

Hawaii Energy Policy Forum

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PRESENTS

A BRIEFING AND DIALOGUE ON

HAWAII'S CLEAN ENERGY INITIATIVE

- **Location:** Hawaii Electric Industries Training Room #2 - American Savings Bank Bldg- 8th Flr,
- **Event Date:** Monday, January 28, 2008
- **Time:** 2 pm – 4 pm

The Event

The U.S. Department of Energy leadership will address the Hawaii Energy Policy Forum (“Forum”) and other interested energy stakeholders and policymakers to begin a meaningful dialogue of Hawaii’s energy issues—and, more specifically, *policy, regulatory frameworks, financing, and technology integration challenges*—with the State’s energy leadership and decision makers.

We invite you to this unique and extremely valuable opportunity to hear from the leadership of the USDOE and to share your thoughts, concerns, and hopes for Hawaii with key decision makers for the HAWAII CLEAN ENERGY INITIATIVE (“HCEI”). Showing Hawaii’s strong commitment to clean energy policy, regulations, and investment allows the USDOE to, in turn, bring stronger and deeper resources to the State. We have an opportunity to share with the USDOE the state’s great and to build a federal-state relationship to maximize the opportunity to engage the federal government and federal resources in Hawaii’s future.

The event will occur just a few hours after the HCEI is launched by the Governor and Assistant Secretary Karsner.

Background

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A partnership is being established between the USDOE and the State of Hawaii to establish a long-term partnership to increase the level of clean energy penetration in Hawaii. This partnership, titled the ***Hawaii Clean Energy Initiative (HCEI)***, seeks a fundamental and sustained transformation in the way renewable energy and energy efficiency are planned and used in the State.

The DOE-Hawaii Partnership will build upon the dynamic, ongoing work of public and private organizations at the State, county, and grassroots levels in order to achieve several key goals, including demonstrating innovation, creating economic opportunity, building the workforce of the future, and creating a replicable global model for achieving similar results.

After the HCEI is launched in late January 2008, Hawaii and DOE will establish working groups in four areas—end use efficiency, electric generation, energy delivery, and transportation—and one energy systems integration working group to coordinate them. The objective of these groups will be to define the structural, technical, regulatory, financial and other barriers that would prevent the state from achieving and sustainably maintaining its clean energy potential.

Participants:

Alexander 'Andy' Karsner is the Assistant Secretary for Energy Efficiency and Renewable Energy (EERE) at DOE. It is his explicit interest, commitment, and vision that has helped drive the Hawaii Clean Energy Initiative to the magnitude that it is today. Before being appointed to his current post, Assistant Secretary Karsner served as an international developer and energy entrepreneur in the private sector on a wide range of technologies and fuel sources. He has extensive experience financing and managing large-scale power projects in North America, Asia, the Middle East, and North Africa.

Steven Chalk is the Deputy Assistant Secretary for Renewable Energy at DOE. As a career fed, his commitment is key to the longevity of the renewable energy portion

of HCEI and its institutionalization in the federal government process. Chalk has extensive experience in the renewable energy world.

David Rodgers is the Deputy Assistant Secretary for Energy Efficiency at DOE. As a career fed, his commitment is key to the longevity of the energy efficiency portion of HCEI and its institutionalization in the federal government process. Rodgers has extensive experience in the energy efficiency world.

Drew Bond is the Acting Director of Commercialization at DOE. It is this office that works most directly with public and private entities to deploy technologies in practical applications all over the country.

Bill Parks is the Deputy Assistant Secretary for the Office of Electricity at DOE. He has been “on loan” to Hawaii DBEDT for over a year and is coordinating HCEI on the Hawaii side. Parks’ commitment has been key to the success of the Initiative thus far and he will continue to play an important role in the HCEI, particularly in helping to design policy and regulatory models that promote clean energy. Parks has extensive experience in the energy world, in both the public and private sectors.

Maurice Kaya is the Chief Technology Officer for DBEDT and has achieved widespread national and international acclaim for his work in renewable energy, energy efficiency, and other strategic technology sectors. Before beginning his long career serving the State of Hawaii, Kaya held engineering positions in the public and private sectors in Oahu.

Michael Hamnett is Co-Chair of the Hawaii Energy Policy Forum and Director of the Social Sciences Research Institute Institute

Briefing and Dialogue:

Hawaii’s Clean Energy Initiative

- Hawaii Electric Industries Training Room #2 - American Savings Bank Bldg-8th Flr - Monday, January 28, 2008 2 pm – 4 pm

Summary Notes:

Alexander Karsner, Assistant Secretary for Energy Efficiency and Renewable Energy

We will address Hawaii's regulatory framework first, which will then allow technology and capital to flow smoothly into Hawaii. The federal government adds the value of convening, focusing, facilitating and collaborating. We can catalyze something into motion to get to our goal of "more, better, faster." We want Hawaii to be more renewable, and alleviate Hawaii's dependence on oil; so the question is, do we react or act preemptively? We pledge that the federal government will be as engaged as Hawaii wants it to be, meaning to be an enduring exercise. We have confidence that this initiative will continue beyond this administration.

- High price signals
- Pressure on consumers pocket books
- A hardware problem
 - Replace oil conversion technologies
- Capital markets
 - Government can't totally fund it
- Policy
 - Connection between hardware problem and capital
 - First priority – get the policy right to create the activity
 - Greatest priority for change
- Power of convening
 - Catalyze something into motion
 - Integrated approach
- Show "it can be done"
- Commercialize "at scale"
- Showcase
- Integration
 - Storage
 - Control systems

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- Smart load controls
- Right policies & incentives
- Government should be technology neutral
- Clean? Available? Inexpensive
 - Let the consumer decide
- Invest ourselves in the technology
- Let better ideas win
- Renewable very site specific
- Cultivate the right conditions
- Hawaii – test bed and demonstration center
- Not pursuit of technology at any cost
- Bring technologies down the cost curve to make them competitive
- Grid intermittency
- Lack of a predictable policy environment
- How do you empower consumers
- Incentivize efficiency
- Incentivize in an unconstrained way
- No lack of capital where regulatory and policy are correct
- How should we be meeting more regularly?
- Show what has the best effects
- Need to test at a scale that addresses the problem
 - Need commercialization & deployment
 - Got to have answers
 - This problem not getting easier
 - Structure the “right” vehicle
 - Team of career professionals
- Programmatic metrics
 - Island nations taking the lead
 - First to focus on transformation
- US DOE
 - Act as a facilitator

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- Value of time
 - Cumbersome process
 - Need to “fast track” the outcomes we seek here
- Prioritize
 - Efficiency first
 - Core working group
 - “Hardware Conversion” for Hawaii’s energy economy

Question and Answer Session

Q: What are you trying to do?

A: 30 years ago, we reacted to a price spike and a political situation. Now, we are dealing with an increase of global energy demand that will exceed supply of petroleum/carbon. The myth is over that this supply is endless; price signals tell us this very clearly. For Hawaii, there is an irony of living in paradise while having the most carbon per capita/fossil fuel dependence in the nation.

Q: Are there any relevant state or federal laws relating to Congress’ renewable energy tax credit?

A: Any incentive this country gives is always linked to tax code. This allows appropriators to have erratic implementation of incentives that were actually needed to be durable, dependent and constant. We will most likely see another erratic, short-term implementation of tax credits.

Q: California wanted to raise gas standards for their state. If Hawaii did this, how would this USDOE initiative help us get there?

A: It is to our benefit not to have many different standards across the nation. Federal standards have a place, local standards are applicable when

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enforceable and when jurisdictions have sovereignty over those standards. The most important question is: what can be enforceable to foster technology to advance rapidly? An example is in California, taxi or bus fleets are manufactured only for the California market. This ends up being a gaming of the system rather than a benefit for the entire nation. For the first time since CAFE was initiated, on December 17, 2007 the standards were modernized, making them 40% higher than before. How do you deal with new energy technologies that don't apply to old rules (plug in hybrids, hydrogen fuel cells)? Vehicle efficiency definition is currently almost exclusively based on oil. What we really want are cars, homes and offices to move to zero emissions.

Comment: Hawaii has the ability to transform biomass to many different projects (have signed an agreement with China). If we can transfer appropriate technology around the world, we can not only reduce our dependency, but also help other countries become more self-sufficient.

Q: Does the federal government have a type of technology it favors? What would the federal government want to use here for the rest of the country and world?

A: Government should be technology neutral, and should pick what the citizens want. Mainly we are going to ask, is it clean, abundant, reliable and cost-effective? We will leave it up to the locals to decide the market; better ideas will win for better applications.

Q: Ocean Thermal Energy Conversion (OTEC) is underutilized, and could power the state if seriously developed. If selecting Hawaii as a demonstration project, federal funds need to be paved with tax incentives for private firms. What kind of public-private partnerships do you envision? What is the timeframe?

A: The federal government has already spent millions and we have folks on the ground, and on this trip we have brought our career senior management. Most importantly, technologies need to be cost effective. What we need is to develop

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government integration and storage capacity. Biofuel and biomass are close to that point. Right now there is a lack of capital for renewable energy, which is due to the lack of predictable policy environment. Our first focus should be to create a policy and regulatory environment that is in line with our vision.

Q: Will there be a full time federal staff here in Hawaii to ensure consistency throughout administration changes?

A: Bill Parks is full time in Hawaii, and the career senior staff will be working on this initiative beyond the election. The next step is to decide how the federal government and Hawaii will meet regularly, since the locals can take care of themselves and don't need Washington to shepherd them.

Q: Have you done something to ensure this is going to continue past this administration?

A: Again, this initiative is bipartisan and the career officials stay beyond administration changes. This is not a political issue; it is a "do or die" issue. This country must test energies at scale to the energy problem. We have reached technological sufficiency and problem identification, so Hawaii will be the living laboratory.

Q: Are other countries sharing this model?

A: Iceland and New Zealand; island nations that are impacted by climate change.

Q: Regulatory issues have a tendency to create major obstacles here in Hawaii. Investors pull out because the timeframe is too long. With this initiative, can we expedite regulatory procedures?

A: The federal government wants to play a useful role in fast tracking outcomes. We can use lessons learned and work with other agencies.

Q: What about conservation and efficiency?

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A: Conservation is not directly addressed, but rather we view our goal as “getting more from less.” We’ve moved past the old notion that economic growth and energy consumption have to be positively correlated. The most important first step is to rate the application with its efficiency; we need to get as lean as possible before you can tackle a different source. We have developed four working groups: Regulatory Fuels, Generation, Integration and Storage Control, and Efficiency. These working groups will require local expertise.

David Rodgers, Deputy Assistant Secretary for Energy Efficiency

- How to make efficiency acceptable
 - Life cycle costing
 - Connect benefits to consumer from provider
 - ie; builder -> buyers
 - Aggregation
 - Small purchases add up to big savings
 - Show business how they can profit from energy efficiency
 - Help utilities promote energy efficiency
 - Evaluate role of regulation

Top issues that Hawaii and the Federal Government should work on:

- Demand reduction programs
- Improve building codes
- Schools
- Military facilities/bases
- Housing and development
 - Build it better now
- Commercial (retail, big box, hotel, condos)
 - Connect with architects & developers

Drew Bond, Acting Director of Commercialization

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We want to accelerate technology further into the market faster, focus on our relationship with national energy labs and build three bridges:

- Talent -- Entrepreneur in Residence Bridge
 - Accelerate technology from lab to market
 - Find a leading venture capital firm, and give them the resources to find a new technology and develop a business plan
- Information Bridge
 - have lots of technology sitting on the shelf that were not feasible due to market conditions at the time. However, market conditions have changed
 - In August, had a venture capital technology showcase,
- Capital Bridge
 - Capital mechanism at national labs
 - Provide cost share
 - Scale up
 - Loan guarantee program
 - Originally \$4 billion. Now \$38 billion
 - Technologies that store carbon
 - Integrated technology solutions are needed.
 - Put projects together and submit
 - Can be at the state level

Question and Answer Session

Q: How much money do you have, and can we get it?

A: We are not here to buy people hardware; we want to improve storage, prices and the state of technology. We are here to help with best practices and policies. The four working group teams will do initial scoping to find the best demonstration projects in the next couple of months.

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Q: What is the timeframe?

A: In the next couple of months, the four working groups will check out initial projects on different islands, will get feedback, then move on to the next set of potential projects. In 36 months we will have real changes to look at.

Q: Are there any emphases on hydro program activity or in ocean energy?

A: This year, the federal government spent \$10 million for ocean/wave energy. Our first step is to benchmark technologies; perhaps some of these technologies can be tested in Hawaii.