



FOOTHILL-DE ANZA
Community College District



Foothill College



De Anza College

Sustainability Program

November 15, 2007



Sustainability Program

- What We Have Done
- Where We Are Going
- Challenges



Sustainability Program

What We Have Done

- Photovoltaics
- Cogeneration
- Artificial Turf
- Energy Management System (EMS)
- Kirsch Center for Environmental Studies
- Student & Community Services
- Science Center
- Other

What We Have Done

Foothill College – Photovoltaics

PROJECT SCOPE

100 kW peak AC rated solar parking shade system in Parking Lot 2A.

QUICK FACTS

Project Completion:	June 2006
Power Production:	158,000 kWh/year

PV Shade Structure



PV Equipment



What We Have Done

Foothill College – Cogeneration

PROJECT SCOPE

Four 60 kW Capstone micro-turbines.



QUICK FACTS

Project Completion:	June 2006
Power Production:	1,800,000 kWh/year
Heat to Pool:	90,000 therms/year



What We Have Done

Foothill College – Artificial Turf

PROJECT SCOPE

Replace natural grass surface with an artificial surface comprised of recycled materials.

QUICK FACTS

Project Completion:	November 2005
Project Budget:	\$3,770,984
Water Savings:	25% of campus total

Football Stadium - construction



Football Stadium - complete



What We Have Done

De Anza College – Photovoltaics

PROJECT SCOPE

201 kW peak AC rated
PowerTracker solar parking
shade system on the Lot C
Parking Structure.

QUICK FACTS

Project Completion:	June 2006
Power Production:	340,000 kWh/year

PV Tracking Array



PV Equipment



What We Have Done

De Anza College – Cogeneration

PROJECT SCOPE

Four 60 kW Capstone micro-turbines.

QUICK FACTS

Project Completion:	June 2006
Power Production:	1,800,000 kWh/year
Heat to Pool:	90,000 therms/year

Micro-turbines



Swimming Pool



What We Have Done

Energy Management System

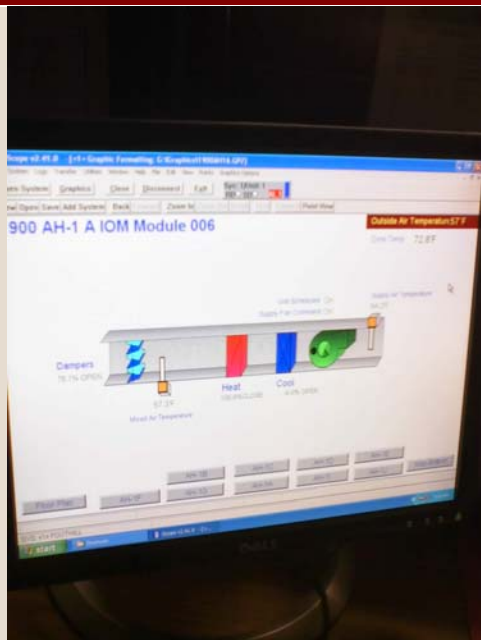
PROJECT SCOPE

Network control of HVAC and lighting system
District wide. Controls temperature set points, air
handler run times and lighting.

QUICK FACTS

Connection Points:	approx 20,000
Area Controlled:	1,000,000 ASF

Terminal



Controls





Sustainability Program

What We Have Done

De Anza Kirsch Center

PROJECT SCOPE

Features a new program in Sustainable Studies that is designed to demonstrate energy efficient design and renewable energy technologies.

QUICK FACTS

LEED Certification:	Gold
Project Completion:	September 2005
Project Budget:	\$11,587,485
GSF:	22,582

Kirsch Center



Kirsch Center





Sustainability Program

What We Have Done

De Anza Kirsch Center

Center for the Built Environment
Livable Buildings Award Winner 2007:
Kirsch Center for Environmental Studies

<http://www.cbe.berkeley.edu/livablebuildings/2007kirsch.htm>



Sustainability Program

What We Have Done

De Anza Student & Community Services

PROJECT SCOPE

Space for 4 student support and workforce development programs.

QUICK FACTS

LEED Certification:	Silver
Project Completion:	June 2005
Project Budget:	\$14,835,776
GSF:	46,748

Student & Community Services



Student & Community Services





Sustainability Program

What We Have Done

De Anza Science Center

PROJECT SCOPE

Expansion of Biology and Science offerings and the renovation of outdated labs.

QUICK FACTS

LEED Certification:	Silver (pending)
Project Completion:	July 2004
Project Budget:	\$21,191,839
GSF:	47,109

Science Center



Science Center





What We Have Done

Other Measures

- Central Utility Plant for Foothill College
- Chiller & Boiler Efficiency Upgrades
- VAV Conversions
- Lighting Retrofits & Occupancy Sensors
- Electric Service Carts
- Chipper for Green Waste
- 1991-1992 to 2005-2006 use/ASF
 - 17% reduction in electricity
 - 8% reduction in natural gas

Where We Are Going

- DeAnza College Sustainability Management Plan
 - 2 years in the making
 - Approved by all governance groups
- District Sustainability Master Plan
 - Identify consumption base line
 - Set long term targets
 - Identify annual goals

Sustainability Program **Challenges**

- Higher initial costs
- Managerial resources to lead the charge
- Continued communication to faculty, staff, students and the community about progress and rationale for actions
- Coordinating College sponsored initiatives with District sponsored initiatives



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Foothill-De Anza CCD Sustainability Program

Questions

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