

Energy Storage Made Simple

CLIENT: Waialua High School **LOCATION:** Oahu, Hawaii **APPLICATION:** Hybrid Off-Grid



The Hawaii Department Of Education (HIDOE) had a problem: rising temperatures, antiquated electrical infrastructure and the need for air conditioning in schools. In Hawaii, classroom temperatures can exceed 100°F (38°C), creating challenging learning environments. Estimates to install traditional grid-tied cooling totaled \$1.695 billion. HIDOE began piloting innovative solutions that could cut that cost: off-grid photovoltaic + battery air conditioning systems. Estimates for this solution were ~ \$140 million.

SimpliPhi Power's non-toxic and safe storage solutions were integrated into hybrid off-grid solar PV + battery air conditioning systems for classrooms at Waialua High and Intermediate Schools. These systems create energy independence and decrease costs, freeing up funds that can be rededicated to support curriculum and learning resources. In partnership with Haleakala Solar and Ameresco, 21 outdoor rated cabinets with 7-10 SimpliPhi PHI 3.4 batteries and Outback Radian inverters were installed DC coupled to distributed solar arrays. Each cabinet has the capacity to increase the battery system, which is a unique advantage of SimpliPhi's modular approach to energy storage. Over 140 batteries (~500 kWh) are operating these air conditioning units today, and more systems are coming to schools statewide.



- The 24V and 48V PHI 3.4 kWh Smart-Tech Battery with integrated Battery Management System (BMS) protection
- Compatible with all industry standard inverter/charge controllers
- Operating temperature -4° to 140°F (20° to 60°C)
- 98% efficiency rate
- No ventilation or cooling required

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