

San Diego Community College District

**ENERGY SAVING PROJECTS
2007-1994**

YEAR	DISTRICT FACILITY
2007-2008	<p><u>City College</u></p> <ul style="list-style-type: none"> • L-100: Heater/Boiler Replacement • Parking Structure: Lighting Replaced • Energy Management System (EMS): Upgrade to Web control. • L Building: Boiler/Chiller Replacement <p><u>Mesa College</u></p> <ul style="list-style-type: none"> • LRC: Replaced roof with Cool Roof. • I-100: Replaced roof with Cool Roof. • D-100: Replaced roof with cool roof. • LRC: Replaced chiller with more efficient unit. • G Building: Chiller Replacement • LRC & G Building: Replaced a/c compressor with new turbo core units. <p><u>Miramar College</u></p> <ul style="list-style-type: none"> • A-100: Replaced Chiller with more efficient unit. • Central Plant: Motor Replacement • A-100: Boiler Replacement and new turbo core a/c air compressor. <p><u>ECC</u></p> <ul style="list-style-type: none"> • Grid Welding System Replaced • EMS Upgraded to A/C A7 <p><u>Mid-City</u></p> <ul style="list-style-type: none"> • HVAC/Energy Management System Upgrade <p><u>District wide</u></p> <ul style="list-style-type: none"> • Exterior Parking Lot: New Lighting Controls
2006-2007	<p><u>City College</u></p> <ul style="list-style-type: none"> • Replaced old 10hp electric motor in D-134 air handler with new energy efficient motor. <p><u>ECC</u></p> <ul style="list-style-type: none"> • EMS Upgrade to Web Control <p><u>Miramar College</u></p> <ul style="list-style-type: none"> • D-200, D-300, D-400, F-200 & I-100: EMS upgrade to Web control. <p><u>Mid-City</u></p> <ul style="list-style-type: none"> • EMS Upgrade to Web control to include demand lighting. <p>The following Energy Saving Projects were completed through the State Scheduled Maintenance budget:</p> <p><u>Mesa College</u></p> <ul style="list-style-type: none"> • L-100: Replaced Boiler with more efficient unit. • L-100: Replaced inefficient heaters. <p><u>Miramar College</u></p> <ul style="list-style-type: none"> • D-300: Replaced roof with Cool Roof

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2005-2006	<p><u>City College</u></p> <ul style="list-style-type: none"> • LRC: Made program changes to Automated Logic Controls in the LRC fan coils and economizers to allow them to operate more efficiently. • C Building: Replaced old 40 ton chiller with new energy efficient Trane unit. • IT Rooms & Photo Labs: Installed new a/c units. <p><u>Mesa College</u></p> <ul style="list-style-type: none"> • Cogeneration 60kw: Installed to heat pool. <p><u>Miramar College</u></p> <ul style="list-style-type: none"> • Caterpillar Cogeneration 55kw/180 ton Thermax Chiller /420 ton York Chiller: Installed to heat the pool. • Science Building: Changed two air handlers from DX to chilled water cooling.
2004-2005	<p><u>City College</u></p> <ul style="list-style-type: none"> • P-100: Installed Automated Controls • E Building: Replaced old a/c units with new energy efficient units and installed Automated Logic Controls. <p><u>Mesa College</u></p> <ul style="list-style-type: none"> • A-200, B-200, C-300, D-100, D-200, & F-200 Buildings: Replaced old a/c units. • Various Buildings: Installed EMS software to implement demand limiting. • B-100, C-100, C-200 K-200, K-300, K-400, & H-100 Buildings: Replaced old a/c units with new energy efficient units. • EMS Software: Installed to implement demand limiting on various buildings. <p><u>Miramar College</u></p> <ul style="list-style-type: none"> • A-200, B-200, C-300, D-100, D-200 & F-200 Buildings: Replaced a/c units with new energy efficient units. <p><u>Centre City</u></p> <ul style="list-style-type: none"> • Chiller/Boiler/EMS Controls: Installed during remodel. <p><u>District wide</u></p> <ul style="list-style-type: none"> • Investigated the possibility of installing Sarnafel Photo Vatalic (PV) units and cool roofs on large flat roofs needing replacement. District roofs were generally in good repair; investigated installing P.V. on the large flat roofs that were in good condition. We identified 230,000 sq. ft. which was 270,000 sq. ft. short of the amount necessary to make the project cost effective. • Contracted with independent vendors to audit our campuses to determine what we could do to reduce energy and water use.

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2003-2004	<p><u>City College</u></p> <ul style="list-style-type: none"> • A-114: Replaced two old air handlers with one new energy efficient unit. • LRC: EMS Upgrade • A-13: Installed new pumps and three-way valve. • E Building: Replaced old a/c units with new energy efficient units and installed Automated Logic Controls. <p><u>Mesa College</u></p> <ul style="list-style-type: none"> • B-100, C-100, C-200 K-200, K-300, K-400, & H-100: Replaced old a/c units with new energy efficient units. <p><u>District wide</u></p> <ul style="list-style-type: none"> • Hot Water/Chilled Water System: By upgrading system and removing booster pumps and three-way valves the system was more cost effective and efficient. • Replaced old outdoor light timers with new electronic programmable timers.
2002-2003	<p><u>City College</u></p> <ul style="list-style-type: none"> • C & L Buildings/Theatre: Replaced old pneumatic controls with Automated Logic Controls. • D-109: Replaced Air Handlers <p><u>Mesa College</u></p> <ul style="list-style-type: none"> • Pool Boiler Replaced with more efficient unit. • B-100, C-100, C-200 K-200, K-300, K-400, & H-100 Buildings: Replaced old a/c units with new energy efficient units. <p><u>District Office</u></p> <ul style="list-style-type: none"> • Changed air ducts from hot deck/cold deck to variable air volume and added variable frequency drive automated controls. <p><u>District wide</u></p> <ul style="list-style-type: none"> • Implemented mixed paper recycling. • Replaced old thermostats on all stand alone units with new electronic programmable thermostats. • Collaborated with SDG&E on several projects. Replaced all magnetic (PCB) ballast and T-12 lamps with electronic ballast and T-8 lamps; also added motion sensors to rooms.
2001-2002	<p><u>City College</u></p> <ul style="list-style-type: none"> • A & T Buildings: Various Air Handlers Upgraded <p><u>Mesa College</u></p> <ul style="list-style-type: none"> • LRC: Installed two new energy efficient a/c units on first floor computer room and three units on fourth floor. <p><u>ECC</u></p> <ul style="list-style-type: none"> • Replaced old Chiller/Boiler with 10 package units and Boiler. <p><u>District wide</u></p> <ul style="list-style-type: none"> • City, Mesa, Miramar and ECC: Installed energy systems of variable speed drives on HVAC systems.

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2000-2001	<p><u>City College</u></p> <ul style="list-style-type: none"> • York chillers installed. <p><u>District wide</u></p> <ul style="list-style-type: none"> • Implemented programs to shut down HVAC systems during breaks. • Changed lighting in all mechanical and electrical rooms to T-8 lamps.
1999-2000	<p><u>City College</u></p> <ul style="list-style-type: none"> • A & T Buildings: Installed new Air Handlers <p><u>District wide</u></p> <ul style="list-style-type: none"> • Began installations of new energy management system on HVAC and some lighting systems District wide. • Collaborated with SDG&E on several projects. Replaced all magnetic (PCB) ballast and T-12 lamps with electronic ballast and T-8 lamps; also added motion sensors to rooms.
1998-1999	<p><u>City College</u></p> <ul style="list-style-type: none"> • P-100: Replaced Boiler <p><u>Miramar College</u></p> <ul style="list-style-type: none"> • Hourglass Park: Added reclaimed water—District water costs for park cut in half.
1997-1998	<p><u>City College</u></p> <ul style="list-style-type: none"> • A-13: Replaced Boiler. <p><u>District wide</u></p> <ul style="list-style-type: none"> • Added timers on tennis courts and outside lighting
1995	<p><u>District wide</u></p> <p>Replaced incandescent exit lights with LED's at City College, Mesa College, Miramar College, West City Center and the District Office.</p>
1994	<p><u>District wide</u></p> <ul style="list-style-type: none"> • Collaborated with SDG&E on several projects. Replaced all magnetic (PCB) ballast and T-12 lamps with electronic ballast and T-8 lamps; also added motion sensors to rooms.

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ENERGY SAVING PROJECTS

Possible Future Projects

DISTRICT FACILITY	PROJECT
CITY	<ul style="list-style-type: none">• A-119: Replace air handler with more energy efficient unit.
MESA	<ul style="list-style-type: none">• Gym motor fan replacements.• I-300/I-400: Chiller/Boiler Replacement• Package Unit Replacement
MIRAMAR	<ul style="list-style-type: none">• Aviation Compressor Replacement• Package Unit Replacement
ECC	<ul style="list-style-type: none">• Replace old EMS System with more efficient system.
District wide	<ul style="list-style-type: none">• CRT Replacements• Automatic Computer Monitor Shutdown