

DOE Launches Web Site to Bring Energy Technology Information to the Public

www.openEI.org
<http://vibe.nrel.gov>
www.data.gov
www.data.gov/list/nationalassets

The Department of Energy (DOE) has launched Open Energy Information (www.openEI.org), an open-source web platform that makes DOE resources and open energy data widely available to the public. The data and tools housed on the free, editable, and evolving wiki-platform can be used by government officials, the private sector, project developers, the international community, and others to help deploy clean energy technologies across the country and around the world. The Web site was launched as part of a broader effort at DOE, the White House Office of Science and Technology Policy, and across the Obama Administration to promote the openness, transparency, and accessibility of the federal government.

"This information platform will allow people across the globe to benefit from the Department of Energy's clean energy data and technical resources," said Energy Secretary Steven Chu. "The true potential of this tool will grow with the public's participation—as they add new data and share their expertise—to ensure that all communities have access to the information they need to broadly deploy the clean energy resources of the future."

DOE worked closely with the National Renewable Energy Laboratory (NREL) and other national laboratories to develop

and populate the Open Energy Information Platform. The site currently houses more than 60 clean energy resources and data sets, including maps of worldwide solar and wind potential, information on climate zones, and best practices. OpenEI.Org also links to the Virtual Information Bridge to Energy (VIBE; <http://vibe.nrel.gov>), which is designed as a data analysis hub that will provide a dynamic portal for better understanding energy data. NREL will continue to develop, monitor, and maintain both sites.

Members of the U.S. public and the energy community globally will have the opportunity going forward to upload additional data to the site and download the information in easy-to-use formats. OpenEI.Org will also play an important role providing technical resources, including U.S. laboratory tools, which can be used by developing countries as they move toward clean energy deployment. Over time, the plan is to expand this portal to include on-line training and technical expert networks.

As part of the Administration-wide Open Gov Initiative, DOE is also contributing various tools and data sets for the National Assets program (www.data.gov/list/nationalassets) being undertaken by a group of six departments and agencies across the federal government. These agencies, including the National Institutes of Health and Food and Drug Administration in the Department of Health and Human Services; the Agricultural Research Service in the Department of Agriculture; the National Institute of Standards and Technology in the Department of Commerce; the Department of Energy; and the National Aeronautics and Space Adminis-

tration, are working together to spur innovation by making it easier for high-tech companies to identify collaborative, entrepreneurial opportunities. By making information from multiple agencies available in RSS and XML feeds on Web site www.data.gov, the National Assets program will increase access to information on publicly funded technologies that are available for license, opportunities for federal funding and partnerships, and potential private-sector partners. According to DOE, this information will help innovators find the information they need and receive real-time updates, which can fuel entrepreneurial momentum, create new jobs, and strengthen economic growth.

EC Calls for Additional €50 Billion in Low Carbon Technologies

In October last year, the European Commission (EC) called on public authorities, business, and researchers to join efforts in order to develop by 2020 the necessary technologies to address climate change, secure European Union (EU) energy supply, and ensure economic competitiveness. In a proposal on "Investing in the Development of Low-Carbon Energy Technologies," the Commission estimates that an additional investment of €50 billion in energy technology research will be needed over the next 10 years. This means almost tripling the annual investment in the European Union, from €3 billion to €8 billion. This represents a step forward in the implementation of the European Strategic Energy Technology Plan (SET-Plan), the technology pillar of the EU's energy and climate policy. Different sources of funding are considered, from public and private sectors at national and EU level, to be used in a coordinated way will also help to push forward a fast growing industrial sector and to create jobs, according to the EC.

The Commission, together with industry and the research community, has drawn up technology roadmaps which identify key low carbon technologies with strong potential at EU level in six areas: wind, solar, electricity grids, bioenergy, carbon capture and storage (CCS), and sustainable nuclear fission. The additional costs would cover basic and applied research, demonstration and early market take up, excluding deployment activities.

The Commission calls for a coordinated and complementary action of relevant actors and for more risk-taking appetite. Public support is needed when the level of technological uncertainties and market risk is high. This should act as an incentive for the industry's involvement, supported

DOE Announces Fellows Program for ARPA-E

<http://arpa-e.energy.gov/JO.html>

The Department of Energy's Advanced Research Projects Agency-Energy (ARPA-E) has established the ARPA-E Fellows Program, which will consist of highly technical scientists and researchers who will help create the strategic direction and vision of the agency. ARPA-E is devoted exclusively to transformational energy technology research and development. Fellows will support ARPA-E's program directors in program creation, while also undertaking independent explorations of promising future research areas for the agency. Fellows will also engage with world class researchers and innovators to develop theses for high impact ARPA-E research program areas, prepare energy technology and economic analyses, and make recommendations to DOE senior management.

Program participants will be expected to have strong technical backgrounds and deep expertise in at least one energy technology related field. Senior Fellows should have more than three years of relevant work experience in energy innovation related fields, while Fellows will represent postdoctoral researchers and recent graduates with less than three years of work experience. ARPA-E Fellow terms will not exceed two years.

More information can be accessed at Web site <http://arpa-e.energy.gov/JO.html>.

by a stronger investment of banks and private investors into the companies that will drive the transition to a low carbon economy. The European Investment Bank (EIB) intervention to increase lending to finance the SET Plan is also considered.

According to the EC, the additional investments should remove the bottlenecks in the development of low-carbon technologies. The **European wind initiative** has to accelerate the reduction of costs, increasingly move offshore, and resolve the associated grid integration issues if it is to fulfill its potential. Up to 20% of EU electricity is to be produced by wind energy technologies by 2020. The program is estimated at €6 billion over the next 10 years.

The **solar Europe initiative** including photovoltaics and concentrated solar power has to help these technologies become more competitive and gain mass market appeal, according to the EC. Up to 15% of EU electricity is to be generated by solar power in 2020. The program would cost an estimated €16 billion over the next 10 years.

The **European electricity grid initiative** has to respond to three interrelated challenges—creating a real internal market, integrating a massive increase of intermittent energy sources, and managing complex interactions between suppliers and customers. With the objective by 2020 to have 50% of networks in Europe operate along “smart principle” effectively matching supply and demand, the program is estimated at €2 billion.

The sustainable **bio-energy Europe**

initiative has to bring to commercial maturity the most promising technologies, in order to permit large-scale, sustainable production of advanced biofuels and highly efficient combined heat and power from biomass, said the EC. At least 14% of the EU energy mix is to be from cost-competitive, sustainable bio-energy by 2020. The initiative will need about €9 billion for its implementation, said the EC.

The **European CO₂ capture, transport, and storage initiative** has to allow a wide commercialization of carbon capture and storage (CCS) technologies. The pressing need is to demonstrate at industrial scale the full CCS chain for a representative portfolio of different capture, transport, and storage options. According to the EC, to reduce the costs of CCS by 2020, the total public and private investment needed in Europe over the next 10 years is estimated at €13 billion.

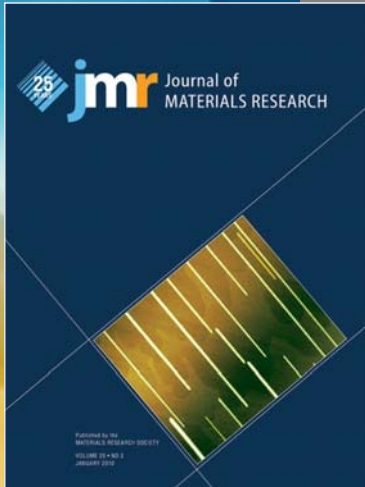
The **sustainable nuclear fission initiative** has to move toward long-term sustainability with a new generation of reactor type that improves safety measures, optimizes the use of fuel, and reduces the volume of radioactive waste—the Generation-IV reactor. They will be designed to maximize inherent safety, increase efficiency, produce less radioactive waste, and minimize proliferation risks. Commercial deployment of these reactors is foreseen for 2040, but to achieve that target, work has to start now, said the EC. For the first Generation-IV prototypes to be in operation in 2020, the EC places the required investment for the

next 10 years to come to about €7 billion.

Other initiatives included in the call for additional financing include the **Joint Technology Initiative (JTI) on fuel cells and hydrogen** which was established for 2008–2013 with a budget of €470 million of community funding to be at least matched by industry. The JTI has the minimum critical mass needed to develop and validate efficient and cost-competitive technologies for the various applications. However, meeting the market entry targets set by industry will require substantial additional effort, said the EC: Additional funding is estimated at €5 billion in the next decade. Also, the European initiative called **Smart Cities** envisages 25 to 30 smart cities that will be the starting points from which small networks, a new generation of buildings, and alternative transport means will develop into European-wide realities. The EC estimated that an additional ~€11 billion will be needed in the next 10 years.

The EC said that to lay the foundations of the EU future competitiveness a further investment of around €1 billion should be made in basic research in the area of energy-related programs.

Overall, the SET Plan has originally been designed both to reach the 2020 targets of reducing the emission of greenhouse gases by 20% and increasing the share of renewable energy sources by 20% and to move forward toward the vision of a complete decarbonization of the energy system by 2050. □



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