Energy neutral portable classroom, Honolulu, HI, United States

**Project data**

- **Project group**: Building and civil engineering works
- **Client**: Department of Education in Hawaii, USA
- **Project background**: Public commission
- **Estimated start of construction**: September 2011

**Main author**

- **Name**: Mark Stephen Tufte Anderson
- **Profession**: Architect
- **Organization**: Anderson Anderson Architecture
- **City, country**: San Francisco, CA, United States

**Further author(s)**


**Comment of the Holcim Awards jury North America**

The jury recognized the project for its sound general concept with an impressive teaching capacity. Through its potential for transferability, even to remote locations, the project delivers a strong contribution. With its spatial and functional qualities it directly supports education in the classrooms, and enhances the awareness for the systems by their direct visibility as well as the monitoring and Internet-publishing of performance.

**Project description by author**

This portable classroom is designed to provide an optimized educational environment for students and teachers while advancing sustainable design principles. The classroom maximally conserves as well as collects and generates natural resources, including electrical energy, daylight, wind energy and rainwater. As well as being strong, efficient and conserving, natural forces and resources are highlighted and exposed throughout the structure, and all systems and performance criteria are monitored and broadcast to the web. The building acts as a learning tool for occupants, other schools and the general public.

**Relevance to target issues by author**

- **Innovation and transferability – Progress**
  - 30 year life-cycle energy and cost analysis
  - Modular and mobile for efficient re-use
  - Systems performance monitored and web broadcast as tool for making and classroom educational tool
  - Modular and mobile for efficient re-use
  - Prefabrication for minimal waste and embedded energy management
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- **Environmental quality and resource efficiency – Planet**
  - Energy neutral goal; energy positive performance analysis
  - Designed in analysis collaboration with independent science and engineering reviewers
  - Natural ventilation and daylighting to require minimal energy input
  - PV and hot water solar panels and Wind turbine system
  - Water catchment
  - FSC certified wood, rapid renewable and recycled materials
  - Prefabrication for minimal waste and embedded energy management
  - Modular and mobile for efficient re-use

- **Economic performance and compatibility – Prosperity**
  - Prefabrication for minimal waste and embedded energy management
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- **Contextual and aesthetic impact – Proficiency**
  - Prefabrication for minimal waste and embedded energy management
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