2022 – 23 Annual Sustainability Report
Contra Costa Community College District

June 14, 2023

Contra Costa Community College District

pathways to success

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Executive Summary

The climate crisis and increased equity gaps have multiple major and contributing common factors. In response to many environmental and equity issues, on November 9, 2022, the Contra Costa Community College District (4CD) Governing Board adopted a Board Resolution in support of Sustainability and Climate Action. This Resolution adopted nine Districtwide sustainability goals, which are in support of the 2019 California Community Colleges Board of Governors (BOG) Climate Change and Sustainability Policy and in support of the 2021 California Community Colleges Board of Governors (BOG) Climate Action and Sustainability Framework. The 2021 Framework refined the 2019 policy to reach further as well as extended the end target year by five years, putting it out to 2035. This framework aligns with current state policies and includes comprehensive goals for establishing benchmarks and meeting targets for reductions in greenhouse gas emissions, energy efficiency, water usage reduction, waste, transportation, food systems, and sustainable purchasing.

This year, The 4CD Annual Sustainability Report is focused on highlighting our progress toward the nine sustainability goals. It includes a description of each goal, steps we are taking to support each of the goals and the development of our baselines and targets to articulate measurable progress. This report is also forward looking, as we plan to continue to engage in this vision and determine the resources required in support of the 4CD sustainability goals at each of the campuses. Highlighted are current year major bond project accomplishments and our collective commitment to promoting student engagement. All of this information will also be brought together as part of this year's long range facilities master planning work as many of the goals will require further development and funding for our infrastructure and buildings.

Finally, the report highlights the early stages of that process, as the activities, projects, initiatives and Sustainability Committees' progress and events, continue to foster an increased awareness about the way we can collectively foster the best possible built environment for our students, and continue to provide an enriched and student-focused experience.

2022 – 23 Awards

This year, the new Art Complex at DVC was recognized by the California Community Colleges Board of Governors (BOG) and awarded the prestigious Best Innovative Project Award for Excellence in Energy and Sustainability.

This cutting-edge, two-story building boasts an "H" shape configuration, with a vibrant open courtyard space and sustainable design features promoting healthy learning environments. The building also includes an all-electric, high-efficiency central utility plant, that provides heating and cooling water to the Art Complex and the Physical Education Kinesiology (PEK) Complex, designed and built to be Zero Net Energy (ZNE). The building was designed to have an energy use intensity of 50 kBTU/sf/year due to clever passive design strategies and a right-sized mechanical system. The existing on-site photovoltaic array offsets its energy use intensity, resulting in Net Zero Energy status – a true feat of eco-engineering and 4CD's first ZNE building.

Projected to save approximately 36% in utility costs and 12.6% in energy savings compared to a baseline Title 24 modeled building, the new Art Complex is also set to achieve LEED Gold V4 certification, exceeding 4CD's LEED Silver target.

The project has garnered regional interest from experts at UC Berkeley and the Lawrence Berkeley National Laboratory, as the all-electric central utility plant has proven to be more successful than the same technology with other manufacturers.

DVC's new Art Complex serves not only as an example of a successful project that embodies innovative sustainable building design, but it also serves as one of several examples of 4CD's commitment to sustainability and student success.

New Diablo Valley College Art Complex, LEED Gold Certification expected

Environmental Justice

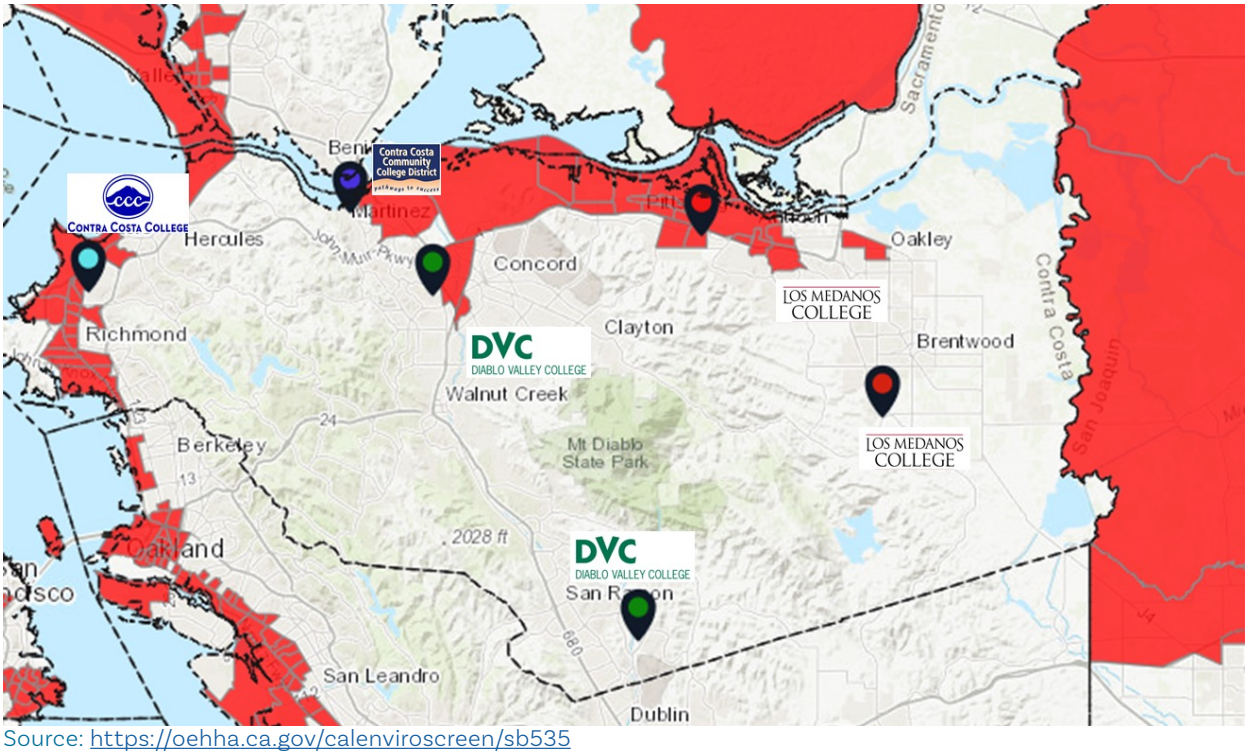
The State of California has been rapidly developing long range energy and sustainability goals, mandates and plans in realization that action is necessary in order to deescalate a myriad of problems, including wildfires, coastal erosion from rising seas, disruption of water supply, health threats from air pollution, contaminated soil, unhealthy water and many other issues that contribute to large equity gaps and have damaging impacts on the economy. Climate crisis and increased equity gaps have many major and contributing common factors. How we procure and use our energy, procure our materials, generate and dispose of waste, landscape and irrigate our property, maintain our investments, travel to work or school, share our food, and so many other factors, all contribute to environmental justice and thus equity for all.

Research shows that negative environmental factors, such as dirty soil and polluted air, contribute significantly toward historically disadvantaged communities, which are often situated near facilities that produce hazardous waste in the air, water and soil. While these environmental factors impact all people, animals, and our ecosystems, it is important to note these factors disproportionately impact young people and future generations, and disproportionately affect people of color and people in poverty, thereby exacerbating existing inequities and limiting opportunities. Closing equity gaps required continued conversations, strategy and action.

A national commitment to environmental justice is taking shape. The federal government is, for the first time in history, setting a goal to ensure that at least 40-percent of certain federal climate and clean energy investments flow to disadvantaged communities. This commitment is being accomplished by various programs under the Justice 40 Initiative. Much like 4CD has accomplished with the EV charging stations grants, there is continued focus on various initiatives and projects that can be made possible by various funding programs.

All nine of the recently adopted sustainability goals reduce 4CD's impact toward climate change, and thus on human health, environmental justice and inequality directly in our communities. The map of 4CD locations and Contra Costa County historically disadvantaged communities show that CCC, DVC and the District Office are surrounded by disadvantaged communities, while LMC resides in a disadvantaged community. This means that everything done at the campuses impacts our communities. Achieving our nine 2035 sustainability goals will not only align us operationally with our District Strategic Plan, but it will result in long-term savings while providing our communities with cleaner air, water, soil and more equitable spaces to work and learn.

Map of 4CD Locations and Contra Costa County Disadvantaged Communities



Source: https://oehha.ca.gov/calenviroscreen/sb535

Timeline of Sustainability at 4CD

Sustainability efforts at 4CD have been shaped over the years through numerous state and local level policies, as well as collective leadership from the District Office and the colleges including faculty, staff and students past and present. Below is a brief history of select Districtwide sustainability milestones at 4CD:

2008

The first set of **energy efficiency projects** completed utilizing Energy Service Company (ESCO) financing based on energy savings. Projects included Districtwide solar panels, lighting retrofits, mechanical equipment and controls upgrades.

2010

4CD Governing Board approves Board Policy (BP) 6004: Environmental Stewardship and Sustainability, supporting resources and environmental conservation at 4CD.

2013

Prop 39 funding: 4CD receives $4.5M in State funding, allowing for implementation of several key Districtwide energy efficiency projects, including LED lighting, mechanical and some building controls upgrades completed in 2019.

2019

CA Community College Chancellor's Office BOG adopts the **Climate Change and Sustainability Policy**. This sets sustainability goals for 2030 and places intermediate targets for 2025. This decision also requests community college districts to adopt their own, local, climate change and sustainability resolutions.

4CD Governing Board approves the Contra Costa Community College District Strategic Plan 2020 – 2025. This plan outlines five District Strategic Goals. Strategic Direction #2 and #5 provide the framework for the Districtwide sustainability efforts:

- **Strategic Direction #2: Decreasing Equity Gaps for All Students:**

  As part of this strategic goal, 4CD's sustainability projects work to promote equitable access to safe and healthy environments, promoting learning for all students.

- **Strategic Direction #5: Responsibly, Effectively, and Sustainably Steward District Resources:**

  4CD's nine Districtwide Sustainability Goals directly support this strategic direction by promoting and advancing sustainability in all areas of 4CD, including operations, construction, facilities, land use, instruction, energy, water conservation, and environmental integrity.

2020

86 Level 2 EV charging stations are installed Districtwide, providing EV charging to faculty, staff, students, and community members.

2021

CA Community College Chancellor's Office BOG adopts the **Climate Action and Sustainability Framework**, which refines the 2019 policy to reach further as well as extend the end target year by five years, putting it out to 2035. The framework also asks community college districts to establish benchmarks, and track progress towards these goals with specific recommendations for how to reach the goals.

2022

4CD Governing Board approves **Board Resolution 20B: In Support of Sustainability and Climate Action,** adopting nine Districtwide sustainability goals and aligning 4CD with California Community College Chancellor's Office BOG 2019 and 2021 Climate Action and Sustainability Framework goals. It sets near-term goals in 2025, 2030, and 2035.

4CD Districtwide Sustainability Goals

4CD Districtwide Sustainability Goals

The CA Community College Chancellor's Office BOG adopted the Climate Change and Sustainability Policy in 2019, followed by the updated nine Climate Action and Sustainability Framework goals in 2021: Greenhouse Gas Emissions, Green Buildings, Energy, Water, Waste, Purchasing & Procurement, Transportation, and Food Systems.

The Climate Action and Sustainability Framework asks California's community colleges to establish benchmarks for each of the nine goals as a starting point. It also asks that progress is tracked towards the goals for 2025, 2030, and ultimately 2035.

In 2022, the 4CD Governing Board committed to establishing the 2035 climate change and sustainability goals, by passing a Governing Board Resolution in support of Sustainability and Climate Action. This action allowed 4CD to align with the California Community College Chancellor's Office BOG 2019 and 2021 policy and goals. This year, the 4CD Sustainability Team focused on engagement activities in an effort to educate and share these goals with campus sustainability committees and the broader campus communities. The committees reached common agreements as to how we can collectively move forward the crucial dialogue and action towards these goals. Specifically, goals were identified as either 4CD-led with campus involvement or campus-led with 4CD support. As such, the colleges' sustainability teams and college users are able to continue to complete energy and water-savings and waste reduction projects. The college sustainability committees will continue to make strides in engaging faculty, staff and students in change management: namely, shifting behaviors to conserve energy and resources.

2035 Districtwide Sustainability Goals

1

Greenhouse Gas (GHG)

Reduce greenhouse gas emission by 100%

2

Decrease EUI by 40% and have 100% ZNE Campus

Renewable Energy

3

Green Buildings

All new buildings ZNE and Zero Carbon

All new and existing buildings LEED O&M Gold or WELL Gold equivalent

Reduce natural gas usage by 75%

4

100% new fleet vehicles & rolling stock must be zero emission vehicles

Implement green parking permits

Achieve 50% reduction in Single Occupancy Vehicle [SOV] transportation

Transportation

5

Zero Waste

Achieve zero waste to landfill

Increase material circularity by 25%

Decrease consumption of materials by 25% by 2035

6

Increase procurement of sustainable products and services by 50% compare to current levels

Procurement

7

Water

Reduce potable water usage by 50%

Limit storm-water runoff and discharge to predevel-opment levels through the use of green infrastructure and low impact development for the campus and for new buildings and major modifications

8

Integrate sustainability into the academic curriculum

Curriculum

9

Food Systems

80% of food served on campus meets the goals of the Real Food Challenge or equivalent

Based on BOG 2021 Climate Action & Sustainability Framework
Goals 1-3, 6-7: District led with campus input
Goals 4-5, 8-9: Campus focused

Goal 1

Greenhouse Gas (GHG) Emissions

Policy Goals –
District-led with campus input

2025:
Establish baseline by creating an inventory of greenhouse gas emissions. Create a Climate Action Plan.

2030:
Reduce greenhouse gas emissions by 75% below 2013 baseline.

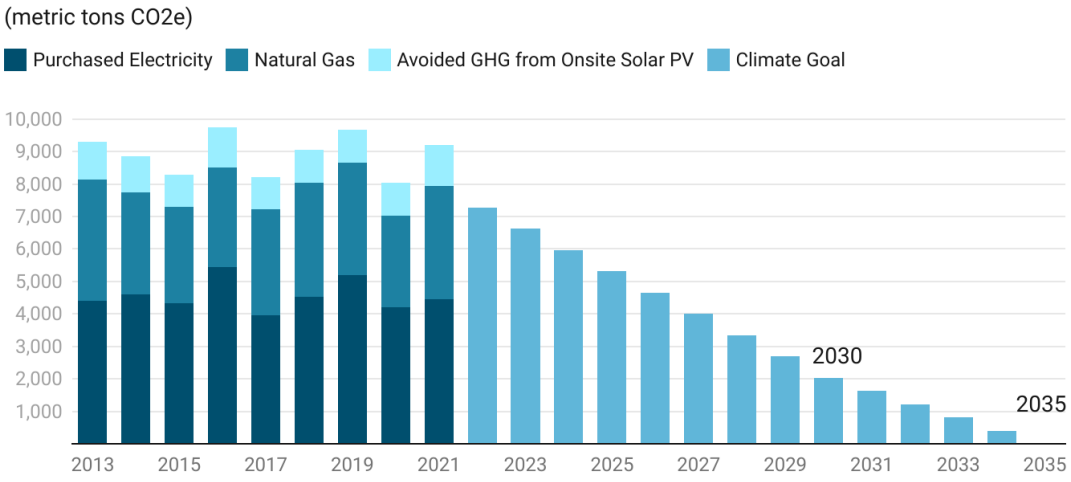
2035:
Reduce greenhouse gas emissions by 100% below 2013 baseline.

Progress Toward Goal

Part of 4CD's first and overarching sustainability goal is reducing its total greenhouse gas (GHG) emissions, which directly contribute to climate change. To move towards this goal, 4CD is implementing several decarbonization strategies, including utilizing renewable energy sources, adding more solar panels to campuses, electrifying fleet vehicles, increasing campus energy efficiency, and electrifying older, end of life, natural gas-fired equipment. Many of these strategies will be reviewed, studied and incorporated into our upcoming Facilities Master Plans this year at each campus to help determine specific approaches and funding strategies for equipment and infrastructure upgrades.

There are various energy-efficiency measures, alone or combined, that effectively reduce energy usage and associated emissions from generating electricity. Measures such as installing energy-efficient lighting and electrifying gas-fired equipment and heating systems, not only supports 4CD in the goal to decrease its greenhouse gas emissions, but it provides for operational cost savings through higher efficiency technologies. Electrifying fleet vehicles reduces transportation-related emissions, while providing fuel and maintenance-related cost savings in the long term. Finally, transitioning to renewable energy sources and adding more solar panels on our campuses allows for generation of clean energy and presents the greatest opportunity to drive down 4CD's greenhouse gas emissions and utility costs. The chart below is based on actual emissions from our purchased electricity provider. It shows our largest emissions are from our purchased electricity, with our next largest emissions coming from natural gas usage. The positive impact of our current campus solar panels is also seen in the avoided emissions in the chart. If we doubled our solar panel capacity, we would double our ability to offset emissions.

4CD Greenhouse Gas Emissions Compared to Goal



Campus fleet not yet incorporated into chart and electricity GHG pending updates from providers. 2023 Fleet vehicles contribute 155 metric tons to our GHG emissions.

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Goal 2

Renewable Energy

Policy Goals –
District-led with campus input

2025:
Establish a campus-level baseline energy use intensity (EUI) score. Conduct effective useful life (EUL) analysis of all gas appliances and systems. Plan for electrification of systems with EUL's of less than 10 years.

2030:
Decrease campus EUI's by 25% from 2013 baseline. Produce or procure 75% of 4CD's electrical consumption through renewable energy.

2035:
Decrease EUI by 40% from 2013 baseline. Achieve zero net energy (ZNE) at all campuses.

Progress Toward Goals

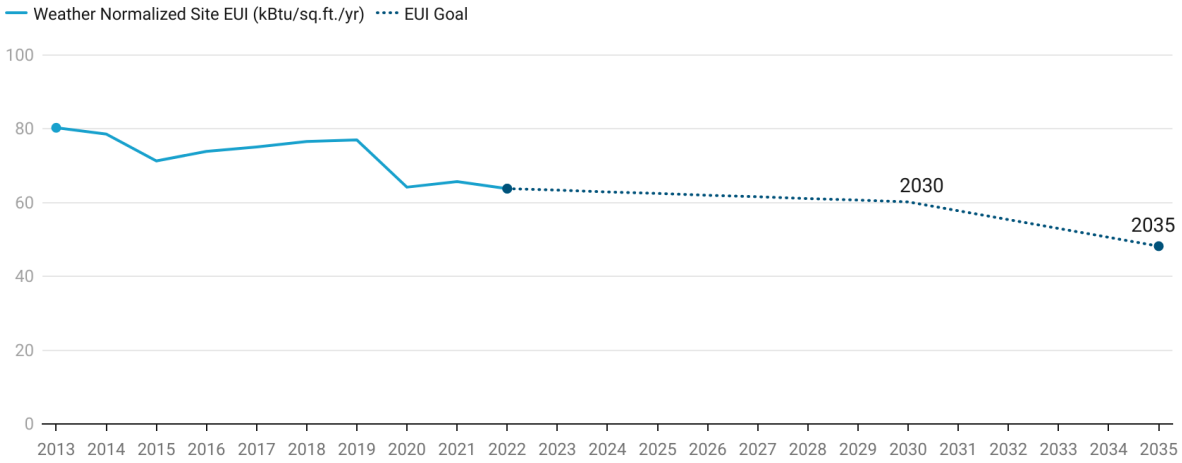
Goal 2 is increasing renewable energy usage across 4CD. It focuses on decreasing energy use intensity – or EUI – of our campuses, and moving towards zero net energy campuses, where energy consumed matches the amount of renewable energy generated. Progress towards this goal supports Goals 1 and 3. While we do have solar panels on our three campuses, they only offset a small portion of our electricity usage. A new solar and battery storage project is planned for the new Brentwood Center as a strategy to help offset the new Center's electricity usage and to provide for some resiliency.

Our next steps are to determine the specific measures required to reduce our EUI districtwide to achieve this goal and to determine the required funding. Specific projects and associated measures will be part of our Facilities Master Plan's long-range planning efforts. Consideration has to be given to funding opportunities such as energy efficiency programs, state scheduled maintenance funding, project grants including the Inflation Reduction Act (IRA). These programs provide for tax credits even for public agencies for up to 40% of the cost to install solar panels, and are just some examples of the ways we are exploring leveraging available grants and funding opportunities to make the capital investments more palatable.

Goal 2

The graphs below show that our EUI has been steadily dropping over time, with the most notable drop during the pandemic, and only a slight rise since we have returned to in-person learning. The second graph shows how much of our electricity is provided by the existing on campus solar panels as well as how much is provided by renewable sources in our purchased electricity. Like GHG emissions, purchasing electricity from cleaner, greener providers and adding additional on-site solar panels can increase our overall renewable energy usage. Our onsite solar panels account for 20% of our overall electricity usage. When we combine that with our purchased renewable energy, it varies across the years, because of the variation in what power plants or renewable energy devices are producing energy across the grid. As an example, in drought years, there is less electricity generated from hydroelectric facilities, because there is less water to generate that electricity.

4CD EUI Compared to Goal



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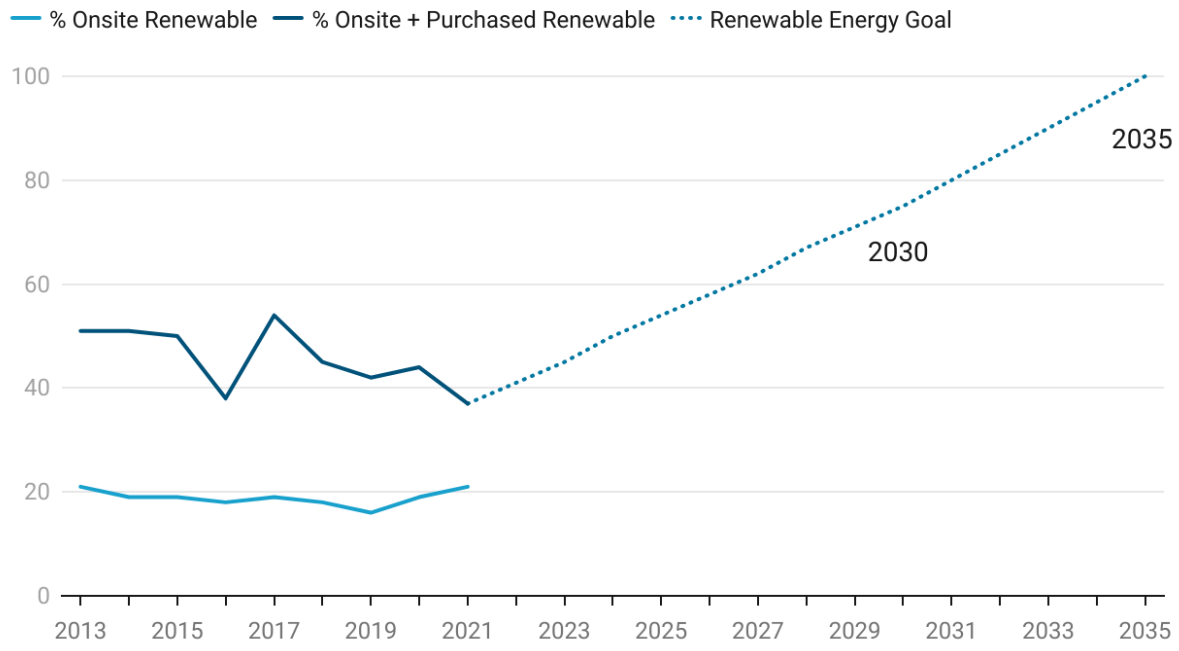
Onsite and Purchased Renewable Energy



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Goal 3

Green Buildings

Policy Goals –
District-led with campus input

2025:
Establish a baseline EUI score for all campus buildings. Develop a ZNE and campus electrification strategy. As appropriate, conduct LEED or WELL assessments of existing 4CD buildings.

2030:
All new buildings are LEED or WELL Gold certified. Reduce natural gas usage by 30%.

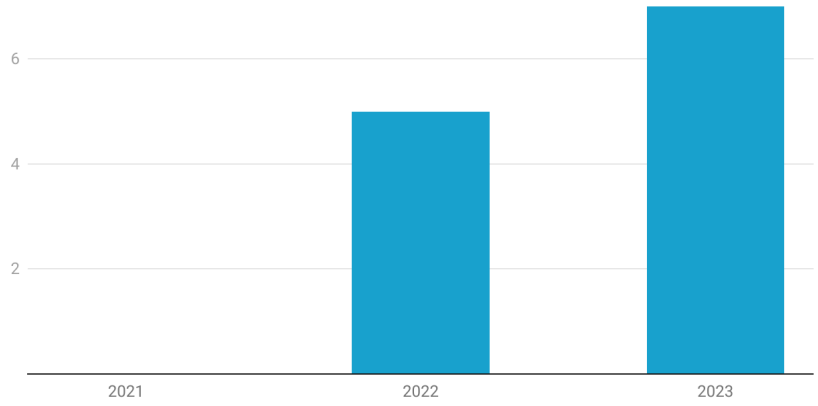
2035:
All new buildings are ZNE and Zero Carbon rated. All existing buildings are certified LEED O&M Gold or WELL Gold equivalent. Reduce natural gas usage by 75%.

Progress Toward Goals

Goal 3, Green Buildings, sets the goal for 4CD's new campus buildings to become LEED or WELL Gold certified. This goal contributes towards reduction of Districtwide natural gas usage as a way of decreasing emissions from building operations. The LEED Gold certification process evaluates a building's performance in sustainable site development, water and energy efficiency, materials selection, indoor environmental quality, and innovation in design. 4CD has several buildings that have achieved or are on the path for LEED Gold certification, including the major capital projects such as the Art and PEK Complex at DVC, the new Science Building at CCC, the Student Union and Kinesiology Athletics Center at LMC, and the new Brentwood Center, all surpassing our former LEED Silver targets. The most recent buildings at CCC and DVC have an all-electric design, which eliminates emissions from fossil fuels and puts them on target to achieve LEED Zero Net Energy certification.

Goal 3

Cumulative Number of 4CD All Electric New Buildings



Six of these buildings are projected to be Zero Net Energy by using existing Onside Solar PV

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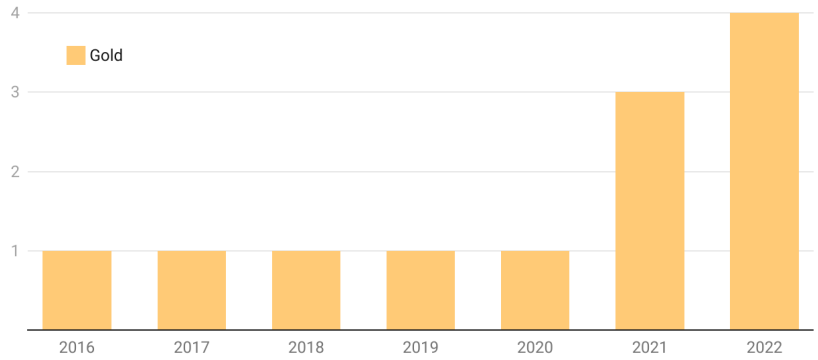
Cumulative Number of 4CD LEED Certifications by Year



2030 Goal - 100% new buildings LEED or WELL Gold

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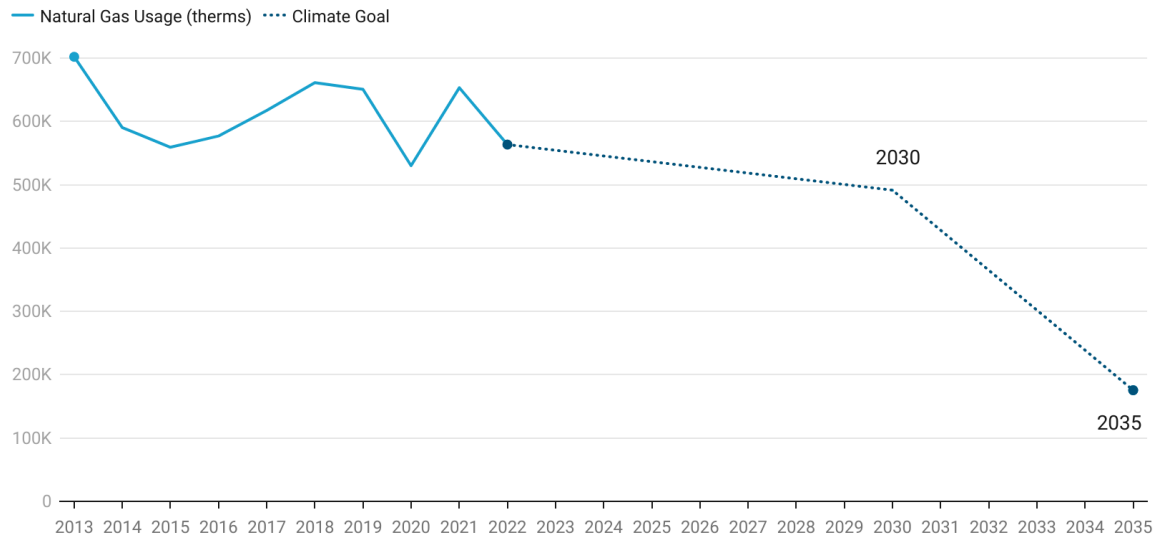
4CD Natural Gas Usage Compared to Goal



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Goal 4

Transportation

Policy Goals –
Campus focused

2025:
Conduct accounting and conditions assessment of fleet vehicles; assess remainder rolling stock for electrification. Develop EV charging infrastructure to encourage EV use among 4CD community. Promote accessible shared transportation methods. Make pedestrian and bicycle assessment improvements by 2025.

2030:
Achieve 50% electrified rolling stock, and 50% of new fleet vehicles as electric. Implement green parking permits districtwide.

2035:
Achieve 100% electric new fleet vehicles, 100% electric rolling stock, and 50% reduction in single occupancy vehicle (SOV) transportation

Progress Toward Goals

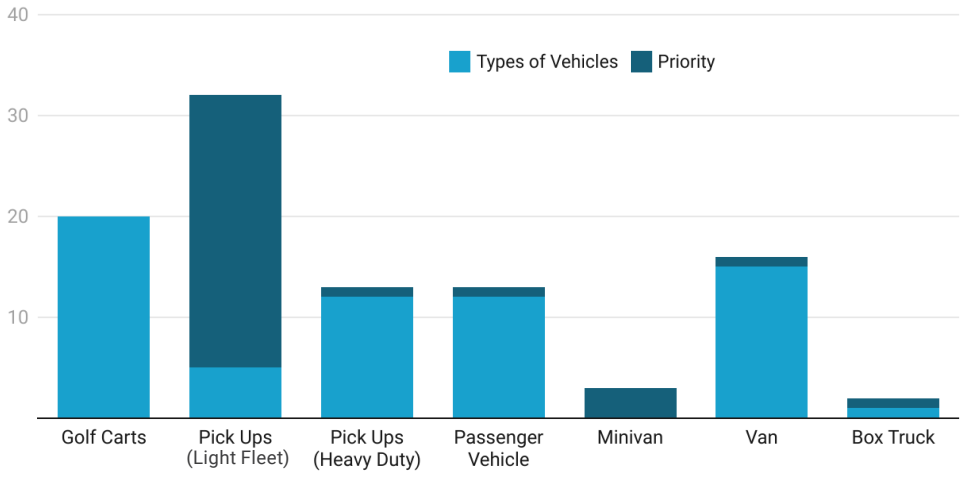
Goal 4, Transportation, focuses on several initiatives, including electrifying 4CD's fleet vehicles, expanding EV charging stations, improving pedestrian and bicycle access to campuses, and expanding access to shared transportation options. To date, 4CD has completed the installation of 86 EV chargers Districtwide ahead of its 2025 goal, by leveraging available planning and construction programs and grants. This year, 4CD collaborated with Prospect Silicon Valley (PSV) on a fleet electrification assessment to develop a strategy for electrifying 4CD's fleet vehicles. PSV assessed the existing vehicle fleet at 4CD and recommended the best models and funding strategies to move toward electrification. This assessment, along with a total cost of ownership perspective, will guide 4CD's next steps in collaborating with colleges' Maintenance and Operations teams and other departments to support step-by-step vehicle replacements with electric equivalents.

Sustainability committees at the colleges are promoting sustainable transportation practices like carpooling, cycling, or using public transportation to reduce emissions and reliance on fossil fuels among faculty, staff, students, and community members, as noted in later parts of this report. This work also supports 4CD's goals to reduce greenhouse gas emissions from campus operations and commuting.

Decreasing barriers to access public transportation is a goal that has also been championed by 4CD student groups. During fall 2022, DVC's Sustainability Committee partnered with the Basic Skills Initiative to purchase and distribute prepaid Clipper Cards for public transportation, garnering 200 available cards for this year in addition to already previous year distributed 200 cards to students receiving financial aid.

The graph below shows the results of our 98 fleet vehicle inventory from this past year. Vehicles categorized as priority represent the oldest and most traveled of our fleet, making them the best choice to electrify upon their replacement. On average, most of our active fleet vehicles travel 4,704 miles annually. This ranges from 615 miles to 24,385 miles a year, with a median of 3,664 miles among all active fleet vehicles.
In addition to the fleet vehicles, 4CD has 67 ground keeping devices, ranging from lawnmowers to blowers and trimmers. As these gasoline-powered products age, they will be part of a plan for replacement with electric powered devices.

4CD Fleet Vehicle Inventory 2022



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Goal 5
Zero Waste

Policy Goals –
Campus focused

2025:
Conduct a waste categorization assessment. Develop total material consumption benchmark. Benchmark and comply with T14 Division 2 Chapter 5 requirements, and T14 CCR Division 7 requirements. Conduct AB341 compliance assessment. Centralize reporting for waste and resource recovery.

2030:
Achieve zero waste to landfill. Conduct circularity analysis. Reduce material consumption by 10%.

2035:
Maintain zero waste to landfill. Increase material circularity by 25% and decrease consumption of materials by 25%.

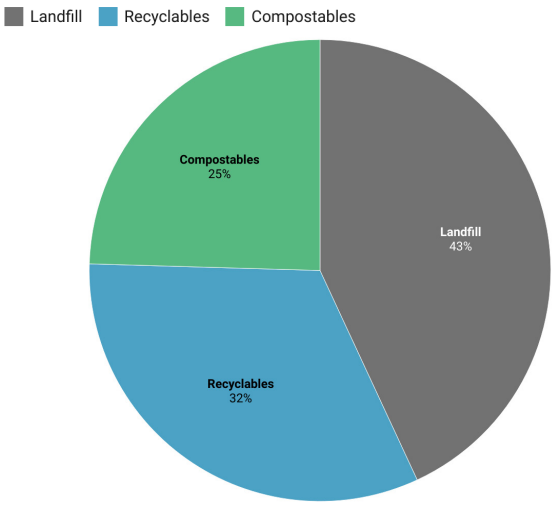
Progress Toward Goals

Our colleges continued to make strides towards zero waste this year, including expansion of the waste signage and three-stream bin set-ups on all our campuses. At the District level, benchmarking efforts resulted in the collection of historical waste data for each site across 4CD, in an effort to track overall waste generation and diversion rates moving forward. Central to this effort are the dedicated contributions by campus Maintenance and Operations teams, as well as students, faculty, and staff members supporting one another in encouraging recycling and composting as much as possible. These efforts will continue in the coming year, with a focus on expanding waste sorting training and continued expansion of three-stream waste systems and signage.

In addition, there were student-led waste audits and education on zero waste practices shared this year. Waste audits analyze the materials thown away to better understand the types and amounts of waste generated at a certain campus or facility. This information can help us understand how to reach zero waste for that site. Students from DVC conducted a waste audit in April 2023 to analyze the waste generated at the cafeteria building and found that most of the waste was landfill (43%) with a diversion rate of 55%. However, after resorting, they discovered that most of the waste was compostable (55%) and the total diversion rate was 88%. By reducing food waste and increasing education on composting, students collectively could work towards achieving zero waste.

Actual Collected DVC Lunch Waste Data

Original DVC cafeteria lunch waste data from bins, measured by category: 55% diversion rate



Diversion rate is the total percentage of compostable and recyclable waste combined and diverted from landfill
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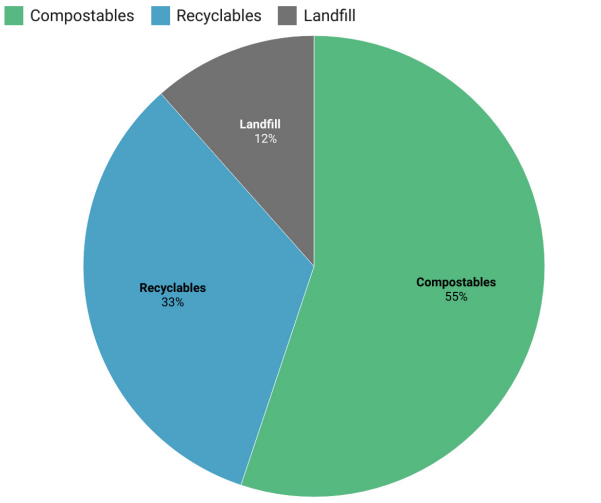
Resorted DVC Lunch Waste Data

DVC cafeteria lunch waste data, accurately sorted: 88% diversion rate



Diversion rate is the total percentage of compostable and recyclable waste combined and diverted from landfill
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Goal 6

Procurement

Policy Goals –
District-led with campus input

2025: Benchmark sustainability of existing products and services. Adopt a sustainable procurement policy and administrative procedure. Purchase environmentally preferable electronics products.

2030: Increase procurement of sustainable products and services by 25%.

2035: Increase procurement of sustainable products and services by 50%.

Progress Toward Goals

Sustainable procurement and purchasing policies prioritize the use of environmentally friendly and socially responsible products and services in procurement. 4CD is implementing several strategies to achieve this goal, including setting clear sustainability goals and criteria, monitoring progress, working with suppliers who meet sustainability criteria, promoting sustainable products and services, and engaging stakeholders to support sustainability initiatives and promote a culture of sustainability within 4CD.

Goal 7
Water

Policy Goals –
District-led with campus input

2025: Develop local benchmarks for potable water usage, and identify non-potable water resources. Create a landscape zoning map and irrigation metering strategy. Adopt CCC Model Stormwater Management Program practices.

2030: Reduce potable water usage by 25%. Install meters on all landscape irrigation systems of 2500 square foot or more (unless using local or municipal reclaimed water). Achieve 90% of landscape plantings as geographically native species. Irrigated turf cannot exceed 50% of landscaped areas on campus. Follow Municipal Separate Storm Sewer Systems (MS4) requirements.

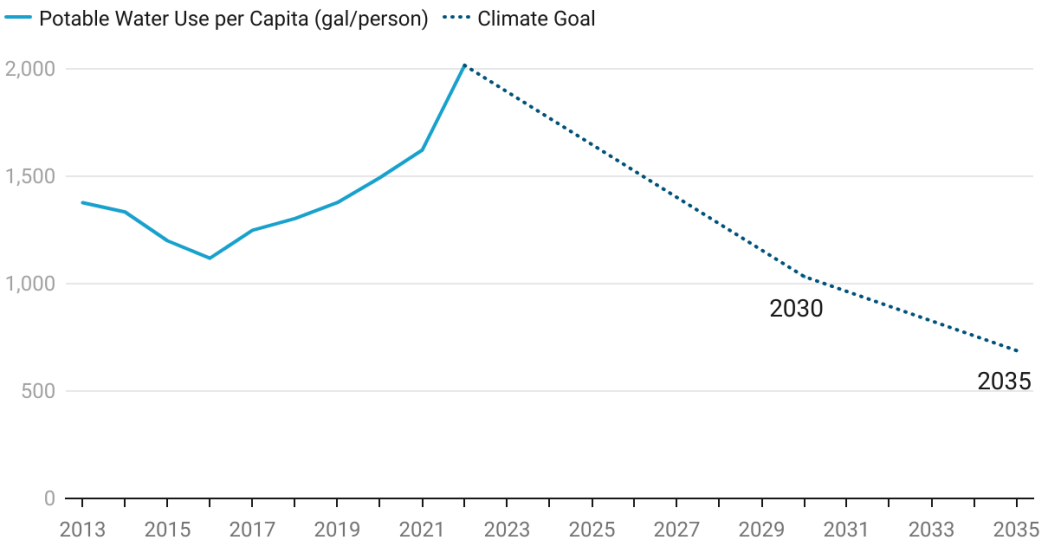
2035: Reduce potable water usage by 50%. Limit stormwater runoff and discharge to predevelopment levels for temperature, rate, volume, and duration of flow through use of green infrastructure and low impact development for the campus, and for new buildings and major modifications.

Progress Toward Goals

Several strategies are being implemented to support progress in this goal. These include water audits to understand usage; implementing water conservation measures such as low-flow fixtures; using native landscaping combined with landscaping suitable for reclaimed water; irrigating and flushing toilets with reclaimed water when available; installing water-efficient appliances; educating students and staff about water conservation; monitoring water usage and partnering with local water agencies for resources and expertise. These strategies are all relevant in helping us reduce our water usage to ensure that 4CD achieves its sustainability water goals.

The graph below shows our historical water usage per capita for potable (drinking) water. Most of our sites use reclaimed water for irrigation. However, one of our larger campuses recently experienced challenges irrigating with reclaimed water and had to switch to irrigating with potable water, causing an increase in the potable water usage. Another campus has had an ongoing leak, identified through the smart utility meter, but specifically locating the leak has been challenging without building level submetering and with no visible water leaks on the campus. Both issues contribute to the per capita increase over the past several years. District and college teams are working toward a solution for both situations, which will help us reach our goals and reduce our water utility costs.

4CD Potable Water Usage per Capita



Reclaimed water use not included.

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Goal 8
Curriculum

Policy Goals –
Campus focused

This goal will be reached by engaging in dialogue and seeking feedback from faculty, staff, students, and community organizations to understand and support various opportunities and effects of sustainability and energy conservation efforts on instructional programs and the environment.

Progress Toward Goals

To achieve its sustainability curriculum goal and prepare students for success in the expanding field of sustainability and energy management, 4CD's Sustainability Team and the colleges are committed to taking steps to collaborate together, and with faculty and instructional staff to infuse existing and/or develop sustainability curriculum, integrate sustainability into academic disciplines, promote experiential learning opportunities, engage with the community, enhance learning through technology, and encourage staff and faculty to participate in available professional development opportunities.

Using our campuses as living laboratories for learning can be a key strategy in this effort. The Campus as a Living Lab model provides students hands-on applied learning opportunities through solving real-world problem they can tackle on campus. This year, 4CD's Sustainability Team collaborated with DVC to offer inaugural sustainability internships to students, providing students with practical skills. The DVC Campus Energy and Sustainability internship and DVC Building Decarbonization internship collectively received 35 applications from 27 individual student applicants from over 10 different majors. Through these strategies, 4CD is making progress towards its curriculum sustainability goal.

Goal 9

Food Systems

Policy Goals –
Campus focused

2025:
Campus food service organizations to track their sustainable food purchases. Refer to Real Food Challenge guidelines – or equivalent – with consideration to campus-requested improvements.

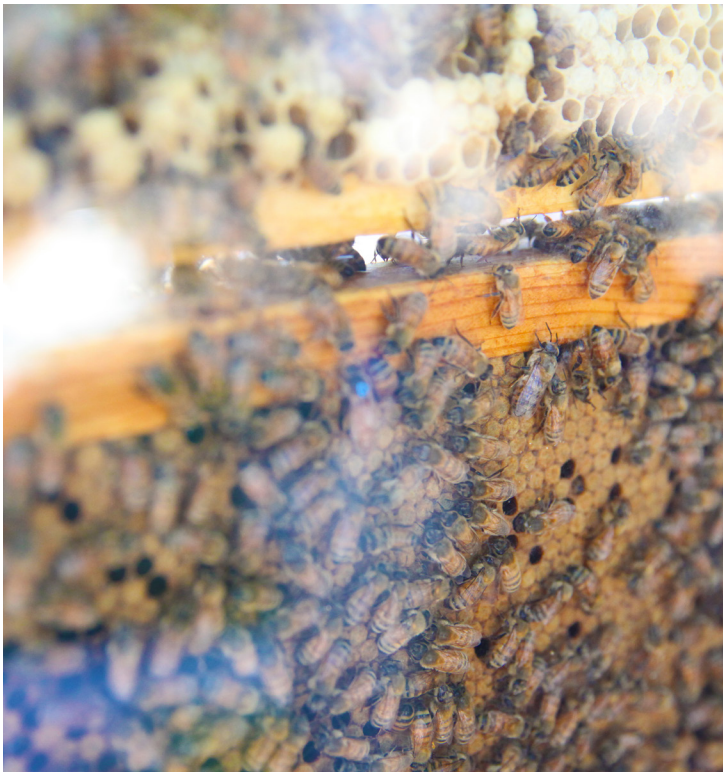
2030:
Increase sustainable food purchases to 20% of total food budget.

2035:
Achieve 80% of food served on campus meets the goals of the Real Food Challenge or equivalent.

Progress Toward Goals

Sustainable food procurement involves sourcing food that is distributed and produced responsibly in environmental, social, and economic terms. The Real Food Challenge, a national organization, offers tools and strategies to promote a sustainable, local, fair, and humane food system through responsible procurement decisions. As part of this initiative, the Culinary Art departments at CCC and DVC have implemented programs such as local gardens and collaborations with local vendors to progress towards this goal.

4CD is also collaborating with the colleges and students to monitor metrics such as food waste diversion and greenhouse gas emissions, fostering education and collaboration among stakeholders, and sharing progress through annual reports and other media channels. These efforts aim to establish a resilient and equitable food system that benefits the environment, public health, and promotes social justice.



Districtwide Utility Costs Update

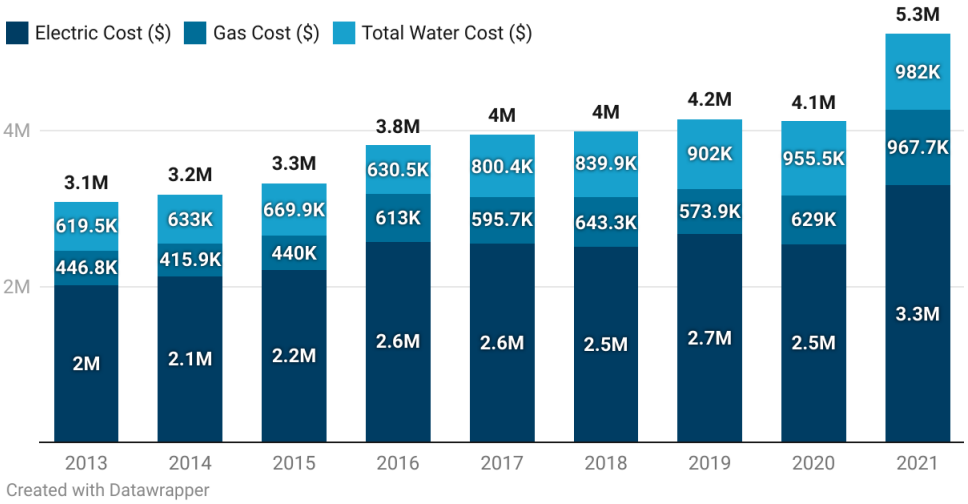
Districtwide Utility Costs Update

Our Districtwide utility costs are impacted by two primary factors: usage and unit cost. As usage increases, costs typically increase. As unit costs increase, overall costs may increase even when usage is on a decline.

4CD Utility Costs

The following graph shows the total utility cost increasing by 70% between 2013 and 2021. More specifically, electric costs increased by 63%, gas costs increased by 116% and water costs increased by 59%. Though the graph does not articulate the percentages for each cost, electricity represents 63% of 2021 costs, while gas and water come in at 18% and 19%.

4CD Utility Cost by Fiscal Year



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4CD Utility Usage

Looking at the 4CD Utility Usage by Fiscal Year graph, we can see the total usage. What is not as easily captured in this graph, is the impact of adding new buildings and more buliding area to our campuses. Between 2013 and 2021, 4CD by 249,000 square feet representing an overall increase of 16%. The electric usage and gas usage in the graph below, are nearly the same in 2013, compared to 2021, thereby noting that the increase in cost in the graph above, is purely due to the unit costs increasing. Without the reduced utility usage per square foot (through implementation of LEED buildings, electrification and overall energy and sustainability efforts), our overall utility costs would have been much higher.

4CD Utility Usage by Fiscal Year

	Purchased (kWh)	Annual Therms Consumed	Annual Potable Water Use (kgal)	Annual Recycled Water Use (kgal)
2013	16,889,407	641,029	43,597	47,351
2014	16,961,394	566,880	40,782	47,804
2015	16,745,507	569,667	37,585	44,628
2016	17,124,605	610,789	36,940	35,899
2017	17,281,559	659,193	42,512	87,448
2018	17,005,355	648,727	38,546	40,158
2019	16,472,861	581,016	46,511	29,117
2020	14,097,983	534,954	52,704	25,809
2021	16,849,130	653,340	49,830	25,901

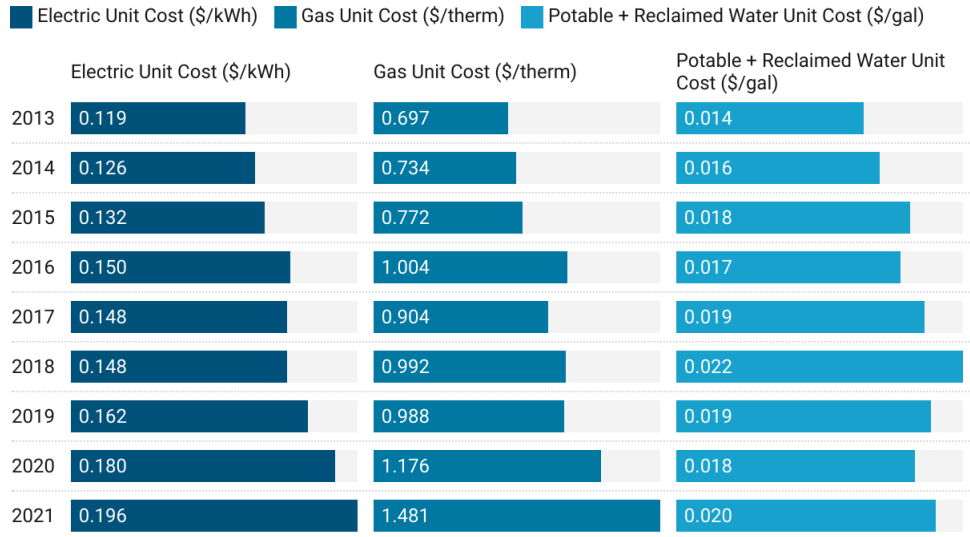
Created with Datawrapper

4CD Utility Unit Costs

The chart below shows how the unit costs for each utility have increased. Electricity has increased by 64% between 2013 and 2021, while gas and water have increased by 112% and 38%. This would imply that gas unit costs are the most volatile, followed by electricity and water as we have experienced much of it this 2022-23 year. Though not all the costs have been captured for this year yet, we saw the gas unit costs increase seven-fold. The previous twenty-year gas unit increase was only three-fold, making December 2022 and January 2023 historic gas price events. This type of volatility in the market is difficult to budget for, and has caused many institutions to spend far more than they budgeted.

Our 2022-23 budget was projected to be 22% higher than last year, accounting for all the known unit price increases. Gas unit cost increases were well outside the expected range. Because of that, we have been tracking the utility costs this fiscal year more closely. At the six-month mark, the expenses were at the corresponding budget, at 52%, and at the end of the third quarter, we were at 71% of our budget. Based on that trend data, we expect our actual utility costs to align closely with our budget this year, even given the unprecedented gas unit costs in December and January.

4CD Utility Unit Costs by Fiscal Year



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As we electrify more of our campuses, it will be important to attempt to stabilize our electricity unit costs. We can do this by adding more solar panels to our campuses, and by engaging in long-term agreements with clean, green electricity providers. As we shift from gas to electricity usage, and to the electric heat pump technology which is three to five times more efficient than gas-fired equipment, we will find this will help minimize the impact of increases in electricity usage/cost, which represents 60% of our utility budget.

Campus Sustainability Committees

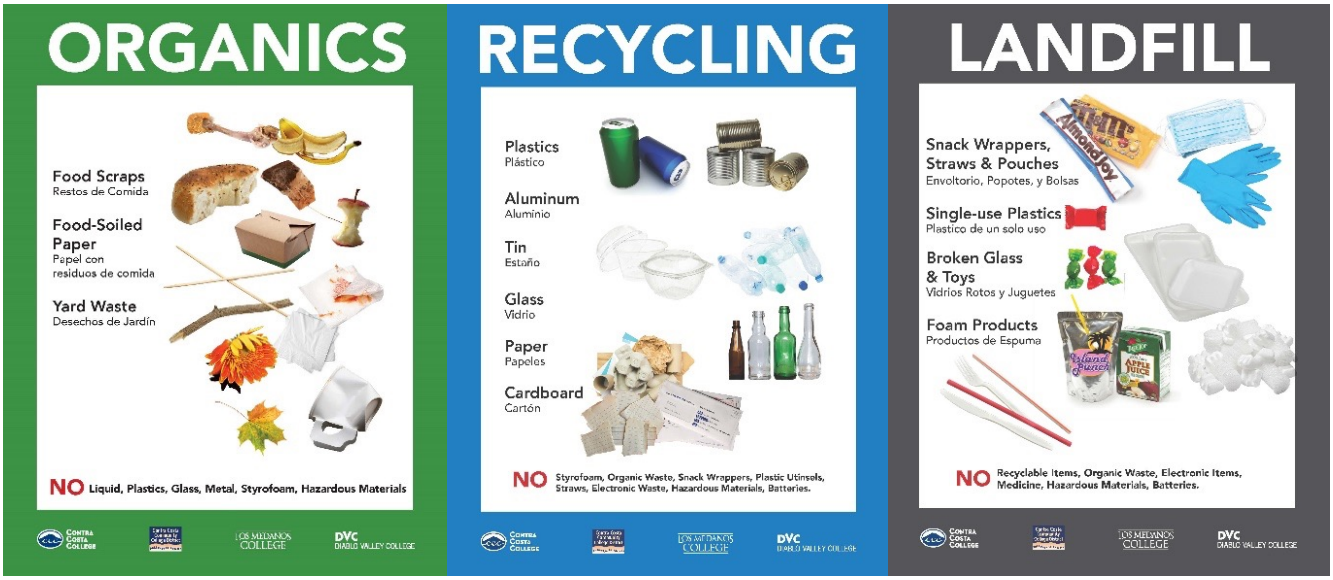
Contra Costa College

CCC's sustainability goals this year included expanding the number of recycling and compost bins on campus; encouraging more faculty, student, and staff involvement in campus sustainability initiatives; reaching out to local organizations and stakeholders for support in advancing CCC's sustainability initiatives; and continuing to work with the 4CD Sustainability Team to align 4CD's Districtwide goals with CCC's campus sustainability goals. Below is a summary of the accomplishments by CCC and its Sustainability Committee:

A. Expansion of Zero Waste Infrastructure

As part of CCC's zero waste goals, three-stream waste bins are being expanded across campus. This year recycling and compost bins have been added to the Science Center, SAB Building, Fireside Hall, GE Building, AA Building, GLC Building, GA and Gym buildings, the Police Station, and the Buildings and Grounds buildings. The next buildings scheduled for this expansion are the Arts and Music Buildings. The goal is to have access to three-stream waste bins across the campus by the end of 2023. These steps help CCC meet District Goal 5: Zero Waste.

Examples of three-stream waste bins and signage at CCC!



B. Transportation

CCC is working to expand access to electric vehicle charging on campus, to encourage CCC faculty, staff, and students to use electric vehicles. The Custodial, Athletics, and Police Services on campus currently use electric golf carts rather than gas-powered vehicles to travel around campus.

CCC also hosted its annual Bike to School Day on May 18, 2023, to encourage alternative modes of transportation to campus. Collectively, these efforts to shift to biking, carpooling, electric vehicles or other alternative modes to go to school help improve air quality and reduce greenhouse gas emissions for the community and 4CD. These efforts support Goal 4 (Transportation) and Goal 1 (Greenhouse Gas).

An example of the six electric golf carts at Contra Costa College!

Earth Day Fair at Contra Costa College, featuring a table of green cleaning products.

C. Water

CCC is advancing water conservation strategies by installing automatic faucets for bathroom and lab sinks, automatic flushable urinals, and toilets with high efficiency flushing. Future projects include upgrading the CCC's landscape sprinkler system to a modern remote system with moisture sensors to further conserve water for campus landscape irrigation. These efforts will save CCC water and money through improving water use efficiency. These efforts are aligned with Goal 7 (Water).

D. Food

The CCC Sustainability Committee continues to explore and discuss tracking sustainable food purchases during committee meetings, which is aligned with District Goal 9 (Food Systems). Cost effectiveness is a priority for CCC and the culinary academy in exploring sustainable food purchases on campus.

E. Events

CCC hosted a wide variety of sustainability events this year. First, on March 7, 2023, CCC hosted an Arbor Day Celebration by planting ten trees in the culinary garden. Despite the onset of rain, celebrations hosted by the CCC Culinary Department continued afterwards at the Aqua Terra Grill.

Next, CCC hosted its annual Earth Day Celebration on April 21, 2023, in partnership with over 20 vendors visiting campus. The celebration was a success and featured games, food, giveaways, music, and contests for attendees.

Diablo Valley College

For the 2022-23 school year, the DVC Sustainability Committee set goals to conduct waste audits, install new signage on waste containers, implement more sustainable food containers on campus, and promote sustainability on campus through events. Below is a summary of this year's sustainability accomplishments at DVC:

A. Waste Signage, Waste Audits, and Zero Waste Events Guide

This year brought lots of progress towards zero waste at DVC. In fall of 2022, new universal waste signage was designed for use at all 4CD campuses and installed throughout DVC at the Pleasant Hill campus and San Ramon campuses. Students, staff, faculty, and visitors on campus can follow the images on the three signs to guide decisions on what goes in compost, recycling, and landfill bins on campus.

On April 13, 2023, the Associated Students of DVC (ASDVC) organized and hosted a waste audit of DVC's cafeteria lunch trash. After weighing and evaluating each bag for its sorting accuracy (or rate of contamination), the students correctly sorted again all the waste content into compost, recycling, and landfill piles. In total, students recorded 38.3 total pounds of waste generated (of which 7.1 pounds were liquids) with 56.92% originally sorted – or diverted – into recycling or compost. After correctly resorting the waste, ASDVC students found that 88.46% of the waste could be diverted into recycling or compost! Common sorting mistakes included leftover food and containers thrown into landfill or compost. Instead, food should be separated from containers before being thrown into compost. These takeaways revealed that more sorting education at DVC can increase the diversion rate for DVC's lunch waste. A greater diversion rate moves DVC closer towards a zero waste campus!

ASDVC students also hosted a cleanup event at the Martinez Marina on April 28, 2023. This community service event provided opportunities for students to help clean up litter at Waterfront Park in Martinez, and practice environmental stewardship through teamwork.

Lastly, DVC's Sustainability Committee also developed a Zero Waste Events Checklist to help provide clear guidelines for hosting zero waste events at DVC. The guide was shared with DVC's Maintenance and Operations department so all future event planners can access it when using campus facilities for events.

ASDVC students auditing waste from the DVC cafeteria!

Left: A Zero Waste Event Checklist developed by Sharrie Bettencourt and the DVC Sustainability Committee. This Checklist is now available for all event organizers at DVC!

B. Clipper Card Distribution

DVC's Sustainability Committee also partnered this year with the DVC Basic Skills Initiative to fund 400 Clipper cards for students who receive financial aid. The Clipper cards came preloaded with $125 each, and are available for students to use when traveling on BART or County Connection buses, expanding access to transportation, and encouraging the use of public transportation. This partnership distributed approximately 200 Clipper cards during the 2022-23 school year, with the rest available for students during the 2023-24 school year.

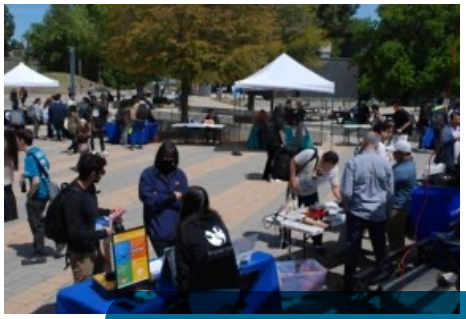
C. Campus Events and Internships

The DVC Sustainability Committee planned multiple events during the 2022-23 school year to provide opportunities for students, staff, and faculty to learn about sustainability. This began with a co-hosted Equity Speaker Series event in November 2022, which invited Sneha Ayyagari from The Greenlining Institute to DVC to present on "Making Social Equity in Climate and Clean Energy Real." Students had the opportunity to learn about the overlaps between social equity and justice in climate and clean energy.

In April, the DVC Sustainability Committee organized and hosted a Sustainability Career Fair during Earth Month, inviting over 20 organizations and companies in the sustainability field to table and show students various job opportunities available. The Fair was a hit and attended by over 150 students, who were able to meet with sustainability professionals and discover potential internships and jobs while enjoying free food and refreshments.

Lastly, DVC partnered with the 4CD Sustainability Team to host two inaugural sustainability internships through SEI's Energize Colleges program, which was funded by PG&E. These were the DVC Campus Energy and Sustainability Intern and Building Decarbonization Intern. After receiving 27 individual applicants representing more than 10 majors, DVC students demonstrated high demand for these types of internships on campus. The 4CD Sustainability Team and DVC look forward to exploring potential funding sources to continue offering these types of internships to students.

DVC's Sustainability Committee co-hosted Sneha Ayyagari from The Greenlining Institute to present on "Making Social Equity in Climate and Clean Energy Real" at DVC's Equity Speakers Series in November.



DVC's Sustainability Career Fair on April 18th invited 20+ sustainability orgs and drew over 150 students!

Los Medanos College

This year, the LMC Sustainability Committee set out multiple goals ranging from water conservation and fleet electrification, to campus infrastructure and community engagement. See below for a highlight of this year's progress.

A. Zero Waste: New Waste Signage and Water Bottle Filling Stations

Campus students, staff, faculty, and visitors will find that additional waste sorting signage are installed around campus, and three new water bottle filling stations have also been added in the math building and childcare building to help LMC community members stay hydrated. These infrastructure improvements support Goal 5 (Zero Waste) by supporting waste sorting and reusable water bottles.

An example of water bottle filling stations at Los Medanos College.

Example of shut off water fountains at Los Medanos College.

B. Water Conservation on Campus

As part of water conservation efforts, this year LMC discontinued the use of onsite fountains and reduced all timeframes for watering landscape by 10%. Maintenance and operations teams are also working to reduce LMC's landscaping water needs by working on vegetative reduction and capping sprinklers in areas where they are no longer needed. These changes support Goal 7 (Water).

C. Fleet Electrification

LMC's Operations and Maintenance teams also continue to explore strategies for electrifying their vehicle fleet that is soon due for replacement. These efforts support Goal 1 (Greenhouse Gas) and Goal 4 (Transportation). Their focus is downsizing vehicles and sharing them with various users to optimize their investments.

D. Campus Education

Lastly, LMC's Sustainability Committee set a goal to install signage in pick-up and drop-off areas to encourage motorists to limit idle time by turning cars off when waiting to reduce vehicle emissions. This would support Goal 1 (Greenhouse Gas). Furthermore, LMC students have had opportunities through LMC's Biology department to tour the recycling and waste recovery facility for Mount Diablo Resource Recovery, who hauls LMC's waste. These tours as part of students' learning support Goal 8 (Curriculum).

Additional Resources

4CD Sustainability Policy/Goals - which includes links to CA Community Colleges Climate Action and Sustainability Goals and CA Community Colleges Board of Governors Climate Action and Sustainability Framework

Contra Costa College Sustainability Committee

Diablo Valley College Sustainability Committee and DVC Sustainability Page

Los Medanos College Sustainability Committee

4CD Facilites Planning, Sustainability Page (coming soon!)

www.4cd.edu

https://www.4cd.edu/business/facilities/index.html

Contra Costa Community College District

pathways to success