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# Hawaii Energy Storage Seminar

June 16, 2010

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University of Hawaii Maui College

**7:30 – 8:30 am Sign-in**

**8:30 – 9:00 am Welcome and Introductions – Jennifer Stinebaugh, Energy Storage Conference Facilitator, Sandia National Labs**  
Introduction of guests, including a special video welcome by the County of Maui Mayor, Charmaine Tavares, and introductory remarks by Ms. Sheri Morrison, Managing Director, County of Maui; Dr. Clyde Sakamoto, Chancellor, UH-Maui College; and Mr. Edward Reinhardt, President, Maui Electric Company, Ltd.

**9:00 – 9:40 am [Applications and Benefits of Storage](#) – Garth Corey, Energy Storage Systems Engineer, Sandia National Labs**  
Mr. Corey will cover the economic and operational benefits of energy storage.

**9:40 – 10:10 am [Case Study I, Lana`i](#) – Abbas Akhil, Hawaii Clean Energy Initiative Technical Lead, Sandia National Labs**  
Mr. Akhil will go over the history and current status of the storage implementation at the Lana`i La Ola PV farm.

**10:10 – 10:30 am Break**

**10:30 – 11:30 am [Storage Technology Overview](#) – Garth Corey, Energy Storage Systems Engineer, Sandia National Labs**  
Mr. Corey will review existing and emerging battery technologies.

**11:30am – 1:00 pm Lunch at The Pa`ina**

**1:00 – 1:30 pm Introduction to Afternoon Session – Theodore Peck, Hawaii State Energy Administrator**  
Mr. Peck will present an overview of Energy Storage Projects in Hawaii.

**1:30 – 2:00 pm [Challenges of Storage](#) – Dan Borneo, Senior Engineering Project Manager, Sandia National Labs**  
Mr. Borneo will look at the challenges of storage, including cost, integration, and life cycle issues.

**2:00pm – 2:20 pm [Case Study II, AEP](#) – John Boyes, Manager of the Energy Infrastructure and Distributed Energy Resources Department, Sandia National Labs**  
Mr. Boyes will discuss a case study on Columbus, Ohio-based AEP's installation of a one- megawatt (MW) battery in West Virginia nearly two years ago, allowing the utility to delay construction of a new substation.

**2:20 – 3:00 pm [Other Storage Technologies That Might Be Suitable for Hawaii](#) - Abbas Akhil, Hawaii Clean Energy Initiative Technical Lead, Sandia National Labs**  
Mr. Akhil will examine non-battery storage technologies that might be suitable for Hawaii, including thermal storage, flywheels, and seawater pumped hydro.

**3:00 – 3:20 pm Break**

**3:20 – 3:45 pm [Case Study III, Beacon Power](#) - John Boyes, Manager, Energy Infrastructure and Distributed Energy Resources, Sandia National Labs**  
Mr. Boyes will analyze a case study of Beacon Power's Stephenson, NY plant (near Albany) where it stores energy in flywheels, aimed to help in power-grid regulation to balance the second-by-second discord between electrical supply and demand.

**3:45 – 4:30pm Q&A Panel**