Strategic Energy Innovations (SEI) is an environmental education and workforce development nonprofit that educates and empowers students and emerging professionals to accelerate climate solutions. SEI received James Cary Smith Community Grant funds for their Energize Schools K-12 program for 2022-2025 to provide project-based curriculum and instructional support, empowering young people to lead environmental action campaigns and reduce air pollution in their communities.

To address the environmental issues associated with greenhouse gases and promote energy efficiency in the built environment, SEI builds partnerships with diverse stakeholders in the education sector to engage:

- Youth and educators in K-12 schools (Energize Schools program)
- Emerging Professionals who participate in vocational training and internships in public infrastructure and decarbonization sectors (Energize Careers, SEI’s Climate Corps Fellowship)
- Faculty in higher education that participate in praxis groups (Energize Colleges)

Energize Schools Program

Through Energize Schools, middle and high school students identify air quality issues and participate in two challenges to develop and implement sustainability and conservation campaigns. In the first year of the James Cary Smith Community Grant Program, SEI implemented Energize Schools at 34 middle and high schools.

During the program, students learn about air quality and interrelated climate issues, how to use the CalEnviroScreen tool, and about environmental health disparities across communities. Students identify their environmental topic of concern and plan two action campaigns over the course of the year while learning project management and policy advocacy skills. Throughout the challenges, SEI “Challenge Advisors” are available to provide teachers and students with instructional support such as visiting their classrooms or campaign planning. Across all of SEI’s Energy Conservation Competitions, student campaigns have saved more than 915,000 kWh of electricity resulting in savings totaling nearly $130,000 for schools.

Student Campaigns

Environmental club leaders at a high school in San Mateo County spearheaded a 4-day project to educate almost 500 members of their school community about waste sorting practices. The resulting waste audit led to the school adding recycling and compost bins on campus.

Educators described that the most valuable moment for the students has been when they moved into implementation and saw their campaigns come to life.
SEI’s Best Practices for Capacity Building

- Take time to build relationships and understand the needs of schools and teachers
- Expand school partnerships by connecting to teachers’ personal networks and engaging district-level STEM officers
- Identify guest speakers to speak on specific air quality issues
- Draw connections to green career pathways and local organizations that may be of interest to students’ future professional careers
- Remain flexible and adaptable to year-round schedules, including busy periods

Partnership & Collaboration

SEI has successfully cultivated student leadership through our NGSS-aligned sustainability curriculum, Green Career webinars and toolkit, among youth that have participated in Energize Schools’ K-12 programming, and campus support for green teams. SEI is eager to partner with the Air District to build upon this student leadership. Air District employees could teach students about:

- How to monitor legislation and the stages of policy or rule development
- Strategies to influence policy and how to submit letters to public officials.
- Methods for civic engagement and how to participate in public meetings or submit public comments
- Specific policies, such as amendments to Rule 9-4 and Rule 9-6 to reduce emissions of nitrogen oxides from furnaces and water heaters

Looking Ahead

With James Cary Smith Community Grant funding, SEI has expanded their curriculum offerings and provided more resources to support teachers to lead environmental education curricula in the classroom. In the future, SEI hopes to expand their program to serve more schools while maintaining their existing partnerships. Additionally, SEI envisions developing a full-length Career and Technical Education (CTE) course in high school that emphasizes the intersection of urban planning with environmental issues.

“We hope that students who participate in air quality challenges can tap into their creativity and recognize the power they have to make a positive difference...These are the first steps for future grassroots advocacy.”

- Aneri Rodriguez, Associate Program Manager at SEI