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ANNUAL AWARDS ISSUE

SUBTLE SHIFTS
Design Moves Away from
the Big Gesture

Energy Efficient Resource Recovery Project

The Renewable Energy Institute at California Polytechnic State University addressed the need for more economical and environmentally sound waste-management facilities by proposing a prototype biological waste-processing facility for the university's San Luis Obispo campus. The planned Energy Efficient Resource Recovery Facility is intended to demonstrate cost-effective and environmentally sound wastewater and solid-waste treatment using proven technologies, with an emphasis on resource recovery and energy-efficiency.

With a three-year, \$342,000 budget, researchers analyzed available technology, including systems for disinfection, irrigation storage, compost curing, methane storage, and liquids treatment and recovery. They also conducted site-selection surveys on the

campus and addressed the economics of the project. Proposed technologies for the facility include straw-bale construction, roof ponds for passive solar heating and cooling, integrated photovoltaics for electrical generation, and gray-water plumbing systems that recycle sewage water for non-potable reuse. Researchers claim the facility is designed to recover energy, water, and valuable nutrients and mitigate the odors typically associated with waste processing.

An external economic audit and technological review of the project was conducted to determine its feasibility. Though the economic review is not complete, the technological review indicated that the project would, in fact, work.

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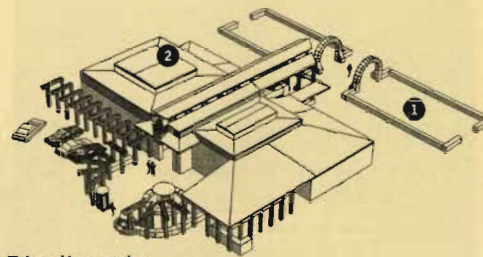
CLIENT: California Polytechnic State University

FUNDING: California Institute for Energy Efficiency; California Polytechnic State University; Pacific Gas and Electric; San Luis Obispo County Integrated Waste Management Authority

MAXMAN: *I commend the effort. They're really looking at the problem holistically and have made a product of their research.*

BECKLEY: *This has taken some of the theoretical research that has been around for a while and applied it to a particular situation in a very admirable way. I was also impressed by the collection of sponsors.*

PLATTUS: *I think the collection of sponsors is indicative of the political dimension of this particular project. The problem of waste management is one of the things that could create incentives for regional cooperation among a large group of constituencies.*



Education center

- 1 demonstration gardens
- 2 solar atrium
- 3 wastewater pond system
- 4 constructed wetlands
- 5 disinfection facility
- 6 wildlife habitat
- 7 treatment buildings



Resource recovery facility