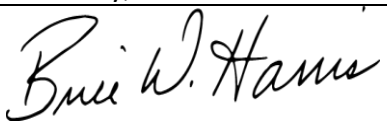
The Board of Governors of the California Community Colleges

PRESENTED TO THE BOARD OF GOVERNORS
DATE: September 21, 2015

SUBJECT: Board of Governors Energy and Sustainability Award Program		Item Number: 4.5	
		Attachment: No	
CATEGORY:	College Finance and Facilities Planning	TYPE OF BOARD CONSIDERATION:	
Recommended By:	 Dan Troy, Vice Chancellor	Consent/Routine	
		First Reading	
Approved for Consideration:	 Brice W. Harris, Chancellor	Action	
		Information	X

ISSUE: This item announces the Board of Governors Energy and Sustainability Awards for 2015, which represent the best of California's community college Proposition 39 energy projects.

BACKGROUND: The Board of Governors Energy and Sustainability awards were established in 2012 and are given out annually to honor exemplary energy and sustainability efforts by districts. The Proposition 39 Excellence Awards winners are chosen based upon a points system for comparing cost savings, energy savings, and jobs created by Proposition 39 energy projects. The Sustainability Champion is chosen by the Chancellor's Office based upon that individual's contributions to the community college system in the energy and sustainability area. In 2015, the awards will be granted in two categories: the Proposition 39 Excellence in Energy and Sustainability and the Board of Governors' Sustainability Champion.

RECOMMENDATION: The Board of Governors recognizes the recipients of the Board of Governors Energy and Sustainability Awards.

The 2015 Board of Governors Energy and Sustainability Awards Recipients

Excellence in Energy and Sustainability – Proposition 39 Projects
The following seven districts have demonstrated excellence in the energy and sustainability area with careful project planning resulting in energy and cost savings.

- **Best Overall District - Large:**
    - **Mt. San Antonio CCD, Mt. San Antonio College - Central Plant Tie-In - Building 2**
      Mt. San Antonio College replaced the existing chillers in Building 2 with more efficient units and integrated the project into the main campus' central plant, allowing for more efficient production of chilled water for the entire campus. The district also achieved additional efficiencies by installing more efficient, pumps, cooling towers, boilers, and variable-frequency drives (VFDs). The $1.3 million project was funded with $1 million of Proposition 39 funds, Investor Owned Utility Rebates of almost $200,000, and $100,000 of district funds. The district will see a yearly reduction of at least 800,000 kilowatt-hours (kWh) and 75 kilowatts (kW) with a subsequent energy bill reduction of almost $105,000 annually. In addition, this project generated one construction related job-year and 0.5 apprentice and trainee job-years in the community.

    - **Honorable Mention: Rancho Santiago CCD, Santa Ana College - Campus-wide Interior Lighting Retrofit**
      Santa Ana College leveraged Proposition 39 and Investor Owned Utility incentive funds to complete a comprehensive interior lighting retrofit around the entire campus. Using light-emitting diode (LED) tubes and fixture retrofit kits, the college completed a lighting retrofit which saved the college 614,000 kWh and 209 kW as well as over $70,000 per year in energy costs. Total project costs were over $892,000; however, the district received $125,000 in utility incentives and $706,000 in Proposition 39 funding reducing the district's costs to $61,000. The project also provides better light quality and significantly reduced maintenance costs, as the installed LEDs carry a 5-year warranty and rated 60,000 hour life. In addition, this project generated 0.2 construction related job-years in the community.

- **Best Overall District – Small:**
    - **Sequoias CCD, College of the Sequoias - Exterior Lighting Retrofit**
      College of the Sequoias engaged Southern California Edison's technical support through the CCC/IOU Partnership in Year 1 of Proposition 39 to help scope an exterior lighting retrofit project at the Visalia Campus. As a result of this initial study done by Southern California Edison and $40,000 in utility incentives, the college was able to undertake a $132,000 project to replace the old high-pressure sodium lights at the Visalia Campus, and as a result save 157,310 kWh per year and approximately $20,000 on their yearly electric bill. In addition, this project generated 0.03 construction related job-years and 0.02 apprentice and trainee job-years in the community.

- **Honorable Mention: Victor Valley CCD, Victor Valley Community College - Variable-Frequency Drives on HVAC Units**
  Increasing the life and overall efficiency of capital equipment was high on the priority list for Victor Valley College when the district decided to retrofit the air handling unit (AHU) fan motors at their Student Services building with VFDs and more efficient motors. Post-retrofit, the supply and return fans on two of the building's AHUs are now able to modulate and run at partial speed when demand allows, saving the college 144,000 kWh and 11 peak kW per year. This translates into savings of $20,000 annual energy costs. The district was able to complete this project entirely with Proposition 39 funding and a Southern California Edison energy incentive of $30,000. In addition, this project generated 0.2 construction related job-years and 0.1 apprentice and trainee job-years in the community.

- **Retrofit Project:**
  - **Coast CCD, Orange Coast College - Interior Lighting Retrofit**
    Orange Coast College achieved significant energy savings by retrofitting a vast majority of the campus' 32W T8 lamps with 25W T8 lamps and new ballasts. The verified energy savings for this project are approximately 628,000 kWh and 135 peak kW, reducing the campus energy bill by over $80,000 per year. This project cost approximately $887,000 to implement; however, $150,000 in Southern California Edison energy incentives and over $722,000 in Proposition 39 funding significantly reduced the district's direct costs to approximately $14,000. In addition, this project generated 0.6 construction related job-years and 0.6 apprentice and trainee job-years in the community.

  - **Honorable Mention: South Orange CCD, Irvine Valley College - Exterior Lighting Retrofit - Phase 1**
    The Irvine Valley College was able to use Proposition 39 funding to retrofit much of the campus lighting. This project retrofitted all existing walkway, parking lot, roadway, wall pack and bollard fixtures and installed a sophisticated lighting control system to further reduce energy consumption. Fixture wattage was reduced by installing LED fixtures equipped with motion sensors and dimming lights. These sensors reduced lighting levels to 50% after 10:30pm but return the lights to 100% brightness if the sensors identify movement in the area. The total project cost was $1.4 million, funded with $1 million of Proposition 39 funds, $129,000 in utility incentives, and $171,000 in district funds. The project is saving the campus over 536,000 kWh/year, and $70,000 in annual energy savings. In addition, this project generated 1.4 construction related job-years in the community.

- **Commissioning:**
  - **Rancho Santiago CCD, Santiago Canyon College - Retro-commissioning (RCx) at Science Building**
    Santiago Canyon College improved the efficiency of the ventilation system in the new science building via a $405,000 project funded in part with $205,000 in Proposition 39 funds and $112,000 of Investor Owned Utility energy incentives. Because of airflow and pressurization issues with the building, the building's supply fans needed to be operated continuously, well beyond normal building occupancy

hours. The retrofit project resulted in significant savings of approximately 383,000 kWh and 20,700 therms per year because the large exhaust fans could be shut down and generally operated in a more efficient manner. In addition, this project generated 0.5 construction related job-years and 0.1 apprentice and trainee job-years in the community.

Board of Governor's Sustainability Champion:

The Board of Governors' Sustainability Champion for 2015 is Mr. Fred Diamond, Director of Facilities and Construction for Citrus Community College District. Mr. Diamond has been a leader in sustainability for his district, as well as a mentor and advisor to other districts throughout the community college system. He has been an integral member of the CCC/IOU Partnership Outreach Team and Management Team working with districts throughout the state on Proposition 39. Mr. Diamond has been actively involved in participating in campus education forums, district outreach, and providing assistance to other districts and the Chancellor's Office in the energy and sustainability areas. Mr. Diamond was also instrumental in the creation of a sustainability template that all districts are able to use to develop sustainability plans for their districts.