

Climate LEAP alumna receives 2017 President's Environmental Youth Award

Emily Liu, an alumna of the Institute for the Environment's 2017 Climate Leadership and Energy Awareness Program (Climate LEAP) and a senior at East Chapel Hill High School (ECHHS), recently received the President's Environmental Youth Award (PEYA) for her project "Climate Leadership and Outreach: Connecting Air Quality and Renewable Energy." The 2017 PEYA award recognized 16 outstanding environmental projects by K-12 students from all 50 states and U.S. territories that promoted awareness of natural resources and encouraged positive community involvement. The EPA recognized national winners of the 2017 PEYA at a ceremony in Washington, D.C. on Sept. 21. Read more: <https://www.epa.gov/education/presidents-environmental-youth-award-peya-winners>



Emily and her award sponsor, Dana Haine, the K-12 Science Education Manager at the UNC Institute for the Environment, attended a ceremony at the U.S. EPA in Washington, D.C. on Sept. 21 where she was honored as the PEYA winner from EPA Region 4.

Liu's project was inspired by her involvement in Climate LEAP, a program that engaged high school students in assessing strategies to promote resilience to environmental hazards associated with society's use of energy and a changing climate.

"It is inspiring to see a high school student translate knowledge gained during our science programming into action in her community" says Dana Haine, Program Director for Climate LEAP. "Program participants were supported in their pursuit of resilience-focused action projects in their communities, and Emily went above and beyond, turning her learning experience into a project that will impact her school and community for years to come."

Liu, motivated by her growing awareness of how air pollution impacts human health and her knowledge of the air quality benefits of renewable energy, examined CO₂ and particulate matter emissions under two different policy scenarios. Her research enabled her to understand the role that renewable energy could play in reducing emissions of both, thus improving air quality. Liu worked with Yang Ou, a Ph.D. candidate in Gillings School of Global Public Health's Department of Environmental Sciences and Engineering, who is studying under Jason West, Ph.D., a professor of Environmental

Sciences and Engineering. Liu's interest in air quality led her to launch *EPA's Air Quality Flag Program Spring 2017 Challenge* at ECHHS, where she prominently displayed a flag conveying local air quality on school grounds each day, educated her peers about air quality, and described actions people could take to conserve energy and improve air quality. In addition, Liu's outreach efforts included speaking at community events and publishing an Op-Ed on asthma awareness in the local newspaper.

Liu also joined forces with others, including another Climate LEAP student, Megan Doherty, to advocate for bringing solar energy to ECHHS. In addition to conducting a school-wide energy audit, Liu and her team wrote a successful grant to the *Duke Energy Carolinas/NC GreenPower Schools Going Solar* program that will bring a 5 kW solar photovoltaic system to ECHHS in 2018. Read more: <https://ie.unc.edu/2017/03/high-school-students-from-ies-science-enrichment-program-bring-solar-panels-to-east-chapel-hill-high-school/>

Liu reported that conducting this multi-faceted project significantly improved her leadership, public speaking and problem-solving skills, while advancing her knowledge of air quality, renewable energy, and the connections between the two. "This has been a life-changing experience for me. It has fueled my passion for protecting our environment, which has shaped who I am today and the things that I do now and in the future," Liu said.

Furthermore, she noted that she is especially proud that her efforts challenged her peers and community members to take actions to improve air quality and make a difference in their community.

Now in her senior year at ECHHS, Liu is busy applying to colleges where she plans to study environmental science.

The 2017 Climate LEAP program was supported by grants from the Burroughs Wellcome Fund and the National Institute of Environmental Health Sciences.

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