

Cal State East Bay

# Climate Action Plan Progress Report

## May 1, 2019 – April 30, 2020

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Climate Action Plan Approved by President Leroy Morishita April 30th, 2018



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# Executive Summary

No emission reductions have been achieved since the adoption of the Cal State East Bay (CSUEB) Climate Action Plan (CAP) in 2018. While the campus has implemented some measures that will minimally reduce greenhouse gas emissions, the campus has also made other decisions that undermine campus mitigation goals. CSUEB is further from achieving its CAP goals than it was in 2018. Leadership is needed to turn this trend around.











The clear priority areas for emissions reductions and revenue generation to support CAP initiatives are solar electricity and alternative transportation.

Additionally, the University Faculty has failed to implement its commitment to make climate neutrality a required part of the education of all CSUEB students.

The on-going COVID-19 pandemic is currently reducing campus transportation emissions. The community should explore lessons-learned during the pandemic to identify practices that might be carried forward once stringent shelter-in-place and social distancing requirements are relaxed.

# Climate Action Plan Background & Reporting

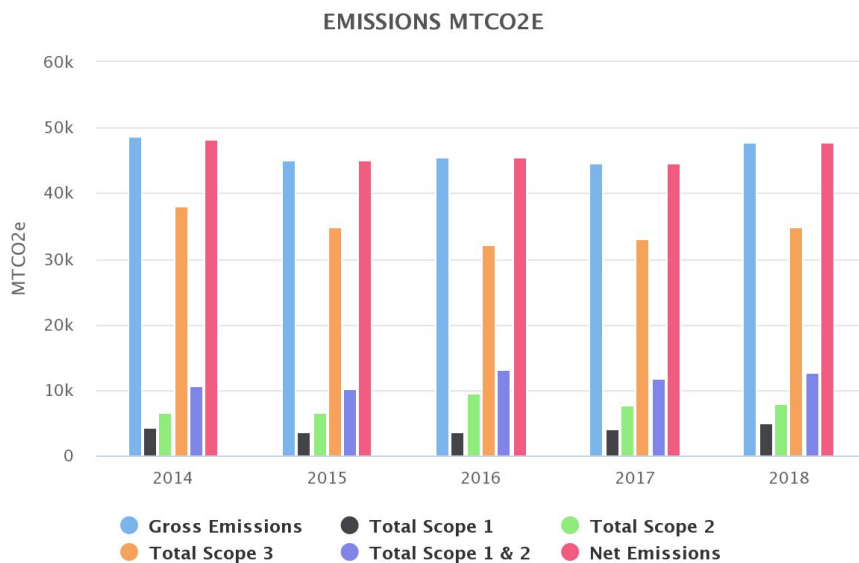
CSUEB adopted its CAP on April 30th, 2018, fulfilling, in part, the University's [Carbon Commitment](#) (signed in 2015). The CAP contains [8 Umbrella Policies \(UMB\)](#) and [52 Action Steps](#) intended to guide greenhouse gas (GHG) emissions reduction efforts to reach carbon neutrality by 2040 ([UMB1](#))<sup>1</sup>. The Umbrella Policies guide implementation of the Action Steps, which are broken into 10 categories, as shown in [Table I](#).

<b>Table I: Umbrella Policies &amp; CAP Action Step Categories</b>	
 <b>Umbrella Policies (UMB)</b>	 <b>Procurement (PROC)</b>
 <b>Energy (ENG)</b>	 <b>Landscaping (LAND)</b>
 <b>Transportation (TRAN)</b>	 <b>Education (EDU)</b>
 <b>Buildings (BLDG)</b>	 <b>Finance (FIN)</b>
 <b>Housing (HOUS)</b>	 <b>Offsets (OFF)</b>

CSUEB reports its emissions annually to [Second Nature](#), in total and per full-time equivalent employee (FTE). As shown in [Second Nature's Reporting Framework](#), CSUEB's emissions are dominated by transportation emissions (Scope 3, primarily from commuting), with purchased electricity (Scope 2), and direct emissions from on-campus fuel use (Scope 1) representing a distant second and third. Also shown, although CSUEB per FTE emissions were reduced from 2014 through 2018, overall emissions were not reduced (see [Figure I](#)). However, because some CAP Action Steps address emissions reductions directly and immediately, while others do not,

<sup>1</sup> UMB1 = Umbrella Policy 1. Refer to the Appendix for a full description and status of the CAP Umbrella Policies. A spreadsheet table of the CAP Umbrella Policies, Action Steps and progress made from May 2019 - April 2020 can be found [here](#).

(Education Action Steps, for example), these Action Steps are still necessary to meet the directives in the Carbon Commitment, although they do not have a direct impact on emissions reductions.

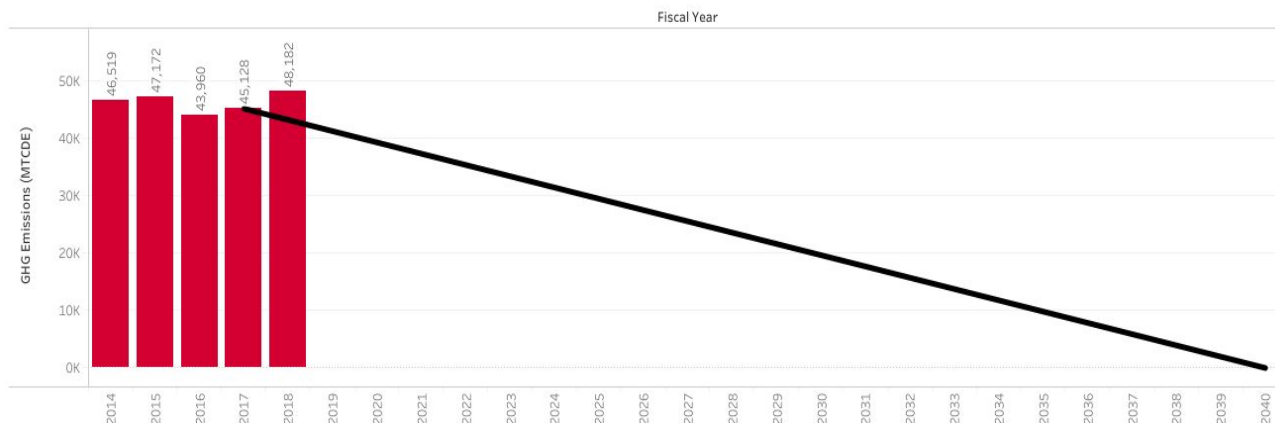


**Figure I: East Bay's emissions, as seen on the Second Nature Reporting Framework**

## Reaching the Carbon Neutrality 2040 Goal

There are 20 years until the CSUEB 2040 carbon neutrality goal and 49 out of the 52 [CAP Action Steps](#) needed to achieve this goal have not been met. Notably, only 3 of the 12 Action Steps identified for immediate achievement (that is, in 2018) have been completed, admittedly with 5 in progress. The Immediate and Near-Term (by 2025) Action Steps are crucial in that they make up 40 out of the 52 Action Steps overall, and they are most amenable to achieving immediate and significant emissions reductions.

Most notable, as of Spring 2020, no major carbon reduction initiatives have been implemented at CSUEB since the CAP was adopted in 2018. As a result, CSUEB is not on track to meet its 2040 carbon neutrality target and will need to begin procuring offsets. To meet its goals, CSUEB must reduce emissions by 5% of its 2018 emissions each year starting in 2020. Each missed year makes future targets more difficult to achieve.



**Figure II: Annual Greenhouse Gas Emissions in Metric Tons of Carbon Dioxide Equivalent (MTCDE) Compared to Required Emissions Reductions Trendline**

It is important to recognize that the CAP is part of an adaptive management strategy, in which objectives are refined as barriers and opportunities emerge. As the Climate Action Planning Implementation Taskforce ([CAP-IT](#))<sup>2</sup> negotiated during its first implementation year (AY18/19), and failed to meet its first-year targets, two clear priorities for action emerged to reduce electricity and transportation emissions:

## 1. Solar Electricity

The highest priority for action is to implement a 6.5 megawatt *Solar IV* photovoltaic (PV) project on the Hayward Campus of the maximum size recommended by the CSU Chancellor's Office (CO). Not only would this achieve a year's worth of emissions reductions in one action, more important, the net cost savings associated with the project would provide the finances needed to fund the CAP.

Solar IV is a Master Enabling Agreement developed by the CO for low-cost solar energy. Indeed, the CO identified 26 acres of land on the CSUEB campus that could accommodate PV installations at an estimated cost, between 5 – 9 cents per kilowatt hour, compared to the average price currently paid, about 13 cents per kilowatt hour. A 6.5 megawatt system, which could be accommodated in that acreage, could save CSUEB over \$500,000 per year. The annual monetary savings from Solar IV and other cost-saving carbon reduction projects could start a Green Revolving Fund to be used solely for implementing further emissions reductions projects.

Lack of dedicated funding for emissions reductions, and lack of personnel time to implement projects, were identified as *the* barriers to implementation of CAP actions. Thus, Solar IV is the essential first step to CAP implementation and would contribute significantly to meeting the CAP

<sup>2</sup> See the Acknowledgements section at the end of this report for recognition of CSUEB's CAP-IT members.

Action Steps [ENG2](#) (installing PV), [ENG3](#) (prioritizing PV), [EDU2](#) (campus as a living lab opportunities), and [FIN2](#) (establishment of a revolving fund to pay for CAP projects).

## 2. Alternative Transportation

The next highest priorities are all in transportation. With transportation being by far the largest single source of CSUEB's emissions, and the most difficult to reduce, sustained and aggressive focus must be placed on reducing commute related emissions. Unfortunately, two recent decisions directly contradict the CAP's transportation goals: the decision to pursue a new diesel shuttle-bus contract, rather than AC Transit for BART-to-campus service, and the decision to end free electric vehicle charging on campus (and charging above market rates for the electricity). These decisions must be revisited as they contradict CAP Action Steps [TRAN2](#) (encouraging alternative transportation) and [TRAN3](#) (subsidized transit passes for the campus community) and disincentivize movement towards achieving [TRAN10](#) (no vehicles for first-year residents).

### Climate Neutrality Education

Action is also conspicuously lacking in the area of climate neutrality education. CSUEB still lacks a requirement for climate neutrality education for all students, which was committed both under the Carbon Commitment (January 2015) and the 2007 Senate Sustainability Resolution (BEC 06-07 9). The Senate Committee on Instruction and Curriculum (CIC) was asked to develop a plan to fulfill this commitment in AY18/19 to achieve CAP Action Step [EDU1](#), but failed. This should be a priority for action in AY20/21.

### COVID-19 Implications

At the same time, new opportunities have arisen that could have very significant emissions reductions implications. With in-person teaching and most work on campus disallowed because of the COVID-19 pandemic, all faculty members teaching lecture-type courses were forced to pivot, within a matter of days, to online teaching, and staff to remote work. Therefore, we anticipate that many more faculty, students, and staff may be interested in teaching, taking on-line or hybrid classes, and working remotely in the future, offering significant opportunities for emissions reductions. While online teaching is clearly not the best choice for all courses and remote work may not be an option for all staff, it may be that we can increase these options, benefiting some aspects of education and productivity, and reducing emissions at the same time in alignment with CAP Action Step [TRAN1](#).



# Navigating the Climate Action Plan Progress Report

In accordance with CSUEB's Commitment ([UMB5](#))<sup>3</sup>, the succeeding sections in this Progress Report review the status and annual progress toward implementation of the CAP Umbrella Policies and Action Steps. CAP-IT, in collaboration with the Office of Sustainability, gathers the relevant data from the responsible campus stakeholders ([UMB2](#))<sup>4</sup>. The data reported herein was provided by CAP-IT members, unless otherwise noted.

The Progress Report is organized by the Umbrella Policies and Action Steps outlined in the CAP, as follows:

- [Climate Action Plan Status Overview](#) details the overall status of Umbrella Policies and Action Steps visually through graphs and tables
- [Appendix I](#) highlights the Umbrella Policies and Action Steps with the status of "Meeting Requirements"
- [Appendix II](#) highlights the Umbrella Policies and Action Steps with the status of "In Progress"
- [Appendix III](#) lists all 8 Umbrella Policies and 52 Action Step descriptions, statuses, environmental impacts, operational impacts, responsible parties and projected timelines

Action Steps with the status of "Yet to Be Addressed" are not covered in detail in this document, as there were no meaningful updates during the AY19/20 time period.

This second annual Climate Action Plan Progress Report tracks progress made from May 01, 2019 – April 30, 2020. This document is built upon the formatting, data, and research established in the first [CAP Progress Report May 2018 - May 2019](#).

## Climate Action Plan Status Overview

This section of the CAP Progress Report displays the status of all Umbrella Policies and Action Steps in the CAP for CSUEB. The order is as follows: Umbrella Policies, Action Steps, and status changes of Action Steps from AY18/19 to AY19/20. The entries in the tables reflect the number of Umbrella Policies ([Table II](#)) or Action Steps ([Table III](#)) that are either meeting requirements, in progress, or yet to be addressed.

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<sup>3</sup> UMB5 = Annually the University will complete an evaluation of progress and submit to Second Nature

<sup>4</sup> UMB2 = Responsible parties will report annually on progress to meet carbon neutrality goals



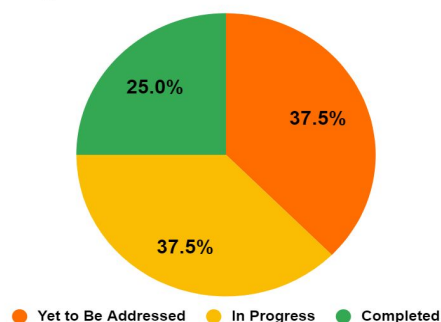
Color key for “Status” columns:

<b>Meeting Requirements:</b> Required Action Steps have been completed, and/or are ongoing.
<b>In Progress:</b> Action Steps are actively being implemented.
<b>Yet to be Addressed:</b> Implementation has not proceeded due to later implementation timeline or a barrier to implementation has been encountered.

Outlined below is a summary of the status of the Umbrella Policies. These directives will ensure that CSUEB will meet the requirements of the Carbon Commitment and keep the University on track for documenting progress towards carbon neutrality.

<b>Table II: Status of CAP Umbrella Policies</b>			
Yet to be Addressed	In Progress	Meeting Requirements	Total
3	3	2	8

**Percentage Breakdown of all 8 Umbrella Policies**



**Figure III: Summary of the Status of the 8 Umbrella Policies for AY 2019-2020**

Outlined below is a summary of the status of the Action Steps. The Action Steps outlined in the CAP focus on key areas where campus emissions are the most prevalent: Energy, Transportation, Buildings, Housing, Procurement, and Landscaping. Education is also included, as CSUEB is an institution of higher education and the Carbon Commitment specifically requires the integration of climate neutrality into the campus curricula. Additional areas for action include Finance, which outlines finance policies essential for implementation of the CAP, and Offsets, used to neutralize emissions that cannot be eliminated through efficiency improvements, conservation, or technology switching.

[Table III](#) presents a summary of the status of the Action Steps based on their intended timeline for achievement, where<sup>5</sup>:

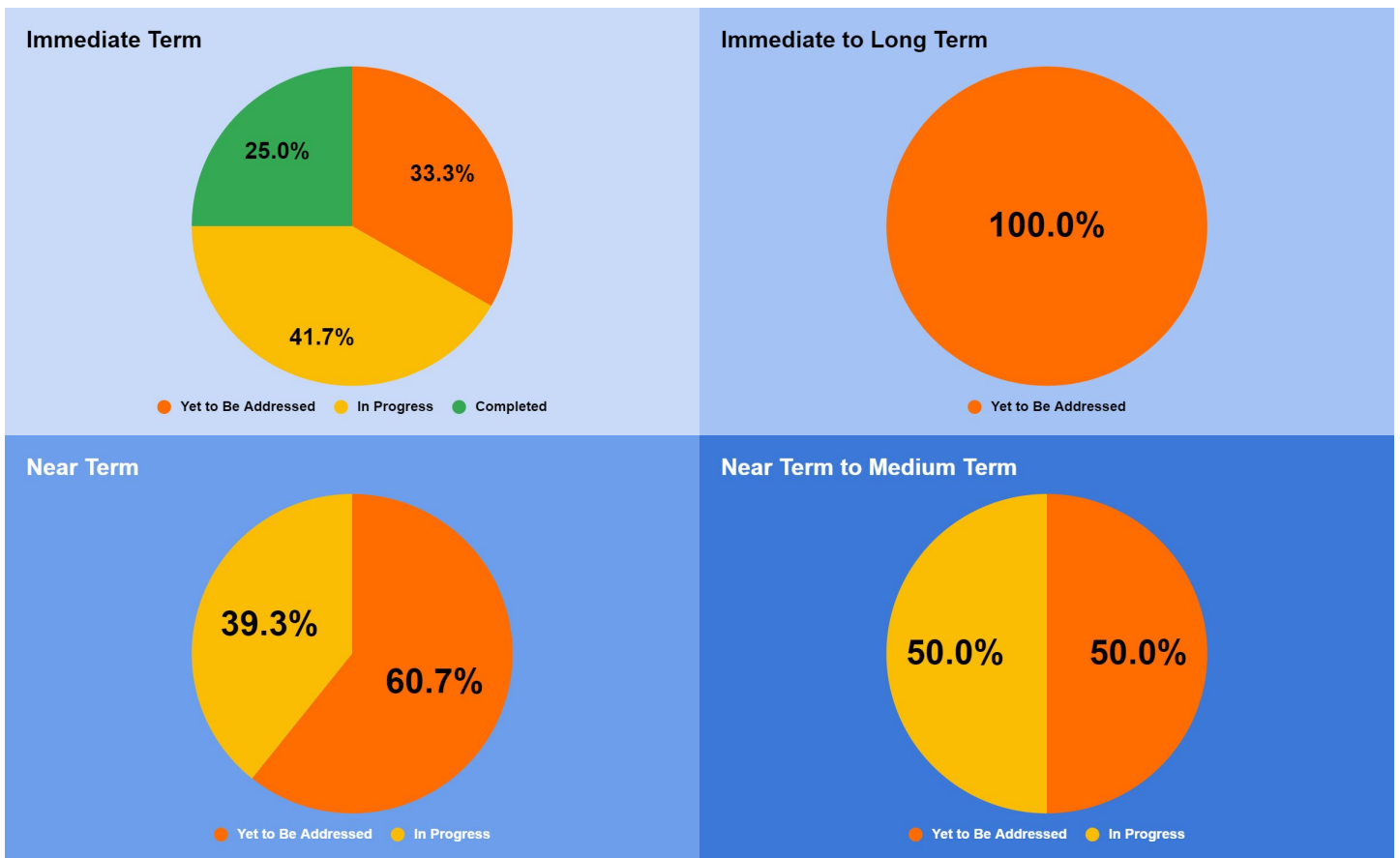
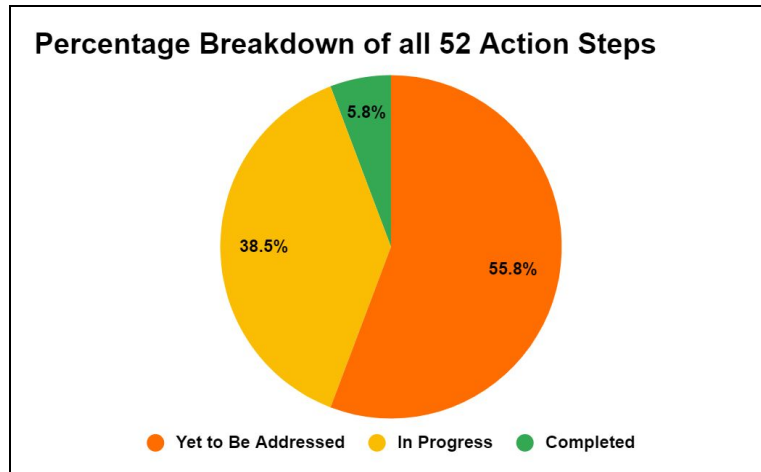
- Immediate = by 2018
- Near Term = by 2025
- Medium Term = by 2030
- Long Term = by 2040

The data is also presented graphically in Figures [III](#) and [IV](#) in the following two pages.

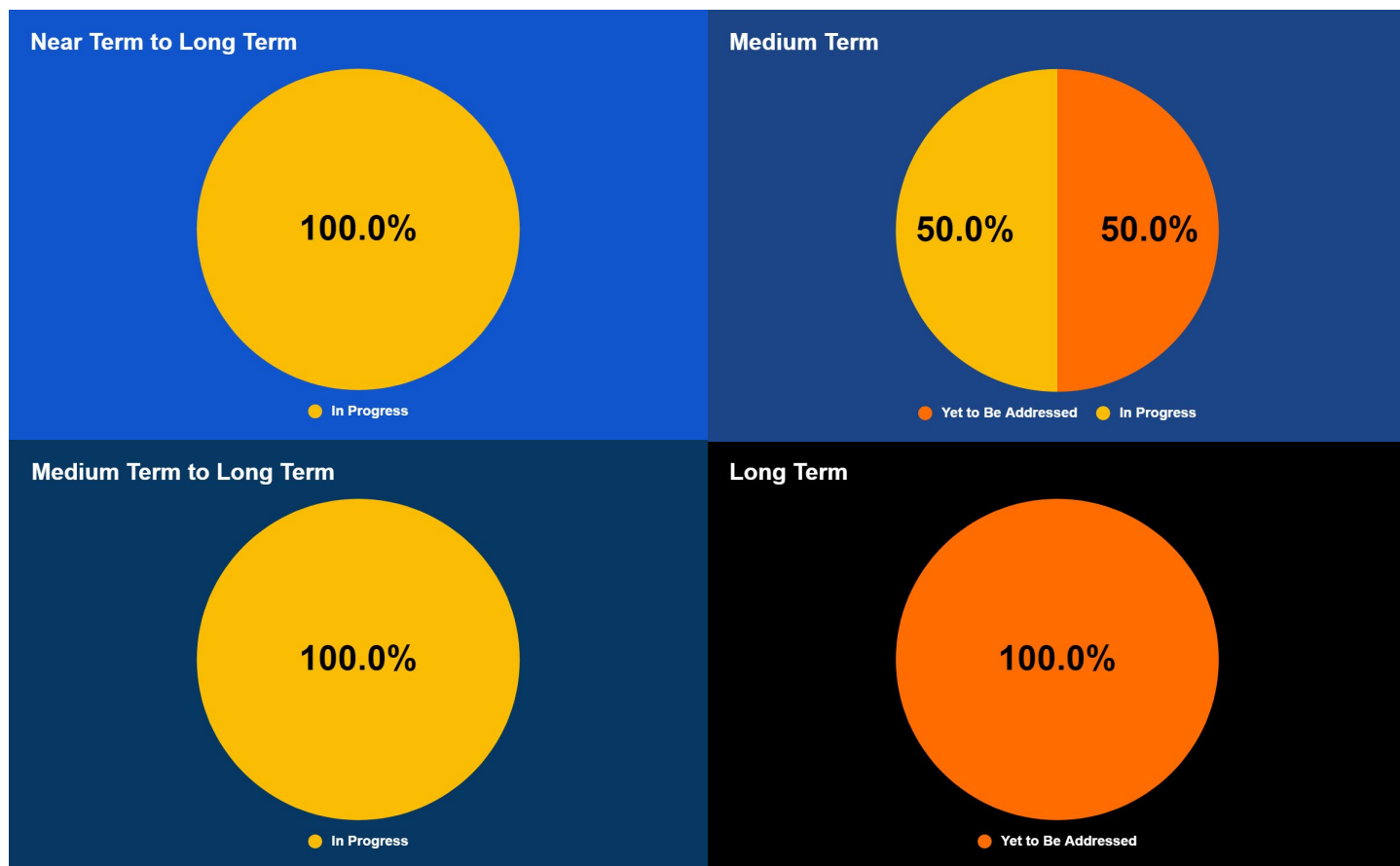
<b>Table III: Status of Action Steps by Timeline Prescribed by the CAP</b>				
	<b>Status</b>			
<b>CAP Action Step Timeline</b>	<b>Yet to be Addressed</b>	<b>In Progress</b>	<b>Meeting Requirements</b>	<b>Total</b>
Immediate (2018)	4	5	3	12
Immediate to Long Term (by 2040)	4	-	-	4
Near Term (by 2025)	17	11	-	28
Near Term to Medium Term (by 2030)	1	1	-	2
Near Term to Long Term (by 2040)	-	1	-	1
Medium Term (by 2030)	1	1	-	2
Medium to Long Term (by 2040)	-	1	-	1
Long Term (by 2040)	2	-	-	2
<b>Total</b>	<b>29</b>	<b>20</b>	<b>3</b>	<b>52</b>

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<sup>5</sup> Refer to the Appendix for the full description of the CAP Action Steps, status, estimated impact, leadership and timeline.








**Figure IV. Pie charts illustrating the status of CAP Action Steps by Timeline**



**Figure V: Pie charts illustrating the status of CAP Action Steps by Timeline (continued)**



After reviewing information collected throughout AY19/20, the Office of Sustainability determined the following status changes were warranted as shown in [Table IV](#). All other Action Steps that are not listed in [Table IV](#) have retained their status from the last CAP Progress Report from AY19/20 and those Action Step summaries can be found in [Appendix I](#) and [Appendix II](#). For a description of each Action Step see [Appendix III](#).

<b>Table IV: CAP Action Steps Status Changes from 2018-2019 to 2019-2020</b>			
Action Step	2018-2019 Status (Previous)	2019-2020 Status (Current)	Reason for Change
<b>ENG1</b> 	In Progress	Yet to be Addressed	Although the RFP for Solar IV is in progress, the Office of Sustainability has decided to move the status to “Yet to be Addressed” until the RFP is distributed publicly for bid.
<b>ENG2</b> 	In Progress	Yet to be Addressed	The Master Enabling Agreement (MEA) on battery storage for energy generated by PV is still not completed at the time of writing this report. “In Progress” status will be restored upon completion of the MEA.
<b>EDU1</b> 	In Progress	Yet to be Addressed	The Committee on Instruction and Curriculum (CIC) failed to address the lack of an official initiative to educate all students on carbon neutrality.
<b>PROC1</b> 	Meeting Requirements	In Progress	The Electronics and Appliance Procurement policy is still in the process of being formally recognized by the campus. Procurement department and Information Technology Solutions are still adhering to the guidelines that are present within the proposed policy however. Because of widespread adherence, CAP-IT is exploring whether it is needed to go through the process of officialization.
<b>PROC4</b> 	Meeting Requirements	In Progress	The 100% Recycled Copy/Print Paper Policy has been followed by campus since the last progress report, but the policy still has not been officially formalized. Similar to the policy for PROC1, due to the widespread adherence CAP-IT is exploring whether it is needed to go through the process of officialization.

# Appendix I: Umbrella Policies & Action Steps

## “Meeting Requirements”




The Umbrella Policies are the overarching guidance for the CAP and its Action Steps.<sup>6</sup> These directives ensure that CSUEB will meet the requirements of the Carbon Commitment and keep the University on track for documenting progress towards climate neutrality.<sup>7</sup> Since the CAP has been adopted (May 1, 2018), CSUEB has successfully met the requirements of 25% of the 8 Umbrella Policies (see [Table II](#) & [Figure I](#)). Both UMB2 and UMB5 have not changed status since the AY19/20 CAP Progress Report.

Table V: Umbrella Policies in which CSUEB is Meeting the Requirements prescribed by the CAP		
Umbrella Policy	Umbrella Policy Description	Status
<b>UMB2</b> 	Responsible parties will report annually on progress to meet carbon neutrality goals	Meeting Requirements
<b>UMB5</b> 	Annually the University will complete an evaluation of progress and submit to Second Nature	Meeting Requirements

<sup>6</sup> Umbrella Policies are not assigned a specific timeline since they are the overarching guidelines of the CAP and its Action Steps.

<sup>7</sup> CSUEB Climate Action Plan, 2018, page 15.




In addition to the Umbrella Policies, since the adoption of the CAP, CSUEB has successfully met the requirements of 5.8% of the total 52 Action Steps and 25% of the 12 Immediate Action Steps (see [Table III](#) & [Figure IV](#)). These figures are down from the reported figures in the AY18/19 Progress Report, which had 9.6% of the total 52 Action Steps and 42% of the 12 Immediate Action Steps. This drop in the number of Action Steps with the “Meeting Requirements” status is due to the downgrading of Action Steps PROC1 and PROC4, as detailed in [Table IV](#) in the preceding section of this document.

<b>Table VI: Action Steps in which CSUEB is Meeting Requirements prescribed by the CAP</b>					
<b>Action Step</b>	<b>Action Step Description (Abbreviated)</b>	<b>Status</b>	<b>Estimated Impact</b>	<b>Leadership</b>	<b>Timeline</b>
<b>ENG6</b> 	Institute on-going energy management training of building technicians	Meeting Requirements	Significant operational cost savings and GHG reduction potential	Facilities	Immediate (2018)
<b>TRAN7</b> 	No net increase in the number of parking spaces for fossil-fueled vehicles	Meeting Requirements	Moderate GHG emissions reduction potential	Facilities	Immediate (2018)
<b>EDU3</b> 	Include recognition of work on University ILOs in the RTP process	Meeting Requirements	Moderate	Academic Senate	Immediate (2018)






## Appendix II: Umbrella Policies & Action Steps “In Progress”

Table VII is a summary describing the CAP Umbrella Policies that are “In Progress” and what progress has been made during AY19/20.


Table VII: Updates on Umbrella Policies which are In Progress	
Umbrella Policy	Umbrella Policy Description
<b>UMB1</b> 	<b>Target: Carbon neutrality by 2040</b>
<b>UMB1 Progress:</b> Overall, 6% of the CAP Action Steps are “meeting requirements” and 40% are “in progress”. In the AY18/19 Progress Report, 10% of the CAP Action Steps were identified as “meeting requirements” and 40% were identified as “in progress”. Meeting the requirements of these Action Steps contributes to CSUEB meeting its goal to reach carbon neutrality by 2040.	
<b>UMB3</b> 	<b>Carbon Management Hierarchy: Consistent with Second Nature's guidance for the development and implementation of climate action plans, the priority order for emissions is (1) reduce emissions with energy efficiency and conservation, (2) replace carbon energy sources with renewable energy, (3) neutralize emissions with offsets</b>
<b>UMB3 Progress:</b> Facilities Development & Operations is working within the Division of Administration and Finance to complete a Request for Proposals to select a vendor to conduct an energy efficiency assessment for CSUEB (see ENG1, below) and implement “Solar IV,” the Chancellor's Office System-Wide Solar Photovoltaic Program Master Enabling Agreement (see <a href="#">ENG2</a> ). Due to the COVID-19 progress on UMB3 has been delayed.	
<b>UMB8</b> 	<b>Leverage partnership opportunities to reduce GHG emissions at least cost and greatest benefit (e.g. with the CSU, the City of Hayward, the County of Alameda)</b>
<b>UMB8 Progress:</b> CSUEB works in collaboration with the City of Hayward on the Campus Sustainability Committee (CSC), as the City's Environmental Services Manager is an ex-officio member of the CSC. Pioneer Heights has switched its energy provider from PG&E to East Bay Community Energy (EBCE), a Community Choice Aggregation (CCA), which sources a cleaner grid mix (see <a href="#">ENG5</a> ). Upgrading to the next, cleaner tier of the EBCE energy rate has been delayed due to COVID-19.	



Tables VIII-XIV are summaries describing the CAP Action Steps that are “In Progress” including what notable progress has been made. Only Action Steps with relevant updates to progress are in this section of CAP Progress Report for the sake of succinctness. 21 of the 52 Action Steps are detailed below, with the remaining notes available in an [AirTable spreadsheet](#).

<b>Table VIII: Updates on In Progress Immediate (2018) Action Steps</b> Descriptions, Estimated Impact & Leadership Updates on 4 of 12 Action Steps			
Action Step	Description	Estimated Impact	Leadership
<b>TRAN2</b> 	<b>Enhance and encourage the use of alternative transportation modes.</b>	<b>Significant GHG reduction potential.</b>	<b>Transportation Planning</b>
The Parking & Alternative Transportation Department began the Waze carpool subsidy program on January 21, 2020. <sup>8</sup> A carpool group of CSUEB staff, faculty, and students that use Waze has been created within the app to foster interconnection among the CSUEB carpooling community.			
<b>BLDG1</b> 	<b>Design all new buildings to be Zero Net Energy (ZNE)</b>	<b>Significant operational cost savings and GHG reduction potential over lifetime of building</b>	<b>Facilities</b>
As of March 2020, the CORE building construction is proceeding with the intent of attaining LEED Gold certification and will be ZNE-ready at the time of project completion. Therefore, CORE will not be considered ZNE until the rooftop solar installations are complete. The Solar IV MEA will include an analysis of the CORE's capability of a ZNE building.			
<b>LAND3</b> 	<b>University will discontinue use of synthetic fertilizers within 5 years</b>	<b>Minimal GHG emissions reduction, moderate general environmental and health benefits, significant symbolic impact</b>	<b>Facilities</b>
About 80-85% of grounds managed by the Grounds Department are fertilized with natural fertilizers. <sup>9</sup> The remaining fraction of land that is fertilized synthetically is still on track to be converted to natural fertilization by 2023.			

<sup>8</sup> [CSUEB Alternative Transportation: Rideshare & Carpool](#)

<sup>9</sup> Reported by Robert Andrews, CSUEB Director of Facilities Operations

<b>LAND6</b> 	<b>Continue turf conversion project using Bay Friendly Landscaping policies.</b>	<b>Operational cost savings from energy, water, and labor savings; environmental benefits.</b>	<b>Facilities</b>
<p>Land that can be converted to adhere to Bay Friendly Landscaping policies is at about 5%.<sup>10</sup> Small updates have been made at the Concord Campus with additional planting of local shrubbery and bark on lawns.</p> <p>Aside from HVAC systems, Facilities and Grounds have eliminated chemicals from all of their major processes in regards to lawn maintenance, upkeep of sport fields, tree maintenance, irrigation, and pathway maintenance. The pest control pilot project, where raptors are being utilized to keep the rodent population in check, has been successful at the Concord Campus.</p>			

<b>Table IX: Updates on In Progress Immediate (2018) to Long Term (2040) Action Steps</b> Descriptions, Estimated Impact & Leadership Updates on 2 of 4 Action Steps			
<b>Action Step</b>	<b>Description</b>	<b>Estimated Impact</b>	<b>Leadership</b>
<b>ENG2</b> 	<b>Install 680 kW of new PV, or other renewable energy capacity annually (or acquire 1.2 million kWh more of RE from the power grid each year, or some combination of the two).</b>	<b>Significant GHG reduction potential; potentially cost neutral.</b>	<b>Facilities</b>
<p>The Solar IV RFP has an estimated completion date of Spring 2020.<sup>11</sup> Recommendations to install more solar PV installations were responded with the suggestion to wait for a Master Enabling Agreement (MEA) on storage batteries. The storage battery MEA is almost finalized but it is not ready for submission. Both documents are delayed due to the COVID-19 health crisis. The aging solar panel system above the Physical Education buildings will need to be replaced as they current panels are being recycled due to old age. There is also a micro-grid assessment in place for June 30, 2020.</p>			
<b>TRAN1</b> 	<b>Increase online coursework and opportunities for telework</b>	<b>Significant GHG reduction potential</b>	<b>Academic Affairs, IT</b>
<p>Online classes have been gradually increasing in both enrollment and number throughout recent semesters. As of December 2019, 54% of students had at least 1 fully-online course in their schedule. In order to accommodate the demand for both online and hybrid courses, 5 faculty have been hired</p>			

<sup>10</sup> Reported by Robert Andrews, CSUEB Director of Facilities Operations

<sup>11</sup> [Campus Sustainability Committee Meeting: Meeting Minutes \(February 14, 2020\)](#)

recently to teach online for psychology, kinesiology, health science, and English.


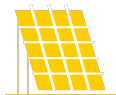
Due to the COVID-19 health crisis, a temporary Telework Agreement was issued to CSUEB staff and faculty wherever applicable.

Due to the recent COVID-19 pandemic, on March 11 both Concord and Hayward campuses had all in-person classes cancelled until March 13. Starting March 16, all in-person classes are transitioning to alternative online modes of instruction up to the end of the Summer 2020 semester.

**Table X: Updates on In Progress Near Term (2025) Action Steps**

Descriptions, Estimated Impact & Leadership




Updates on 11 of 28 Action Steps

Action Step	Description	Estimated Impact	Leadership
<b>ENG1</b> 	<b>Develop and maintain an operation and maintenance plan to reduce energy use, maximize equipment efficiency, and most effectively utilize deferred maintenance funds. (The campus will prioritize facilities upgrades that reduce operating costs and replace equipment at end of life. The campus energy team will engage in an ongoing process to seek opportunities to improve energy efficiency using energy monitoring data, periodic energy audits, continuous commissioning).</b>	<b>Significant GHG reduction potential; significant operational cost savings.</b>	<b>Facilities</b>
<p>A draft of CSUEB's energy plan was given to the Vice President of Administration &amp; Finance in January 2020. The final submission will be finalized during Summer 2020. The baseline for the plan is AY13/14. The goal is to reduce consumption by 5% each year starting in 2020 in regards to the baseline year. There is discussion to update the Master Plan this year as well, in accordance with the energy plan, but there are no hard timelines set in place.</p>			
<b>ENG7</b> 	<b>The campus information technology team will maintain all campus-owned computers, displays, and related technology to always operate in energy saver mode, unless needed for a documented exception.</b>	<b>Low to moderate operational cost savings and GHG reduction potential.</b>	<b>IT</b>
<p>The Information Technology (IT) Department has ongoing efforts to find additional ways to conserve energy use by electronics. In addition to the power-saving features of the 6,862 devices that include</p>			


monitors, screens, and personal computers noted in the previous progress report, all desktop vendors (Apple, Lenovo, and Dell) are currently certified by Energy Star. The device count includes both the Concord and Hayward campuses.

As of December 2019, all desktop computers are replaced every 4 to 5 years. They can also be replaced on individual request. There is consideration on replacing desktop computers at longer intervals to extend their use and reduce the rate of e-waste produced on campus.

For e-waste, IT Asset Management is working with the Property Management Office in having an official process where CSUEB can donate electronics to [publicsurplus.com](https://publicsurplus.com). On that website, the local community and CSUEB affiliates can bid on the items for re-use therefore diverting the items from landfills.


<b>TRAN3</b> 	<b>Pursue subsidized transit passes for students, staff, and faculty (including AC transit and BART).</b>	<b>Moderate to significant GHG reduction potential.</b>	<b>Transportation Planning</b>
<p>The AC Transit partnership has been shelved in favor of a 5-year contracted school shuttle program. There are still ambitions to work with AC Transit for subsidized transit passes after the contract with the new shuttle provider ends and the budget for alternative transportation is reassessed.</p> <p>CSUEB is currently in the process of optimizing shuttle frequency in order to have shuttles at the stops every 8 - 10 minutes. GPS tracking is a feature being explored as well allowing students to more efficiently plan their shuttle trips.</p>			
<b>TRAN5</b> 	<b>Offset carbon emissions from all study abroad and international travel by 2022: investigate adding the cost to the program fee that covers carbon emissions from airfare to and from the origin/destination city.</b>	<b>Moderate to significant GHG reduction potential; no cost implications</b>	<b>Admissions, University Extension</b>
<p>Research into an extension of the Directly Financed Air Travel Offset Policy for international and study-abroad students started late 2019. The program for state-funded travel for faculty and staff will be used as a model and assessment for the planned international / study-abroad student offset program.</p> <p>CSUEB has about 800 students that broadly qualify as international students every year and has peaked at 1,600 students in previous years. There are of course many different types of international students in regards to visas, residency, and sub-categories.</p> <p>In order to balance the carbon cost of international flights, there have been discussions in bundling the carbon offset cost with application and insurance fees. The goal is to not affect tuition for all students.</p>			
<b>TRAN6</b> 	<b>All state-funded travel will be carbon neutral or 100% offset by 2022.</b>	<b>Low GHG reduction potential; but more predictable outcome than most transportation measures and high education value for the university community.</b>	<b>Finance, Admin</b>

CSUEB's first Air Travel Offset Policy has been recommended for Presidential signature by the Campus Sustainability Committee. The policy will impose a \$9 fee on air travel by campus personnel and create a fund that will support on-campus carbon reduction projects.


<b>BLDG2</b> 	<b>No new natural-gas consuming equipment for space and water conditioning starting in 2022. For example, solar thermal systems, PV-driven heat pump systems, or off-set.</b>	<b>Significant GHG reduction potential.</b>	<b>Procurement, Facilities</b>
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Installs of more efficient gas boilers as older models become inoperable are ongoing. Gas powered boilers are still the default option as the infrastructure of the older buildings has made it more difficult to adapt electric water heaters.


Implementation of transitioning off of natural gas is planned to have a section of the energy plan.

<b>PROC3</b> 	<b>Investigate policy for locally sourcing materials to reduce transportation energy use associated with procurement. E.g. Purchase majority of construction materials within 250 miles.</b>	<b>Moderate GHG reduction potential, potential for higher cost of goods.</b>	<b>Procurement</b>
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Sustainability in Procurement Credit Cards (PCard) will become more robust as discussions on the topic continue this year. There have been suggestions in officially discouraging using Amazon.com for supplies and to look into locally available distributors such as Staples. For example, Staples also has a section of products in the Sustainable Earth product line where they are more environmentally-friendly compared to standard office supplies. Also, a draft on updated purchasing policy is being circulated and reviewed as of February 2020.

<b>PROC5</b> 	<b>Continue to move away from the use of paper-based processes with digital processes.</b>	<b>Low GHG reduction potential; moderate monetary cost savings potential.</b>	<b>Procurement</b>
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Adobe Sign, Certify, Calsource and GovQuote are the most common online document tools being used on campus. Adobe Sign has not been implemented into entire departments as of yet, but many individual sections have been utilizing it. Calsource has almost eliminated paper throughout the RFP process for larger services that are valued over \$50,000.

<b>LAND2</b> 	<b>The university will adopt Bay Friendly Landscaping practices</b>	<b>Moderate operational cost savings from energy, water, and labor reductions; moderate GHG reduction potential; environmental benefits.</b>	<b>Facilities,CSC</b>
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Landscaping seeks to incorporate direct mention of Bay Friendly Landscaping (BFL) in CORE building drafts. The contractor project leads for CORE have received suggestions to have BFL practices in the CORE since the project's conception. Wider application of such practices are being reviewed by

Facilities for wider applications for campus.			
<b>LAND4</b> 	<b>Newly purchased equipment to be electric, battery-powered, biofueled or other RE-powered when commercial grade equipment is available</b>	<b>Operational cost savings from reduced equipment maintenance, low GHG reduction potential, potential health benefits</b>	<b>Facilities</b>
As of January 2020, 20% of the lawn mowers and 15% of powered hand tools are powered by electricity. <sup>12</sup> Facilities have been phasing out gas-powered equipment as they reach mechanical failure.			
<b>EDU2</b> 	<b>Facilitate student learning on climate neutrality issues through involvement in research, hands-on-learning, campus-as-a-living-laboratory, community engagement on issues of climate mitigation and adaptation, carbon-neutrality internship placements, and freshman learning communities.</b>	<b>Significant educational impact, especially for diverse student population, as underrepresented minorities benefit most from high impact learning practices such as theses. Significant GHG reduction potential from campus-as-living-laboratory projects.</b>	<b>Center for Community Engagement, Office of Sustainability, Faculty</b>
<p>CSUEB continues to hire alumni to fulfill the Climate Corps AmeriCorps position on campus. Through their work on campus, the fellows gain experience learning about climate protection practices and develop professional skills and understanding for future work in the sustainability and climate action field.</p> <p>Student Sustainability Ambassadors hired by the Office of Sustainability conduct reporting for Sustainability Tracking, Assessment &amp; Rating System™ (STARS®) and greenhouse gas inventories every year.</p> <p>3 students with support by 2 professors presented their work at the 33rd Annual Center for Student Research competition on topics that included tidal effects on marshes, influence of conductivity on CH<sub>4</sub> and CO<sub>2</sub> in wetlands, and applications of geographic information systems in regards to California's marijuana policies.<sup>13</sup></p>			


<sup>12</sup> Reported by Robert Andrews, CSUEB Director of Facilities Operations

<sup>13</sup> [CSR Scholars 2018-19: Environmental Science](#)



**Table XI: Updates on In Progress Near Term (2025) to Medium Term (2030) Action Steps**


Descriptions, Estimated Impact & Leadership  
Updates on 1 of 2 Action Steps

Action Step	Description	Estimated Impact	Leadership
<b>LAND7</b> 	<b>Increase tree cover in parking lots and other locations on campus. Use high albedo paving surfaces (permeable where possible).</b>	<b>Moderate GHG reduction potential; significant co-benefits including mitigation of heat island effect, positive aesthetic impact; significant environmental comfort and health benefits.</b>	<b>Facilities</b>

As stated in LAND5, tree cover in the parking lots have reached maximum capacity. The focus for the next decade is maintaining the health of these trees as they mature.

**Table XI: Updates on In Progress Near Term (2025) to Long Term (2040) Action Steps**

Descriptions, Estimated Impact & Leadership  
Updates on 1 of 1 Action Steps

Action Step	Description	Estimated Impact	Leadership
<b>TRAN8</b> 	<b>Maintain at least 50% greater EV charging station capacity (relative to total number of parking spaces) than the statewide EV vehicle proportion as reported by the state. So, for example, if 10% of the state's onroad fleet is EVs, then 15% of our parking spaces will be for EVs.</b>	<b>Low to moderate GHG reduction potential; potential educational value</b>	<b>Parking</b>

The count of the EV spaces available on both campuses was compared to the amount of EVs registered in California (from the latest DMV report updated in January 2019).<sup>14</sup>

65 spots are required to meet the 50% goal. CSUEB has 56 charging spaces and 13 EV waiting spaces. Only charging spaces are being counted in fulfilling this Action Step, therefore CSUEB needs 9 more spaces. Once the next report from the DMV is published, it is likely that even more EV charging stations will be needed.<sup>15</sup> Future accommodations require planning in the upcoming years as the EV adoption rate approaches California's goal of 5 million EVs on the road by 2030.<sup>16</sup>


<sup>14</sup> [CA DMV: Fuel Type by County as of 1/1/2019](#)

<sup>15</sup> [California Auto Outlook \(Q4 2019\)](#)

<sup>16</sup> [California Public Utilities Commission: Zero-Emission Vehicles](#)




<b>Table XII: Updates on In Progress Medium Term (2030) Action Steps</b> Descriptions, Estimated Impact & Leadership Updates on 0 of 2 Action Steps			
Action Step	Description	Estimated Impact	Leadership
No major progression on the two Medium Term Action Steps (ENG9, EDU1)			

<b>Table XIII: Updates on In Progress Medium Term (2030) to Long Term (2040) Action Steps</b> Descriptions, Estimated Impact & Leadership Updates on 1 of 1 Action Steps			
Action Step	Description	Estimated Impact	Leadership
<b>LAND5</b> 	<b>Carbon sequestration: Restore native woodland to maximum extent possible on non-landscaped areas of the Hayward and Concord Campuses.</b>	<b>Significant ecological benefits, moderate GHG reductions; Cost implications need to be studied (possible cost benefits if offsets from sequestration are certified).</b>	<b>Facilities</b>
<p>Ongoing efforts by CSUEB graduate students and professor Patty Oikawa on the Concord Campus are the most notable points of progress for carbon sequestration:</p> <p>“We are investigating the carbon sequestration potential of compost-amended rangelands at CSU East Bay's Concord Campus Galindo Creek Field Station. Carbon and water cycling will be investigated through ecosystem-scale measurements of carbon dioxide exchange and evapotranspiration via the eddy covariance method. The eddy tower was established in June 2019 and will be maintained prior to and following a one-time application of compost planned for Fall 2020”<sup>17</sup></p>			

<sup>17</sup> [Oikawa Lab and Research webpage](#)

**Table XIV: Updates on In Progress Long Term (2040) Action Steps**  
 Descriptions, Estimated Impact & Leadership  
 Updates on 1 of 2 Action Steps

Action Step	Description	Estimated Impact	Leadership
<b>HOUS2</b> 	<b>Institute policy to increase campus housing to 5,000 student residents by 2032 and encourage first year students to live in residence halls (consistent with master plan)</b>	<b>Significant GHG reduction potential from both commuting and zero net energy housing, but increases the challenge of achieving carbon neutrality; potential increase in water use on campus</b>	<b>Admin</b>
<p>An affordable housing plan and resident demand study will be finalized this year. The affordable housing plan's report finished review recently in mid-January. The resident demand study will be completed within the next two years. Projects at San Diego State and San Luis Obispo are being used as references for the resident demand study. CSUEB's enrollment and applications for student housing are not climbing at a high rate therefore current accommodations are at sufficient levels.</p>			

## Appendix III: Overview of CAP Umbrella Policies & Action Steps Status

Appendix III summarizes the status of each CAP Umbrella Policy and Action Step. The Umbrella Policies and Actions Steps are organized in the same order as outlined in the CAP.

Table XI: CSUEB CAP Umbrella Policies & Status		
Umbrella Policy	Umbrella Policy Description	Status
UMB1	Target: Carbon neutrality by 2040 (This would amend the 2009 Master Plan carbon neutrality target date of 2030, which is infeasible given the fact that the Plan was never implemented given its almost immediate suspension and the fact that the Plan did not include commute emissions)	In Progress
UMB2	Responsible parties will report annually on progress to meet carbon neutrality goals	Meeting Requirements
UMB3	Carbon Management Hierarchy: Consistent with Second Nature's guidance for the development and implementation of climate action plans, the priority order for emissions is (1) reduce emissions with energy efficiency and conservation, (2) replace carbon energy sources with renewable energy, (3) neutralize emissions with offsets	In Progress
UMB4	The University will review, revise if necessary, and submit the climate action plan to Second Nature no less frequently than every five years	Yet to be Addressed
UMB5	Annually the University will complete an evaluation of progress and submit to Second Nature	Meeting Requirements
UMB6	Integrate Climate Action Planning into other campus policies: e.g. Master Plan	Yet to be Addressed
UMB7	The University will take a life-cycle planning approach to major projects.	Yet to be Addressed
UMB8	Leverage partnership opportunities to reduce GHG emissions at least cost and greatest benefit (e.g. with the CSU, the City of Hayward, the County of Alameda)	In Progress

Table XII: CSUEB CAP Action Steps & Status (As of May 2020)					
Action Step	Action Step Description (Abbreviated)	Status	Estimated Impact	Leadership	Timeline
ENG1	Develop and maintain an operation and maintenance plan to reduce energy use, maximize equipment efficiency, and most effectively utilize deferred maintenance funds	Yet to be addressed	Significant GHG reduction potential; significant operational cost savings	Facilities	Near Term (by 2025)
ENG2	Install 680 kW of new PV, or other renewable energy capacity annually	Yet to be addressed	Significant GHG reduction potential; potentially cost neutral	Facilities	Immediate (2018) to Long Term (by 2040)
ENG3	Prioritize PV installations to: displace all Concord Campus Energy use (~630kW), on Hayward Campus parking lots (~8MW long term)	Yet to be addressed	Significant GHG reduction potential	Facilities	Immediate (2018) to Long Term (by 2040)
ENG4	Install PV system of a size necessary to displace annual electricity use of the Concord Campus	Yet to be addressed	Very significant GHG reduction potential; low to moderate equipment cost with potential for RECs; significant educational opportunity	Facilities, Admin	Near Term (by 2025)
ENG5	Prioritize purchase of high renewable power-content, low unspecified power content, grid power	In Progress	Significant GHG reduction potential; cost of power may be higher than current contract in the near term	Facilities, Admin	Near Term (by 2025)
ENG6	Institute on-going energy management training of building technicians	Meeting Requirements	Significant operational cost savings and GHG reduction potential	Facilities	Immediate (2018)

ENG7	The campus information technology team will maintain all campus-owned computers related technology to always operate in energy saver mode	In Progress	Low to moderate operational cost savings and GHG reduction potential	IT	Near Term (by 2025)
ENG8	Research emerging energy technologies for carbon savings	Yet to be addressed	Possibly significant GHG reduction potential	Faculty	Near Term (by 2025)
ENG9	Investigate the potential for CSUEB wind-power facilities	In Progress	Low to moderate GHG reduction potential; moderate educational value	Facilities	Medium Term (by 2030)
TRAN1	Increase online coursework and opportunities for telework	Yet to be addressed	Significant GHG reduction potential	Academic Affairs, IT	Immediate (2018) to Long Term (by 2040)
TRAN2	Enhance and encourage the use of alternative transportation modes	In Progress	Significant GHG reduction potential	Transportation Planning	Immediate (2018)
TRAN3	Pursue subsidized transit passes for students, staff, and faculty	In Progress	Moderate to significant GHG reduction potential	Transportation Planning	Near Term (by 2025)
TRAN4	Encourage the use of alternative transportation modes with faculty and staff by implementing an Employee Cash Out Program	Yet to be addressed	Moderate GHG reduction potential; low cost depending on the conditions of the plan; potential employee co-benefits (health, financial, job satisfaction)	Admin, Finance	Near Term (by 2025)
TRAN5	Offset carbon emissions from all study abroad and international travel by 2022	Yet to be addressed	Moderate to significant GHG reduction potential; no cost implications	Admissions, University Extension	Near Term (by 2025)
TRAN6	All state-funded travel will be carbon neutral or 100% offset by 2022	In Progress	Low GHG reduction	Admin, Finance	Near Term (by 2025)



			potential; but more predictable outcome than most transportation measures and high education value for the university community		
TRAN7	No net increase in the number of parking spaces for fossil-fueled vehicles	Meeting Requirements	Moderate GHG emissions reduction potential	Facilities	Immediate (2018)
TRAN8	Maintain at least 50% greater EV charging station capacity (relative to total number of parking spaces) than the statewide EV vehicle proportion	Meeting Requirements	Low to moderate GHG reduction potential; potential educational value	Parking	Near Term (by 2025) to Long Term (by 2040)
TRAN9	All new-to-campus fleet vehicles must be electric, bio-fueled, or other RE-powered	Yet to be addressed	Low GHG reduction, reduced operational costs	Procurement	Immediate (2018)
TRAN10	No personal vehicle/parking passes for first year residence hall students	Yet to be addressed	Low direct GHG reduction potential but sets the habit of becoming more comfortable with relying on alternative transportation	Admin	Near Term (by 2025)
BLDG1	Design all new buildings to be Zero Net Energy (ZNE) starting immediately	In Progress	Significant operational cost savings and GHG reduction potential over lifetime of building	Facilities	Immediate (2018)
BLDG2	No new natural-gas consuming equipment for space and water conditioning starting in 2022	In Progress	Significant GHG reduction potential	Facilities, Procurement	Near Term (by 2025)

BLDG3	Replace space heating, water heating, and cooking equipment with ultra efficient fossil-fuel-free technologies	Yet to be addressed	Significant GHG reduction potential	Facilities, Procurement	Long Term (by 2040)
BLDG4	Maximize PV production on all new buildings	Yet to be addressed	Moderate GHG reduction potential, cost savings over lifetime of system	Facilities	Immediate (2018)
BLDG5	Track building energy performance with computerized monitoring systems to enable more effective building energy management and GHG emissions reductions tracking	In Progress	Moderate GHG reduction potential, moderate operational cost savings from more effective energy use	Facilities	Near Term (by 2025)
BLDG6	Post climate action educational display prominently in all main buildings	Yet to be addressed	Significant educational and motivational impact	Facilities	Near Term (by 2025)
HOUS1	Switch to Solar Water Heating in Pioneer Heights	Yet to be addressed	Significant reduction in natural gas demand in residence halls and associated GHG reductions (currently N-gas accounts for 60% of the Hayward Campus's residence hall energy use.)	Facilities	Near Term (by 2025)
HOUS2	Institute policy to increase campus housing to 5,000 student residents by 2032 and encourage first year students to live in residence halls	Yet to be addressed	Significant GHG reduction potential from both commuting and zero net energy housing, but increases the challenge of achieving carbon	Admin	Long Term (by 2040)

			neutrality; potential increase in water use on campus		
HOUS3	Investigate potential for building low-cost faculty housing on or near campus	Yet to be addressed	Moderate GHG reduction potential from commuting and zero net energy housing, but increases the challenge of achieving carbon neutrality; potential increase in water use on campus; potentially significant co-benefits in attracting and retaining new faculty	Admin	Near Term (by 2025)
PROC1	Adopt Electronics and Appliance Procurement Policy that requires: Bronze EPEAT® or higher for EPEAT®-rated products, ENERGY STAR® for everything else if available	In Progress	Moderate GHG reduction potential, moderate operational cost savings	Procurement	Immediate (2018)
PROC2	Initiate accounting of carbon emissions from procurement	Yet to be addressed	Significant GHG reduction potential	Procurement	Near Term (by 2025)
PROC3	Investigate policy for locally sourcing materials to reduce transportation energy use associated with procurement	In Progress	Moderate GHG reduction potential, potential for higher cost of goods	Procurement	Near Term (by 2025)
PROC4	Establish 100% Recycled Copy/Print Paper Policy	In Progress	Low GHG reduction potential; increased cost of paper	Procurement	Immediate (2018)
PROC5	Continue to move away from the use of paper-based processes with digital processes	In Progress	Low GHG reduction potential;	Procurement	Near Term (by 2025)

			moderate monetary cost savings potential		
LAND1	The university will adopt SITES certification criteria in developing landscaping projects	Yet to be addressed	Moderate general environmental benefits	Facilities	Near Term (by 2025)
LAND2	The university will adopt Bay Friendly Landscaping practices	Yet to be addressed	Moderate operational cost savings from energy, water, and labor reductions; moderate GHG reduction potential; environmental benefits.	Facilities, CSC	Near Term (by 2025)
LAND3	University will discontinue use of synthetic fertilizers within 5 years	Yet to be addressed	Minimal GHG emissions reduction, moderate general environmental and health benefits, significant symbolic impact	Facilities	Immediate (2018)
LAND4	Newly purchased equipment to be electric, battery-powered, bio-fueled, or other RE-powered when commercial grade equipment is available	Yet to be addressed	Operational cost savings from reduced equipment maintenance, low GHG reduction potential, potential health benefits	Facilities	Near Term (by 2025)
LAND5	Carbon sequestration: Restore native woodland to maximum extent possible on non-landscaped areas of the Hayward and Concord Campuses	In Progress	Significant ecological benefits, moderate GHG reductions; Cost implications need to be studied (possible cost benefits if offsets from sequestration are certified)	Facilities	Medium (by 2030) to Long Term (by 2040)

LAND6	Continue turf conversion project using Bay Friendly Landscaping policies	In Progress	Operational cost savings from energy, water, and labor savings; environmental benefits.	Facilities	Immediate (2018)
LAND7	Increase tree cover in parking lots and other locations on campus. Use high albedo paving surfaces	In Progress	Moderate GHG reduction potential; significant co-benefits including mitigation of heat island effect, positive aesthetic impact; significant environmental comfort and health benefits	Facilities	Near Term (by 2025) to Medium (by 2030)
LAND8	Pursue the development of on-campus organic food production in the form of multi-cultural heritage gardens, that serve as a foundation for the sharing of multicultural food and traditions	Yet to be addressed	Minimal GHG reduction potential; significant co-benefits	Facilities, Academic Affairs	Near Term (by 2025) to Medium (by 2030)
LAND9	Continue to investigate the potential for on-campus composting program	In Progress	Low GHG reduction resulting from decreased transport of materials to waste facility and decrease in need for synthetic fertilizer; operational cost savings as finished compost used in place of purchased fertilizer	Facilities	Near Term (by 2025)
EDU1	Pursue fulfillment of commitment to educate all	In Progress	Highly significant educational	Academic Senate	Medium Term (by

	students on carbon neutrality		impact. Moderate direct GHG reduction potential, but possibly large indirect GHG reductions through changing students' behaviors and attitudes over their lifetime.		2030)
EDU2	Facilitate student learning on climate neutrality issues through involvement in research, hands-on-learning, campus-as-a-living-laboratory, community engagement on issues of climate mitigation and adaptation, carbon-neutrality internship placements, and freshman learning communities	In Progress	Significant educational impact, especially for a diverse student population, as underrepresented minorities benefit most from high impact learning practices such as theses. Significant GHG reduction potential from campus-as-living-laboratory projects.	Faculty, Office of Sustainability, Center for Community Engagement	Near Term (by 2025)
EDU3	Include recognition of work on University ILOs in the RTP process	Meeting Requirements	Moderate	Academic Senate	Immediate (2018)
EDU4	Pursue an interdisciplinary sustainability minor that includes education on carbon neutrality	In Progress	Moderate but important stepping stone	Academic Senate	Near Term (by 2025)
EDU5	Pursue faculty hires to support universal education on carbon neutrality	Yet to be addressed	Significant and essential to maintain momentum	Academic Affairs	Immediate (2018) to Long Term (by 2040)
FIN1	Financial Analysis of Carbon Neutrality Plan An analysis of the most cost effective to achieve carbon neutrality	Yet to be addressed	Significant: Enabler of entire Climate Action Plan	Finance, Admin	Near Term (by 2025)

FIN2	Ensure Annual Budget & Staff Time for GHG-reduction efforts	Yet to be addressed	Significant GHG reduction impact in that this enables fulfillment of the Climate Action Plan; potentially significant energy cost savings from energy efficiency projects	Admin, Finance	Near Term (by 2025)
FIN3	Incorporate the cost of carbon, along with other project costs, in the cost-benefit analysis of new infrastructure projects	Yet to be addressed	Significant educational impact for staff because it serves as constant reminder to incorporate carbon neutrality in all project planning. Moderate GHG reduction potential	Facilities	Immediate (2018)
FIN4	Divest from fossil fuel investments	Yet to be addressed	Significant educational and ethical impact. Important PR messaging impact. Moderate GHG reduction potential because of small endowment currently. Potential longer-term higher investment returns given the global shift toward alternative sustainable energy sources	CSUEB Education Foundation Board of Directors	Near Term (by 2025)



OFF1	True-up Emissions Policy	Yet to be addressed	Significant GHG reduction potential; monetary cost savings, because offsets are only used to help achieve emissions reductions targets if the offsets cost are lower than achieving those same reductions through efficiency improvements or renewable energy.	CSC, Accounting	Near Term (by 2025)
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# Acknowledgements

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