Sustainability Superheroes: How Green Jobs Are Transforming Industries by

Author: **Priscilla Vicari**

- Climate Solution: **Sustainable Industry**
- Climate Solution Career: **Sustainability Specialist**

This profile highlights the growing importance of sustainability specialists in driving eco-friendly practices across industries. It outlines the role of these professionals in helping organizations reduce waste, conserve energy, and comply with environmental policies, while emphasizing key skills like data analysis, project management, and communication. The piece profiles UCLA as a leader in sustainability, showcasing its initiatives in clean energy, waste reduction, and education. It also features expert insights, workforce trends, and opportunities for internships and volunteer work with organizations like Algalita and Heal the Bay. Additionally, the article provides resources for education and training, such as UCLA's Sustainability Extension Certification Program, to prepare individuals for careers in this vital field.

Pricilla Vicari is a student at El Camino College. Her career interests include sustainability, environmental education, waste management. Her educational interests include opportunities related to environmental issues and sustainability. As a Green Careers Fellow, she profiled careers in the climate solution sector of Industry Sustainability with a focus on careers as a sustainability specialist.

Cool Roofs, Hot Jobs: The Rise of Sustainable Urban Careers

Author: **Avinash Prasad**
Climate Solution: **Healthy & Equitable Communities, Green Roofs**
Career: **Sustainable Urban Development Specialists**

This profile explores the intersection of equitable and sustainable urban development, focusing on climate solutions like green and cool roofs that reduce urban heat, lower energy costs, and promote environmental justice. It highlights careers in this growing field, such as green roof installers, urban planners, and sustainability consultants, detailing their roles, required skills (e.g., policy advocacy, community engagement, data analysis), and salary ranges. The piece profiles organizations like the Five Points Youth Foundation, which transforms neglected urban spaces into green hubs, and features experts like Lizzeth Rosales and Vien Truong, who advocate for climate justice. It also lists internship opportunities and educational programs, such as the University of Sussex's Climate Justice degree, to prepare individuals for careers in sustainable urban development.

Avinash Prasad is a Sophomore at El Segundo High School. His career and educational interests include industrial engineering, computer science, and management engineering. Avinash is seeking to apply his problem solving and engineering skills to improve the environment, increase green spaces and educate the public. Avinash has experience as a Birthday Wishes Club President to provide gift boxes for youth in homeless shelters. He has served as AI club impact director and El Segundo Teen Advisory Committee member. He hosted educational podcases on racial inequality and redlining. As a Green Career Fellow, Avinash provided equitable & Sustainable Urban Development and Sustainable Civil Engineering.

Charging Today for a Cleaner Tomorrow - Commercial Fleet Electrification

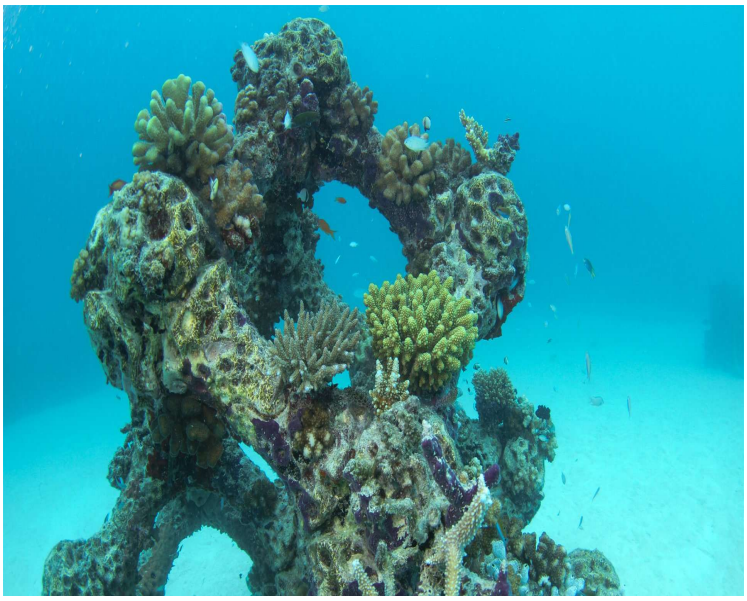
Author: **Cara King**
Climate Solution: **Zero/Low Emission Transportation, Commercial Fleet Electrification**
Climate Solution Career: **Public Outreach Coordinator**

Commercial fleet electrification plays a critical role in reducing greenhouse gas emissions. Medium and heavy-duty trucks, though only 7% of U.S. vehicles, contribute over 26% of transportation emissions. This profile discusses the challenges of transitioning to zero-emission vehicles (ZEVs), such as high costs, limited charging infrastructure, and "range anxiety," while emphasizing government incentives and initiatives like California's aggressive EV infrastructure investments. The piece also profiles green careers, particularly the Public Outreach Coordinator role, and underscores the importance of communication and policy advocacy in advancing electrification. Interviews with industry leaders, including Nathalie Choy of Greenlane and Chris Caines of Climate United, illustrate efforts to overcome barriers through innovative solutions like driver lounges and community-focused projects. Additionally, the article outlines education programs, workforce trends, and volunteer opportunities, advocating for collective action to achieve environmental justice and a sustainable future.

Cara King is a Junior at El Segundo High School. Her career interests include environmental journalism, media, sustainability coordination and analytics. Her educational interests include communication studies with an environmental and sustainability focus. As a Green Career Fellow, she profiled careers in zero emission transportation, commercial fleet electrification, public relations and outreach coordination. In school she participates in a business pathway. Her extracurriculars include club soccer and lacrosse.

Guardians of the Deep: Marine Biologists and the Battle for Coral Reefs

Author: **Katya Horasz**
Climate Solutions: **Land, Forest & Ocean Conservation, Artificial Reefs**
Climate Solutions Career: **Marine Biologist**



Artificial reefs are manmade structures designed to mimic natural reefs, playing a crucial role in ocean conservation by restoring biodiversity, protecting coastlines from erosion, and creating marine habitats. This profile highlights the importance of artificial reefs in combating the decline of natural reefs due to pollution, overfishing, and climate change. It explores the work of marine biologists, who are instrumental in reef restoration, detailing their skills, salary ranges, and green skills such as conservation, climate change mitigation, and sustainable research. The article also covers workforce trends, notable organizations like Reef Maker and Reef Design Lab, and opportunities for internships and education, such as programs at UCSD and the University of Washington. Resources and expert insights, like those from David Attenborough, further emphasize the global significance of reef conservation.

Katya Horasz. Is a Junior at Mira Costa High School. Her career and educational interests include environmental law. Katya has experience as a Swim Instructor, Lifeguard, Mentor, Assistant Soccer Coach, Congressional Intern and Secretary for a Political Review Club. She has received multiple President volunteer service award honors. As a Green Career Fellow, Katya profiled the climate solution of artificial Reefs and the career of a Marine Biologist.

Bee Hotels: Tiny Sanctuaries Saving Our Pollinators

Author: **Paige Esposito**
Climate Solution: **Land, Forest & Ocean Conservation, Bee Hotels**
Climate Solutions Career: **Species Migration Expert**

Bee hotels are innovative conservation tools designed to combat the endangerment of wild bee populations, which are vital for pollination, biodiversity, and global food security. This profile explores the role of bee hotels in providing shelter and nesting sites for bees, mimicking natural habitats to encourage repopulation. It highlights the career of a species migration expert, who uses environmental science and migration pattern analysis to determine optimal placements for bee hotels and other conservation structures. Key skills include GPS technology, animal behavior analysis, and weather pattern interpretation, with a salary range of $70,000-$80,000 annually. The article also discusses educational pathways, workforce trends like pesticide regulations and mysterious bee deaths, and organizations such as the Conservation Biology Institute and Sierra Club. Expert insights from Professor Thomas Seely and internship opportunities like the Great Basin Institute further underscore the importance of this green career in protecting pollinators.

Paige Esposito is a Junior at Mira Costa High School. Her career interests include water waste engineering, recycling, waste management and solar energy. Her educational interests include environmental science, marine biology and veterinary medicine. Paige's experienced include serving as a program aide and camp counselor at American Martyrs School, serving as a Girl Scout Ambassador and president of connecting charities club. As a Green Career Fellow, Paige profiled the Climate Solution of Biodiversity Conservation, Bea Hotels and the career of a Species Migration Expert.

Code for Climate: How Automation Engineers Are Cutting Energy Waste

Author: **Ashley Arenas**
Climate Solution: **Green Buildings, Automation Systems**
Career: **Computer Systems Engineers**

Building Automation Systems (BAS) are a cutting-edge climate solution aimed at reducing energy consumption and greenhouse gas emissions by automating and optimizing the operation of technologies like heating, cooling, and lighting in buildings. This profile explores the role of BAS in supporting the electrification of green buildings, highlighting the career of Computer Systems Engineers and Automation Systems Engineers who design, program, and maintain these systems. Key skills include cybersecurity, programming, networking, and project management, with salaries ranging from $80,000 to $130,000 annually. Educational pathways at institutions like Georgia Tech and Stanford are outlined, alongside workforce trends showing growing demand for green automation solutions. The article also features job opportunities, expert insights from aerospace engineer Thomas Smith, and internship programs like Tesla's high school internships and the Green Software Foundation.

Ashley Arenas is a Sophomore at Redondo Union High School. Here career interests include engineering and law. Her educational interests include climate change, law, computer science and mathematics. Her extracurricular activities include book club, Girl Scouts and Soccer. Her hobbies include art, cooking and baking and sewing. Ashley participated in the program to widen her knowledge about the environment and enhance her skill sets. As a Green Career Pathway Fellow, Ashley profiled the climate solution of Automation Systems and careers in Automated Engineering.

Rebuilding the Lungs of the Earth: The Science of Forest Restoration

Author: **Addison O'Neal**
Climate Solution: **Land, Forests & Ocean Conservation, Temperate Forest Restoration**
Climate Solution Career: **Forest Restoration Ecologist**

Temperate forest restoration is a vital climate solution that involves reforestation, afforestation, and ecosystem rehabilitation to sequester carbon, enhance biodiversity, and improve ecosystem resilience. This profile highlights the role of Forest Restoration Ecologists, who oversee restoration projects, monitor forest health, and implement sustainable land management practices. Key skills include forestry and ecology knowledge, GIS mapping, soil science, and project management, with employment projected to grow 5% by 2033. The article features educational pathways at institutions like Yale and Oregon State, alongside organizations such as American Forests and The Nature Conservancy. Expert insights from Dr. Douglas Tallamy and opportunities like Earth Watch Institute internships underscore the importance of this career in combating climate change and promoting biodiversity.

Addison O'Neal is Sophomore at West High School in Torrance. Her career interests include environmental science, archeology and anthropology. Her educational interests include environmental archeology and anthropology. Addison's extracurricular activities include track and field, hurdles and high jump, dance and theater. She has volunteered in church leadership working with young people. As a Green Career Fellow, Addison profiled the climate solution of temperate forest restoration. Her career profile is Ecologist.

Data Drives Green Transit: How Analytics Powers Zero-Emission Mobility

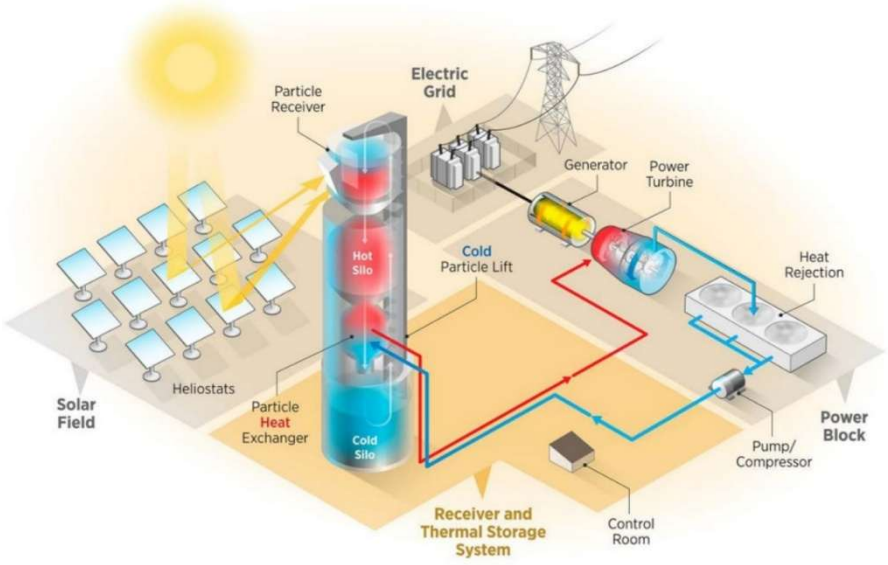
Author: **Advait Sharma**
Climate Solution: **Zero/Low Emission Transportation**
Career: **Data Scientists & Analysts**

Zero and low-carbon emission public transport is a transformative climate solution that reduces greenhouse gas emissions, improves urban air quality, and enhances energy efficiency through innovations like electric buses and hydrogen-powered trains. This profile highlights the role of Data Scientists and Analysts in optimizing sustainable transit systems by leveraging data analytics, machine learning, and AI to improve route efficiency, predict maintenance needs, and integrate renewable energy solutions. Key skills include programming (Python, R, SQL), predictive analytics, and sustainability metrics, with salaries ranging from $55K to $110K. The article features educational programs at institutions like MIT and UC Berkeley, workforce trends projecting a $27.4B market by 2024, and insights from experts at LA Metro. Internship opportunities, such as NASA's Climate Change Research Initiative, provide hands-on experience in this growing field.

Advait Sharma is a Junior at West Torrance High School. His career interests include: data science, computer science, computer engineering, mechanical engineering and/or information systems. As a Green Career Fellow, he profiled careers in zero emission transportation with a focus on low and zero emissions public transit.

Harnessing the Sun's Fury: Concentrated Solar Power Engineering

Author: **Ananya Chitnis**
Climate Solution: **Renewable Energy, Concentrated Solar Power**
Climate Solutions Career: **Solar Power Engineer**

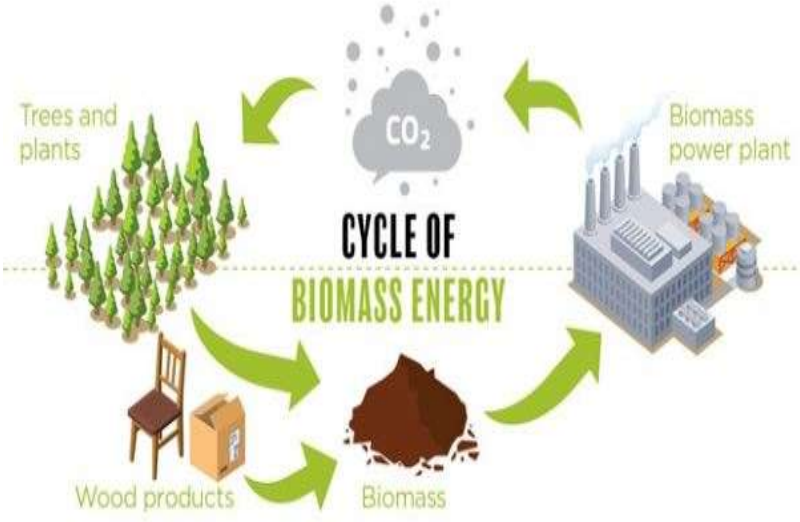


Concentrated Solar Power (CSP) Engineers design cutting-edge systems that use mirrors to focus sunlight, converting it into reliable, storable energy. With the global CSP market projected to grow from $10 billion to $45 billion by 2034, this career combines thermodynamics, optics, and sustainability to combat climate change. CSP Engineers optimize solar towers, thermal storage, and hybrid energy grids, earning median salaries of $82,000 while pioneering innovations like AI-driven plant operations and industrial solar heat applications.

Ananya Chitnis is a Freshman at West Torrance High School. Her career interests include maximizing the usage of green energy through technological advancements. Her educational interests include science, technology, government, aerospace and the environment. Ananya is passionate about sustainability and climate solutions. She speaks multiple languages and is artistic. Her Extracurricular activities include science and robotics club, UNICEF. As a Green Career Fellow, Ananya is profiling Concentrated Solar Power and the career of a solar power engineer.

From Waste to Watts: The Green Revolution of Biomass Energy Engineers

Author: **Sebastian Anselmo**
Climate Solutions: **Renewable Energy; Biomass Energy**
Career: **Biomass Energy Engineer**



Biomass Energy Engineers transform agricultural waste, wood, and algae into renewable fuels like biogas and bioethanol, reducing landfill use and emissions. With Sweden already sourcing 35% of its energy from biomass, this field demands expertise in thermochemical conversion, lifecycle analysis, and sustainable supply chains. Careers range from designing anaerobic digesters to advocating for carbon-neutral policies, with growing opportunities in circular economies and waste-to-energy projects worldwide.

Sebastian Anselmo is a Junior at West Torrance High School. His career interests include: engineering, construction, manufacturing and the mining industry. His educational interests included opportunities to get involved volunteer work and matching career interests with career sectors. As a Green Career Fellow, he profiled the climate solution of biomass energy and prepared a career profile of Biomass Energy Engineer. Sebastian has family in the Philippines and has learned about first-hand about the impact of flooding on communities. Sebastian plays the trombone in the marching band at his school.

Power to the People: How Microgrid Engineers Are Electrifying the Future

Author: **Rishabh Raikar**
Climate Solution: **Renewable Energy, Microgrids**
Career: **Microgrid Engineering**

Microgrid Engineers design decentralized energy systems that boost resilience, cut transmission losses by 15%, and integrate renewables like solar and wind. As climate disasters strain traditional grids, microgrids offer lifelines for 300 million households reliant on fossil fuels. This career requires electrical engineering prowess, control systems mastery, and policy savvy, with Guidehouse predicting 500,000 new jobs and $146 billion in economic growth by 2030.

Possible Titles:

Rishabh Raikar is a Junior at West High School in Torrance. His career interests include environmental science, nuclear engineering, architectural engineering and hydrogen fuel cell engineering. His educational goals include studying aerospace and mechanical engineering. His extracurriculars include the robotics club, DIY Club, Science Club, Tennis and the California Scholarship Foundation. As a Green Career Fellow, Rishabh profiled the climate solution of microgrids, focusing on careers in microgrid engineering.

Charging Ahead: The Electric Fleet Managers Driving Zero-Emission Logistics

Author: **Ratib Bhuiyan**
Climate Solution: **Zero/Low Emission Transportation, Energy Efficient Trucks**
Climate Solution Career: **Electric Fleet Manager**

Electric Fleet Managers oversee the transition from gas-guzzlers to EVs, optimizing charging networks, battery health, and route efficiency for companies like Amazon and Rivian. With EV truck sales doubling since 2020, this role blends logistics, telematics, and sustainability, offering salaries up to $106,000. Key challenges include scaling infrastructure and training drivers, but the payoff—reduced emissions and lower fuel costs—is monumental.

Ratib Bhuiyan is a senior at West Torrance High School. His career interests include solar energy technology, energy analytics, sustainability, electric vehicle engineering and transportation planning. He plans to obtain a bachelors or master's degree in environmental engineering or science. As a Green Career Fellow, Ratib recently completed a career profile focused on Zero Emission Transportation, energy efficient trucking and electric fleet management. Ratib has served as teaching assistant and demonstrates strong skills in communication, academic support and empathy when working with other students. Ratib's hobbies include playing chess and basketball.

Truth in the Time of Climate Crisis: The Vital Role of Environmental Journalists

Author**: Maya Nawachi**
Climate Solution**: Education, Policy & Advocacy**
Career**: Environmental Journalism**

Environmental Journalists bridge the gap between science and society, exposing greenwashing and amplifying climate solutions. As media coverage of climate change surges (up 58% since 2020), these storytellers need expertise in policy, fossil fuel history, and data journalism. Fellowships like Columbia's Energy Journalism Program and the Ted Scripps Award (with $80,000 stipends) support this critical work, which pressures corporations and policymakers to act.
Possible Titles:

"**Maya Nawachi** is a Junior at West High School in Torrance. Her career interests include environmental engineering and environmental science. Her educational interests include Ocean and forestry conservation research. Maya's extracurricular activities include school newspaper editor and photography editor, women in stem activities director, science Olympiad team and French club. She is a student Ambassador for the Parkland Conservancy Student Ambassador and NOAA Ocean Guardian Youth Ambassador. As a Green Career Fellow, May profiled the climate solution of Environmental Journalism and the career of climate journalist.

Powering the Future: Chemical Engineers at the Heart of the EV Revolution

Author: **Kristin Nakamura**
Climate Solution**: Zero/Low Emission Transportation, Electric Vehicles**
Career**: Chemical Engineer, Battery Technology**

Chemical Engineers are revolutionizing battery tech for EVs, designing lithium-ion systems that prioritize performance, recyclability, and ethical sourcing. With the U.S. aiming for 50% EV sales by 2030, careers at Tesla, Rivian, and Lucid Motors demand skills in materials science, sustainable manufacturing, and thermodynamics. The field is booming, with a 10% job growth forecast and roles in R&D, policy, and lifecycle analysis.

"**Kristen Nakamura** is a Junior at North High School in Torrance. Her career and educational interests include chemical engineering, automotive engineering and fuel cell engineering. Her extracurricular activities include serving as an education volunteer for the Aquarium of the Pacific in Long Beach, Publicity Coordinator for the Risking Starts Youth Leadership Program. As a Girl Scout Gold awardee, she partnered with Captura to educate peers about climate change, and the research process of CO2 removal. She works as a pharmacy clerk for Pharmoco in Torrance. As a Green Career Fellow, Kristen profiled the climate solution of Battery Powered Electric Vehicles and the career of chemical engineering.

Trapping Tomorrow's Carbon: The Engineers Turning CO_2 into Opportunity

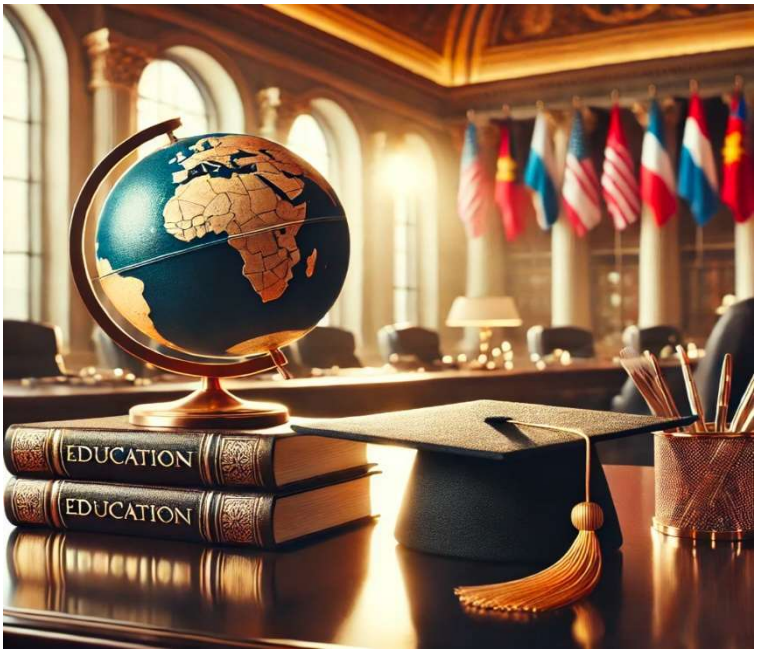
Author**: Josiah Kellams**
Climate Solution**: Renewable Energy**
Climate Solution Career**: Carbon Capture Engineer**

Carbon Capture Engineers combat climate change by designing systems that absorb CO_2 from the air, repurposing it into building materials or biofuels. With governments investing $27 billion in CCS projects and 64,000 new jobs expected by 2035, this career merges chemical engineering, policy, and innovation. Salaries reach $150,000, and breakthroughs like metal-organic frameworks (MOFs) promise 40% more efficiency than traditional methods.

Josiah Kellams is a freshman at West Torrance High School. His career interests include the engineering, technical and scientific arenas. His educational interests include science, biology and chemistry. As a Green Career Fellow, Josiah profiled career pathways in renewable energy, focusing on the career solution of Carbon Capture Engineering. Josiah's extracurricular activities include math and Korean Culture Club. He serves as team captain for the AYSO soccer club team and is involved in a number of environmental activities in his community.

Teaching the Climate Crisis: How Policy Advocates Are Rewriting Education

Author: Hannah Jang
Climate Solution: Education, Policy & Advocacy
Career: Education Policy Advocate with Environmental Focus

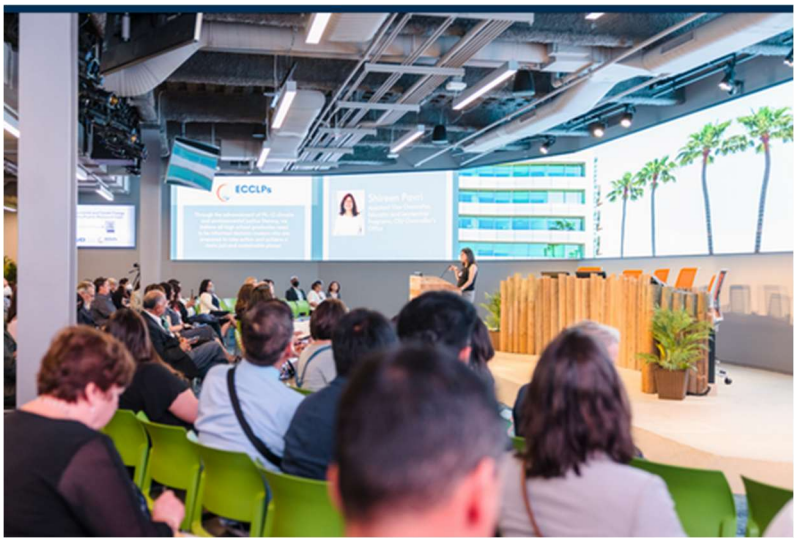


Education Policy Advocates push for K–12 climate curricula to equip students with solutions for a warming world. While Finland and the Netherlands lead with interdisciplinary environmental programs, the U.S. lags due to outdated laws and uneven state standards. Advocates work to modernize policies, improve teacher training, and integrate climate science across subjects—because today's students will inherit tomorrow's climate emergencies.

Hannah Jang is a Sophomore at West High School in Torrance. She is interested in careers in politics, environmental analysis, science and technology policy, and sustainable fashion design. Her educational interests include political science, economics, international relations, fashion design, renewable energy studies, environmental science technology policy and global diplomacy. Her extracurricular activities include serving as a youth council member of Eunpyeong-gu of Seoul Korea and student council member. Her hobbies include biking swimming, hiking, reading, recycling and upcycling projects, sustainable fashion and thrifting. As a Green Career Fellow, Hannah profiled careers in Bridging Diplomacy and Sustainable Energy with careers in diplomacy and environmental policy analysis.

The Brain Trust of the Green Economy: Why Universities Hold the Key

Author: **Eshaal Sultan**
Climate Solutions: **Education, Policy and Advocacy**
Climate Solutions Careers**: Higher Education Environmental Educators**

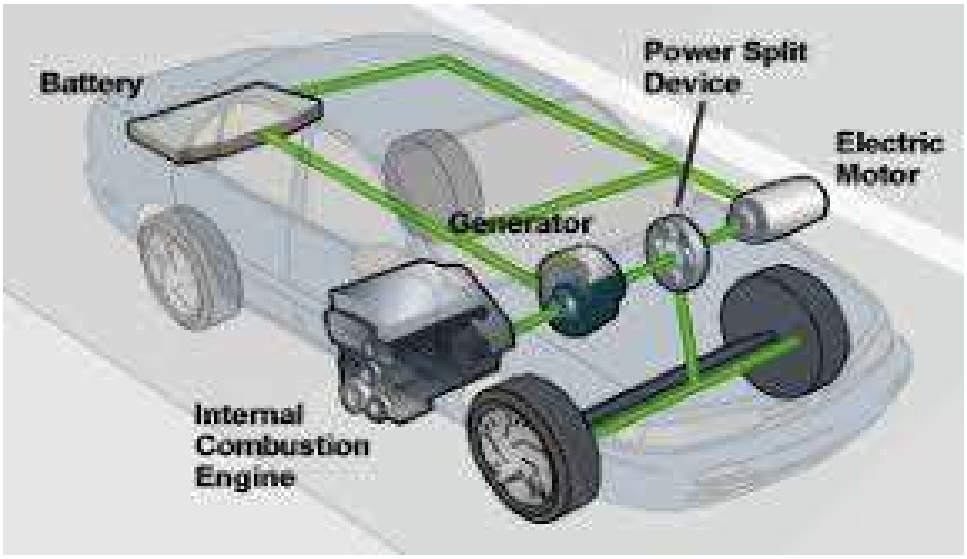


Universities are incubators for the green economy, offering programs in renewable energy, sustainable agriculture, and climate policy. By 2030, 85 million clean-energy jobs will demand skilled grads, yet barriers like high costs and outdated curricula persist. Strategies like curriculum reform, community partnerships, and equity-focused scholarships can prepare a diverse workforce to tackle emissions, restore ecosystems, and lead the energy transition.

Eshaal Sultan is a Sophomore at West Torrance High School. She has experience in medical shadowing, tutoring and volunteering at Torrance Memorial. She volunteers for the California Junior Scholarship Federation. She has participated in the Lumiere research program, the Rosetta Institute of Biomedical Sciences Online Medicinal Chemistry Workshop and a UCI research program she speaks four languages. She enjoys playing tennis. As a Green Career Fellow, she is profiling a career in Education for Green Careers in Higher education focused on careers as College Professor.

The Hybrid Heroes: Mechanical Engineers Cutting Emissions by 34%

Author: **Arihan Joglekar**
Climate Solutions: **Zero/Low Emission Transportation, Hybrid Cars**
Climate Solutions Careers: **Mechanical Engineering**



Mechanical Engineers are key to hybrid vehicles, designing systems that blend gas and electric power for 45+ mpg efficiency. At companies like Honda, they optimize regenerative braking, aerodynamics, and battery integration, slashing emissions by a third. With salaries averaging $99,510 and STEM camps like Cal Poly's EPIC Program fostering talent, this career merges innovation with environmental impact.

Arihan Joglekar is a Senior at West Torrance High School. His career and educational interests include Mechanical Engineering and Environmental Engineering. He has held key positions on the West High Robotics team for 3 years. He has experience as a manufacturing inter and strategy lead in robotics. His Extracurricular activities include Jiu-Jitsu, Boy Scouts and Tae-kwon-do. As a Green Career Fellow, He profiled a career in the Zero Emission Transportation Sector focused on Hybrid Cars. The career he profiled was mechanical engineering.