

ENERGY IS EVERYTHING

Annual Report

2022

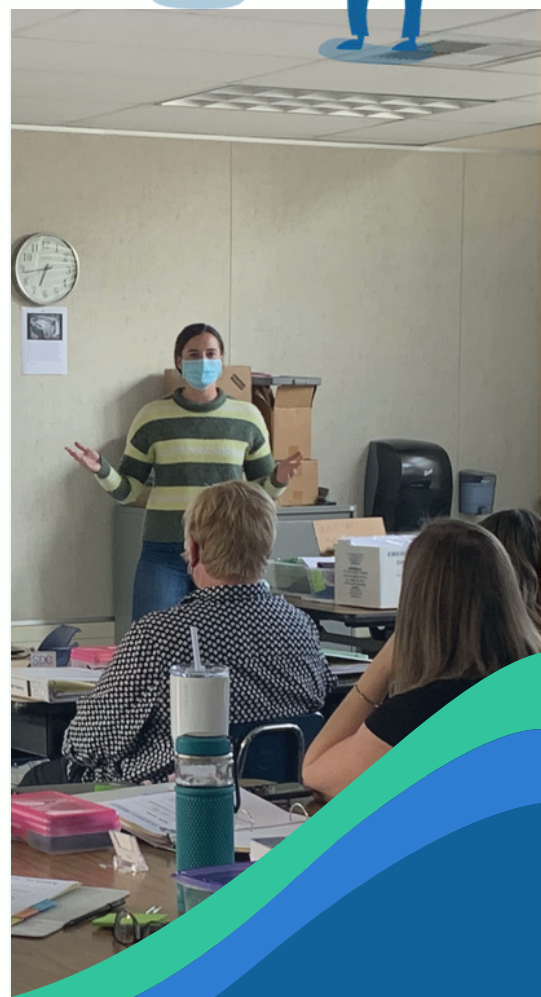
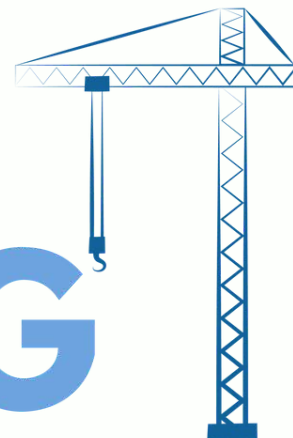
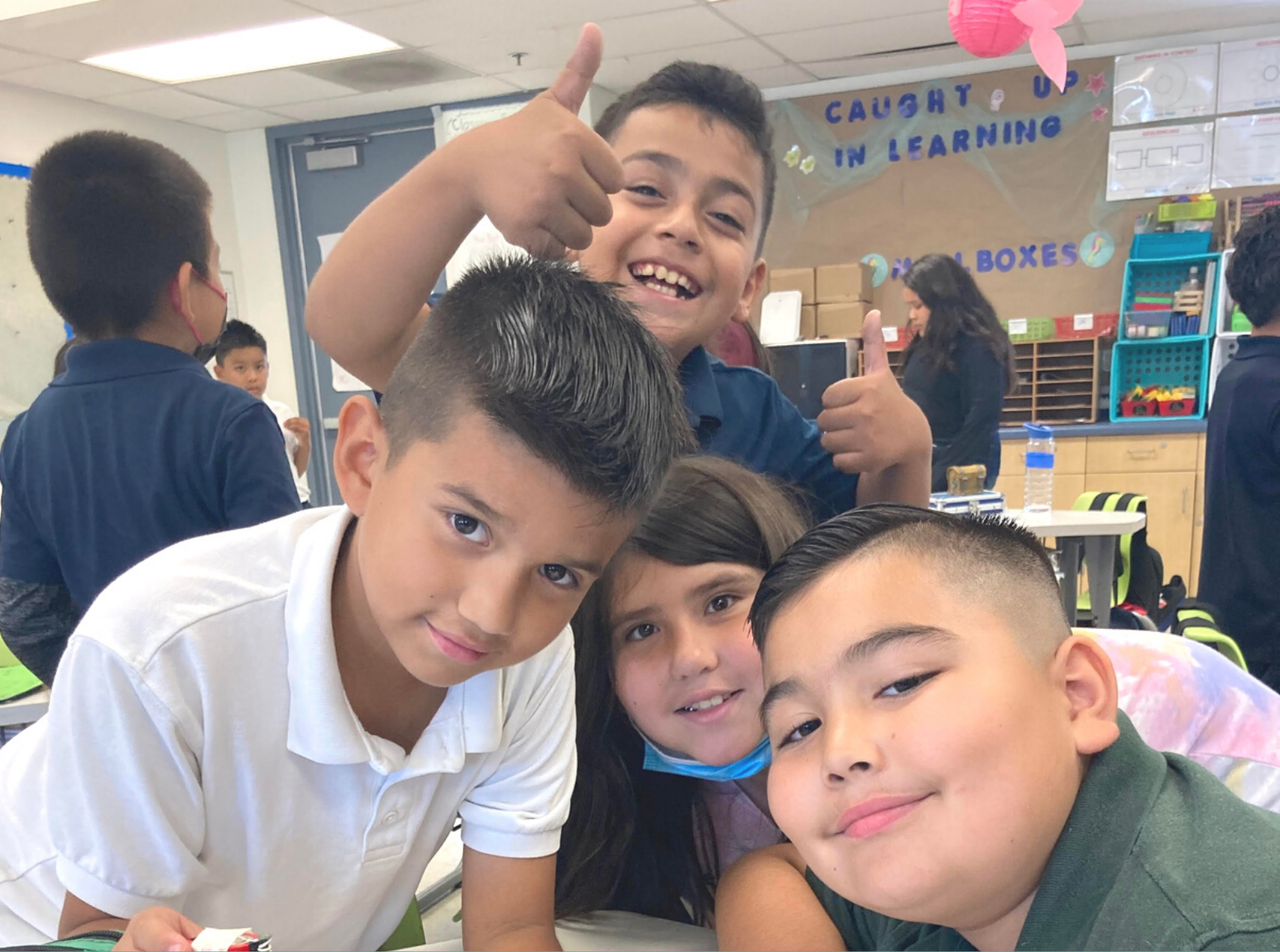




Table of Contents

- 03** **About Us**
Meet the Team!
- 06** **Energy is Everything**
- 08** **Equity and Inclusion**
- 09** **Key Performance Indicators**
Program Impact Territory
- 11** **Additional Key Performance Indicators**
Student and Educator Experience
Educator Testimonials
- 13** **Program Strategies**
Program Strategy Metrics
- 16** **Program Deliverables**
Program Delivery Metrics
Student Breakdown
- 20** **Program Reach**
Regional and Disadvantaged Areas
- 24** **Event Highlights**
Southern California Edison Company
Southern California Gas Company
Pacific Gas and Electric Company
San Diego Gas and Electric Company
- 29** **Looking Ahead**



TEC designs innovative programs to excite and engage students in energy efficiency, conservation, STEM topics, and sustainability to transform communities' thinking about and use of energy.

About Us

The Energy Coalition (TEC) is a 501(c)3 nonprofit organization with almost fifty years of experience designing and implementing strategies that transform the way we think about and use energy. Through stakeholder engagement, idea generation, and innovative program designs, we empower communities to leap into the future of clean energy. TEC envisions a future in which communities produce clean energy that is affordable and accessible for everyone and specifically aims to advance equity and ensure access to Environmental Justice communities. Through education initiatives such as our Energy is Everything program, TEC aims to build a pipeline of informed and prepared change-makers equipped to take action through clean energy careers and transform energy use in their communities and beyond.





TEC programs annually serve hundreds of public agencies and schools, thousands of students and educators, and countless industry professionals, organizations, and partners—all working together to provide no-cost education and training opportunities to California’s future energy workforce. TEC covers all major urban and numerous rural counties in California and leverages virtual presence capabilities and local regional partnerships to facilitate curriculum sharing, professional development, and communication to reach geographically remote populations and allow for flexible participation. TEC has four offices in Oakland, Irvine, Los Angeles, and San Diego and staff supporting the Energy is Everything program is available and accessible to local education providers, students, and educators in program service regions statewide.

Meet the Team!

TEC has four offices in Oakland, Irvine, Los Angeles, and San Diego.



Meaghan Laverty
Director



Siria Salas
Program Manager

TEC staff supporting the program are available and accessible to local education providers, students, and educators in program service regions statewide!



Tinuviel Carlson
Project Manager



Hanna Buechi
Project Coordinator



Tess Hooper
Project Coordinator



Billie Hervas
Project Coordinator



Jasmine Pineda
Project Coordinator



Katya Perez
Project Assistant



Energy is Everything

TEC's Workforce Education and Training (WE&T), Career Connections: Energy is Everything (Energy is Everything) program serves TK to 12th-grade students statewide and is administered by the Investor Owned Utilities (IOU) (Pacific Gas and Electric Company, Southern California Edison, Southern California Gas Company, or San Diego Gas and Electric Company®). TEC's Energy is Everything program is a multi-disciplinary program aligning with California state standards and Science, Technology, and Mathematics (STEM) skills, focused on energy and environmental topics.

The program aims to develop the next generation of energy workers by raising knowledge of and exposure to high-value energy career pathways for K-12 disadvantaged students. TEC accomplishes this by preparing students with the necessary knowledge, skills, and abilities (KSA) related to Integrated Demand Side Management (IDSMS) subject matter for high-demand energy career opportunities. The program also provides professional development training to boost educator experience and confidence in energy and STEM topics and inspire students to adopt sustainable behaviors.

TEC trains the next generation of Energy Educators to serve enrolled student groups in partnership with post-secondary institutions, STEM organizations, and educational partners. Energy Educators help broaden TEC's reach and provide services to hard-to-reach, rural, disadvantaged, and otherwise under-resourced and underserved communities through the train-the-trainer model (a framework for training educators to enable them to train others and reach larger populations). Once trained, Energy Educators facilitate learning and guide students to apply science and engineering practices (researching, designing solutions, redesigning, notebooking, and communicating)—ultimately helping students build their conceptual knowledge.





Our mission is to inspire students of all kinds to make sustainability a part of their everyday lives.

Equity and Inclusion

TEC values diversity and cultural uniqueness. TEC operates in traditionally underserved communities and lessons developed for Energy is Everything leverage foundational ideas of diversity, equity, and inclusion. TEC values all families and knows families come in all shapes, sizes, and forms. Student living situations and life experiences vary greatly, even within the same classroom. Because of this, the language within Energy is Everything lessons are chosen with care and by using best practices for being inclusive; terms such as "home," "family," or "an adult in the home" replace "parents," "house," or others that can create an undertone of exclusion. Energy is Everything lessons focus on equitable access to materials and learning experiences by offering digital and printed access for educators as technology and internet access can be a barrier to services. Once enrolled, all students receive the necessary materials and lesson supplies to learn and complete investigations. Ongoing modifications and accommodations for student accessibility are a best practice for all TEC's education programs and are developed as needed.



Key Performance Indicators

Program performance is measured and reported regularly through key performance indicators (KPIs) to deliver quantifiable outcomes. The data points below show how all 2022 program KPIs and quantifiable outcomes were not only met, but exceed.

153,203

verified student instruction and training hours
(101% to goal of 153,000)

459

educators who received educational resources
(125% to goal of 370)

377

local education providers served
(216% to goal of 175)

34,058

students enrolled and provided with career awareness/experiences
(101% to goal of 34,000)

268

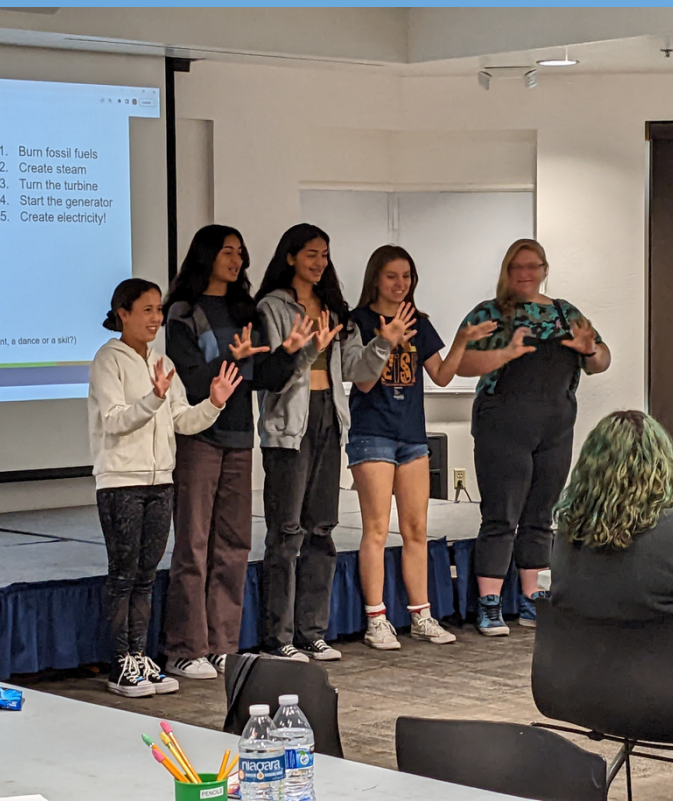
formal local education providers served
(256% to goal of 105)

282

disadvantaged local education providers served
(202% to goal of 140)

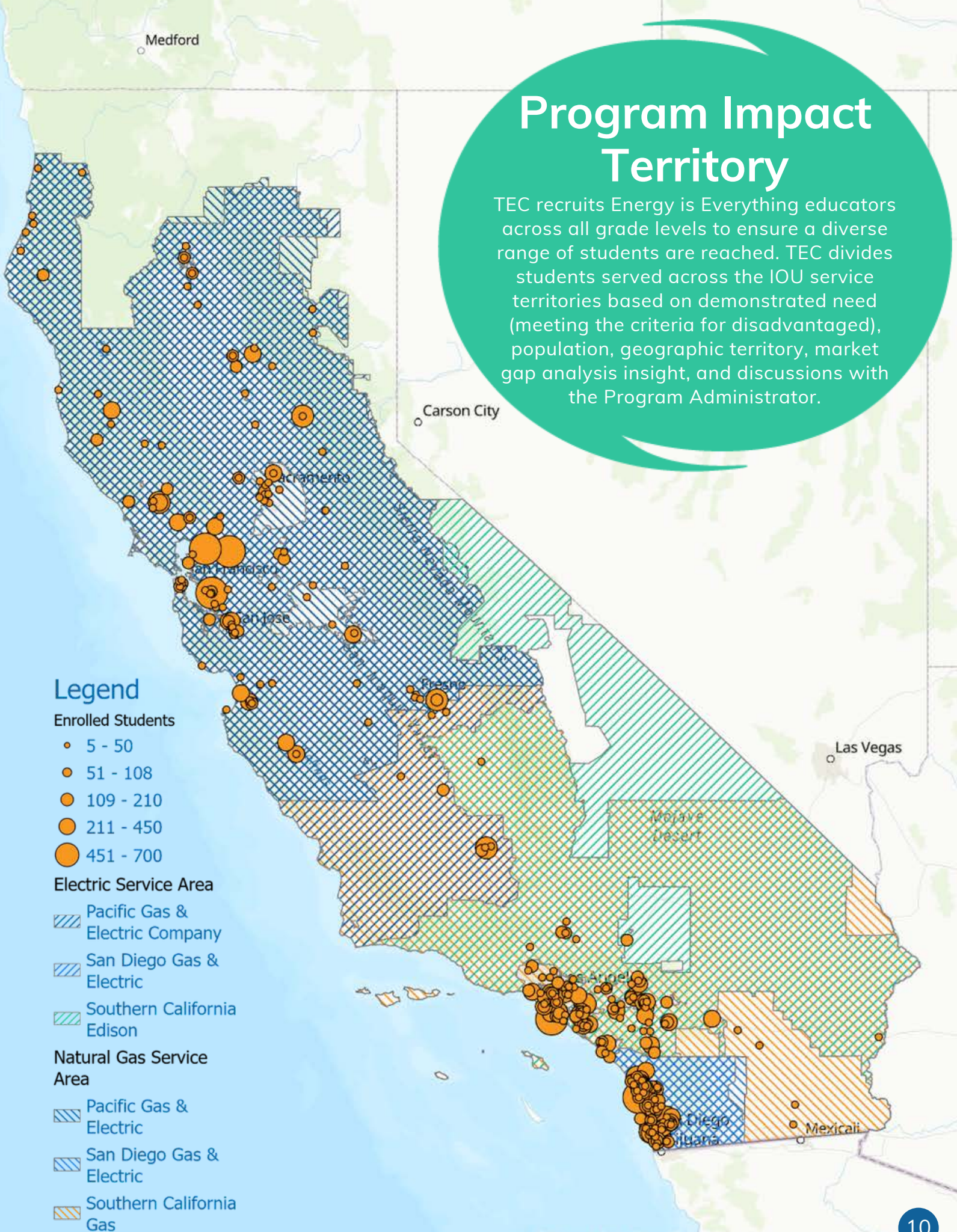
32

partnerships across California established
(107% to goal of 30)



Program Impact Territory

TEC recruits Energy is Everything educators across all grade levels to ensure a diverse range of students are reached. TEC divides students served across the IOU service territories based on demonstrated need (meeting the criteria for disadvantaged), population, geographic territory, market gap analysis insight, and discussions with the Program Administrator.



Legend

Enrolled Students

- 5 - 50
- 51 - 108
- 109 - 210
- 211 - 450
- 451 - 700

Electric Service Area

- Pacific Gas & Electric Company
- San Diego Gas & Electric
- Southern California Edison

Natural Gas Service Area

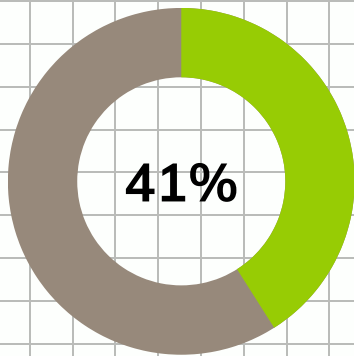
- Pacific Gas & Electric
- San Diego Gas & Electric
- Southern California Gas

Additional Key Performance Indicators

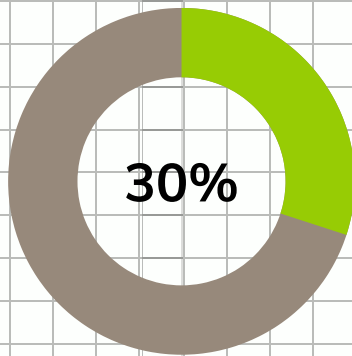


Some key performance indicators show educator and student growth through self-reporting and survey data collection. Knowledge gains, interest in green careers, and behavior changes are shown below as percentage growth between initial surveying and after program completion.

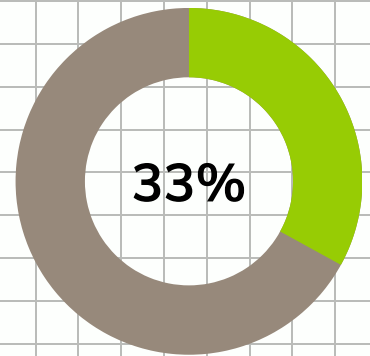
Student Experience



increase in student knowledge of STEM, EE, and IDSM content

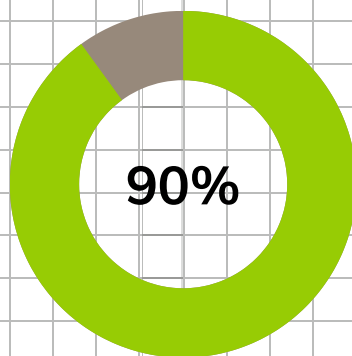
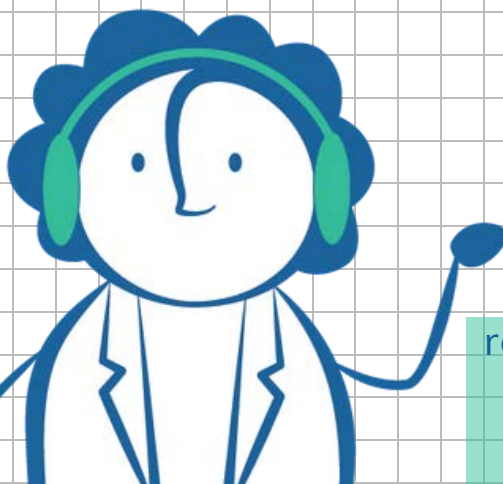


increase in student awareness of energy career pathways

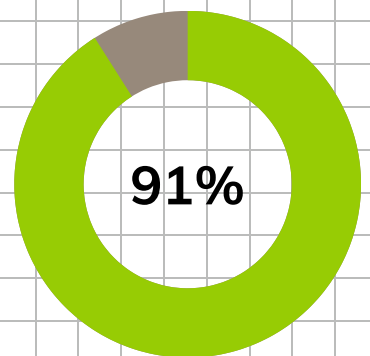


increase in students participating who share knowledge and behaviors

Educator Experience



reported gains in teaching STEM, EE, IDSM, and energy career pathways



reported program satisfaction

Educator Testimonials

“

I am always enthusiastic about expanding my students' knowledge in anything and everything STEAM. I work at a Title 1 school and try to expose my students to things outside of their realm.

”

- 3-5th-grade Energy Educator

“

I want to teach excited science concepts to my students with a real world focus. I also want my students to be aware of the climate and how energy affects it.

”

- TK-5th-grade Energy Educator

“

I teach physical sciences to students in the 8th through 12th grade in a small rural school district. Students in our district have limited access to curriculum with real world hands on materials and they would benefit greatly from participating in a program like this.

”

- 6-12th-grade Energy Educator

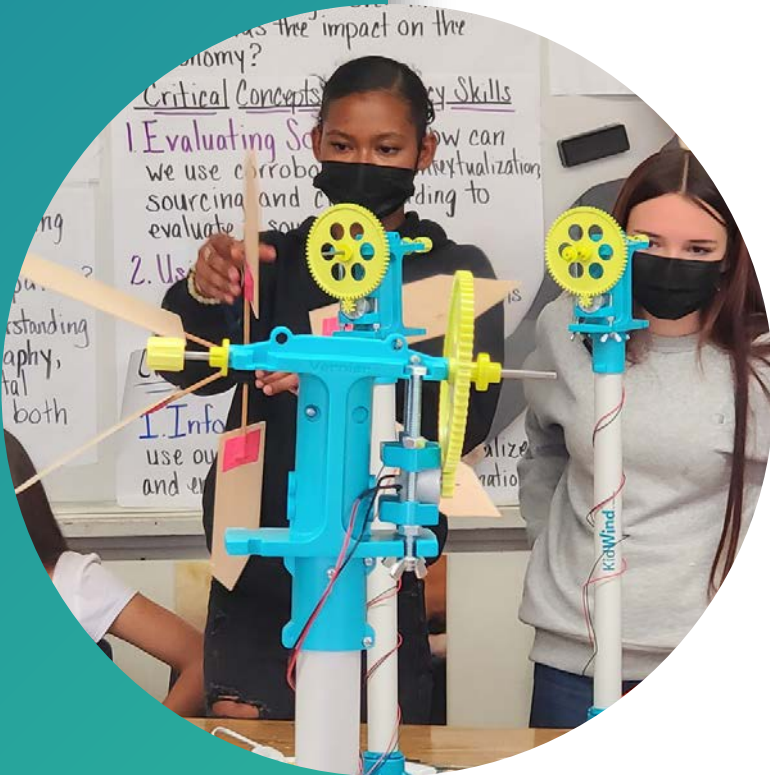
“

I was interested in bringing Energy is Everything to our afterschool program because I know that classroom teachers are not able to teach as much science as they wish to during the school day. I would also like to bring awareness of conservation of energy to the local community.

”

- TK-8th-grade Energy Educator

Program Strategies



TEC provides services and products serving formal and informal educators and their students at various local education providers throughout the state. Services include hands-on lessons, lab day co-teaching opportunities, My Future Energy Career presentations, and field day events. Program components are designed to minimize gaps and create alignment between energy efficiency (EE) education and training programs and workforce demands. The services also provide indirect benefits such as improved behavioral norms, energy savings, and awareness for local education providers, community-based organizations, students' families, and their communities. TEC implemented the following program strategies in 2022:





Completed



In-Progress

Multilingual materials for educators, students, and their families

Train-the-trainer professional development training, conducted online or in-person, for educators to build confidence and experience in energy and STEM subjects and ensure long-term instruction

Statewide delivery through online learning platforms, TEC's statewide offices, Field Educators (post-secondary students in training), Program Ambassadors, and Energy Fellows (specialized program staff)

Educator enrollment and retention through direct marketing to educators and local education providers and indirect marketing through peer-to-peer referrals and engagement materials

Partnerships and innovative program design to overcome traditional barriers to serving disadvantaged schools and meet the unique needs of these students

Energy Fellows strategically placed in disadvantaged, hard-to-reach, or rural areas across the state to cost-effectively support local implementation

Adaptable, modular subject matter by grade, topic, and objective to allow for flexible integration into instruction and to meet educator instructional needs

Family-facing materials through coordination with IOUs and 3P residential resource programs to support pro-environmental behaviors and energy savings in students' homes and communities

Robust Field Educator network to engage "educators in training" at CSUs, UCs, and CCCs who support cost-effective on-site and virtual instruction while gaining on-the-job training

Program Strategy Metrics

Energy is Everything's program strategies produce significant gains for Energy Educators to develop professional skills, build community networks, and access materials in a way that meets their instructional needs.

Modular design by grade level and topic

Planet
Protectors
K-2

Resource
Managers
3-5

Earth
Engineers
6-8

Future
Innovators
9-12



Agriculture &
Greening



Air &
Transportation



Circuitry



Climate Literacy



Electricity



Electrification



Natural
Gas



Renewable
Resources



Waste
Management



Water-Energy
Nexus

100%

of student and
family facing
material is
available in
Spanish

880+

training hours
completed by Energy
Educators

55+

education orientation
trainings completed

5+

strategic partnerships
with UCs for Field
Educator Recruitment

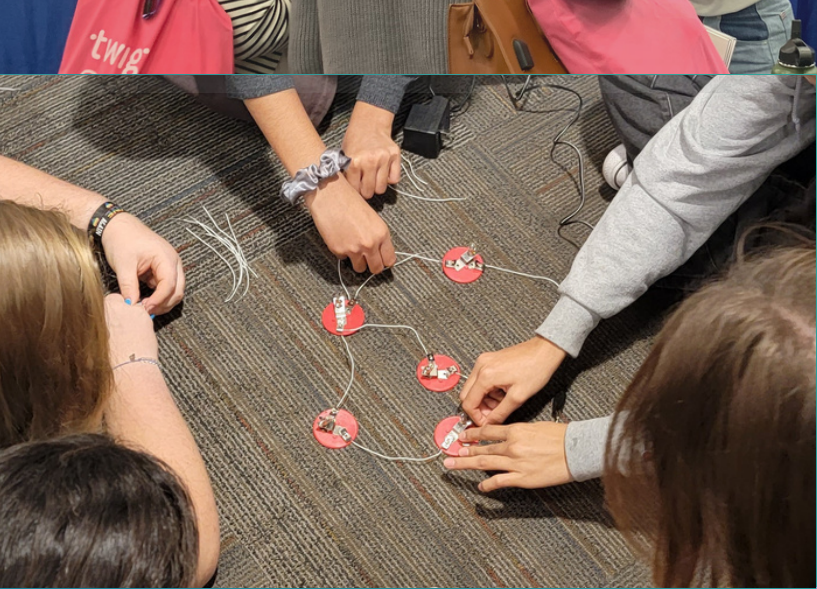
8

Energy Fellows
providing services
annually

Program Deliverables

Energy is Everything offers comprehensive, fully developed products, processes, and materials, making program implementation seamless.

Program deliverables that were completed in 2022 include:



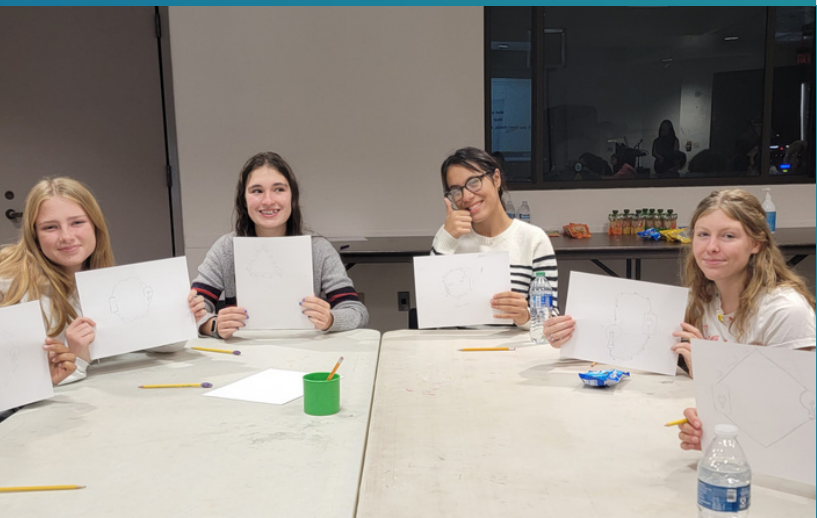
High-quality, peer-reviewed, standards-aligned, modular, multilingual IDSM energy lessons, activities, and hands-on lessons and supplies for K-12 students

In-person and virtual learning, engagement and training materials and platforms for educators and students



Welcome to Energy is Everything!

Energy is Everything is an education program of The Energy Coalition, a California-based 501(c)3 nonprofit with over 45 years experience empowering communities to leap into the future of clean energy. [Scroll down to read more about The Energy Coalition, meet our team, and explore the program!](#)



Onsite hands-on visits, demonstrations, career and science fairs for TK-12 students delivered by TEC staff, Field Educators, Program Ambassadors, and Energy Fellows

Field trips and hands-on activities for TK-12 students to local IOU energy-education centers, EE industry experiential learning sites, and others as appropriate



TK-12 student and educator behavior-focused EE action campaigns designed to save energy at school, at home, and in the community through tangible actions

Energy career professional exposure for TK-12 students through presentations and video profiles provided by industry professionals



What Makes a Good Wind Site?

Strong, consistent wind resource (17+ mph or 7.5 m/s) is the ideal scenario!



Low shear and turbulence



Good exposure to the wind



Elevated, flat terrain



Limited vegetation



Low turbine wake effects



Close to transmission system

Welcome to the Energy Educator Orientation Training



In this orientation, you will learn all about the Energy is Everything program. You will take a look and learn about the program structure, program offerings and materials, student learning reports, and the standards alignment in our lessons. New Educators must complete the training modules Getting Started and The Classroom and Beyond.

Contact educators@energycoalition.org or text us at 858-630-1780 if you run into any questions during the training!



Getting Started!

Energy Educator Section I

Get started with the Energy is Everything program by completing this section of the training. In this section of the training, you will learn about the program structure and goals, the requirements, and how the curriculum connects with California education standards.

Let's get started!



The Classroom and Beyond

Accredited, relevant professional development training (in-person and online) for formal and informal educators

Program Delivery Metrics

Energy is Everything reached a significant number of students and educators in 2022 through hands-on lessons, lesson supplies and resources, and interactive presentations as shown in the data points below.

200+

K-12th grade lessons available

300+

Lesson supply shipments sent

35+

@Home lessons available

26

Conferences and tabling events

15+

Lab days facilitated

12

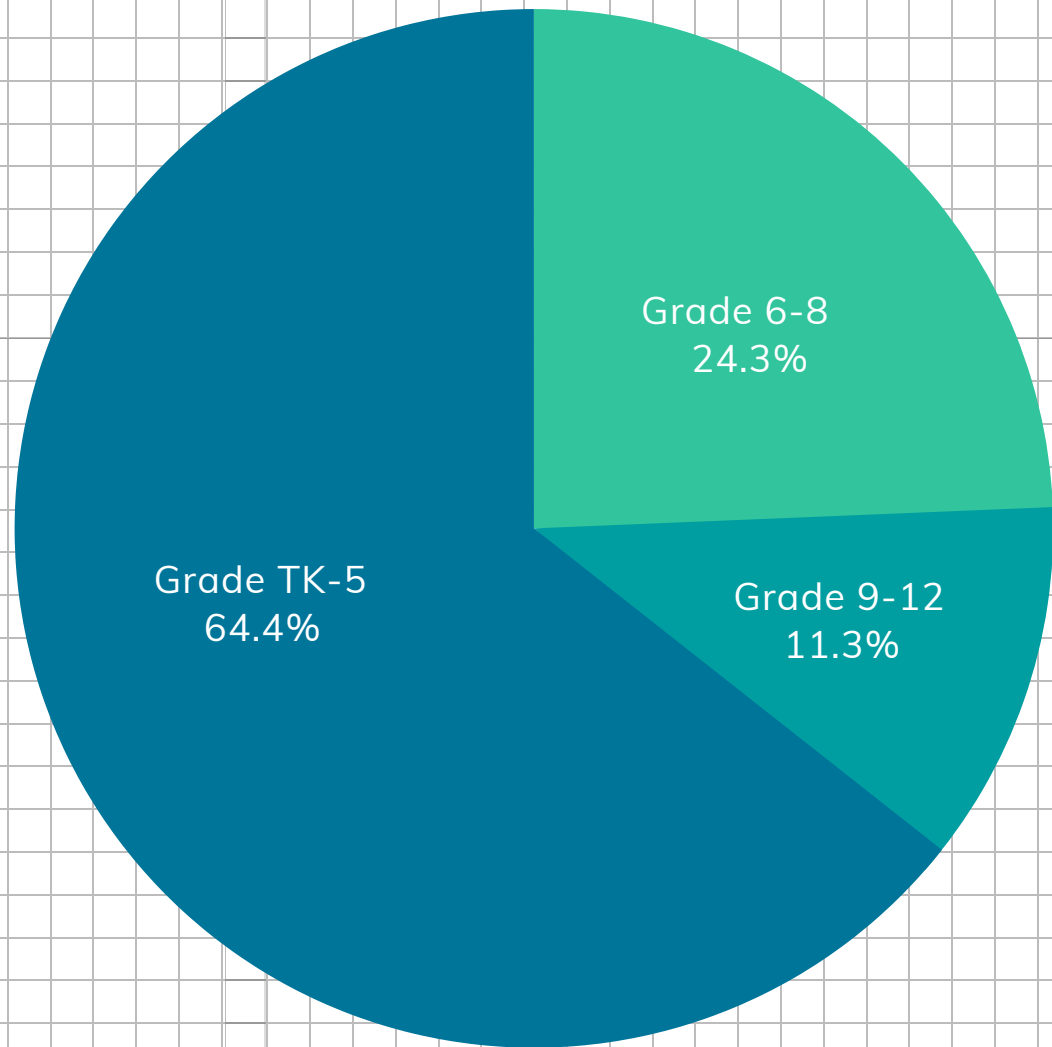
Workshops facilitated

Student Breakdown

Grade TK-5
21,926
students

Grade 6-8
8,292 students

Grade 9-12
3,840 students

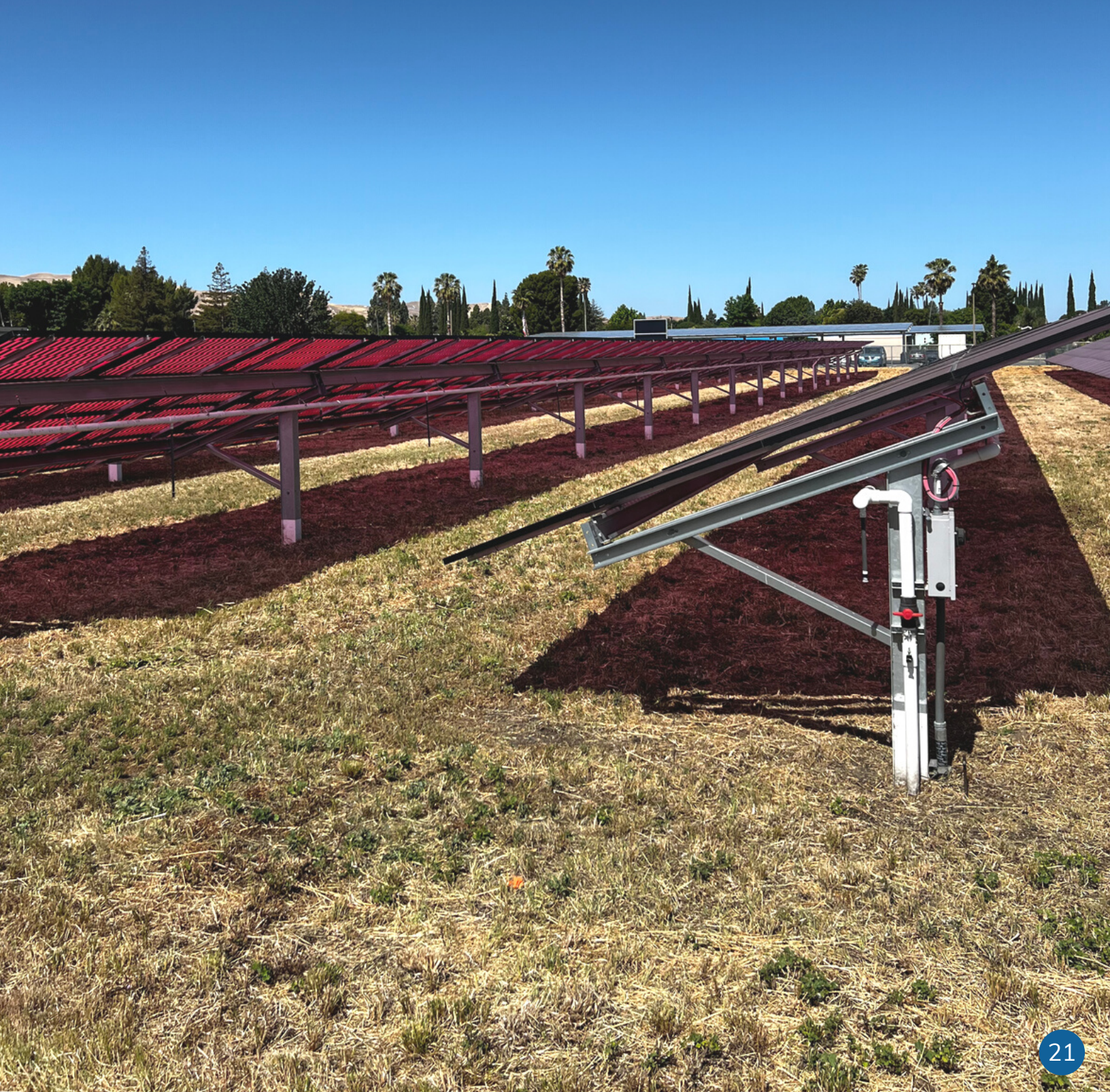


Program Reach

TEC's Energy is Everything program is designed to target and impact students in hard-to-reach households and disadvantaged communities. TEC supports regional implementation across these challenged California communities and strategically places Field Educators, Program Ambassadors, and Energy Fellows to build a local presence. Energy is Everything also partners with community-based organizations that serve directly in these communities, such as YMCAs, libraries, and museums. TEC provides formal and informal educators in these regions with the necessary resources to deliver high-quality, multilingual energy education and offer career pathways to their students.



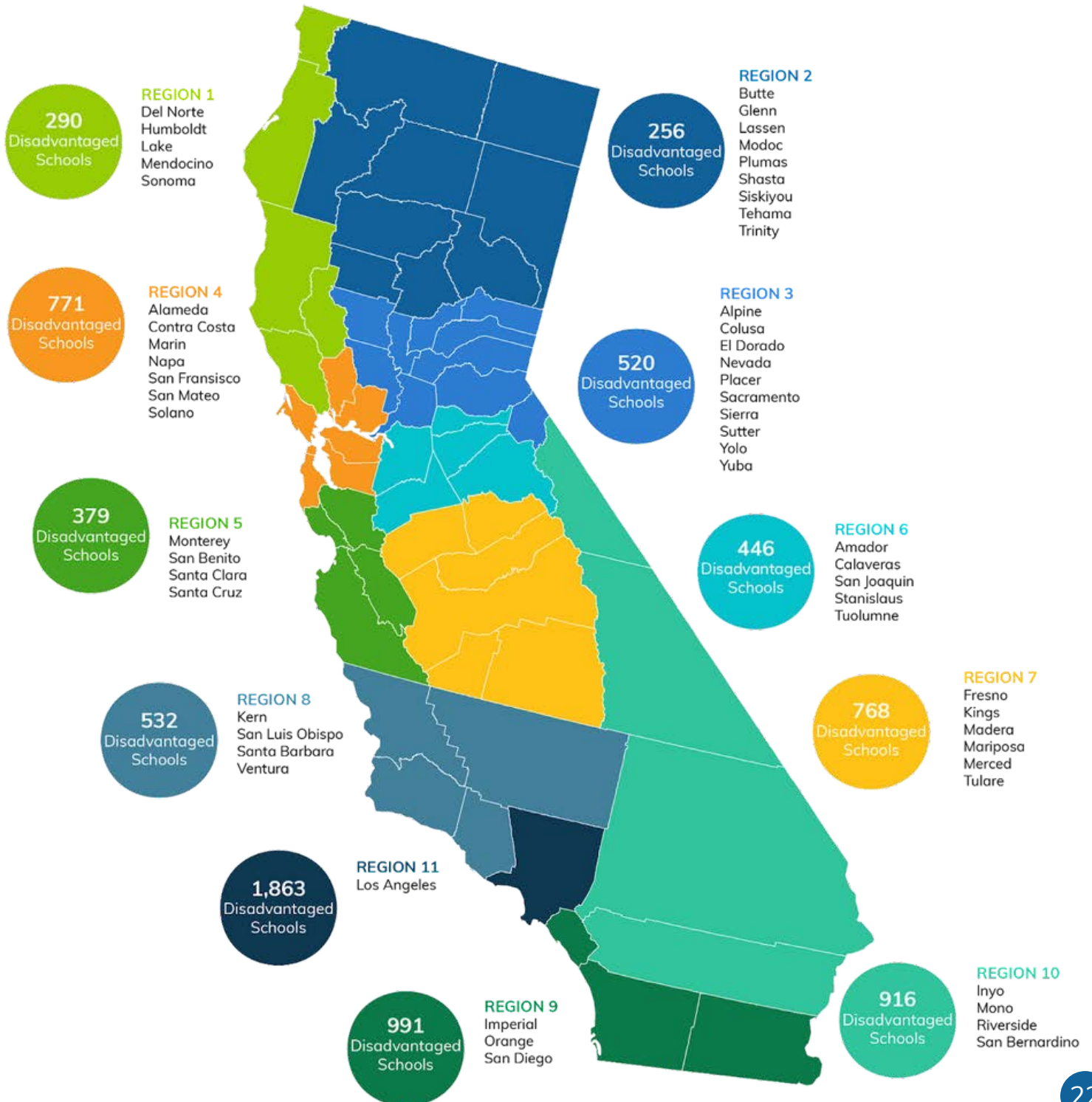
In 2022, TEC identified counties to target for program participants through a comprehensive statewide market analysis that reviewed California's socioeconomic, geographic, and economic factors related to energy education and workforce services. This resulted in TEC focusing on recruitment in the following counties for the first year of the three-year contract: Alameda, San Francisco, San Mateo, Contra Costa, San Joaquin, Merced, Los Angeles, San Bernardino, Riverside, Imperial, and San Diego.



Regional and Disadvantaged Areas

In 2022, Energy is Everything conducted outreach to 7,732 schools across California that are considered disadvantaged based on one or more of the following criteria:

- Title 1 classification
- Free and Reduced Price Meal (FRPM) percentage above 40%
- Located in a zip code scoring in the top 25% statewide per CalEnviroScreen 3.0 or 4.0
- Classified as rural





TEC values all educators, students, and families served through education programs and strives to build communities focused on environmental stewardship.

Event Highlights

Educator recruitment and enrollment are successful because of the local presence of Energy is Everything staff. Through participation in conferences and professional development opportunities, Energy Educators learn about the program and spread the word to peers and other educators in their networks. Students and families have the opportunity to learn and interact with program staff through boothing and workshops held through community organizations and local education providers.

In the following pages, event highlights from each of the four IOU territories are highlighted. These are only a few of the many events held in 2022 that created high program impact through enrollment and partnerships.



Event Highlights

Southern California Edison Company



STEM Symposium

The annual STEM Symposium (which included a Robot Rally, Crazy Contraptions Competition, and Math Mania) was an opportunity to engage with over 100 community members and educators. A highlight of the Symposium was witnessing the excitement and creativity of a group of innovative students that put together a parallel circuit to power four wind turbines at once!



Love Your Mother Earth Fair

The first annual Love Your Mother Earth Sustainability Fair allowed for engagement with over 40 community members. Participants learned about Energy is Everything with a focus on circuitry and energy efficiency.



Girl Scouts Cookie Kickoff

The Girl Scouts Cookie Kickoff celebration introduced over 100 Girl Scouts and their families to solar energy with a chance to complete a solar circuit—powering up a wind turbine, light bulb, or buzzer. Community members interacted and learned about energy with Energy is Everything lesson materials.

Event Highlights

Southern California Gas Company



California STEAM Symposium

STEAM educators and administrators engaged with the Energy is Everything program at the 2022 California STEAM Symposium. STEAM educators were quizzed about energy knowledge, virtually toured the online learning platform, and enrolled in the program.



STEP Con 2022

The Science and Technology Education Partnership Conference (STEP Con), an annual event, aims to bridge the skills gap between K-12 students and high-technology industries by providing educators with the necessary tools to teach and prepare students for STEM careers. Energy is Everything staff demonstrated lessons and facilitated educator interactions and a sustainability trivia wheel activity.

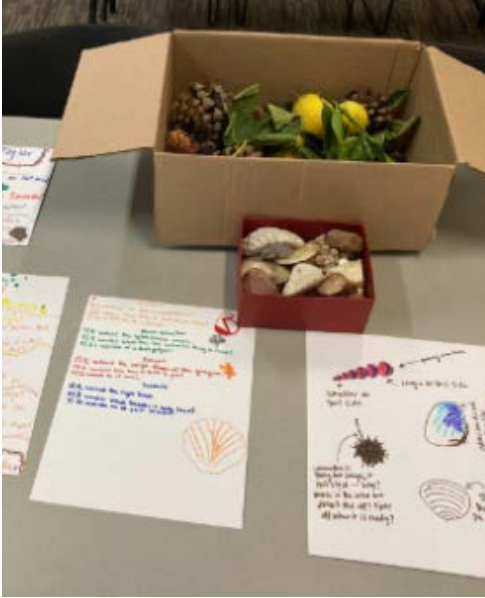


Oak Glen Nature Festival

The Oak Glen Preserve Arts and Nature Festival highlighted a circuitry lesson, allowing community members to learn about and assemble solar circuits. While at the Energy is Everything booth, over 400 community members previewed hands-on materials, enjoyed being in nature, and were in awe of the scenery at the Oak Glen Preserve.

Event Highlights

Pacific Gas and Electric Company



Region 2 Expanded Learning Institute

Interactive, hands-on Energy is Everything workshops for after-school and expanded learning educators were facilitated at the Region 2 Expanded Learning Institute with over 30 educators participating. Participants reflected that the workshops were a literal “breath of fresh air” giving them tangible tools for cultivating similar curiosity and wellness in nature with their students.



Bay Area Science Festival (BASF)

BASF events, hosted during Earth month, introduced over 1,500 attendees to Energy is Everything lesson concepts such as circuitry, renewable energy, ecosystems, natural processes, and biomimicry. Through learning, hands-on activities, and trivia games, students created biomimicry designs to solve human problems such as water filtration and collection.



Pittsburg Unified School District (PUSD) Field Trip

PUSD students, teachers, and administrators participated in a field trip to the local bioswale facility. 12-Environmental Science students acted as docents for 50 fourth graders who built mini bioswales in plastic water bottles, assembled solar circuits, designed wind turbines, and planned EV charging infrastructure in their community.

Event Highlights

San Diego Gas and Electric Company



City Heights Library Earth Day Fair

Over 100 community members stopped by the Energy is Everything booth at the City Heights Library Earth Day Fair to explore solar circuitry and learn about the Student Energy ACTIONS (energy basics found throughout the program). Attendees wrote pledges for environmental actions on sticky notes and added them to a pledge board.



Marston Middle School Field Trip

Students received a week-long “field trip” from Energy is Everything on-site. The class, mid-way through a sustainability project, focused on four areas: energy, water, waste, and transportation. Students learned about the Student Energy ACTIONS (energy basics found throughout the program), electrical generation, food and transportation, solar power and circuitry, and energy use in waste management.



ProKids Lab Day

ProKids, an after-school program, held an Energy is Everything lab day where students learned about electricity, electrification, solar power, and other energy sustainability topics. Students investigated using solar panels, energy balls, and energy usage monitors to learn how electricity works and where it comes from—learning about the importance of renewable energy and conservation.

Looking Ahead

New and enhanced program deliverables were the focus of 2022. Relationships and collaboration opportunities were developed and strengthened in 2022, setting the foundation for success in 2023 and beyond, with the following program deliverables:

Career Technical Education (CTE)

(9-12th-grade)

Students gain industry-based skills for energy careers, through enhancing existing and facilitating additional articulation agreements between high schools and community colleges, to enable high school students to take college-level technical courses for credits.

Technical Skill Certifications

(6-12th-grade)

Students will apply scientific concepts and knowledge to earn certification as Junior Energy Managers, by learning and performing data collection, monitoring, and auditing energy and water use, and executing a conservation campaign. In the process, they will meet practitioners and learn about EE careers.

Internships

(11-12th-grade)

Provide students with real-life career experiences and skills development through placement with TEC and program partners, in alignment with program deliverables, to develop career pathway knowledge and gain professional skills and insight from practitioners.

Welcome Packet Add-on

(all students)

Students will access hands-on learning at home. Energy is Everything staff will coordinate with third-party implementers (3PI) in each IOU territory, to identify families to then receive self-install EE measures within a family toolkit, complimenting the family welcome packet provided by Energy is Everything.