



**Foothill–De Anza Community College District
Energy Master Plan Project
Energy and Sustainability Advisory Committee (ESAC)
Agenda
June 17, 2021
10:30 AM – 12:00 PM**

Via Zoom:

1. Action Items and Schedule Review (attached)
2. Review Revised Objectives (attached)
3. Implementation Programs and Projects list (attached)
4. Review preliminary Action Plan (Implementation Programs and Projects Checklist – to be presented during meeting)
5. Next Steps
 - Finalize Action Plan
 - Establish Performance Measurement and Reporting Protocols
 - Develop Energy Master Plan document

Next Meetings: July 1, July 15, July 29

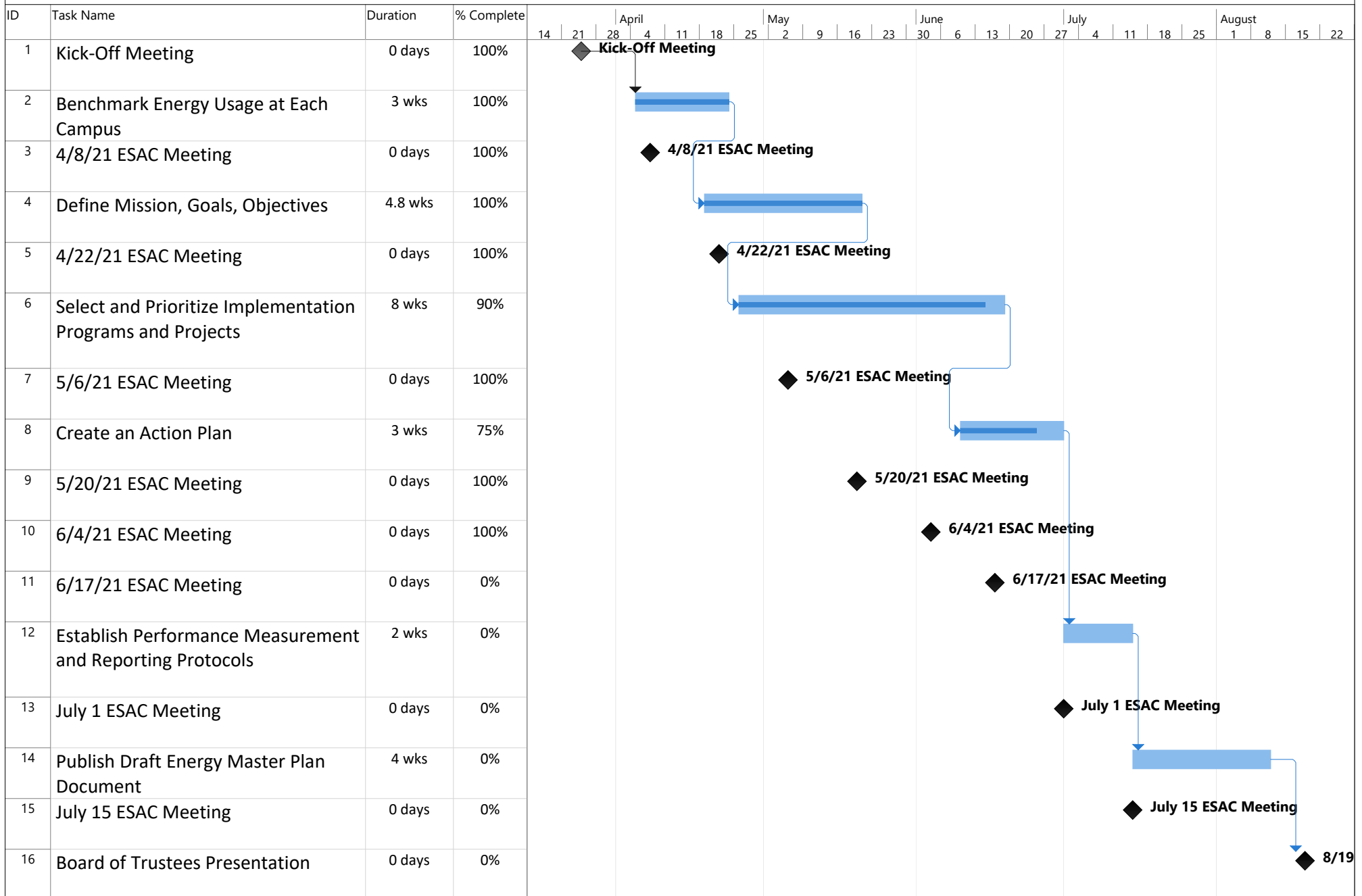
FHDA Energy Master Plan Project

Action Item/Decision List

Updated: 6/17/2021

Action Item No.	Description	Responsibility	Due Date	Status	Notes
25	ESAC Approval of Objectives	ESAC	20-May	In Progress	Revised based on 6/4/21 ESCA meeting changes.
30	Schedule ESAC Workshop to review and edit draft Implementation Programs and Projects List	Joel, Matt	4-Jun	In Progress	Revised based on ESAC input at 6/4 and 6/10 meetings
33	Develop DRAFT EMP Action Plan (Implementation Programs and Projects Checklist)	Matt	17-Jun	In Progress	Review draft at 6/17 ESAC meeting

FHDA CCD Energy Master Plan Schedule Status Update 6/17/21



FHDA Energy Master Plan Objectives
REVISED 6/10/21

Objective	Description	Timeline	Notes
1	District Carbon Reduction Goals ⁽¹⁾ <ul style="list-style-type: none"> • Reduce GHG emissions 50 percent from 2005 levels by 2030 (Biden) • Transition to natural gas free by 2035 • Purchased electricity will be 100% renewable by 2045 (SB 100) • Carbon Neutrality by 2045 (EO B-55-18) 	2030-2045	Includes energy efficiency, on-site/off-site renewable/carbon free energy, facilities construction and operations, green building standards.
2	Deploy EV charging infrastructure consistent with State of California goals and timelines for electrification of transportation	2025-2030	Include Fleet Vehicles
3	Reduce Vehicle Miles Traveled (VMT) for Students, Faculty and Staff by 25-50% by 2035 by coordinating with other ongoing district programs	2035	Could be a student led project. Defer public transportation programs development pending a comprehensive Sustainability Plan in 2022.
4	Evaluate Campus Resiliency Opportunities	2022-2025	Solar/Battery/Microgrid, Emergency Preparedness Plans.
5	Investigate most effective ways to institutionalize Energy and Sustainability Management in District Operations	2022-2025	Work with other CCC sustainability leaders and consider UC/CSU best practices. Participate in ACBO Facilities Task Force, Chancellors Office Climate Task Force. Engage with SVCE.

FHDA Energy Master Plan Objectives
REVISED 6/10/21

Objective	Description	Timeline	Notes
6	Develop Processes to Engage Students, Faculty, and Staff in Energy and Sustainability Activities in a Meaningful Way	2021	Training, inclusive processes and procedures
7	Encourage and facilitate student learning activities related to energy and carbon reduction	2022	Engage faculty in this discussion. Students assist in energy projects. Cynthia and Bob will take the lead.
8	Enhance Campus and Community Engagement	2022	Enhance ESAC Website. Defer other program activities pending comprehensive Sustainability Plan in 2022.
9	Ensure Activities Consider Broader Economic and Environmental Impacts	Ongoing	Ensure activities consider economic constraints, true Environmental Impacts (including material, manufacturing, and disposal impacts), equipment maintenance considerations, and Life-Cycle Analysis. Quality control process. Evaluated process. Use the data to make decisions.

(1) Carbon reduction goals for Scope 1 and Scope 2 GHG emissions.

Project ID	Description	Timeline (Calendar Year)	Priority (H,M,L)	Responsibility	Template Section 7 Category	Notes
OBJECTIVE 1 - District Carbon Reduction Goals (Scope 1 and Scope 2 emissions)						
1-001	Implement Measure G Bond Projects	Measure G Plan	H		7.13 Carbon Reduction Programs	
1-002	Perform Feasibility Study for District Electrification	2021	H		7.13 Carbon Reduction Programs	
1-003	Estimate FY 2020-2021 FHDA energy usage and GHG emissions (Scope 1 and Scope 2)	2021	H		7.13 Carbon Reduction Programs	
1-004	Work with SFSU and Electricity de France to complete TOTEM analysis of Bldg. 7400 (CEF) at Foothill College	2021	H		7.13 Carbon Reduction Programs	TOTEM - Tool for Optimization of Thermal and Electric Microgrids (heat pumps, heat recovery)
1-005	Funding Study. Identify and Take Advantage of Grant and Incentive Programs	2021	H		7.2 Energy Efficiency	Determine Measure G funding allowable use (Bond Council). Explore PG&E incentives.
1-006	Evaluate Mechanisms for the Implementation of Energy Efficiency Projects (incl. ESCO, Consultant, D-B contractor)	2022	H		7.2 Energy Efficiency	
1-007	Conduct a Facility Prioritization Survey for EE Measures	2022-2025	H		7.2 Energy Efficiency	
1-008	Install Energy Efficient Equipment (HVAC, Lighting, Controls, etc.)	2022-2025	H		7.2 Energy Efficiency	Measure G projects.
1-009	Manage Plug Loads	2022-2025	M		7.2 Energy Efficiency	
1-010	Set Energy Efficiency Goals	2022-2025	M		7.2 Energy Efficiency	
1-011	Conduct Comprehensive Facility Energy Audits	2022-2025	M		7.2 Energy Efficiency	
1-012	Implement New and Existing Audit Recommendations	2022-2025	M		7.2 Energy Efficiency	
1-013	Evaluate and Participate in Demand Response (DR) Programs	2023	M		7.2 Energy Efficiency	
1-014	Install Meters and Benchmark Facilities at the Building and System Level	2022	M		7.3 Facilities Operations	
1-015	Perform Regular Maintenance on Equipment	2021	H		7.3 Facilities Operations	

Implementation Programs and Projects
6/17/2021 v4 Sorted by Objective

Project ID	Description	Timeline (Calendar Year)	Priority (H,M,L)	Responsibility	Template Section 7 Category	Notes
1-016	Encourage and Support Energy Efficiency Training of Staff	2022	M		7.3 Facilities Operations	
1-017	Evaluate and Install Energy Management Systems/Monitor Energy Usage	2022	M		7.3 Facilities Operations	Evalute suitability of Gridium EIS. Ensure existing meters are working. Facilities team to take this on.
1-018	Adjust Temperature Set Points and Schedule Operating Times	2023	M		7.3 Facilities Operations	
1-019	Optimize Building Occupancy Scheduling	2023	M		7.3 Facilities Operations	Coordinate with distance learning opportunities. Data driven. Smart scheduling. Post-COVID considerations. Zoned HVAC. Education for bldg users.
1-020	Optimize HVAC Equipment Scheduling	2023	M		7.3 Facilities Operations	
1-021	Pursue Monitoring-Based Commissioning (MBCx)/Retro-commissioning (RCx)	2023	M		7.3 Facilities Operations	
1-022	Commission New Buildings	2023	M		7.4 Sustainable Building Practices	Measure G program.
1-023	Establish a Green Building Standard	2021	H		7.4 Sustainable Building Practices	Prior to Measure G implementation. Research appropriate standards. CalGreen. Title 24.
1-024	Implement Sustainable Design Practices	2021	H		7.4 Sustainable Building Practices	Prior to Measure G implementation.
1-025	Use an Integrated Systems Approach in Building Design	2021	H		7.4 Sustainable Building Practices	Prior to Measure G implementation.
1-026	Hire Sustainable Building Design Professionals	2021	H		7.4 Sustainable Building Practices	Prior to Measure G implementation.
1-027	Evaluate and Minimize Greenhouse Gas Intensity of Purchased Electricity (Green Power)	2022	H		7.5 On-Site Generation and Renewable Energy	Only 100% renewable generation (not credits). Buy into a project, PPA's?
1-028	Perform Feasibility Study for additional PV at Campuses	2022	H		7.5 On-Site Generation and Renewable Energy	Could be part of 1-002

Project ID	Description	Timeline (Calendar Year)	Priority (H,M,L)	Responsibility	Template Section 7 Category	Notes
OBJECTIVE 2 - Deploy EV charging infrastructure consistent with State of California goals and timelines for electrification of transportation						
2-001	Analyze and Implement Electric Vehicle (EV) charging integrated with onsite solar PV electricity. Include analysis of fast-charging for autonomous vehicles.	2025-2030	M		7.6 Transportation	Existing Level 2 EV chargers - 10 @ De Anza, 13 @ Foothill Need benchmark for post-carbon world. Will be part of code. CCCC guidance
OBJECTIVE 3 - Reduce Vehicle Miles Traveled (VMT) for Students, Faculty and Staff by 25-50% by 2035 by coordinating with other ongoing district programs						
3-001	Participate and coordinate with existing District transportation surveys and analysis of remote learning and working to reduce VMT	2021-2022	H			Could be a student led project. Defer public transportation programs development pending a comprehensive Sustainability Plan in 2022.
OBJECTIVE 4 - Evaluate Campus Resiliency Opportunities						
4-001	Climate Adaptation and Resiliency Plan	2022-2025	M		7.3 Facilities Operations	
4-002	Evaluate Load Shifting Technologies (BES)(TES)	2022-2025	M		7.5 On-Site Generation and Renewable Energy	
5-003	Solar/BES/Microgrid Feasibility Study	2022-2025	M		7.5 On-Site Generation and Renewable Energy	
OBJECTIVE 5 - Investigate most effective ways to institutionalize Energy and Sustainability Management in District Operations						
5-001	Investigate most effective ways to institutionalize Energy and Sustainability Management in District Operations	2022-2025	M		7.1 Management and Organizational Structure	
5-002	Participate in CCC system-wide energy and sustainability committees and external organizations (UC/CSU, SVCE) to learn Best Practices for energy management.	2022-2025	M		7.1 Management and Organizational Structure	Work with other CCC sustainability leaders and consider UC/CSU best practices. Participate in ACBO Facilities Task Force, Chancellors Office Climate Task Force. Engage with SVCE.
OBJECTIVE 6 - Develop Processes to Engage Students, Faculty, and Staff in Energy and Sustainability Activities in a Meaningful Way						
6-001	Student and Employee Orientation Program	2022	H		7.11 Campus and Community Outreach and Awareness	Education process

Project ID	Description	Timeline (Calendar Year)	Priority (H,M,L)	Responsibility	Template Section 7 Category	Notes
6-002	Inter-Campus Collaboration	2021	H		7.11 Campus and Community Outreach and Awareness	Driven by ESAC. Integrate sustainability into campus governance structure. Consistent approach for both campuses for operational needs.
OBJECTIVE 7 - Encourage and facilitate student learning activities related to energy and carbon reduction						
7-001	Engage Faculty and Academic Senate to explore learning opportunities related to energy and sustainability activities	2022-2025	H	Cynthia Kaufman, Robert Cormia	7.10 Student and Curriculum Development	
7-002	Training Opportunities for Students	2022-2025	H	Robert Cormia	7.10 Student and Curriculum Development	Students assist in Energy projects and data analysis
OBJECTIVE 8 - Enhance Campus and Community Engagement						
8-001	Enhance ESAC Website to Better Communicate Energy and Sustainability Activities	2025	H		7.11 Campus and Community Outreach and Awareness	High Priority now
Objective 9 - Ensure Activities Consider Broader Economic and Environmental Impacts						
9-001	Research true economic, social, and environmental impacts of energy and sustainability projects. Include students in this program.	2021	H		7.10 Student and Curriculum Development	Ensure activities consider economic constraints, true Environmental Impacts (including material, manufacturing, and disposal impacts), equipment maintenance considerations, and Life-Cycle Analysis. Quality control process. Evaluated process. Use the data to make decisions.