INTERNATIONAL PARTNERSHIPS

NETL

NATIONAL ENERGY TECHNOLOGY LABORATORY

BACKGROUND

The purpose of the National Energy Technology Laboratory's (NETL) International Partnerships Program is to provide a proactive approach to supporting the international-related efforts of the Department of Energy (DOE) and its Office of Fossil Energy (FE). The Program also aligns with the broader international energy and environmental interests of other U.S. government agencies as well as the private sector.

While supporting DOE's Strategic Plan and contributing to international efforts to address global climate change, NETL plays a key role in securing the nation's long-term fossil energy supplies and developing technologies that allow fossil fuels to be used cleanly and efficiently.

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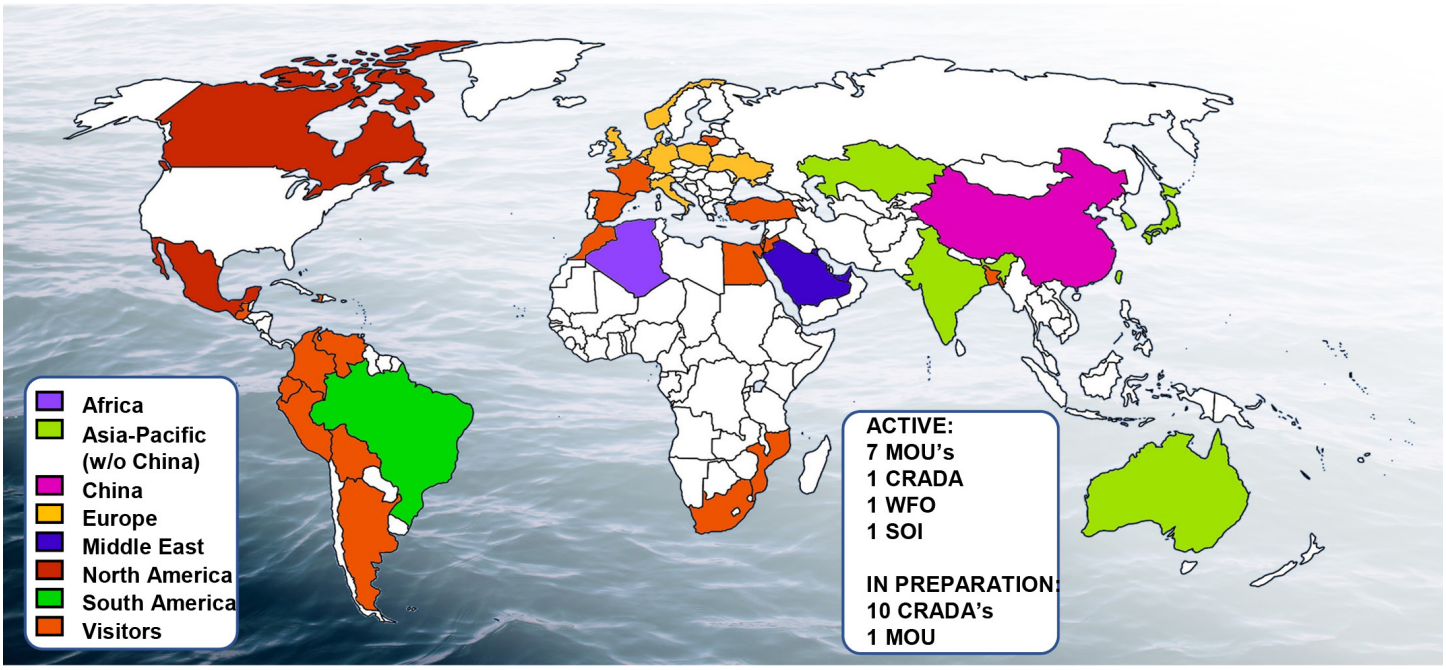
International activities at NETL are guided by two general principles: (1) accelerate the research, development, and deployment (RD&D) of NETL clean energy technologies; and (2) support the broader mission, goals, and objectives of White House, Department of State, DOE, and other U.S. government (USG) energy-related international programs and initiatives.

NETL's international partnerships strategy features five general activities:

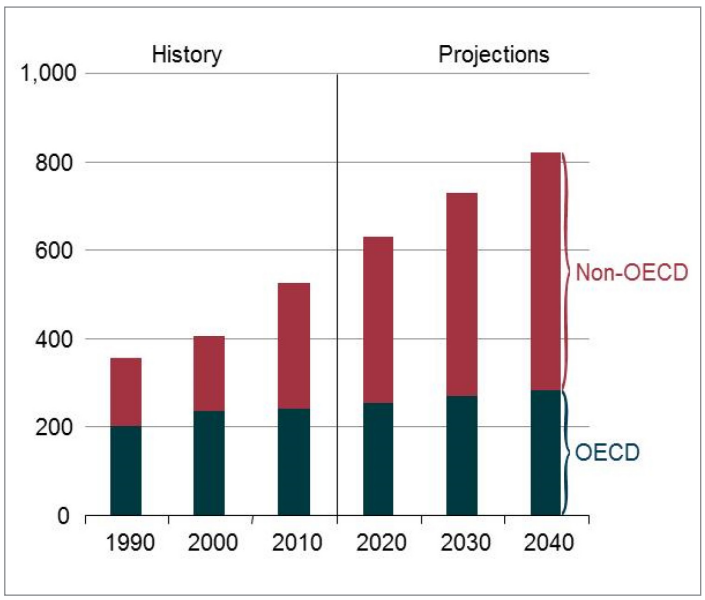
- Participation in international demonstration projects
- Establishment of joint research centers
- Promotion of initiatives for data development
- Participation in international forums
- Dissemination of information

The U.S. benefits from NETL participation in international activities are:

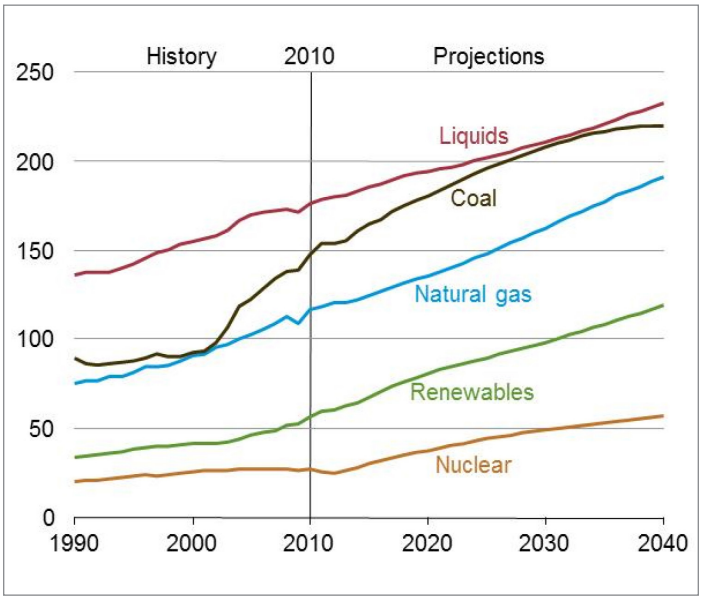
- A cleaner environment
- More open markets
- Secure energy markets and supplies
- Increased international energy dialogue
- Valuable intelligence



World energy resources are predicted to be in greater demand because of the emergence of massive new markets in developing countries driven by the creation of new wealth. In addition, quality-of-life and global climate change issues will add to the difficulties of making energy choices. Meeting these unprecedented global demands will create pressure on energy supplies and prices.



World Energy Consumption
2010-2040 [1]
(quadrillion BTU)



World Energy Consumption
by Fuel Type 1990-2040 [1]
(quadrillion BTU)

As the demand for additional energy resources increases globally in the foreseeable future, significant challenges exist for developed and developing countries to address the environmental issues associated with the continued use of fossil fuels. These environmental challenges/issues underscore the need to accelerate development and deployment of advanced clean energy technologies. No one country possesses the complete array of resources, people, facilities, and funding necessary to address these challenges independently. Overall, the United States possesses the most RD&D personnel, infrastructure, science and technology competence and financial resources to tackle energy challenges. For U.S. capabilities to impact global reduction in greenhouse gases, enhance global climate preparedness, or globally deploy clean energy technologies, we must work with developed and developing countries collaboratively to address the environmental issues associated with fossil fuel use.

[1] http://www.eia.gov/forecasts/ieo/more_highlights.cfm

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Engaging our core areas, NETL shapes, funds, and manages contracted research in the United States and in partnerships with foreign countries. In its international strategic outreach role, NETL is uniquely positioned to:

- Effectively promote U.S. policies and technology solutions in developing markets
- Increase exports of U.S. energy and environmental technologies, products, and services to foreign markets
- Develop relevant programs and activities that support U.S. policies and the Administration's views on important issues
- Leverage appropriated DOE resources provided to NETL and other U.S. government agencies, the U.S. private sector, and universities with those from foreign governments and organizations
- Serve as a reliable resource for domestic and foreign governments and the private sector to learn about the potential represented by developing technologies resulting from sponsored and leveraged programs

NETL is uniquely suited for its international role for three reasons:

- NETL has gained respect from the international scientific community for its onside research in computational and basic sciences, energy system dynamics, geological and environmental systems, and materials science
- Most of the Laboratory's funding has been devoted to RD&D partnerships with industry, university, and other government entities resulting in a wealth of experience in creating effective RD&D partnerships and performing oversight necessary for successful work completion
- Because NETL is federally owned and operated instead of contractor-operated, contract procurement steps and additional bureaucratic processes are largely avoided

Contacts

Charles Taylor
International Partnerships Program Manager
National Energy Technology Laboratory
412.386.6058
charles.taylor@netl.doe.gov

Anthony Armaly
Business Development Manager
National Energy Technology Laboratory
412.386.6040
anthony.armaly@netl.doe.gov

Michael Knaggs
Strategic Partnerships Director
National Energy Technology Laboratory
304. 285.4926
michael.knaggs@netl.doe.gov