

ECO PARTNERSHIPS

Program Overview

The U.S.–China EcoPartnerships program highlights subnational organizations, states and provinces, cities and localities, businesses, universities, and non-profits from the United States and China working together to find clean energy and environmental solutions. Transitioning solutions from the laboratories and research institutes to the marketplace can be a significant challenge. The U.S. Department of State and China's National Development and Reform Commission established the EcoPartnerships program in 2008 to offer recognition and support for getting promising innovations into the market. EcoPartnerships provide opportunities to test and demonstrate policies, technologies, and new approaches at sub-national levels. They also facilitate innovations including development, commercialization, and deployment of energy and environmental technologies.

Organizations inducted into the program are highly motivated and capable of executing innovative projects, relevant to the Ten-Year Framework for Cooperation on Energy and Environment (TYF) or the U.S.-China Climate Change Working Group (CCWG), through technical cooperation or information exchanges. New EcoPartnerships must sufficiently demonstrate both programmatic competence and financial capacity to implement the intended activities. EcoPartnerships are an important example of how people-to-people connections can help improve the lives of citizens from both the United States and China as well as strengthen our bilateral relationship.

EcoPartnerships publicly share new insights from their projects to help foster broader replication in the United States and China. The Joint U.S. – China Secretariat supports the EcoPartners as they navigate unexpected hurdles and promotes their work.

Organizations involved in EcoPartnerships



Recent EcoPartnership Successes

247Solar Inc. (formed by Wilson Solarpower) and China's Shenzhen Enesoon Science and Technology Co. announced the formation of a Joint Venture (JV) to commercialize a revolutionary approach to a solar technology that can produce electricity 24/7. Over the next five years, the JV intends to build 1000 megawatts of the 247Solar Plant™ in China. The 247Solar Plants are capable of generating power every hour of the year regardless of whether the sun is shining, just like conventional coal and nuclear power plants. The Plants achieve non-stop power generation by storing the sun's heat in a large insulated vessel filled with low-cost firebrick for use at night. When storage is depleted, small amounts of fuel can be burned to maintain output. Such storage systems are a fraction of the cost of batteries.

The Lawrence Berkeley National Laboratory (LBNL) and Shandong Academy of Science (SDAS) EcoPartnership analyzed Shandong's energy demand and energy cap utilizing the Green Resources & Energy Analysis Tool (GREAT) developed by LBNL's China Energy Group. This analysis will serve as the scientific basis for energy policies adopted under the 13th Five Year Plan by Shandong's Development and Reform Commission. Alongside this, SDAS has trained over 100 government officials from Jinan, Shandong on LBNL's BEST Tool, which provides city officials with strategies they can follow to reduce carbon and methane emissions. SDAS also recently built capacity beyond Shandong's borders by training Anhui Province's Development and Reform Commission and Architecture University on LBNL's low-carbon city policy planning tools to help Anhui's cities create action plans for low-carbon development.



The Sea Turtles 911 and Hainan Normal University EcoPartnership aims to save sea turtles from extinction in the Asia-Pacific region. They have been hard at work nurturing sea turtles to health, restoring critical habitat, and raising awareness. On January 15th 2015, Sea Turtles 911 founder, Frederick Yeh, was joined by the U.S. Ambassador and volunteers to release the satellite tagged turtles named "Harvard" and "Yale" into the South China Sea. Under the auspices of the EcoPartnership, the movements of these two turtles will be tracked for conservation research purposes. According to Frederick, "Sea turtles are charismatic, migratory animals that serve as natural ambassadors of the ocean; as communities and countries work together to preserve this flagship species for future generations, our shared mission to save sea turtles nurtures a peaceful platform of common grounds to improve community and international relations."



Get Involved

Consider joining the ranks of these outstanding organizations by forming a new EcoPartnership! Each EcoPartnership must include at least one organization from the United States and one from China that work together to achieve more as a team than either could do alone. Successful proposals are for high-impact, unique and viable solutions that will be piloted over three years. Previous EcoPartnerships have focused on tangible projects including new technologies, policies, or programs. There is no fee to apply, but those selected must have the resources necessary to demonstrate their innovative concept. Another option is to reach out to organizations already in the program and explore ways to get involved with their work. For more information, visit the "Get Involved" section of the [EcoPartnerships website](http://EcoPartnerships.gov).



Current EcoPartnerships



Boeing – Commercial Aircraft Corporation of China: Produce and thoroughly test aviation biofuels, enhance air-traffic management procedures, and promote lean aircraft manufacturing and recycling.



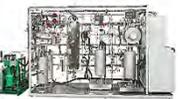
Caterpillar Inc. – Shanghai Lingang Economic Development Group Co. Ltd.: Advance the remanufacturing (product recovery process) industry; set up a big data system on remanufacturing energy conservation; and conduct a smart-remanufacturing upgrade demonstration.



Chemical and Metal Technologies (CMT) – CPI Yuanda Environmental Protection Engineering Co. Ltd.: Demonstrate and evaluate CMT's patent-pending sorbent that treats flue gas and wastewater from coal-burning power plants for the removal of mercury, heavy metals, selenium, and nitrates/nitrites.



The Coca-Cola Company – Yangtze River Delta Circular Economy Institute of Technology: Develop and commercialize bio-plastics suitable for beverage containers and other packaging applications from agricultural residues.



Columbia University – Baotou Steel: Separate iron oxide and rare earth minerals from steel slag for use as new feedstocks; sequester SO_x, NO_x, and CO₂ from ironmaking flue gas; and produce highly pure CaCO₃.



Environmental Defense Fund – Shenzhen Low Carbon Development Foundation: Integrate mobile emissions into Shenzhen's landmark emissions trading system (transportation emits 30 % of its greenhouse gases).



Franklin County / Columbus, Ohio – Hefei, Anhui / Hefei Institute of Technology: Advance water-quality, watershed-management, and clean-transportation technologies and best practices in urban areas.



GE – Harbin Electric: Develop and deploy the top-performing gas-turbine-combined-cycle power plant that reduces emissions without compromising output.



Greater Philadelphia – Tianjin Economic Development Authority: Showcase advanced building technologies, district-level energy performance monitoring, and industrial waste water treatment solutions.



Institute for Sustainable Cities – National Center for Climate Change Strategy and International Cooperation: Develop the capacity of non-profits to plan, implement, and work collaboratively with local government and other stakeholders to champion sustainable development initiatives at the local level.



International City / County Management Association – China University of Political Science and Law: Conduct training and capacity building on good governance and environmental sustainability in cities.



Lawrence Berkeley National Laboratory – Shandong Academy of Sciences: Equip city officials with training, tools, and methodologies to create aggressive and viable low-carbon development plans.



Minerals Technologies, Inc. – Sun Paper – Tsinghua University: Repurpose 100% of the lime mud produced in the paper-making process and thereby eliminate it as a waste product from the paper-making process; pilot new technology at Sun Paper's mill in Yanzhou, Shandong Province.



Natural Resources Defense Council – Beijing Energy and Environmental Protection Center: Establish a demand-side management program to cut 800 megawatts (MW) of energy use in Beijing's buildings.



The Nature Conservancy – Yangtze River Fishery Administration: Conduct the first tagging and sonic telemetry study in China to track fish populations and promote sustainable fisheries in the Yangtze River system, and mitigate invasive carp in the Mississippi River system.



Port of Los Angeles – Shanghai Municipal Transportation Commission: Deploy shore-based power systems to reduce emissions and noise relative to diesel generators; optimize docking and idling practices.



Ramboll Environ / IMACC – Suzhou National Environmental New & High Tech Industrial Park: Install emissions-monitoring equipment at chemical-industrial parks; issue safety alerts; inform new standards.



Sea Turtles 911 – Hainan Normal University: Foster conservation research, sustainable seafood practices, ecotourism, and student exchanges that empower local communities to safeguard the health of the ocean by saving sea turtles from extinction.



Stony Brook University / Oberon Fuels – Tongji University: Capture and utilize methane from municipal solid waste for cost-effective conversion into transportation and power-generation fuels.



UniEnergy Technologies – Rongke Power: Deliver large-scale flow battery-based energy storage solutions to enable increasing penetration of renewables and to advance grid modernization in both the United States and China, and around the globe.



University of Kentucky – Jiangsu Wisdom Engineering Technology Co.: Pilot a 1 MW facility that captures volatile organic compounds (VOC) prior to combustion in energy-intensive industrial plants.



University of Southern California – Bayeco: Develop and deploy a full range of VOC and NOx technology to significantly reduce air pollution in China over the next five to 10 years.



Wetland and Aquatic Research Center – Beijing Forestry University: Conduct an ecosystem assessment of vegetation, sediment, and water dynamics of Dongting Lake and associated floodplains of the Yangtze River, particularly with regard to sedimentation and impoundment, in order to better understand how to protect biodiversity.



Wilson Solarpower – Shenzhen Enesoon Science & Technology Co.: Pilot a 20 MW concentrating solar power plant using innovative Brayton Air Cycle technology that operates 24/7; build 1000 megawatt plant by 2020.