

Appendix A: EERE Technology Areas

Program	Description	Research Areas	Program Website
Advanced Manufacturing Office	The Advanced Manufacturing Office (AMO) leads national efforts to improve industrial energy efficiency and environmental performance. The program contributes to EERE's efforts to provide reliable, affordable, and environmentally sound energy for America today and in the future.	Advanced building materials, metals, mining, petroleum refining, steel, innovative manufacturing, oscillating combustion, efficient boilers, industrial combustion, advanced steam generation.	http://www1.eere.energy.gov/manufacturing/http://www1.eere.energy.gov/industry/
Biomass Program	The Biomass Program partners with U.S. industry to foster research and development on advanced technologies that will transform our abundant biomass resources into clean, affordable, and domestically produced biofuels, biopower, and high-value bioproducts. The results will be economic development, energy supply options, and energy security.	Algal biofuels, water quality, soil health, land use biodiversity, biochemical conversion, thermochemical conversion, biorefineries, feedstock supply and conversion, integrated biorefineries, distribution infrastructure, sustainability, strategic analysis, market expansion.	http://www1.eere.energy.gov/biomass/http://www1.eere.energy.gov/biomass/
Building Technologies Program	The Building Technologies Program works in partnership with states, industry, and manufacturers to improve the energy efficiency of our nation's buildings. Through innovative new technologies and systems-engineered	Appliance standards, solar decathlon, solid state lighting, utility solar water heating, commercial solar thermal, increased building efficiency, building components, energy modeling tools, building energy codes, appliance standards, reduction of energy	http://www1.eere.energy.gov/buildings/http://www1.eere.energy.gov/buildings/

	building practices we are transforming how we design, build, and operate the approximately 15 million new buildings projected to be constructed by 2015.	use in new and existing buildings.	
Federal Energy Management Program	The Federal Energy Management Program (FEMP) works to reduce the cost and environmental impact of the Federal government by advancing energy efficiency and water conservation, promoting the use of distributed and renewable energy, and improving utility management decisions at Federal sites.	Facilitates government implementation of sound, cost-effective energy management and investment practices to enhance the nation's energy security and environmental stewardship.	http://www1.eere.energy.gov/femp/http://www1.eere.energy.gov/femp/
FreedomCAR and Vehicle Technologies Program	The FreedomCAR and Vehicle Technologies (FCVT) Program is developing more energy efficient and environmentally friendly highway transportation technologies that will enable America to use less petroleum. The long-term aim is to develop "leap frog" technologies that will provide Americans with greater freedom of mobility and energy security, while lowering costs and reducing impacts on the environment.	Hybrid and vehicle systems, advanced combustion engines, fuels and lubricants, applied battery research ultracapacitors, battery systems, materials, vehicles analysis, environmentally friendly highway transportation technologies, "leap-frog" technologies for greater freedom of mobility and energy security with reduced environmental impact, cleaner burning fuels, engine research for internal combustion and diesel engines.	http://www1.eere.energy.gov/vehiclesandfuels/http://www1.eere.energy.gov/vehiclesandfuels/

<p>Geothermal Technologies Program</p>	<p>The Geothermal Technologies Program works in partnership with industry to establish geothermal energy as an economically competitive contributor to the U.S. energy supply. Geothermal energy production, a \$1.5 billion a year industry, generates electricity or provides heat for direct applications including aquaculture, crop drying, and district heating, or for use in heat pumps to heat and cool buildings.</p>	<p>Enhanced geothermal, high temperature sensing, tracing, advanced drilling, well stimulation, hydrothermal power generation, low temperature geothermal resources, geopressure, reservoir conditions, drilling, energy conversion, sensing.</p>	<p>http://www1.eere.energy.gov/geothermal/http://www1.eere.energy.gov/geothermal/</p>
<p>Hydrogen, Fuel Cells and Infrastructure Technologies Program</p>	<p>The Hydrogen, Fuel Cells & Infrastructure Technologies Program is working to research, develop, and validate fuel cells and hydrogen production, delivery, and storage technologies for transportation and stationary applications to realize the vision of a hydrogen economy.</p>	<p>Hydrogen production; hydrogen delivery; hydrogen storage; fuel cells; safety, codes and standards; education; analysis; natural gas technologies for fueling station applications; transportation-related hydrogen end-use technologies.</p>	<p>http://www1.eere.energy.gov/hydrogenandfuelcells/http://www1.eere.energy.gov/hydrogenandfuelcells/</p>
<p>Solar Energy Technology Program</p>	<p>The Solar Energy Technologies Program leads the effort to research, develop, and deploy cost-effective technologies toward growing the use of solar energy throughout our nation and the world. The program works closely with national laboratories, universities, industry, professional associations,</p>	<p>Photovoltaics, materials, coatings, nanostructures, concentrating solar power, power-cycle and conversion research, power towers, thermal energy storage, mirrors, advanced optical materials, advanced coatings, grid integration, standards and codes, solar power outreach and education.</p>	<p>http://www1.eere.energy.gov/solar/http://www1.eere.energy.gov/solar/</p>

	and other programs at the Department of Energy and with federal, state, and local agencies across the nation.		
Weatherization & Intergovernmental Program	The Weatherization and Intergovernmental Program (WIP) provides funding and technical assistance to its partners in state and local governments, Indian tribes, and international agencies to facilitate the adoption of renewable energy and energy efficiency technologies.	Weatherization, solar hot water, solar photovoltaics, solar thermal air heating, heat pump, cool roofs, geothermal heat pumps, tankless hot water, home energy monitors, tribal energy, home energy guidelines, renewable energy production incentives,	http://www1.eere.energy.gov/wip/ http://www1.eere.energy.gov/wip/
Wind Program	The Wind Program is developing the rapid expansion of clean, affordable, reliable domestic wind power to promote new job creation, increase rural economic development, and help meet the nation's energy needs. The program manages the public's investment in wind technologies to improve the performance and lower the cost of wind power	Large wind technologies, offshore wind technologies, distributed (small) wind technologies, wind turbine manufacturing, systems interconnections, environmental impact and siting, wind power education, grid planning, wind forecasting, blade design, market barrier removal.	http://www1.eere.energy.gov/wind/ http://www1.eere.energy.gov/wind/
Water Power Program	The Wind & Hydropower Technologies Program works to increase the use of domestic wind and water resources for electric power generation in order to stabilize energy costs, enhance energy security,	Conventional hydropower, marine and hydrokinetic technologies, fish friendly turbines, rotor technology, mechanical reliabilities, controls, resources modeling, tidal power, wave power,	http://www1.eere.energy.gov/water/ http://www1.eere.energy.gov/water/

	and improve our environment.	energy storage.	
Multiple Programs	These technologies spread across different programs.	Net-energy reductions, desalination, reducing environmental impacts of unconventional fossil fuels development, carbon sequestration, reduced energy in the industrial and manufacturing sector, supply chain and product delivery channels for lower production emissions, power plant emission reduction associated with renewable power production systems, materials and manufacturing technologies that result in a life-cycle reduction in energy use and/or emissions, lightweight materials for transportation and supply chain technologies, and renewable fuel production, transmission or distribution technology that enables higher penetration of renewables into electric grid, transportation infrastructure that results in the net reduction in fuel/energy usage, technologies that use hydrogen, biomass-derived gas, some technologies to recycle and recover chemical feedstocks and plastics.	n/a