The Achieving the Dream Leader College designation recognizes an institution’s impact in the effort to improve student success and eliminate achievement gaps nationwide.
Outline

Introduction: Alamo Colleges

Energy Conservation Projects
- Continuous Commissioning (CC®)
- Summer Initiatives: Four Day Work Week and Demand Response.
- Thermal storage systems at NLC, NVC and PAC
- Green Initiatives and Emissions Reductions
- Summer Fellows

Conclusion: Benefits to Alamo
Introduction: Alamo Colleges

San Antonio College (SAC)
- 1925
- 2,166,594 ft²
- 31 Buildings
- ~ 20,000 students

Northeast Lakeview College (NLC)
- 2007
- 369,651 ft²
- 10 Buildings
- ~ 3,000 students

Northwest Vista College (NVC)
- 1995
- 838,471 ft²
- 12 Buildings
- ~ 17,000 students

St. Phillip’s College (SPC)
- 1898
- MLK: 781,460 ft²
- 18 Buildings
- ~ 11,000 students
- SWC: 460,492 ft²
- 6 Buildings
- ~ 11,000 students

Palo Alto College (PAC)
- 1985
- 567,437 ft²
- 25 Buildings
- ~ 9,000 students

Total Area¹: 5,498,597 ft²
More than 50,000 students

1) ACCD Building Inventory 2014. Includes Fire Training Academy and district offices.
Continuous Commissioning® (CC®)

- A team effort (facility staff & CC® professionals) to commission mechanical and control devices and to optimize overall building systems.

- Oriented toward total building performance with emphasis on energy management.
CC® Measures Implement at Alamo Colleges

- Air Handler Optimization
  - Occupied/unoccupied schedules
  - Supply air temperature reset schedule
  - Duct static pressure reset schedule
  - Economizer mode
  - Humidity control

- Terminal Box Optimization
  - Minimum flow setting
  - Air flow calibration/verification

- Central Plant Optimization
  - Chilled and hot water reset schedules
  - Chiller staging

![Alamo Colleges Annual Energy Savings Chart]
Summer Initiatives:
Four Day Work Week Schedule

Summer 2016 Total Savings: $263,294

- CC® Measures
- Four day work week schedule
Summer Initiatives:
Demand Response Program

Historic Performance and Rebate

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<tr>
<th>Year</th>
<th>Contract</th>
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<tbody>
<tr>
<td>2013</td>
<td>$98,222</td>
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<td>2016</td>
<td>$199,410</td>
<td>$2,890</td>
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Chilled Water Thermal Energy Storage (TES) Tanks: Since 2014

Northeast Lakeview College
- 1.0 million gallons
- 70’-0” ID x 34’-9” water depth
- 4,000 gpm

Northwest Vista College
- 0.9 million gallons
- 66’-2” ID x 35’-0” water depth
- 4,000 gpm

Palo Alto College
- 0.53 million gallons
- 42’-4” ID x 50’-8” water depth
- 2,500 gpm
TES Tanks: Manage Daily Peak Loads

Colleges switched from real-time cooling to drawing from the TES tanks

Expected Savings:

- $280,000 in annual cost savings
- 1.5 GWh/yr in energy consumption benefits
Green Initiatives and Emissions Reductions from Energy Savings

Green Initiatives

Solar Panels ~600 kW total generation capacity:
- SPC – Southwest Campus: 400 kW
- SAC – Scobee Center: 33.32 kW
- SAC – Eco Centro: 23.80 kW
- NVC – Parking Garage: 154 kW

LEED-Certified Projects:
- Eco Centro
- NVC (Upcoming)

Second Nature’s Climate Leadership Commitment

Emissions Reductions

<table>
<thead>
<tr>
<th>Source</th>
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<th>Unit</th>
<th>Tons</th>
<th>Unit</th>
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<tr>
<td>Electricity</td>
<td>259,465</td>
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<td>29,850</td>
<td></td>
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<td>CO₂</td>
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</table>

Total CO₂ reduction from electricity and gas - 102,268 tons:

Equivalent to 19,597 passenger vehicles driven a year²

Summer Fellows working on Energy Projects

Program

- EDF (Environmental Defense Fund) Climate Corps Fellows
- Alamo Colleges has been paired with a fellow each summer since 2013
- Fellows with Sustainability and Energy Management background

Projects

- Energy audits and lighting retrofit proposals
- Analysis of buildings’ energy and water performance
- LEED standard recommendations
- Renewable energy analysis
Overall Benefits to Alamo Colleges from Energy Management

Cumulative cost savings ~ $19 Millions
(May 2002 through October 2016)
Includes district wide operation buildings and all campuses.
Contact:
John Strybos
Associate Vice Chancellor of Facilities
Alamo Community College District
jstrybos@alamo.edu

Website:
www.alamo.edu

Thanks.

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