Department of Energy

Mission: to ensure America's security and prosperity by addressing its energy, environmental and nuclear challenges through transformative science and technology solutions.

Office of Science: supports the Nation's best minds, using the world's best facilities, to keep America at the forefront of discovery. From astronomy to zeolites, our researchers are unveiling secrets of the basic building blocks of matter, such as quarks, neutrinos, and the Higgs boson. They peer deep into outer space to understand the dark matter and dark energy that seem to dominate the universe and yet have eluded our attempts to observe them directly. They peer deep into inner space, too, examining and manipulating matter at nanoscale and atomic resolutions.

Advanced Research Projects Agency-Energy (ARPA-E): funds game-changing energy technologies that are typically too early for private-sector investment. From new wind turbine designs and transportation fuels made from bacteria to innovative energy storage solutions and smaller, more efficient semiconductors, ARPA-E projects have the potential to change the way we generate, store and use energy. The program continues to invest in technologies that could radically improve U.S. economic prosperity, national security and environmental well-being.

Energy Innovation Hubs: Hubs are integrated research centers that combine basic and applied research with engineering to accelerate scientific discovery that addresses critical energy issues. There are currently four Hubs that work on everything from advance research to produce fuels directly from sunlight (the Joint Center for Artificial Photosynthesis) to improving battery technology for transportation and the grid (the Joint Center for Energy Storage Research) to developing solutions for rare earth elements and other materials critical to a growing number of clean energy technologies (the Critical Materials Institute).

National Labs: tackle the critical scientific challenges of our time -- from combating climate change to discovering the origins of our universe -- and possess unique instruments and facilities, many of which are found nowhere else in the world. They address large scale, complex research and development challenges with a multidisciplinary approach that places an emphasis on translating basic science to innovation.