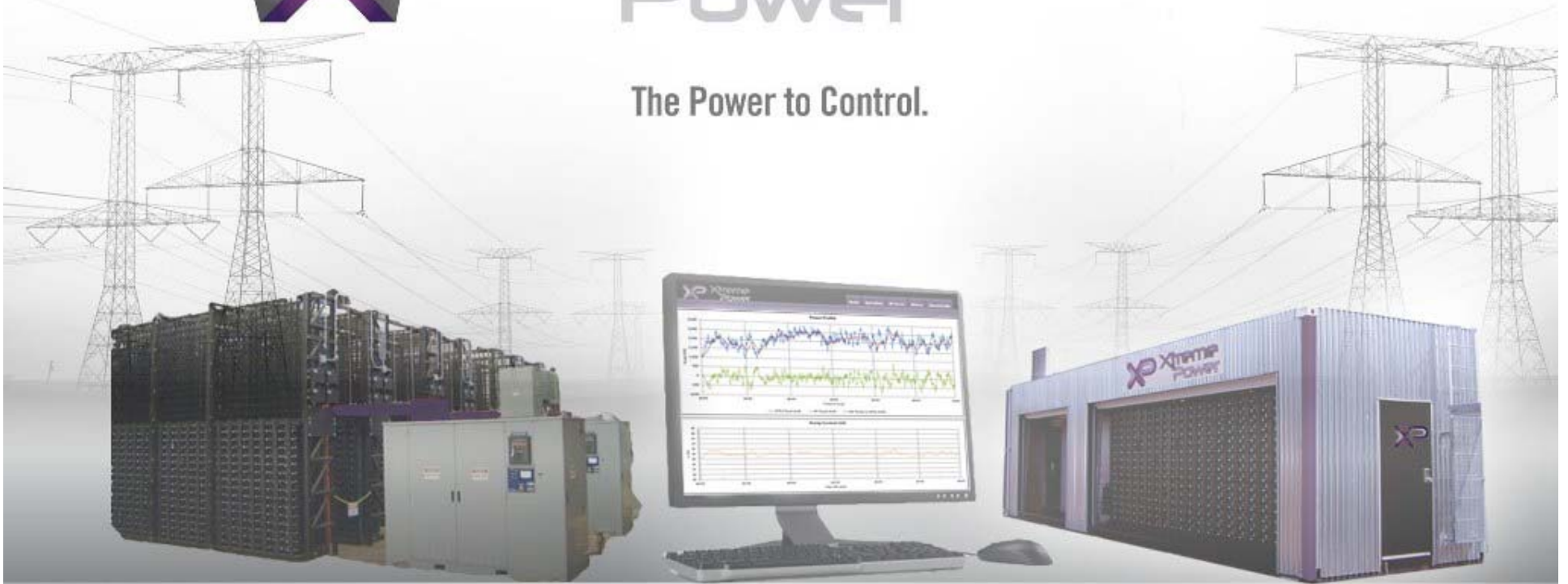




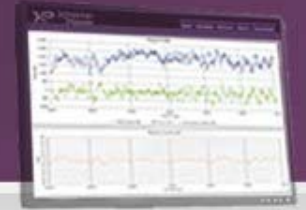
The Power to Control.



**Senate Committee on Energy & Environment,
Senator Mike Gabbard, Chair
Senator Shan S. Tsutsui, President of the Senate
Informational Briefing**

December 04, 2012

Xtreme Power, Inc.



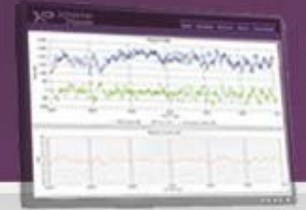
- Founded in November, 2004
- Designs and manufactures integrated energy storage and power management systems and services that improve grid reliability
- HQ in Austin, Texas
- Leading provider of utility scale power and energy management systems
 - Customers include: Duke Energy, Ford, First Wind and others
 - Partnerships with companies: GE, Sumitomo and others
- Top investors from leading technology and venture firms, including:
 - Bessemer Venture Partners, Sail Capital Partners and Skylake
 - Dow Chemical, BP, Fluor and Posco

XP's Dynamic Power Resource (DPR)



- Grid-connected power management and energy storage solutions
- Xtreme Power integrates all components into large, utility scale systems that provide a full range of services engineered to meet the Xtreme demands of the electric grid
- XP manufactures the best products and services technology for the market, and deploys the top thinkers and engineers in the field to ensure safe, reliable and problem solving energy services

Why Energy Storage?



- Xtreme Power provides power and energy storage management systems
 - Allows existing grid operators and independent power producers to seamlessly integrate renewable energy sources into the electric grid.
 - Controls and smoothes power generation variability from solar and wind sources (ramp rate control)

First Wind generated energy
(green line)

XP Energy Management
(red line)

Resulting energy to the electric grid
(blue line)

Xtreme Power's Kahuku Web Interface



- This means lower costs, more reliable power, enhanced system and grid stability performance
 - Enabling renewable energy sources, which generate power intermittently, to integrate and synchronize with existing electric grid and system realities.

Our Promise and Performance in Hawaii



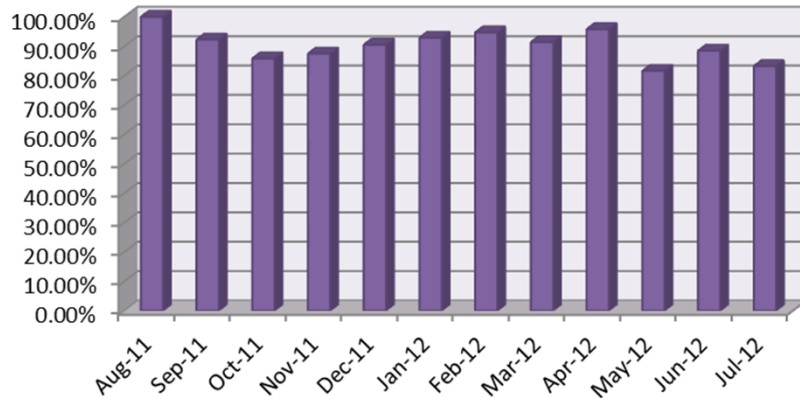
- A Visionary Partnership between First Wind and Xtreme Power
 - To demonstrate the value and real market potential of marrying advanced energy storage technology with renewable energy generation

- Highlights of Xtreme Power's Operating Field Performance
 - > 75 Megawatts Delivered
 - > 117,300 Hours of Integrated Power Module Operation
 - > 325 Gigabytes of Recorded Data
 - > 2,500 MWh Charged and Discharged
 - 6+ years continuous operations at the South Pole

Kahuku Site System Performance

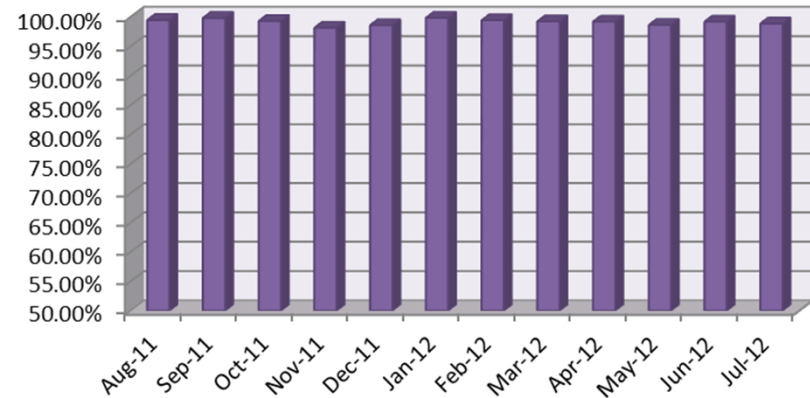


Monthly Availability



Site Availability

Compliance



Compliance

■ Performance Metrics

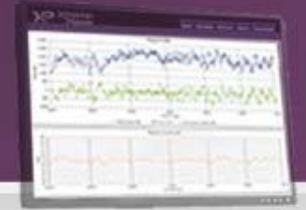
- Availability is uptime, if the system isn't up (available) it doesn't provide services
- Compliance is a performance metric, compliance greater than 90% is good

■ Kahuku site performance exceeded design criteria (availability, ramp rate compliance)

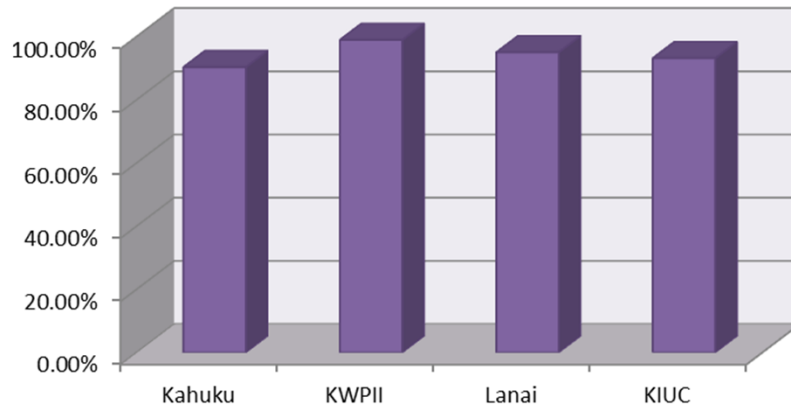
- Kahuku BESS prevented an average of ~2,349 ramp rate violations per day
- ~1,234,550 ramp rate violations prevented in one year

■ Solid performance shows that energy storage is viable and effective

Other Hawaii Sites DPR Performance

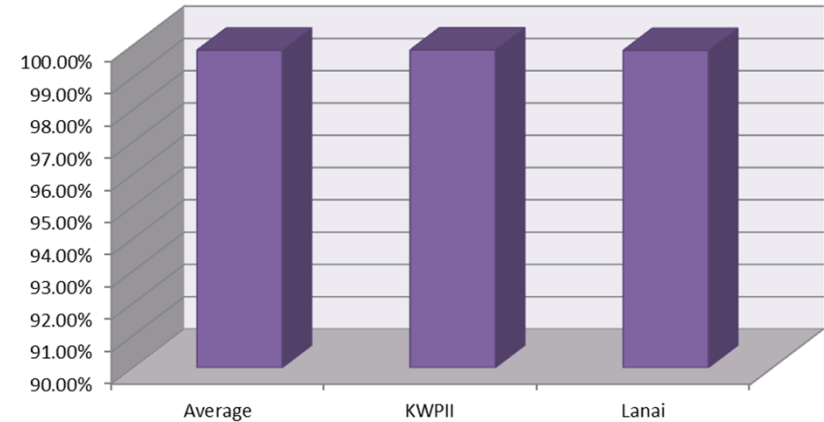


Availability



Availability

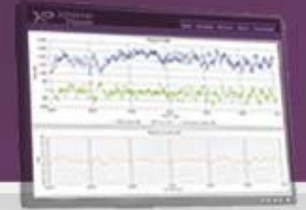
Compliance



Compliance

- All Hawaii site performance exceeds design criteria (availability and compliance)
- KIUC DPR system designed and deployed for solar generated energy ramp rate control
 - However, solar plant installation was delayed,
 - The flexible DPR system was modified, thru a software update, to perform frequency support
- KWP II provides ramp rate control, frequency and VAR support, simultaneously
- Solid performance and flexibility again shows that energy storage is viable and effective

Kahuku Fire Incidents



■ First Fire (4/22/2011)

- Ignited inside vendor supplied inverter 9. No XP PowerCell batteries involved.
 - Led to installation of new DC fuses, bus hardware upgrades and smoke barrier installations

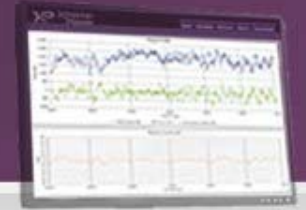
■ Second Fire (5/23/2011)

- Ignited inside vendor supplied inverter 7. No XP PowerCell batteries involved.
 - Cause of both fires was a capacitor manufacturing defect.
 - 14 separate improvements were made including smoke detectors placed inside of all inverters.
 - All systems back to normal functioning within three months.

■ Third Fire (8/1/2012)

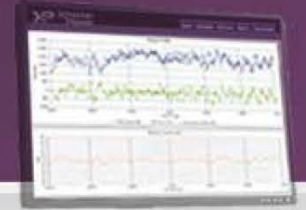
- Appears to ignite near base of battery rack 9 in the concrete aisle.
 - Fire slow to start as observed from First Wind surveillance video
 - Honolulu fire department arrived on site in a timely manner
- XP's DPR Control System performed as designed.
 - Sensors monitored and system sent fault signals. HFD called to site
 - ◆ Initially one DPR unit and then entire facility shutdown autonomously, as designed
- Fire allowed to burn for many hours until the entire facility was destroyed.
- Cause of fire ignition is currently unknown and further investigation is underway.

Why Energy Storage is Safe



Xtreme Power is proud:

- Utility scale energy storage provides new capabilities to the electric grid, enabling large scale integration of renewable power generation on the grid
 - Enabling renewable energy sources, which generate power intermittently, to integrate and synchronize with existing electric grid and system realities
- None of our systems has ever recorded a single failure or fire event other than at the Kahuku site;
 - Providing more than 117,300 hours of operations, and counting, of smoothly functional systems across the world;
- In addition to Xtreme Power's world-class technology already deployed in Hawaii, XP partners with leading technology providers such as:
 - GE, Dynapower, Eaton, Parker Hannifin and others



XP Xtreme Power

The Power to Control.