Southern California Regional Energy Network

SoCalREN Architecture, Construction, Engineering & Sustainability (ACES) Pathway Program Implementation Plan

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A. Program Overview

The Architecture, Construction, Engineering and Sustainability (ACES) Pathway Program engages, exposes, and challenges students to explore architecture, construction, and engineering career pathways with a focus on Energy Efficiency. The program leverages public works investment, community college Science, Technology, Engineering, the Arts, and Mathematics (STEAM) courses offerings, and robust industry participation across the SoCalREN Territory to provide students with comprehensive exposure and opportunities in these fields.

B. Program Budget and Savings

Table 1. Table 1: Program Budget and Savings

1	Program Name	Architecture, Construction, Engineering & Sustainability (ACES) Pathway Program	
2	Program ID Number	SCR-WET-D2	
3	Program Implementer	SoCalREN/County of Los Angeles + Third-Party Implementer	
4	Portfolio Administrator	SoCalREN	
5	Program Implementer Type	REN + Third-Party Delivered	
6	Portfolio Segment[1]	Equity	
7	Total Program Budget	$2,374,000	
8	Program Budget by Year	2024	$470,000
		2025	$470,000
		2026	$917,000
		2027	$517,000
9	Program Duration (Start Date - End Date)	2024–2027	
10	Total System Benefit (TSB)	N/A	
11	CO_2 (Lifecycle, First Year, Net, Gross)	N/A	
12	KW (First Year, Net, Gross)	N/A	

[1] D.21-05-031 Ordering Paragraph 2

13	KWh (Lifecycle, First Year, Net, Gross)	N/A
14	Therms (Lifecycle, First Year, Net, Gross)	N/A
15	Program Cost Effectiveness: Total Resource Cost (TRC)	N/A
16	Program Cost Effectiveness: Program Administrator Cost (PAC)	N/A
17	Market Sector	Cross-Cutting Workforce Education and Training (WE&T)
18	Program Type (i.e., Non-resource, Resource)	Non-resource
19	Delivery Type[2]	Downstream
20	Intervention Strategies	Training, Advocacy, Marketing & Outreach
21	M&V Methods	Other

[2] Database for Energy Efficiency Resources (DEER) 2026 Delivery Types

C. Implementation Plan Narrative

1. Program Description

The Architecture, Construction, Engineering & Sustainability (ACES) Pathway Program builds a skilled workforce to support public-sector energy efficiency investments by connecting in-school youth to tuition-free community college courses, hands-on learning, and career exposure that make sustainability and energy efficiency pathways visible and actionable. To support students from early awareness through on-the-job training, ACES leverages a continuum of experiences—from the Future Green Leaders Summit and the iEngineering curriculum in earlier grades to advanced preparation that combines college courses, industry-recognized certifications, career supports, and paid summer internships for eligible high school students.

To ensure a smooth transition from training to employment, ACES provides paid summer internships for disadvantaged youth who complete two classes each academic year, reinforcing their academic pathways to clean energy careers.

Figure 1. ACES Pathway Program Participation Steps



Rationale

SoCalREN believes that in-school youth, particularly those attending Title I schools in disadvantaged and hard-to-reach communities, are not adequately served by traditional workforce and energy programs. Many students lack early exposure, structured pathways, and access to industry-recognized credentials connected to architecture, construction, engineering, and sustainability careers. As an Equity-focused Workforce Education and Training program, ACES addresses this gap by building coordinated partnerships between K–12 schools, community colleges, and industry to create clear, supported pathways into clean energy and public-sector infrastructure careers across the SoCalREN territory.

Program Objectives

The ACES Pathway Program will achieve the following objectives:

1. Expand access to curriculum-aligned coursework in architecture, construction, engineering, sustainability, and clean energy career pathways for students in underserved communities.
2. Increase attainment of industry-recognized certifications to strengthen technical competencies and workforce readiness.
3. Provide structured hands-on training and experiential learning opportunities to reinforce academic progression and career preparedness.

4. Promote early career awareness and exposure to architecture, construction, engineering, and sustainability pathways through K–12 engagement and community activities.
5. Facilitate successful transitions from education to employment by offering mentorship and paid internship opportunities for eligible students demonstrating academic progression.

2. Performance Tracking

Contractual Target Metrics: Unique Value

The metrics to be gathered by the SoCalREN ACES program are as follows:

Table 2. Contractual Targets Metrics (UVMs)

Program Goals	2024	2025	2026	2027
Number of DAC/HTR Schools Served	11	15	20	25
Total Unique Participants Served	150	200	450	550
Number of Dual Enrollment Courses Participants are Taking	250	275	300	325
Number of Skills Training Certificates Earned	20	30	35	40
Number of Employment Partners	5	10	15	20
Number of Industry and Grant Partners	N/A	N/A	12	15
Number of College Partners	N/A	N/A	7	8
Number of Professional Certifications Earned	5	10	15	20
Number of Internship Placements	25	40	50	60

Supporting Metrics: Indicators

The metrics to be gathered by the SoCalREN ACES program are as follows:

Table 3. Supporting Indicators

Metric	Data Collected
Total Service Touch Points (Non-Unique)	The total number of individual participant service touchpoints across all program-supported activities. Each instance of participation is counted separately, regardless of whether the same participant engages multiple times.
Number of Participants Enrolled in Dual Enrollment Courses	The total number of unique participants enrolled in at least one dual enrollment course supported by the program during the reporting period.
Total College Credits Earned Through Dual Enrollment	The total number of college credits earned by ACES participants through the successful completion of program-supported dual-enrollment courses. Credit values are recorded based on the official course credit assignments issued by each partner college.
K8 ACES Curriculum Participants	The distinct count of K-8 students who attended one or more ACES-affiliated exposure-based activities but did not participate in ACES coursework, certifications, or internships.
Number of Participants Engaged Exclusively in Industry Events or Field Trips	The number of unique participants who attend exposure-based activities such as industry events or field trips without participating in coursework, certifications, or internships.
Number of School Partner Orientations	The total count of orientation meetings conducted to introduce ACES program offerings to new potential schools that have not yet joined the program. Example: formal presentation to a school district's board to support program adoption.
Number of School Site Support Hours	The total number of hours ACES staff spent providing direct, on-site support to students at participating schools. This includes time spent on activities such as student orientations, course registration assistance, and workshops.
Number of Outreach Events Attended by ACES	The total number of partner-led or external events (e.g., community fairs, school nights, partner meetings) that ACES staff attended for the purpose of participant recruitment, program outreach, or partnership development. (e.g., Setting up a table at an event).

Metric	Data Collected
Number of Events Hosted or Co-Hosted by ACES	The total number of events organized, led, or co-hosted by the ACES program for its participants. This includes industry days, workshops, award ceremonies, and information sessions.
Number of Active Counties	The total number of counties where the program is currently operating during the current program year.
Number of Counties in Progress	The total number of counties where the program is in development but has not yet officially launched or begun active operations during the current program year.
Number of College Partners in Progress	The total number of college partnerships that are being developed or worked on but are not yet official.
Number of Skills Training Certificates in Progress	The total count of skills-based certificates that are currently in progress, pursued through program-supported training or coursework
Number of Professional Certifications in Progress	The total count of industry-recognized or professional certifications currently in progress, pursued through program-supported training and activities.
Number of Unique Participants Who Earned Skills Certificates	The total count of unduplicated participants who successfully earned one or more Skills Training Certificates (for completion of program-supported coursework).
Number of Unique Participants Who Earned Professional Certifications	The total count of unduplicated participants who successfully earned one or more industry-recognized Professional Certifications (e.g., SolidWorks, Adobe).
Number of Participants Pursuing STEM and EE Major In College	The total count of individuals who have enrolled in higher education with a declared major in a STEM-related field following their participation in the program.
Number of Unique Courses Jointly Developed by ACES/CC	The total count of distinct courses collaboratively designed and implemented by ACES and community colleges to enhance program alignment with academic and industry needs.
Number of Hours of Student Support	The total number of hours dedicated to providing academic or college career counseling support to students enrolled in the program.
Number of Students Receiving Academic/College Career Counseling Support	The total number of unique students who have received one or more academic or college career counseling sessions during the program year.
Number of Supportive Sessions	The total count of one-on-one or group sessions provided

Metric	Data Collected
Provided to Students in Academic and College Counseling	to students offering academic guidance, college preparation, or career counseling support.
Number of Intern Hours Worked	The total number of hours worked by participants during internships supported by the program.
Internship Wages Earned	The total amount of wages earned by interns through ACES supported internships.
Internship Completion Rate	The percentage of participants who began an internship placement and successfully completed the required hours or duration. (Calculated as: Participants Completing Internship / Participants Starting Internship).
Monetary Contributions Leveraged (Hard Funds)	The total value of verified cash, grants, and external funds (e.g., WIOA wages) leveraged from non-SoCalREN sources to support the program.
In-Kind Contributions Leveraged (Estimated Value)	The estimated monetary value of non-monetary support (e.g., donated space, materials, professional time) leveraged from non-SoCalREN sources.
Assessed Value of the Partnership by Partners—Surveys	The perceived value of the partnership as reported by partners through surveys, reflecting qualitative or monetary assessments of the benefits received from program collaboration
Number of students participating in Future Green Leaders Summit (FGLS)	Number of students who participate in FGLS events each year
Number of partners (sponsors, workshop organizations, exhibitors) for Future Green Leaders Summit	Number of organizations that partner with SoCalREN as sponsors, workshop leads, plenary speakers, etc., each year.

3. Program Delivery and Customer Services

Student Outreach

ACES program employs early and continuous outreach strategies to engage in-school youth and introduce them to STEAM careers and enrollment opportunities. Outreach is delivered in close coordination with school administrators, counselors, and teachers to ensure students receive timely, accurate information and clear next steps for participation. Activities may include school-day presentations, special assemblies, classroom visits, and school-hosted outreach events.

ACES also uses accessible, family-facing communications—such as multilingual materials and information sessions—to support understanding of program expectations and enrollment requirements. Follow-up outreach helps students move from interest to enrollment through guided application and registration support, including answering questions and providing individualized assistance as needed.

Schools are selected based on Title I designation, indicating that the majority of students are classified as disadvantaged, and outreach is designed to promote equitable access to program opportunities for students and families across the SoCalREN service territory.

College Enrollment & Certifications

ACES supports college enrollment through partnerships with the Los Angeles Community College District (LACCD) and other Community Colleges within the SoCalREN Service Territory. Through these partnerships, students can earn transferable college credit that helps reduce the time and cost of completing a degree in ACES-related fields. ACES also collaborates with community colleges to expand student access to course-based skills certificates and industry-recognized professional certifications.

Hands-on Training

ACES provides hands-on, skill-building activities where students apply engineering and design practices through guided work. Students build technical confidence and teamwork skills while creating tangible work products. ACES also makes hands-on safety training available, including Occupational Safet and Health Administration (OSHA) and CPR/First Aid certification, to support safe participation in labs, projects, and work-based learning.

ACES K8 iEngineering Bridge Program

As part of the ACES K–8 curricular focus, the iEngineering Bridge Program engages youth and parents in community-centered, project-based learning that introduces sustainability and energy-efficiency careers. The program bridges community knowledge with engineering concepts and experiences, while also helping younger students explore and connect to ACES opportunities.

Seminars

Educational seminars led by industry experts to enhance students' knowledge and skills in Architecture, Construction, Engineering and Sustainability fields. These seminars address industry topics and trends, practical skills, and career development, ensuring students are well-prepared for future opportunities in these sectors.

Industry Certifications

In partnership with GoEngineer, ACES offers students the opportunity to train for the Certified SOLIDWORKS Associate (CSWA), and Certified SOLIDWORKS Professional (CSWP) international certifications. SOLIDWORKS is a 3D CAD design software widely used in the Architerture, Construction, Engineering (ACE)industry for various purposes. ACES will further this initiative by assisting students in creating personal projects utilizing the software, enabling them to apply their skills in real-world scenarios and develop a robust portfolio. In addition to SOLIDWORKS, ACES partners with CertiPort offering students access to a range of industry-recognized professional certifications aligned to program needs and student interests.

Career/Industry Days

ACES is dedicated to providing students with valuable industry exposure and career development opportunities. As part of this commitment, ACES hosts Industry Career Days in partnership with high schools within the SoCalREN territory to introduce students to career opportunities in the energy sector and beyond.

STEM Boot Camps

ACES, in collaboration with community college partners, offers an integrated series of academic boot camps for high school students. These in-depth camps are designed to provide valuable exposure to the energy efficiency sector and other ACES professions through:

- Curriculum Development: Creating comprehensive curricula that cover essential engineering concepts relevant to the energy efficiency sector.
- Hands-On Learning: Providing practical, hands-on learning experiences where students develop critical skills through expert-led instruction and real-world projects.
- Industry Partnerships: Facilitating interactions with industry professionals, offering students opportunities to learn about internships, and seek mentorship based on the curriculum covered.

Paid Summer Internships

ACES offers paid internships that allow students to work alongside industry professionals, enhancing their academic goals and interests. To qualify for these internships, ACES students must successfully complete a minimum of two college courses during the academic year. These internships are facilitated in partnership with the America's Job Center of California (AJCC) using the Workforce Innovation and Opportunity Act (WIOA) funds and various industry partners across both public and private sectors. ACES coordinates with industry partners to identify and secure valuable internship opportunities for students.

In addition, ACES provides a comprehensive professional development training program to prepare students for their internships. This training focuses on essential skills such as resume building, interview techniques, workplace etiquette, and communication. By equipping students with these critical skills, the program aims to boost their confidence and help them excel in their summer internship and future career or educational pursuits.

Personal Enrichment Training

Personal enrichment Training (PET) is designed to prepare participants for a successful transition into the workforce. This training covers essential topics such as financial literacy, work ethics, life skills, career exploration, and goal setting.

Student Support

ACES provides students with personalized, on-demand academic and career guidance to help them stay on track and succeed in college and career pathways. Students can request assistance in person or via Zoom through their college counselors and receive support from college-level content tutors, experienced career advisors, and STEM professionals.

Program Strategies

ACES engages in-school youth in sustainability and energy efficiency careers and supports multiple pathways after high school, including college, training, and workforce entry. The program offers access to community college certifications, industry-recognized credentials, and energy-sector programming that help students build the skills and confidence needed for postsecondary and career success.

Marketing and Outreach Activities

ACES will be promoted through various channels to target our primary audience.

Direct Outreach to Students

ACES will engage feeder schools within the SoCalREN service territory, aiming to include all 13 counties in the region. Program staff will provide information about the available certifications, opportunities, and supportive services to those unfamiliar with careers in the energy efficiency sector.

ACES Orientation Meetings

Orientation meetings will be conducted for school administration, students, and parents interested in learning more about the program. These sessions will provide detailed information about enrollment processes, available certifications and training, requirements for paid internships, and program expectations.

ACES Meetings

A series of meetings will be established to educate students on key subjects within the Architecture, Construction, Engineering, Sustainability fields and Energy Efficiency. These sessions will feature presentations, discussions, and hand-on activities, offering students deeper insight and knowledge to enhance their understanding and interest in these areas.

Future Green Leaders Summit

The Future Green Leaders Summit is a one-day event for middle school students to expose them to careers in the fields of sustainability and energy. The goal for participating students and schools is to connect them to ACES in order to set them on a trajectory of career exploration,

curriculum and training that will deepen their understanding of sustainability and clean energy career pathways.

Marketing and Advertising Engagement Channels

Marketing Collateral

To effectively promote ACES, a comprehensive set of marketing materials have been developed. This includes a program overview, fact sheets, and various resources designed to inform potential participants about ACES and the benefits of involvement. These materials aim to provide clear and engaging information to help prospective students understand the program's value and how it can support their educational and career goals.

Toll-Free Phone and Email Support

The ACES program offers toll-free phone and email support for all program inquiries. The toll-free line is available on weekdays from 9:00 a.m. to 5:00 p.m. PST, providing assistance and information to prospective participants and stakeholders.

Engagement Channels

Social media platforms will be utilized as a dynamic channel for the ACES program to engage with youth, community partners, and stakeholders. These platforms will help increase awareness of the program, share information about participation, and foster connections within the community. Engagement also includes but not limited to:

- Interest Forms, Enrollment Applications
- Press Releases
- Newsletters

Web-Based Digital Marketing Education & Outreach

ACES is prominently featured on the SoCalREN website, with a dedicated section providing detailed information about the program. Additionally, the program is highlighted across SoCalREN's social media platforms and included in the Quarterly SoCalREN E-Newsletter to enhance visibility and outreach.

Public Relations

Information and subsequent activities of the ACES may be shared with local media outlets

4. Program Design and Best Practices

The goal of ACES is to introduce students to career pathways in the clean energy sector by providing foundational skills and training. Participants will undergo individual assessments to identify any existing barriers. Once barriers have been identified, partners such as the LA County Department of Economic Opportunity (DEO) and the statewide AJCC locations offer supportive services to address or mitigate those barriers.

Table 4. ACES Program Barriers

Barrier	Solution
Accessibility for youth of color to high-road ACE and Sustainability careers	Outreach/recruitment conducted in coordination with participating high schools and community colleges to increase awareness of architecture, construction, engineering, and sustainability pathways.
Local hiring standards for DAC/HTR professional workers	Implement the Paid Internship Program for youth to perform in ACE and sustainability related careers in partnership with public and private local employers
Limited entry-level ACE and Sustainability opportunities	Maintain strong employer relationships and identify entry-level ACE and sustainability opportunities with partner employers
Accessibility to technology	Participants enrolled in the program will have the opportunity to borrow a laptop and access hotspots to complete skills certification training aligned with ACE and sustainability career pathways
Transportation	Eligible participants will receive a bus pass or gas reimbursement to travel to and from the training/employer site.
Clothing	Eligible participants will receive a clothing stipend for training/work site attire.

5. **Innovation**

Future Green Leaders Summit

The Future Green Leaders' Summit is a one-day event for middle and/or high school students to expose them to careers in the fields of sustainability and energy. The event, held once or twice per year, takes place throughout the SoCalREN jurisdiction, in disadvantaged and hard to reach communities, includes inspiring plenary speakers, workshops and a resource fair. Participating students, schools, and school districts are connected to a suite of SoCalREN programming, including ACES, to set them on a trajectory of career exploration, curriculum and training that will deepen their understanding of sustainability and clean energy career pathways. Opportunities for student engagement include youth involvement and advisory in event programming and pre and post student learning and engagement.

ACES Mentorship Program

ACES plans to launch a mentorship initiative aimed at providing personalized guidance and support to its participants. The mentorship program will connect current students with ACES alumni and industry partners, offering valuable insights, encouragement, and support as they navigate their educational and career aspirations through high school.

ACES Curriculum Development

In collaboration with school partners, ACES is in the process of developing and piloting an innovative curriculum that introduces students to electrical engineering through an environmental justice lens. After learning to code and work with circuits, students apply the engineering design process to community-identified needs, exploring how electrical systems can be used to support healthier, more sustainable neighborhoods.

6. **Pilots**

N/A

7. **Workforce Education and Training**

Describe how the program will support workforce, education, and training to:

a. Expand/initiate partnerships with entities that do job training and placement;

   i. Our partnership through DEO and the AJCC provides job readiness training and paid internship placement opportunities for ACES participants. ACES coordinates with AJCC and industry partners to identify and secure internship placements aligned with students' academic pathways in architecture, construction, engineering, sustainability, and clean energy. Students also participate in Professional Enrichment Training (PET), which prepares them with workplace readiness skills prior to internship placement.

b. Require placement experience for any new partners in the workforce, education, and training programs and new solicitations.

i. N/A

c. Require “first source” hiring from a pool of qualified candidates, before looking more broadly, beginning with self-certification; and

i. N/A

d. Facilitate job connections, by working with implementers and contractor partners, and utilizing energy training centers.

i. N/A

8. Workforce Standards

N/A

9. Disadvantaged Worker Plan

N/A

10. Market Access Programs

N/A

11. Additional Information

N/A

D. Supporting Documents

1. Program Manual and Program Rules

Eligible Measures

ACES is a non-resource Workforce Education & Training program and does not deliver or claim energy efficiency measures. Eligible program activities include dual enrollment coursework, industry-recognized certifications, pre-apprenticeship training, paid internships, mentorship, and career readiness services aligned with architecture, construction, engineering, sustainability, and clean energy pathways.

Customer Eligibility Requirements

Participants must complete the ACES General Enrollment Process, including submission of application and consent forms. For paid internships, students must complete or be on track to complete at least two eligible dual enrollment courses with a grade of C or better during the academic year. Eligibility and enrollment are verified by ACES staff prior to participation in advanced program components.

Contractor Eligibility Requirements

ACES operates as a downstream Workforce Education & Training program. Participating partners may include high schools, community colleges, industry employers, labor organizations, certification providers, and workforce agencies such as the Los Angeles County Department of Economic Opportunity (DEO).

Participating Contractors, Manufacturers, Retailers, Distributors, and Partners

ACES operates as a downstream Workforce Education & Training program. Participating partners may include industry contractors, employers, community colleges, school districts, certification providers, and workforce agencies supporting internship and training opportunities.

Additional Services

ACES provides outreach, orientation meetings, academic advising, professional development training, mentorship, internship placement coordination, and supportive services to prepare students for higher education and workforce participation in energy efficiency-related career pathways.

Audits

Not applicable. ACES is a non-resource Workforce Education & Training program and does not conduct pre- or post-installation energy audits, provide audit incentives, or include demand-side resource assessments.

Program Quality Assurance Provisions

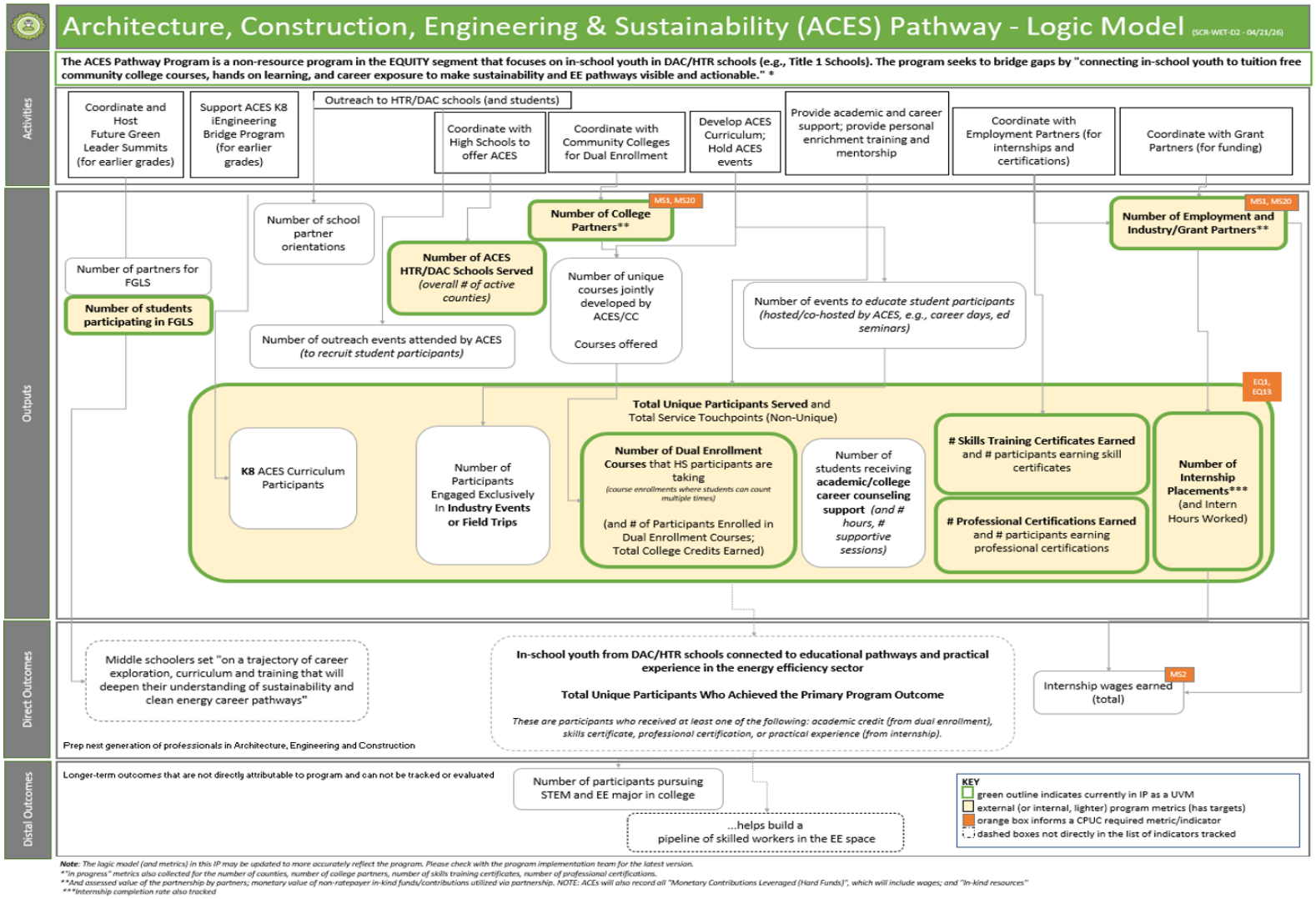
Quality assurance includes participant enrollment verification, internship eligibility review, certification tracking, Unique Value Metric (UVM) monitoring, Quarterly At-Risk Assessments,

and internal data validation processes to ensure compliance with SoCalREN reporting and contractual requirements.

Other Program Metrics

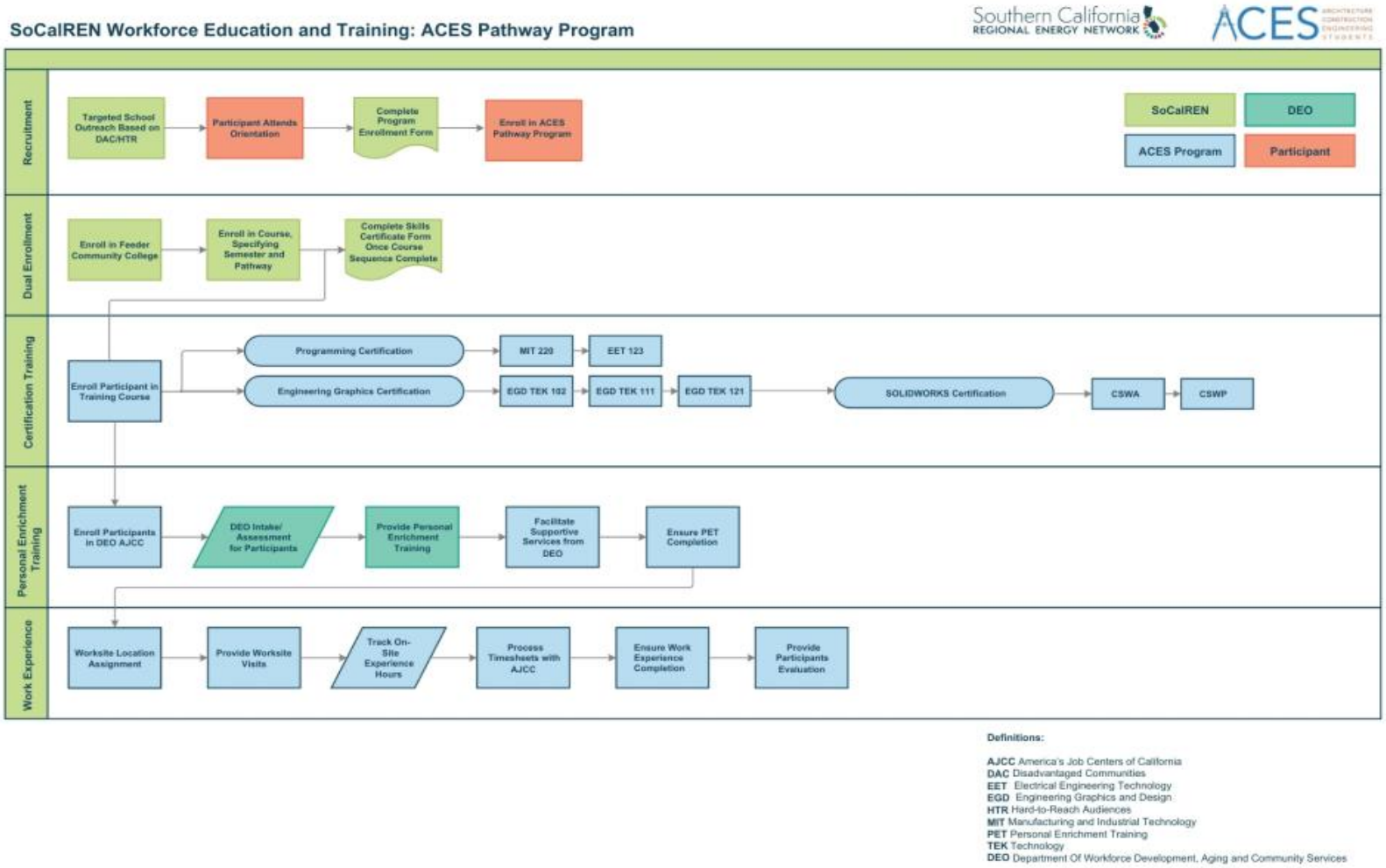
Program metrics are supported by enrollment documentation, dual enrollment records, certification completion documentation, internship placement records, internship hours worked, wage documentation, demographic tracking, and internally monitored Unique Value Metrics (UVMs) and Supporting Indicators.

2. Program Theory and Program Logic Model



3. Process Flow Chart

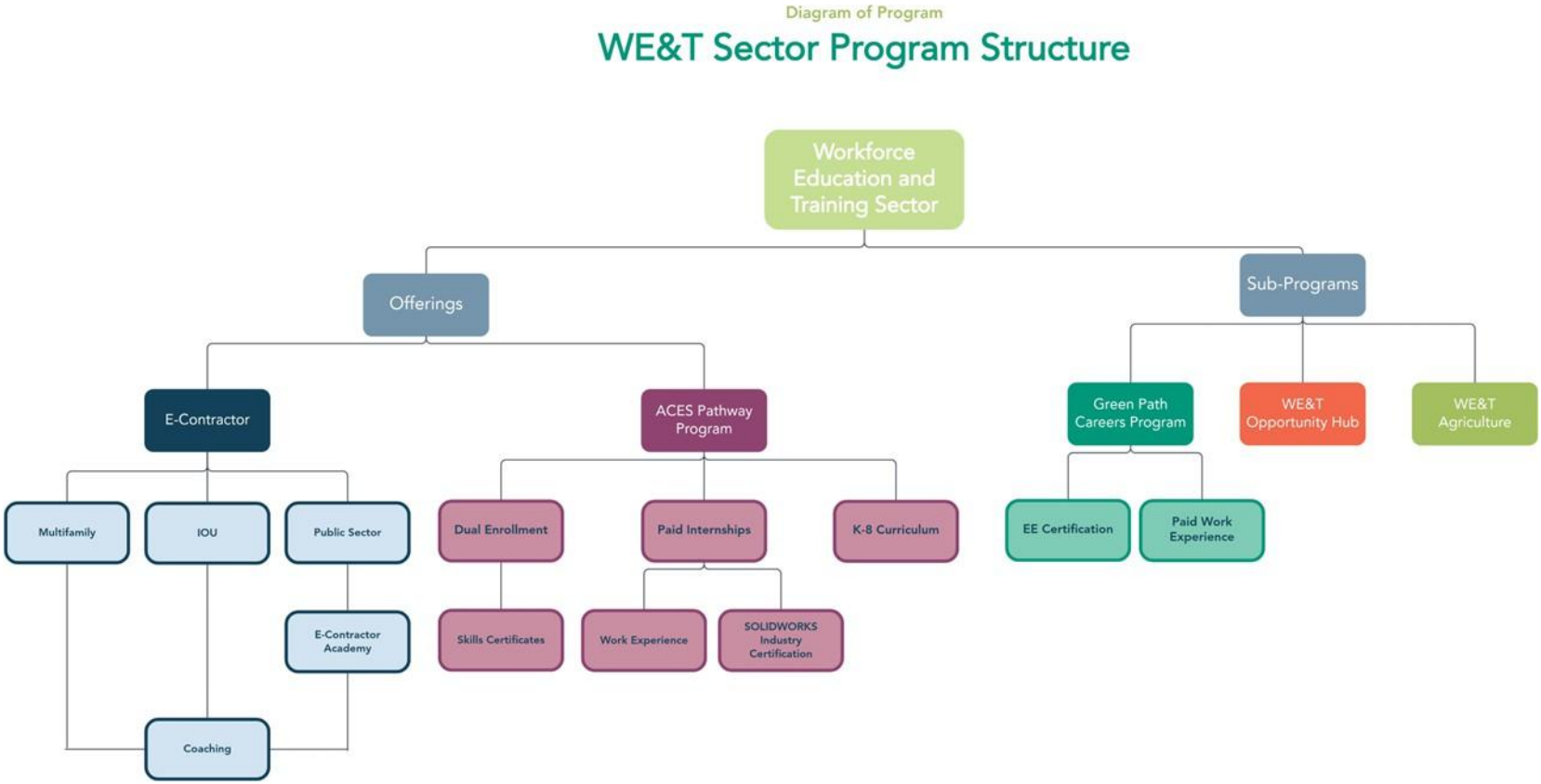
SoCalREN Workforce Education and Training: ACES Pathway Program



4. Measures and Incentives

N/A

5. Diagram of Program



6. Program Measurement and Verification

ACES completes ongoing evaluation to ensure the goals and targets are met while keeping stakeholders fully informed of program operations and outcomes. Quarterly At-Risk Assessments are conducted using established performance thresholds to monitor progress toward annual goals and implement corrective actions, as needed. In addition, a comprehensive work plan will be developed by SoCalREN's third-party EM&V team at the beginning of each year to identify the study needs in the portfolio, determine the timeframe and allocate the budget per study.

7. Normalized Metered Energy Consumption (NMEC) Program M&V Plan

N/A