



Philadelphia Solar Energy Association

Annual Report 2023

Philadelphia's Junior Solar Sprint The Philadelphia Solar Energy Association (PSEA) celebrated the 30th anniversary of our Junior Solar Sprint, by holding another wonderful race on the Drexel University campus! Despite cloudy weather, more than 40 students and 25 enthusiastic volunteers combined to make the day a great success! Not one but two dragon-themed cars won Artistic Merit awards. Some high drama occurred during the final heat, when a car jumped its track, crashed into a competitor and flipped onto the tarmac, while the competitor rolled on to victory. Tours of Drexel's Engineering Labs were very popular again this year.



For the win



A good day for dragons!

Franklin Institute's STEM Scholars Program In May of 2023, Jesse Starger, Ron Celentano and Liz Robinson taught a 4 week class to a group of high school Freshmen as part of the Franklin Institute's STEM Scholars Program. Students learned how to design, build and race model solar cars. The program culminated in another exciting race on the Institute's roof. This year for the first time, a Franklin Institute STEM Scholar participated in the Open Division of the Junior Solar Sprint.

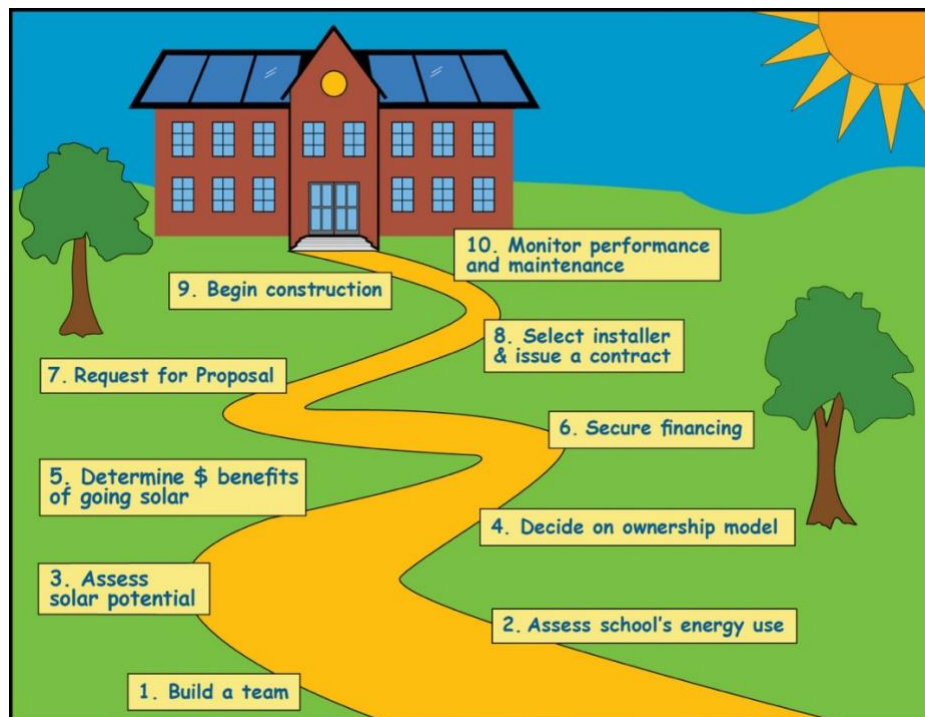
A crew from NBC 10 News filmed during the last day of class and we were featured on [NBC 10 news](#) several times the following week.

Teacher Training PSEA held several teacher trainings in preparation for the Sprint.



Teachers learn how to build solar cars in preparation for teaching their students.

Solar Schools Toolkit PSEA is developing a Solar Schools Toolkit for Pennsylvania under contract to the Department of Environmental Protection (DEP). This will include all the new IRA tax credits, federal and state grants and other incentives now available to schools and other nonprofits. We also gave 3 webinars and 2 conference presentations to help school administrators and other stakeholders learn more about all the new opportunities. The PSEA team is also providing free technical assistance to Pennsylvania schools. The Toolkit will be published in mid-August, 2023.



Imagine a Clean Energy Future Contest In the Spring of 2023, PSEA sponsored a Student Contest, inviting students in grades 5 – 12 to Imagine a Clean Energy Future. The contest offered 3 categories: Visual Arts, Language Arts and Video. We received 104 entries from 40 different schools across the region. Prizes were awarded in all 3 categories at the Opening Reception for the Exhibition in Center City, Philadelphia. The exhibit was open to the public for more than a month.



Imagine a Clean Energy Future Opening Reception



PSEA volunteers & organizers:
George McGrady, Lisa Rose, Liz Robinson, Lew Kramer

Solar Energy Curriculum Prepares Students for the Clean Energy Future

Building on the popularity of the Junior Solar Sprint program, and responding to teachers' requests, PSEA shared its science curriculum for 5th grade, and developed 6th grade curriculum. This curriculum helps students understand and explore solar energy and introduces them to the role of solar energy in addressing climate change. It is consistent with the new PA STEELS Standards, Education for Sustainability, and the Eco Schools and Green Schools Standards. PSEA is working with teachers to refine the curriculum and to make it more widely available.

STEM education is especially important now, as the U.S. struggles with shortages of technically skilled workers in many fields. As solar and wind energy are the most rapidly growing forms of energy in the U.S., PSEA is working to strengthen the preparation of our young people, and especially low income and minority students, to be able to enter and excel in these dynamic fields.

For more information on PSEA's solar curriculum, contact Liz Robinson, lizhrob2@gmail.com.

Public Policy PSEA has been active in influencing public policy this year:

- A. Regional Greenhouse Gas Initiative (RGGI)** 2023 was another critical year for approval of Pennsylvania's plans to participate in the Regional Greenhouse Gas Initiative (RGGI), the nation's oldest and largest carbon market involving 11 states from Maine to Virginia. PSEA worked with dozens of civic, religious, and environmental organizations to help educate lawmakers and the public and to engage stakeholders to support the implementation of a carbon cap and invest in Pennsylvania. RGGI has been challenged by the fossil fuel industry, and we are now awaiting a decision in the state Supreme Court.

- B. Community Choice Aggregation (CCA)** With a team of experts, PSEA is advancing Community Choice Aggregation in Pennsylvania. CCA is the process through which municipalities can aggregate all their electricity users and procure power on their behalf in the competitive marketplace. CCA is currently legal in PA for boroughs on an “opt-out” basis. Several boroughs in southeastern PA have signed Memorandum of Understanding (MOUs) to investigate how CCA will work for them.
- C. Solar for Schools** PSEA has assisted in the development and support of a Solar for Schools bill. This would create a state grant to cover technical assistance and installation of solar PV systems on PA public schools, community colleges and technical institutes statewide. The bill has strong bipartisan support and good momentum.
- D. Alternative Energy Portfolio Standard (AEPS)** PSEA is working in coalition with many other energy and environmental organizations to expand PA’s AEPS, which flatlined 2 years ago at 8% renewable. The bill would expand to 30% renewable by 2030, a very modest goal, compared to other states. This effort will gain momentum in the Fall.
- E. Community Solar** PSEA supports the inclusion of community solar in the AEPS bill as written in SB230.

New Collaborations with Colleges and Universities In addition to deepening our partnership with Drexel University, PSEA collaborated with Temple University, Haverford College and Bryn Mawr College, involving undergraduate students as interns and assistants with several projects, especially the Solar Schools Toolkit and the student contest. Next year we plan to build on all of these relationships.

Organizational Governance and Infrastructure

Board Members

Lisa Rose, President	Anil Babooram	Dr. Aaron Fafarman
Vincent O’Grady, Vice President	Lynn McConville	David Hammes
Ron Celentano, Treasurer	Roger Clark	George McGrady
Maureen Mulligan, Secretary		

Staff

Liz Robinson, Executive Director; Ron Celentano, Technical Director
Lorraine Shaw and Virginia Friedman, Curriculum Specialists

Financial Support

Total revenue in fiscal year 2022 was \$ 42,494 with expenditures of \$ 36,160. In addition, PSEA had more than 1000 hours of volunteer time, space and other in-kind donations. These in-kind contributions are valued at more than \$100,000.

Partnerships

Drexel University

Philadelphia School District

PA Department of Environmental Protection

Franklin Institute

PHENND Sustainability

American Solar Energy Society

National Renewable Energy Laboratory

Philadelphia Energy Authority

Eco STEM Collaborative

Delaware Valley Regional Planning Commission

Looking Forward 2024 promises to be a very exciting year for solar:

- PSEA plans to expand its student contest: *“Imagine a Clean Energy Future”*
- We look forward to:
 - another in-person Solar Sprint in the Spring
 - expanding our curriculum development work
 - expanding our internships with area colleges and universities
 - helping PA implement statewide solar programs to increase grid reliability and resilience as we accelerate the transition to a clean energy economy for all Pennsylvanians.
 - Expanding our public education efforts on the IRA, IJA and other incentives
- 2024 will require strengthening workforce development, technical training and detailed, comprehensive planning as PA implements the Inflation Reduction Act, RGGI and the Infrastructure Law in the same year.

It's “all hands-on deck” time.

Philadelphia Solar Energy Association 7821 Flourtown Avenue Wyndmoor, PA 19038
www.phillysolar.org