



FOOTHILL-DE ANZA
Community College District

Chancellor's Advisory Council



Foothill College



De Anza College

DRAFT

Sustainability Plan

January 11, 2008



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Sustainability Plan

- What We Have Done
- Where We Are Going
- Master Plan Outline
- Challenges
- Actions and Goals for 2008



DRAFT What We Have Done

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



DRAFT What We Have Done

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

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

DRAFT What We Have Done

- 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



DRAFT What We Have Done

■ DeAnza College Sustainability Management Plan

- 2 years in the making
- Approved by all governance groups



DRAFT Where We Are Going

- **District Sustainability Master Plan**

- **Several Key Elements are Essential**

- *Strong support from the board*
- *“Champions” at the colleges and Central Services*
- *Knowledgeable faculty, staff and administrators*
- *Financial resources*
- *Modern environmental policies to guide the decision-making*
- *Annual goals to identify and report on projects for the year*
- *Subject area specialists to promote initiatives as diverse as recycling, transportation, purchasing, district vehicle usage, buying energy, academic programs, etc.*
- *A strong web based communication tool to show initiatives, accomplishments and usage of resources*
- *Metrics to measure current effort and improvements made*

- Presidents Climate Commitment

- Building Construction and Renovation
 - LEEDs Certifications

- Climate Protection Practices
 - Alternative Energy Sources
 - Photovoltaic
 - Cogeneration
 - Buy “Green Electricity”

■ *Sustainable Operations*

■ *Reduction of energy / water consumption*

- Lighting standards and hours of use
- Set points for heating and cooling
- Training of plant services staff
- Education of students, faculty, and staff

■ Dining Services Practices

■ Motor Vehicle Fleet

■ *Recycling and Waste Management*

- Use of Materials
- Recycling
- Landscaping green waste

■ Environmentally Preferable Purchasing

- Reduction in purchases
- Re-use of resources
- Purchasing “green” products
- Influencing packaging/shipping materials and practices

■ *Education Programs*

- Instructional programs
- Kirsch Center programs
- Academic Senate Sustainable Climate Initiative
- Others

■ Student and Staff Transportation

- Education and Incentives for
 - Carpools
 - Alternatives



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Plan Outline - continued

■ *Communication*

- Faculty
- Staff
- Students
- Community

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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

DRAFT Actions and Goals

■ Strategic Initiative Tasks for 2007 -2008

■ Handout



Strategic Initiative Tasks for 2007-2008		Tasks for 07-08	Lead Person	Timeline
	District Sustainability Master Plan			
1	BOARD POLICY	Revise BP 3220 and 3214, and AP 3214; Consolidate to one policy; route through governance process		
2	BUILDING CONSTRUCTION AND RENOVATIONS	1. Consider Board adoption of LEEDS standards for new buildings		
		1. Develop broad standards for renovation projects to incorporate LEEDS type standards		
3	CLIMATE PROTECTION PRACTICES			
	A. To develop on site capacity for generating electricity			
	Photovoltaic	1. Initiate engineering and cost analysis for expansion of PV system using bond money (approved project in Measure C)		
	Cogeneration	no further action at this time		
	B. Buying "Green electricity"	1. Determine sources and cost of purchasing "green" electricity for district.		
4	SUSTAINABLE OPERATIONS			
	Reduction of energy consumption			
	Reduction of energy consumption Energy management control systems			

		2. Articulate water control systems status, next steps and training		
		3. Review use of groundwater wells for landscaping for Foothill		
		4. Review options for additional storm runoff control		
	Sustainable Dining Services practices			
		1. Develop procedure to purchase perishable food from local sources by in house staff at De Anza and contractor at Foothill		
		2. Develop procedures to reduce/eliminate use of plastics in food delivery to include plastic water bottles		
	Motor Vehicle fleet			
		1. Review of usage to minimize/consolidate trips in district vehicles		
		2. Develop purchasing strategy for high mileage or hybrid vehicles		
5	RECYCLING AND WASTE MANAGEMENT			
	Use of materials			
		1. Articulate written procedures for use of earth friendly materials in custodial cleaning products		
	Recycling			
		1. Review strength and		

		3. Review surplus property program to eliminate surplus property going to dumps.		
6	ENVIRONMENTALLY PREFERABLE PURCHASING			
	Purchasing			
		1. Education on re-use of resources and re-use of resources		
		2. Review existing practices on purchasing “green” products and establish pathways for improvement		
		3. Develop purchasing practices to influence packaging/shipping materials and practices		
7	EDUCATIONAL PROGRAMS			
	Instructional programs and student services to educate students about FHDA philosophy and their role in achieving district/college goals	Under consideration		
	Instructional programs to provide certification for technicians	Under development		
8	STUDENT AND STAFF TRANSPORTATION			
	Transportation			
		Education and incentives for students, faculty and staff to use carpools and alternate transportation		
9	COMMUNICATION			



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De Anza College

Sustainability Plan

Questions

January 22, 2008



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Sustainability Plan

Backup slides

January 22, 2008



Sustainability Program

DRAFT 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



DRAFT 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



DRAFT 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



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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



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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



DRAFT What We Have Done

Energy Management System

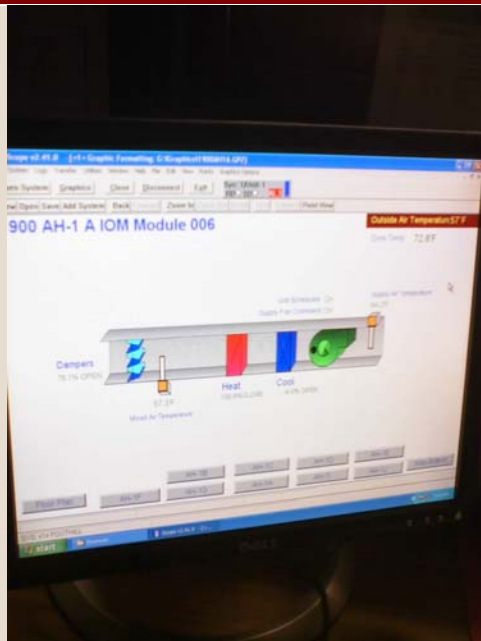
PROJECT SCOPE

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

DRAFT 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

DRAFT 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

DRAFT 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

