

SAN MATEO COUNTY  
COMMUNITY COLLEGE DISTRICT

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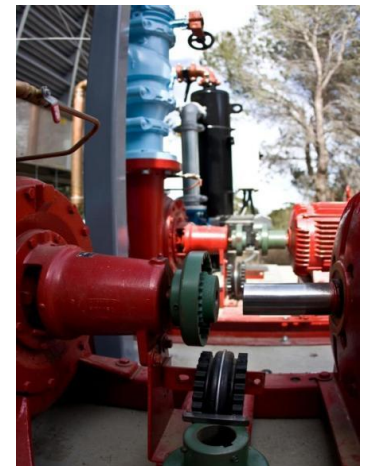
# District Energy/Sustainability Goals

- Goal - Reduce Operating Costs through Renewable and Energy Efficiency Capital Projects
- Goal - All new projects LEED Certified
- Goal – All Modernization Projects LEED Standard
- Goal - Every new project 15% below Title 24 requirements
- Goal - Mandatory PG&E Energy Efficiency/Savings by Design Application
- Goal - Mandatory Life Cycle Cost Analysis on Major Equipment



# Crafting a Plan & Executing Projects

- Design Standards
  - Mandatory Goals
  - PG&E Energy Efficiency/Savings by Design
- Project Review (Different Goals)
  - College Leadership
  - Maintenance & Operations Staff
  - Designers
  - Constituents (Faculty/Staff/Students)
- Design/Construction (Constant Vigilance)
  - Schematic Design (SD)
  - Design Drawings (DD)
  - Construction (RFI/Submittal Review)
  - Commissioning (Programming through Occupancy)



# Energy Efficiency & Sustainability Rebate Breakdown

## – PG&E Energy Efficiency

- CAN Air Handler Retrofits: Jan 2002 - \$27,000
- DW High Efficiency Lighting Systems: July 2002 - \$102,600
- CSM & SKY Co-Generation: November 2004 - \$878,557
- CSM Demand Response Participation: February 2012 - \$16,621

## – Savings by Design

- Cañada 9: March 2008 - \$24,927
- Cañada Facilities Maintenance Center (FMC): Summer 2010 - \$3,347
- College of San Mateo 5 Health & Wellness: May 2010 - \$228,968
- College of San Mateo 10: May 2011 - \$138,183
- College of San Mateo 35: Summer 2006 - \$2,775
- College of San Mateo 36: November 2006 - \$56,117
- Skyline B6/7A: May 2007 - \$38,546
- Skyline Facilities Maintenance Center (FMC): Summer 2010 - \$1,284



# Energy Efficiency & Sustainability Rebate Breakdown

## – CCC/IOU Partnership

### • Rebates Received

- Cañada 5/6: November 2011 - \$37,399
- Cañada 8: Summer 2010 - \$7,990
- Cañada 16/18 DDC Controls Retrofit: April 2009 - \$11,067
- College of San Mateo 2/4 & 14/16: March 2009 - \$52,459
- College of San Mateo 5 Aquatic Center: December 2011 - \$35,244
- College of San Mateo DDC Controls Retrofit: April 2009 - \$52,459
- College of San Mateo 8 VAV Retrofit: May 2007 - \$7,594
- College of San Mateo Transformer Replacement Project: December 2011 - \$8,914
- Skyline 3 VAV Retrofit: May 2007 - \$39,686
- Skyline 4: November 2011 - \$108,182
- Skyline 5 Library Lighting: April 2009 - \$15,203
- Skyline 7 DDC Controls Retrofit: April 2009 - \$9,011
- Skyline Transformer Replacement: April 2012 - \$7,295
- District Wide Parking Lot Lighting: April 2009 - \$1,914

### • Rebates Forthcoming

- College of San Mateo 9 Library Chiller: In Process (\$22, 207)
- College of San Mateo 10 MBCx: In Process (\$19, 077)
- College of San Mateo North Gateway: Out to Bid (\$27,600)
- Skyline Loma Chica Furnace Replacement: In Process (\$1,200)
- District Office Cooling Tower/Pump Project: June 2012 - \$10,108
- DW Burner Replacement: In Process (\$7,970)



# Energy Efficiency & Sustainability Savings Summary – To Date

- Operational Savings \$1.7M (On-going)
  - KWH
  - Therms
  - CcF
  - Labor
  - Materials
  - Synthetic Field Conversion
- PG&E Energy Efficiency: \$1,024,778
- Savings by Design: \$494,147
- CCC/IOU Partnership
  - Received \$341,958
  - Pending \$130,513



# Ongoing Challenges

- Complexities of New Systems
  - Maintenance & Service Agreements
- Staffing & Technology
  - Old vs. New
  - Wrench vs. Computers
  - Old Timers vs. Younger Generation
- Diminished M&O Budget
  - Rebates (One Time)
  - Energy Efficiency Savings (On-going)



# Best Practices

- 12 Month Systems Review
  - M&O Staff
  - A&Es
- Indoor Environmental Quality
- Regular Follow-up
  - End User
  - Facilities Staff
  - Commissioning Agent
  - CCC/IOU Partnership Staff





# New Facilities



Skyline College Building 4 Multi-Cultural/Cosmetology



College of San Mateo Building 5 Health & Wellness



College of San Mateo Building 10 College Center



Cañada College Facilities Maintenance Center (FMC)

"Facilities Excellence"

# New Facilities



Cañada College Building 9 Library/Learning Resource Center



Skyline College Building 6 Student & Community Center



"Facilities Excellence"

Skyline College Facilities Maintenance Center (FMC)