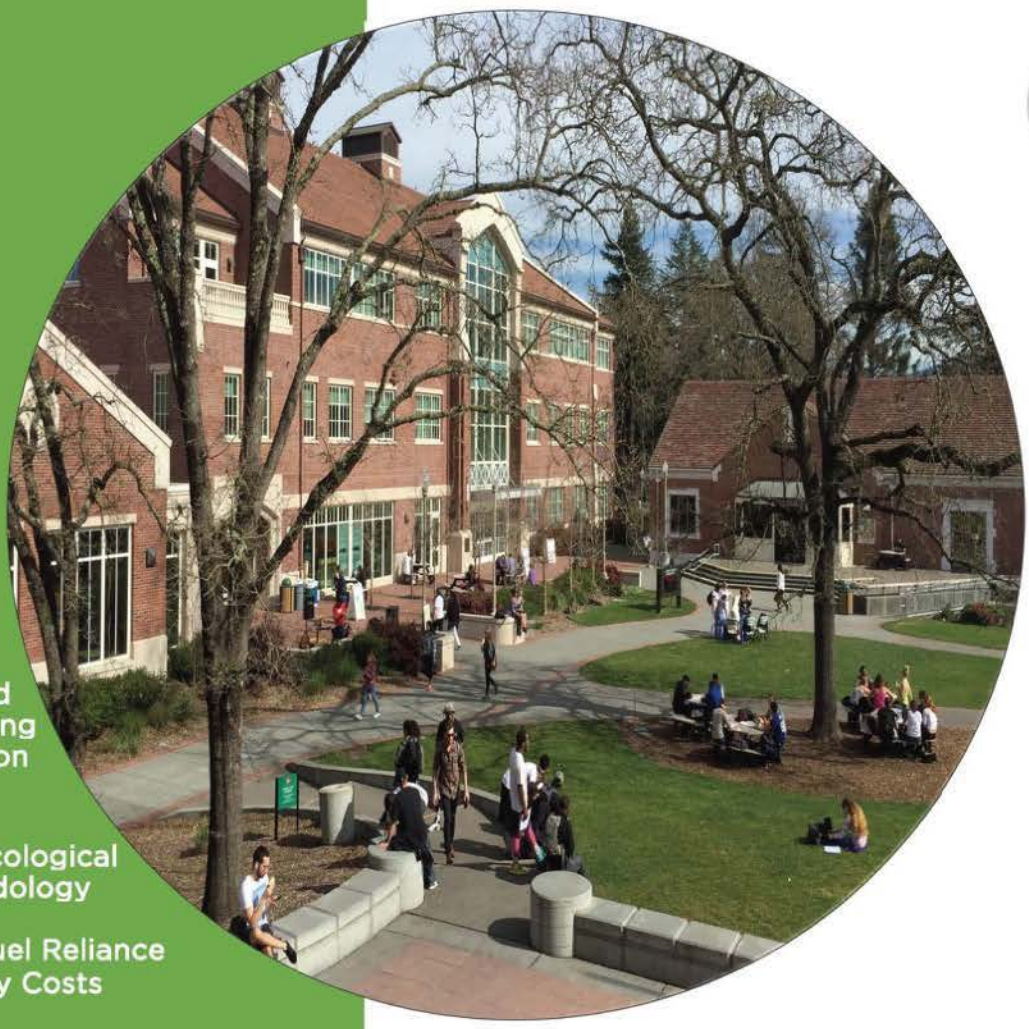
SANTA ROSA JUNIOR COLLEGE

SUSTAINABLE SRJC



Ten Guiding Principles of Sustainability

1. Use an Integrated Approach to Building Design, Construction and Operations

2. Implement an Ecological Site Design Methodology

3. Reduce Fossil Fuel Reliance and Related Energy Costs

4. Manage Water Carefully

5. Source Materials and Services Responsibly

6. Optimize Occupant Comfort, Health and Well Being

7. Reduce Waste

8. Use the Built Environment as a Teaching Tool

9. Facilitate Sustainable Management of Campus Operations

10. Showcase Sustainability Leadership

"SRJC...continues to be at the forefront of sustainability and serves as a model for other institutions of higher learning. We promote sustainability broadly across all areas of campus operations, student life, academics, and civic and community engagement."

—Superintendent / President Dr. Frank Chong
Sonoma county Junior College District

A Message from the Sonoma County Junior College District Superintendent / President

Since 2012, it has been my pleasure and privilege to serve as the Superintendent and President of the Sonoma County Junior College District. I am very honored to be part of the District's history in serving Sonoma County. SRJC has provided educational opportunities to approximately 1.7 million graduates for nearly 105 years, working with the community to meet the diverse needs of our community. The District currently serves approximately 21,000 students each semester at five different campuses: Santa Rosa Campus, SRJC Petaluma, Public Safety Training Center, Southwest Center, and Shone Farm. SRJC is also the third largest employer in Sonoma County.

SRJC made a sustainability commitment in 2011 by signing the Talloires Declaration, a ten-point action plan for incorporating sustainability and environmental literacy in teaching, research, operations and outreach at colleges and universities. Even before the signing of the Declaration, as part of the California Solar Initiative (which commenced in 2006), SRJC installed photovoltaic arrays at the Public Safety Training Center. Our work at SRJC was just beginning.

In 2014, Sonoma County voters passed Measure H, the $410 million bond (the largest bond passed by voters in Sonoma County history) to support new and updated technology and facilities and the subsequent new construction and renovations including the Lindley Center for STEM Education, Kunde Hall, Burbank Auditorium updates, new athletic facilities, and critical sustainability projects. With the participation of the entire college community and constituency groups, we began the creation of the 2016 Facilities Master Plan to guide our work. The fifteen-year plan incorporates a number of sustainability initiatives that will lower the District's use of energy and water, and lower the District's operating costs.

Sonoma County and the District already knew how important sustainability is in addressing climate change, but that urgency was underscored in 2017, with the devastating Tubbs Fire, and again in 2020, with the Glass Fire.

Among our many sustainability measures to help us advance our Net Zero energy goals are the newly completed Quinn Central Plant includes a reclaimed water tank that will help us be more resilient by reducing our water use and serving as emergency fire water, and the award-winning SRJC Microgrid Project, funded by $5 million grant from the California Energy Commission.

SRJC was the first community college to complete the Sustainability Tracking, Assessment & Rating System, or STARS assessment in 2019, and continues to be at the forefront of sustainability and serves as a model for other institutions of higher learning. We promote sustainability broadly across all areas of campus operations, student life, academics, and civic and community engagement.

Sonoma County, I want to thank you for your commitment to education and for your support of these important initiatives.

In gratitude,

Dr. Frank Chong, Superintendent/President

"SRJC...continues to be at the forefront of sustainability..."

10 Guiding Principles and 5 Pillars of Sustainability inform the District's commitment to its goal of Zero Net Energy by 2030—

Guided by the 2016 Facilities Master Program, the Bond Measure H Program incorporates initiatives to lower SRJC's dependence on energy and to help conserve water

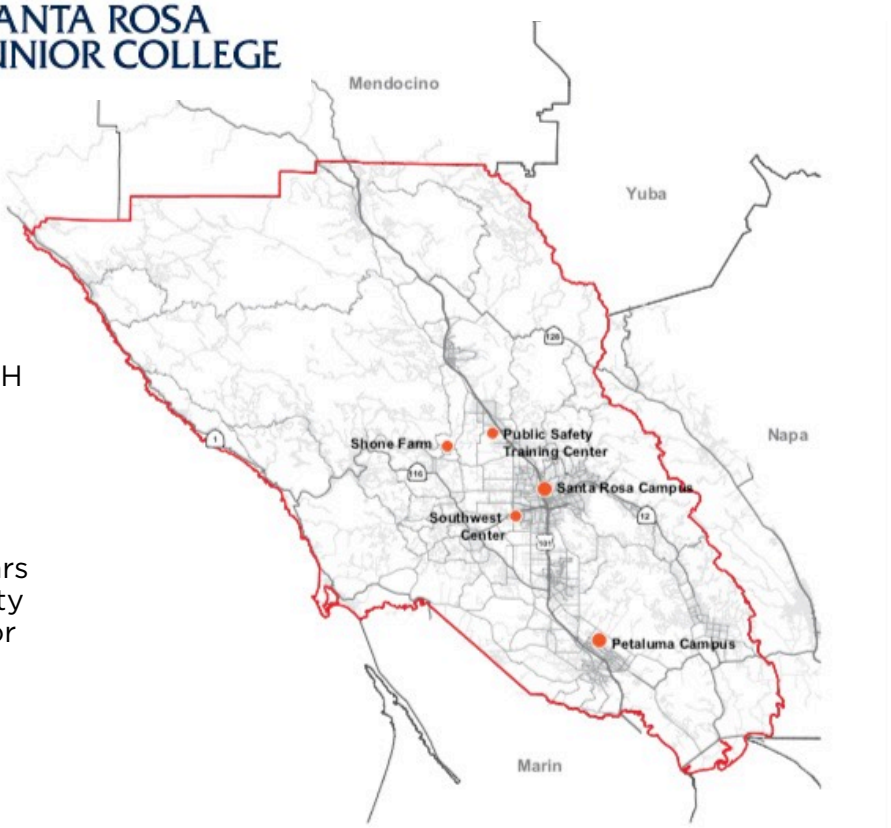
In 2014, Sonoma County voters passed Measure H, valued at $410 million and the largest districtwide school facilities upgrade initiative in the Sonoma County Junior College District's history. Measure H is improving the educational experience and alleviating overcrowding through facilities renovations and seismic retrofitting.

Walk on any of the District's five campuses, and you will see how tax dollars have provided important health and safety upgrades, and have renovated, created, or are constructing enhanced learning environments to better train students in fast-growing job sectors.

The Measure H budget contains $35.3 million for energy conservation and sustainability projects based on recommendations in the 2016 Facilities Master Plan, informed by the 10 Guiding Principles and 5 Pillars of Sustainability.

"With every Measure H project, sustainable features are incorporated into the renovation, design and construction," said Serafin Fernandez, Senior Director, Capital Projects. "Everything is designed to work as efficiently as possible in order to reduce our carbon footprint."

In addition to sustainability features added to every renovation and new construction project, some of the major



Measure H energy and sustainability projects include:

- Advance Submetering at the Public Safety Training Center and SRJC Petaluma
- Electrical Submetering at the Santa Rosa Campus
- Geothermal Exchange Field
- Quinn Central Plant
- LED Lighting and Advance Lighting Controls
- Photovoltaic Arrays at Santa Rosa Campus, Shone Farm, and SRJC Petaluma

Zero Net Energy | Zero Net Non-Potable Water | Carbon Neutral Operations | Zero Waste | Built Environment

Photovoltaic systems at Shone Farm, SRJC Petaluma, and the Santa Rosa Campus harness solar and reap savings

Photovoltaic arrays, or solar panels, were installed at SRJC Petaluma, the Santa Rosa Campus and Shone Farm through the Measure H Photovoltaic Project. It is estimated that the District will reap over $1 million in energy savings per year. One cost benefit in installing the Shone Farm ground mount photovoltaic system was realized when the District reused existing solar panels taken down from Plover Hall when the roof needed replacing. The new solar system will generate 90% of Shone Farm's energy usage with the potential of attaining net zero energy.

Another benefit is that many of the District's solar canopies also provide shade in parking lots.

"This project," said Energy and Sustainability Manager David Liebman, "also positioned the district for successfully receiving a $5 million microgrid grant from California Energy Commission to support our aggressive sustainability goals."

The grant funds the creation of battery storage for the energy collect t by the campus's solar canopies. The combination of solar power and battery storage will allow the school's essential buildings to operate independently of the local energy grid in case of emergency.

Read more about the SRJC Microgrid on page 7.

Photos, top clockwise: Ground mounted photovoltaics at Shone Farm, aerial view of photovoltaic arrays on the SRJC Petaluma Campus, Bech Parking Lot solar arrays, and the photovoltaic arrays at the Zumwalt Parking Pavilion, at the Santa Rosa Campus. Santa Rosa also has photovoltaics at Emeritus Hall.

The SRJC Photovoltaic Project is reducing the District's greenhouse gas emissions by 7%

Quinn Central Plant to provide high efficiency heating and cooling while reducing natural gas usage

Funded by Measure H, the new Quinn Central Plant is designed to provide high efficiency heating and cooling to Bailey Hall, Maggini Hall, the Barnett Hall, Tauzer Gymnasium, the new outdoor pool at the Quinn Aquatic Center, and the Lindley Center for STEM Education, which will open next fall.

In 2016, the Quinn Cogeneration Plant caught fire and burned down. The Cogeneration Plant serviced Quinn, Bailey Hall, Barnett Hall and Maggini Hall. The District's sustainability objectives established a need for a replacement plant that would also support the new STEM building, Garcia Hall, Forsyth Hall, Analy Hall, and the Burbank Auditorium through the use of the new Geothermal Field.It was important that the project would install a new reclaimed water tank.

According to Sustainability and Energy Programs Manager David Liebman, the plant uses specialized chillers and an electric boiler, which allow the college to use electricity to heat buildings and pools. "This will reduce natural gas usage to only the coldest of days," said Mr. Liebman.

"An estimated six to seven million gallons of water a year will be reclaimed to and help the college reduce its potable water consumption by close to 20 percent."

The Quinn Central Plant architectural design was created with a teaching and learning component, too, and serves the District's academic mission. The glass facade provides a large, unobstructed view of the Plant's interior, serving as a transparent screen wall to inform and instruct. All piping and equipment is color coded to reflect its use, and graphics provide more detailed information on equipment functions. The design is elegant and clean.

As part of the $11.7 million project, a new reclaimed water tank was installed. The Plant will pump and catch fifty thousand gallons of water a day for irrigation use, toilet flushing, and process cooling, and serve as emergency fire water with a fire hose connection and emergency water supply for resilience.

"An estimated six to seven million gallons of water a year will be reclaimed," said Mr. Liebman, "to help the college reduce its potable water consumption by close to twenty percent."

SRJC's Award-winning Residential Demonstration Garden Project

In 2018, SRJC received a $150,000 grant to convert the landscapes of eight houses along Elliott Avenue into residential demonstration garden projects. These demonstration gardens would feature drought tolerant and pollinator-friendly native California plants, and specific to our local ecosystems. Made possible through a partnership between the City of Santa Rosa, the Sonoma County Water Agency, the California Native Plant Society and Habitat Corridor Project.

"We have a Memorandum of Understanding (MOU) with the Native Plant Society and Habitat Corridor for 5 years of year-round maintenance," said Energy and Sustainability Manager David Liebman.

For this project, SRJC received two awards:

- Community College Water Award, from the California Higher Education Sustainability Conference (CHESC)
- 2019 Water Use Efficiency Award for Large Landscapes from the City of Santa Rosa

SRJC installs Water Bottle Refilling Stations to Reduce Unhealthy and Unsustainable Dependence of Plastics

As part our sustainability work, SRJC has installed water bottle refilling stations throughout the District. The water bottle refilling stations are providing students, faculty, and staff with access to clean filtered water and reducing associated health risks of drinking unfiltered water. The stations are also reducing plastic water bottle usage and of drinking unfiltered water. The stations are also reducing plastic water bottle usage and landfill waste.

Santa Rosa Campus Refilling Stations

Baker Hall (Outside - Center Circle)
Bertolini Student Center (North Ground Floor Entrance)
Lounibos Hall (Welding Shop)
Pioneer Hall (Outside, Book Store Entrance)
Quinn Swim Center (Indoor Pool & Outdoor Pool)
Tauzer Gym (Inside, West Side Entrance)
Analy Village
Call Child Development Center (Outside Courtyard)
Plover Hall North Wing
Race Hall Second Floor
Forsyth Hall

Petaluma Campus Refilling Station

Petaluma Building 1200 South Side, Outside

Public Safety Training Center Refilling Station

PSTC Building 1100 South Side, Outside

Did You Know?

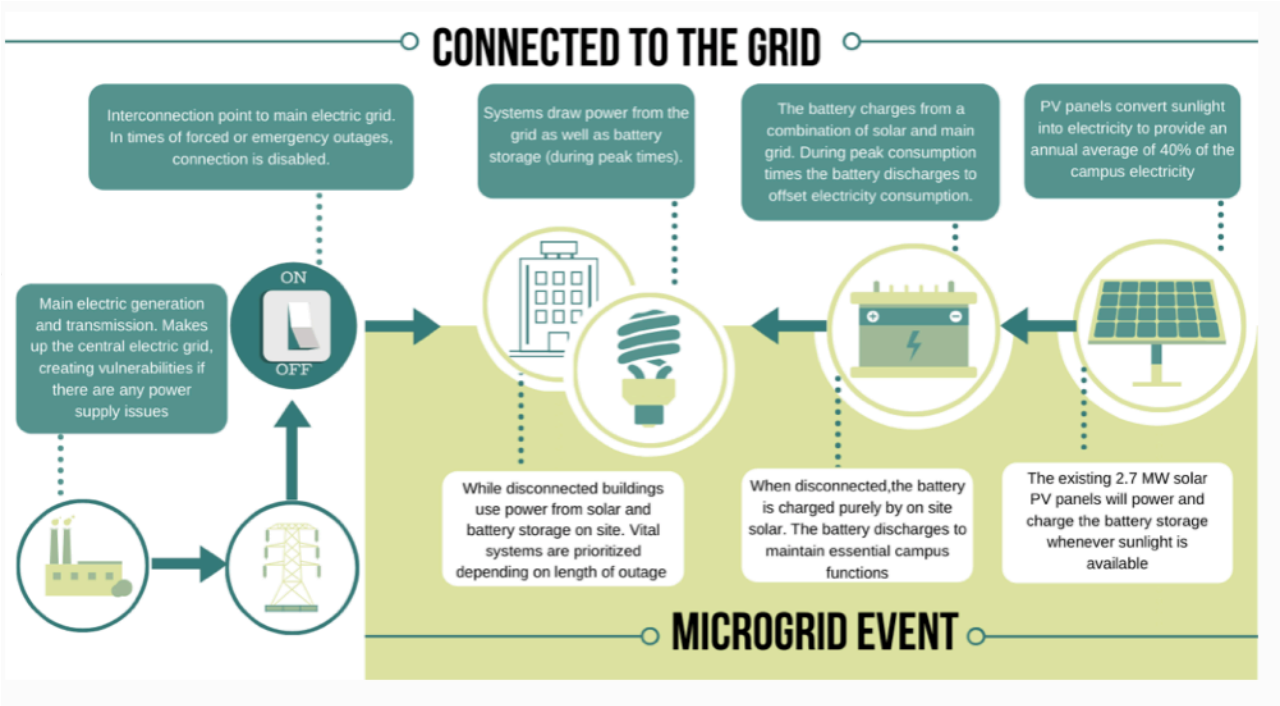
- **17 million barrels of oil are used annually for U.S. plastic bottles.**
- **Americans use 89 billion plastic water bottles a year; only one in six is recycled.**
- **Recycled plastic is degraded during the recycling process but only usable for composite materials, such as fleece and plastic composite wood. It is not removed from the waste stream, just delayed.**

Visit www.livinglearninglandscapes.com to download free landscape plans from SRJC's award willing Residential Demonstration Garden Project.

The Award-winning SRJC Urban Microgrid Project

Funded by a $5 million dollar grant from the California Energy Commission, the award-winning SRJC Urban Microgrid Project is leading the way in sustainability methods to combat climate change. The grant provided the funds needed for the creation of battery storage for collecting energy through the solar canopies (a Measure H project) on the Santa Rosa Campus. The combination of solar power and battery storage will allow the school's essential buildings to operate independently of the local energy grid in case of emergency, such as power outages and wildfires. The SRJC Microgrid will help restore power after such an event, and promote clean energy, and increase community resiliency. In the case of a PG&E blackout, the Microgrid will provide enough power to maintain the entire campus for three to four hours.

"By disconnecting non-essential services," said David Liebman, Sustainability and Energy Programs Manager, "SRJC could continue to operate indefinitely—or until the sun goes out."



Two Other Sustainability Projects:

- LED Lighting Upgrades at the Santa Rosa Campus and SRJC Petaluma campuses to improve light quality and classroom environments—anticipated annual utility savings is $300,000.
- Electric Vehicle (EV) Charge Stations (19 ports total) across the Petaluma and Santa Rosa Campuses, the Public Safety Training Center and Shone Farm.

Did You Know?

By replacing one meat or dairy-based meal per day with one plant-based meal, we can minimize our personal water and carbon footprint from our diet by roughly 25%. A fully plant-based diet moves that number to 60%.

Visit https://bond.santarosa.edu/sustainability-projects for more information.

SUSTAINABLE TRANSPORTATION

New pilot public transportation program began fall 2022 and runs through summer 2024

Currently enrolled SRJC students can get a Clipper BayPass FREE OF CHARGE.

The Clipper BayPass provides transportation on all bus, rail, and ferry services in the 9-county San Francisco Bay Area region on lines where Clipper passes are accepted.

This free program is available to SRJC students, who will remain eligible for two-years—as long as they are enrolled.

This two-year pilot project will study the benefits of a transit pass that provides access to all transit services in the 9-county Bay Area.

To apply for the Clipper BayPass please fill out this form: **srjc_clipper_baypass_form**

After submitting the online form, the Clipper BayPass cards must picked up by December 16, 2022
For more information, visit the **Clipper BayPass FAQ page**

Weaving Sustainability into the Curriculum

Meeting the needs of the present without compromising the ability of future generations to meet their needs is a fundamental tenet of sustainability education.

Understanding this important value, SRJC faculty have designed curriculum to ensure that sustainability is taught across multiple academic departments. Students have an opportunity to take designated courses with an explicit focus on sustainability, as well as classes which include sustainability topics within the coursework.

One of the majors available to students is Sustainable Agriculture. The Sustainable Agriculture Program is designed to train farmers and gardeners in the techniques of sustainable food production. It provides a foundation in plant and soil science, integrated pest management, and ecological agriculture, and emphasizes the "how to" aspects of organic gardening and farming, including tillage, compost production, and crop planning and production.

Another major is in Wastewater Treatment Operations, which also offers five certificate options on various aspects of the field. for students. Other certificate programs include Fire Resilient Landscaping and three different certificates for Solar Photovoltaics.

Courses available in various departments that include sustainability address human impact & responsibility in the following areas: environmental stewardship, economic vitality, and social equity.

Visit https://sustainability.santarosa.edu/waste to learn more about SRJC's initiatives, sustainable living, and ways you can reduce and reuse.

SRJC Sustainability Goals and Our Vision for the Future

by David Liebman, Energy and Sustainability Manager

In 2015, Superintendent / President Dr. Frank Chong signed S*ustainable SRJC, a Greenprint for Achieving 18 Sustainability Objectives by 2018.* Developed by the SRJC Sustainability Collaborative, comprised of students, faculty, classified staff, and administrators, the *2015 Sustainable SRJC Greenprint* focused on identifying eighteen goals and objectives to support Goal E in the Strategic Plan: *Establish a Culture of Sustainability.*

Most of the objectives were accomplished by the target year, including Objective 8: *Assure Green Building & Sustainable Facilities*, as well as the creation of the role I hold as energy and sustainability manager (Objective 1).

Following the Greenprint's success, the Districtwide Sustainability Committee is now in the process of drafting the *Sustainable SRJC Greenprint 2.0 by 2030.*

Greenprint 2.0 builds on the District's accomplishments and includes expanded action, planning and vision to further SRJC's leadership in the face of Climate Change while working to help create a just and equitable society. The *Sustainable SRJC Greenprint 2.0 by 2030* is organized by topics that include the following:

- •Built Environment (grounds / landscaping)
- •Curriculum and Education
- •Climate Change
- •Economics
- •Engagement & Culture
- •Equity
- •Food
- •Resource Use
- •Transportation

Visionary goals include:

- •Achieve Carbon Neutrality and adapt to a changing climate
- •Achieve Net Zero Energy, Water, & Waste
- •Provide low cost, fast, and safe sustainable transportation solutions to all District facilities for students, staff, faculty, and community members

As one of the co-chairs of the Districtwide Sustainability Committee, I would like to invite all SRJC community members to join us in our important work in addressing climate change and demonstrating our commitment to environmental stewardship.

SUSTAINABLE SRJC

The Districtwide Sustainability Committee meets on the 4th Thursday of every month 3:00pm to 4:30pm
Bertolini Student Center, Senate Chambers, on the Santa Rosa Campus, and on Zoom.
For more information, please contact:
Co-Chair David Liebman,
dliebman@santarosa.edu
Or Co- Chair Abigail Zoger,

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Among SRJC's many sustainability measures helping the District advance its Net Zero energy goals are photovoltaic arrays at several sites, and the newly completed Quinn Central Plant, including a reclaimed water tank that will help us be more resilient by reducing our water use and serving as emergency fire water. Leveraging the sustainability projects funded by Bond Measure H, the District received a $5 million grant for the award-winning SRJC Microgrid Project. Thank you, Sonoma County Voters!

SANTA ROSA JUNIOR COLLEGE

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Santa Rosa, CA 95401

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Measure H Energy and Sustainability Projects are anticipated to reap a major Return on Investment while reducing the District's carbon footprint:

- **Photovoltaic Projects** (Petaluma Campus, Santa Rosa Campus, and Shone Farm): will **reduce the District's greenhouse gas emissions by 7%**, provide 90% of electrical use at Petaluma, 35 % at Santa Rosa, and 90% at ShoneFarm, for combined annual utility costs of over **$825,000.**
- **Installation of LED lights** throughout the District will result in annual savings of **$300,000.**
- **The Geothermal Plant Project** heats and cools campus buildings **without fossil fuels** and will provide annual utility cost savings of **$120,000**.
- **The Quinn Central Plant** uses electric chillers and **will reduce natural gas usage** to only the coldest of days, and mitigates the District's risk to rising electricity and natural gas costs. Anticipated annual savings of **$150,000.**

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