and tools for digital fabrication and can be used after taking a workshop.

<http://www.arch.hawaii.edu/fabrication.php>

## School of Ocean and Earth Science & Technology

SOEST has multiple facilities for research, including a Hawaii Sustainable Energy Research Facility (HiSERF), various microscope facilities, boats for ocean research, and ocean observation stations, and an island dedicated for research.

<https://www.soest.hawaii.edu/soestwp/tech/>

## Hawaii Sustainability Energy Research Facility

From their site:

Established to accelerate acceptance and deployment of fuel cells for commercial and military applications. The mission has been expanded to include battery and other energy storage technologies. The facility is made possible by generous support from the Hawaiian Electric Company, and houses eight test stands for testing of single cells from 50 to 600 cm<sup>2</sup> and small stacks (up to 5 kW), including one high speed hardware-in-the-loop station for dynamic testing.

<http://www.hnei.hawaii.edu/facilities/hawaii-sustainable-energy-research-facility-hiserf>

# News Sources

Energy Ventures  
Honolulu 2015

*Newsletters and resources to keep you up to date locally and in the field of clean energy*

**Don't be the last one to know! Stay on top of what is happening in your industry locally and globally.**

---

## The Sustainable Leader

---

Free - online only

The Sustainable Leader was launched in the February of 2013 in Honolulu to create a space where people who are passionate about making the world a better place for us and our children can meet and share their ideas.

The Sustainable Leader is a citizen media syndicate comprised of citizen journalists and thought leaders from all over the world, all of whom are focused on discussing and pushing the envelope towards a more sustainable world.

It is a fantastic resource on both local and global issues, and a great place to contribute and showcase your own work.

[thesustainableleader.org](http://thesustainableleader.org)

---

## Hawaii Business Magazine

---

Paid - online after publication date

While not specifically about clean energy, this publication often covers stories that effect the local clean energy landscape, including in depth reporting on the HECO & NextEra situation. They also frequently have tips for entrepreneurs and insights into local business culture

<http://www.hawaiibusiness.com>

---

## Sustainable Brands

---

Free - online only

Showcases success stories and issues for sustainable companies and their policies. Great resource if your trying to solve problems within your own venture and learn the best practices and standards across a wide swatch of sustainable businesses They also host online events and are home to a resource library.

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

---

## Energy Manager Today

---

Free - online only

Round up of news within the energy sector, be it efficiency or production. Directed at those in industry to keep them informed and up to date.

<http://www.energymanagertoday.com>

---

## Post Carbon Institute

---

Activist organization to promote a carbon free future. Post Carbon Institute provides individuals and communities with the resources needed to understand and respond to the interrelated economic, energy, and ecological crises of the 21st century. They promote innovations for a more resilient future.

[postcarbon.org](http://postcarbon.org)

# COMMUNITY RESOURCES

Energy Ventures  
Honolulu 2015

*Local groups for entrepreneurs and clean energy professionals*

## WiRE

*Sorry, women only for this one!*

WiRE is a forum for women who are working to bring about a sustainable Hawaii powered by clean energy. Women active in the fields of energy, renewable energy, energy efficiency, and

transportation, are welcome to come talk story. Each month, experts from the energy industry address a different topic – ranging from new projects breaking ground to state policy, workforce development to utility regulation.

As we educate each other, develop relationships, and

become aware of new opportunities, we hope the result will be real partnerships and accelerated progress toward a sustainable and prosperous future for Hawaii.

[hawaiiwire.org](http://hawaiiwire.org)

## Envision Hawaii

Envision Hawai'i's mission is to serve as a catalyst that drives high-impact, social change for Hawai'i's common good by leveraging the principles of social entrepreneurship and by inspiring Hawai'i's next generation of leaders. Envision Hawai'i provides opportunities for professional development as well as space for informal discussion and networking. They host first Tuesday Pau Hanna networking events, mini conferences, and provide community support for young professionals in Hawai'i.

<http://envisionhawaii.org>

## Student Sustainability Coalition of Hawaii (SSCH)

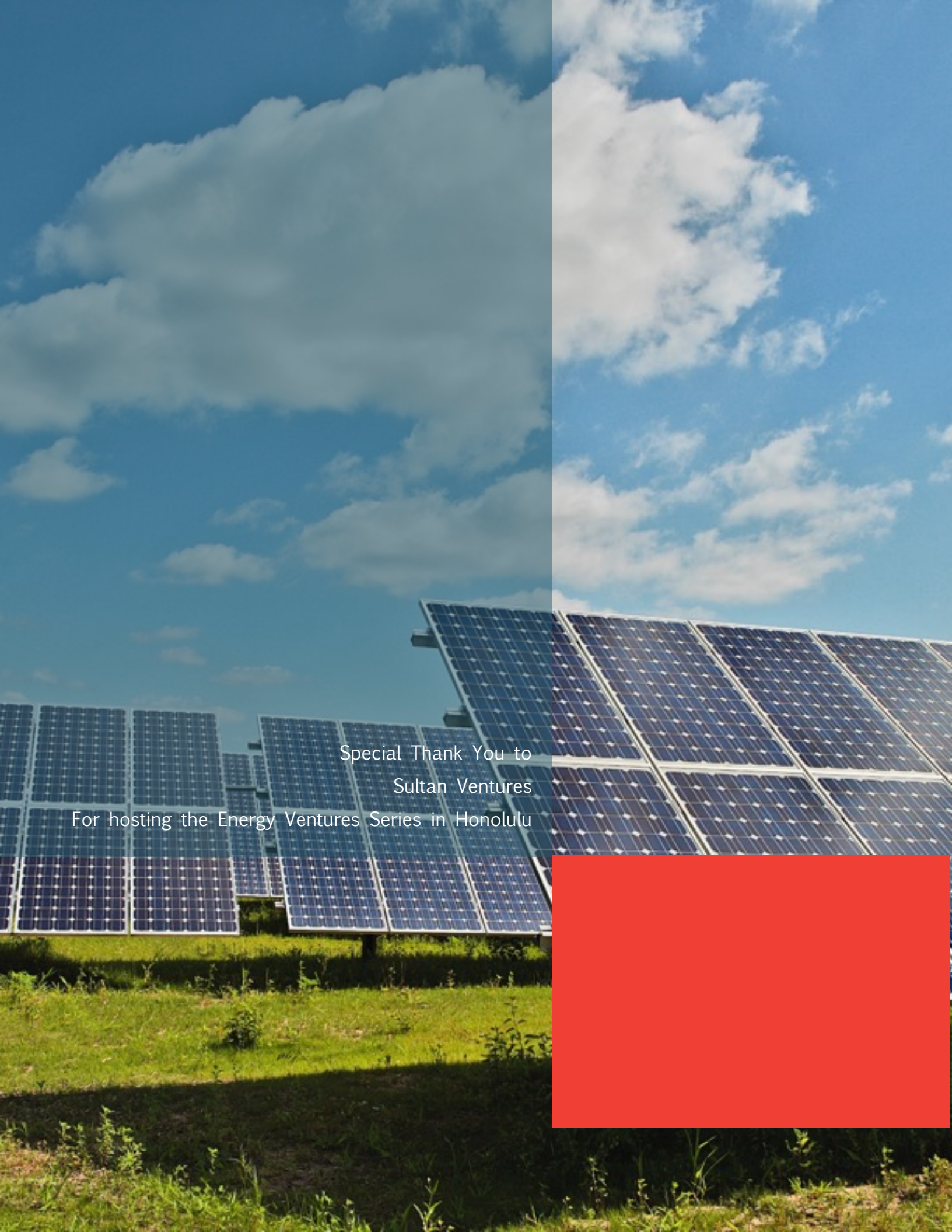
SSCH bridges a connection between students working on or passionate about environmental sustainability on campuses across the Hawaiian islands, including the University of Hawaii system and Hawaii Pacific University, Chaminade University, and Brigham Young University Hawaii.

<http://www.hawaii.edu/sustainability/ssch/>

## HPU Leaders for a Sustainable Future

Leaders for a Sustainable Future (LSF) strives to encourage sustainable practices both on campus and throughout the local community. By participating in diverse sustainability related events, LSF members have the opportunity to network, build their resume, gain leadership skills, and contribute to meaningful activities.

<http://www.hpu.edu/Studentlife/Clubs/LeadersforaSustainableFuture.html>



Special Thank You to  
Sultan Ventures  
For hosting the Energy Ventures Series in Honolulu

