

The Current serves Hawaii's businesses and policy makers in making informed decisions about clean energy investments and policy. Hawaii's clean energy sector is a significant driver for economic development to replace fossil fuel expenditures with home-grown industries that generate revenue and create high-paying jobs for local residents.

**HAWAII: THE CLEAN ENERGY GATHERING PLACE**  
**MARK GLICK, ENERGY ADMINISTRATOR**


This fall finds Hawaii taking important planning steps on the path to energy independence. This edition of *The Current* details several gatherings that promise to pay great dividends for the state in the coming months and years.

The first gathering was the Hawaii Clean Energy Initiative's (HCEI's) third stakeholder meeting, which focused on big data and modeling. HSEO's capability to model and envision the road to a clean energy future before we get there will help the state optimize our strategy, saving costs, avoiding pitfalls and ensuring that we take advantage of every opportunity.

Hawaii also hosted dignitaries from Korea as the state signed a memorandum of understanding (MOU) with the Korea Institute of Energy Technology Evaluation and Planning (KETEP), one of many international agreements that will yield international cooperation and expertise for Hawaii's clean energy efforts.

Finally, HSEO partnered with GreenBiz Group on VERGE Hawaii, a leading clean energy event series that will bring the brightest minds in clean energy to Hawaii over the next two years. In announcing the partnership, I have said that Hawaii is the place where the next generations of energy solutions will be created and VERGE Hawaii is an open invitation to the world's best creative minds in clean energy.

## OUR CLEAN ENERGY VISION

The Hawaii State Energy Office (HSEO) will transform Hawaii's economy by growing the clean energy sector. To this end, HSEO works to stimulate the deployment of clean energy infrastructure and serve as a catalyst for energy innovation and test bed investments. In doing so, HSEO will lead the charge in achieving 100 percent renewable energy in the electricity sector by 2045, and exceeding the target of 4,300 gigawatt hours of savings by 2030.

## LEADING THE CHARGE

**Hawaii Clean Energy PEIS: Environmental Impacts and Mitigation Measures**  
 Achieving 100 percent renewable energy by 2045 will require diverse clean energy technologies and projects, many of which have the potential to impact Hawaii's environment. A better understanding of these impacts, and the measures available to minimize them, can help stakeholders determine the clean energy technologies and projects that may be most applicable for Hawaii. To support this process, the US Department of Energy, in cooperation with the State of Hawaii, developed the Hawaii Clean Energy Programmatic Environmental Impact Statement (PEIS). The PEIS discusses the typical environmental impacts associated with 31 clean energy technologies and activities that could be implemented in Hawaii, the measures available to minimize impacts and the Hawaii environments that could be affected. As it is programmatic, the PEIS does not assess a particular project or environment, but uses representative projects to discuss the potential impacts associated with a given technology or activity. The final PEIS statement is now available.

**Airport Energy Savings Ready for Take-Off**

The Hawaii Department of Transportation's Airport Energy Savings Program is expected to have a big economic impact, according to the Research and Economic Analysis Division in DBEDT. Over a 20-year performance period (which includes the two-year construction and installation phase), the project will result in:

- \$20.2 million in tax revenues (2014 dollars)
- \$148.5 million in income to households (2014 dollars)
- 867 jobs generated or supported each year for the first two years and an average of 63 jobs generated or supported each year during the next 18 years of the performance period

**Utilities Renewed**

Hawaii's utilities generated 1,989 gigawatt-hours (GWh) of renewable energy in 2014, up 16 percent from 2013. The utilities have doubled their renewable generation in the six years since the inception of the Hawaii Clean Energy Initiative (HCEI) in 2008.



**HAWAII CLEAN ENERGY PEIS: ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

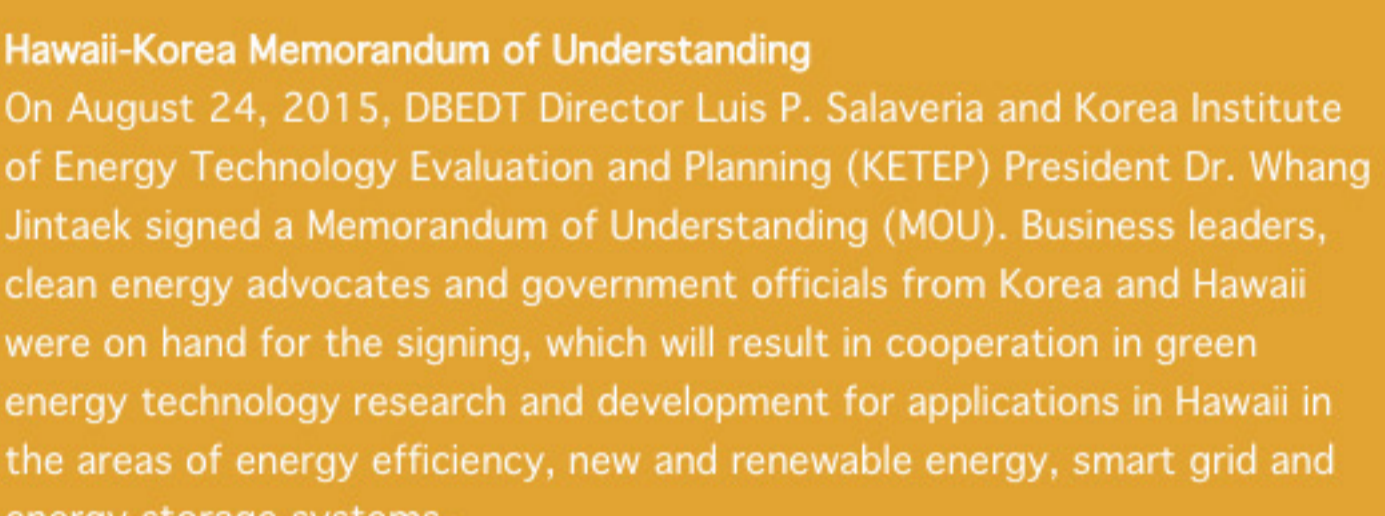


**AIRPORT ENERGY SAVINGS READY FOR TAKE-OFF**



**UTILITIES RENEWED**

## FEATURED STORY: CLEAN ENERGY ADVOCATES NEAR AND FAR COME TOGETHER IN HAWAII


**Hawaii-Korea Memorandum of Understanding**

On August 24, 2015, DBEDT Director Luis P. Salaveria and Korea Institute of Energy Technology Evaluation and Planning (KETEP) President Dr. Whang Jintae signed a Memorandum of Understanding (MOU). Business leaders, clean energy advocates and government officials from Korea and Hawaii were on hand for the signing, which will result in cooperation in green energy technology research and development for applications in Hawaii in the areas of energy efficiency, new and renewable energy, smart grid and energy storage systems.

**Constructing Models**

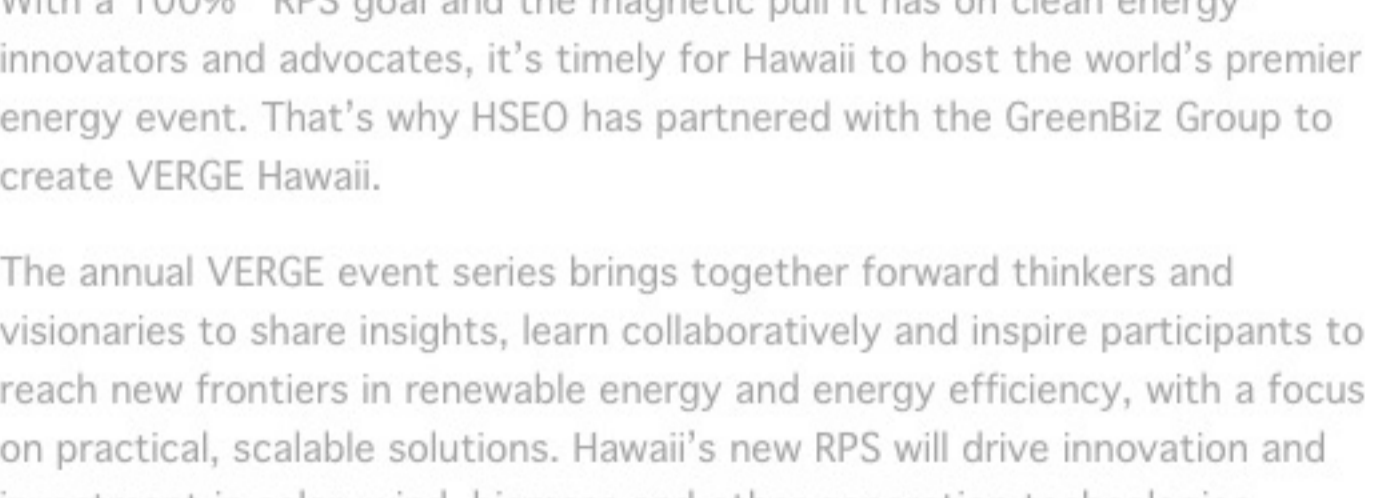
The topics at HCEI's third public stakeholder meeting on August 26, 2015 were planning models and access to big data. Entitled "Modeling Hawaii's Clean Energy Future," the meeting was a chance for stakeholders to discuss the complexity of the energy eco-system and how scenario planning can help build a resilient grid that supports and is supported by the multitude of technologies that will make up Hawaii's energy mix.

Speakers at the event included:

- **Chris Yunker, Program Manager, Energy Systems and Planning Branch of HSEO.** Mr. Yunker demonstrated how models can help prepare for fundamental changes in customers' energy needs and demands, determine cost-effective and resilient potential energy scenarios and identify infrastructure investment options that best meet given objectives.
- **Derek Stenclik, Manager, Power Systems Strategy, GE Energy Management.** Mr. Stenclik provided an overview of a recent grid study done in collaboration with the Hawaii Natural Energy Institute (HNEI). The study examined how high penetrations of renewable resources could impact grid stability and operations and the costs and benefits of various mitigating strategies.

Following the meeting, HSEO and HNEI will continue their modeling efforts and outreach to stakeholders for feedback. HNEI will decide the best way to share information as they recalibrate their work in light of the state's new RPS goals.

## FEATURED STORY: ON THE VERGE OF SOMETHING BIG



With a 100% RPS goal and the magnetic pull it has on clean energy innovators and advocates, it's timely for Hawaii to host the world's premier energy event. That's why HSEO has partnered with the GreenBiz Group to create VERGE Hawaii.

The annual VERGE event series brings together forward thinkers and visionaries to share insights, learn collaboratively and inspire participants to reach new frontiers in renewable energy and energy efficiency, with a focus on practical, scalable solutions. Hawaii's new RPS will drive innovation and investment in solar, wind, biomass and other generation technologies, battery storage, microgrids, electric vehicles and a variety of grid-management tools. Becoming a world leader in renewable energy will position Hawaii as a premier testing ground for these innovations. Hawaii's isolated grid and vulnerability to climate change are also unique factors that make it the ideal location for real-world clean energy problem-solving and applications.

The two-year series kicks off with the VERGE Hawaii: Asia Pacific Clean Energy Summit, June 21-23, 2016, at the Hilton Hawaiian Village. To learn more about the event series, visit

<https://www.greenbiz.com/events/verge/honolulu/2016>. To nominate a speaker, go to

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

## DID YOU KNOW?



Last year, Hawaii was best in the country in rankings of total solar power capacity per person by state. A study from Environment America Research & Policy Center says Hawaii outdoes other states because its policies have made increased solar penetration possible for homeowners, businesses, communities and utilities. Way to go solar, Hawaii!

## ENLIGHTENING NEWS AND ARTICLES



**Regulators close door on Hawaiian Electric's rooftop solar program**

(Pacific Business News, 10/13/15)

**Hawaii's Energy Excelsior startup companies have raised \$207M to date**

(Pacific Business News, 10/8/15)

**NextEra Energy not backing down despite renewed opposition to HECO sale**

(Pacific Business News, 10/8/15)

**Renewable generation looking ahead**

(Pacific Business News, 9/4/15)

**Hawaii leads the nation in solar power per capita**

(Pacific Business News, 9/3/15)

**Hawaii 2015 Energy Report Card**

(Pacific Business News, 8/25/15)

**Honolulu named one of top green cities in the U.S., new report says**

(Pacific Business News, 10/14/15)

**Hawaii's clean energy financing program doles out 150 applications**

(Pacific Business News, 11/3/15)