



Clean and Green Technology

**US Japan Council Annual Meeting
Washington, DC
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Pacific International Center for High Technology Research

Maurice Kaya, Project Director

Background of PICHTR

- Established in 1982 after oil crises
- Cooperative Initiative of Japan and US Governments
- International Board of Directors
- Strong corporate ties to US DOE and Japan MOFA
- Expertise in energy, environment, training
- Energy Projects: Renewable energy, OTEC, biomass, solar, geothermal

PICHTR Clean Energy Experience

- Pioneering work in OTEC development
- Sugar Cane Biogasification Trials at Paia, Maui
- Downhole Co-axial heat exchanger for geothermal energy
- Numerous solar and wind technology trials at Kahua Ranch
- Fiji Islands renewable energy systems for Japan Government
- Carbon sequestration with US, Japan and Norway
- Training for power plant managers and operations staff, Pacific Islands

Current PICHTR Projects

- Hawaii Renewable Energy Development Venture (HREDV) for US DOE
- Hawaii Technology Development Venture for US DOD
- Center for Training for Homeland Security
- Medical Records Automation Project
- Technology Commercialization for State of Hawaii
- Support for Okinawa Hawaii Clean Energy Collaboration

Emerging Technology Needs—Foci for HREDV's Future Efforts

- Integration of intermittent RE into electric grid via controls and energy storage
- Integration of distributed energy systems and ancillary services to better utilize them
- Integration of electricity/transportation systems including electric vehicle technology
- Development of controls, smart grids, simulations, systems engineering
- Island-based biofuels production and processing
- Alternative energy for agriculture

Clean and Green Technology Panel

- US and Japan are green technology leaders
- Highlights of US, Japan, and corporate visions
- Explore synergies between the two countries
- Discuss some of the collaborative projects
- What types of initiatives should be pursued to achieve mutual gains and solidify global leadership?
- What are the useful roles for the US Japan Council?

Our Panelists

- **Bill Parks**, Office of Electricity Delivery and Energy Reliability, US Department of Energy
 - US Government perspective
- **Osamu Onodera**, New Energy and Industrial Technology Development Organization (NEDO), Government of Japan
 - Japanese Government perspective
- **Guido Bartels**, IBM, Chair of GridWise Alliance
 - Multi-national corporation perspective