Provided further, That within 60 days of enactment, the Secretary shall invite applications from qualified entities for the purpose of forming and governing a national energy sector cyber organization that have the knowledge and capacity to focus cyber security research and development and to identify and disseminate best practices; organize the collection, analysis and dissemination of infrastructure vulnerabilities and threats; work cooperatively with the Department of Energy and other Federal agencies to identify areas where Federal agencies with jurisdiction may best support efforts to enhance security of the bulk power electric grid: *Provided further*, That, of the amount appropriated in this paragraph, $6,475,000 shall be used for projects specified in the table that appears under the heading ''Congressionally Directed Electricity Delivery and Energy Reliability Projects'' in the report of the Committee on Appropriations of the United States Senate to accompany this Act.

NUCLEAR ENERGY

(INCLUDING TRANSFER OF FUNDS)

For Department of Energy expenses including the purchase, construction, and acquisition of plant and capital equipment, and other expenses necessary for nuclear energy activities in carrying out the purposes of the Department of Energy Organization Act (42 U.S.C. 7101 et

CONGRESSIONALLY DIRECTED ENERGY EFFICIENCY AND RENEWABLE ENERGY PROJECTS—Continued

Project title	Amount	Requestor
Thin Film Photovoltaic Research & Development	500,000	Senator Leahy
Unconventional and Renewable Energies Research Utilizing Computer Simulations	2,500,000	Senator Bennett
University of Louisville Research and Energy Independence Program	2,000,000	Senator McConnell
University of New Haven Solar Testing and Training Lab	500,000	Senator Dodd
UNR—Biodiesel from Food Waste	1,000,000	Senator Reid
UNR—Great Basin Center for Geothermal Energy	1,000,000	Senator Reid
UNR—Mass Exchanger Technology for Geothermal and Solar Energy Systems	1,200,000	Senator Reid
Vermont Biofuels Initiative	750,000	Senator Leahy
Vermont Energy Investment Corporation	450,000	Senator Sanders
Wallowa County Integrated Biomass Energy Center	500,000	Senators Wyden, Merkley
Washoe Wind Turbine Demonstration Project	50,000	Senator Reid
Wind Turbine Development	1,000,000	Senators Baucus, Tester
Wind Turbine Infrastructure for Green Energy and Research on Wind Power in Delaware	1,000,000	Senators Carper, Kaufman

ELECTRICITY DELIVERY AND ENERGY RELIABILITY

Appropriations, 2009	[1] $4,637,000,000
Budget estimate, 2010	208,008,000
Committee recommendation	179,483,000

[1] Includes Emergency Appropriations of $4,500,000,000 under Public Law 111–5.

The Committee provides $179,483,000 for Electricity Delivery and Energy Reliability. No funding is provided for the Grid Materials, Devices and Systems Hub.

The Committee is supportive of the increased investment in cyber security funding to support a coordinated research and development strategy that will improve the security of our national electricity grid and establish the appropriate protocols and policies for the integration on smart grid technology and to validate and test SCADA technologies and software. To ensure the effective deployment of this technology in the electric transmission system the Committee directs the Department to establish a private sector organization to identify vulnerabilities, and develop research and development and deployment strategies. It is important the users, owners and operators of the bulk power system are able to work with Federal agencies and laboratories to test and validate technologies and software and develop and disseminate best practices to ensure the thorough deployment of the state-of-the-art technology. In addition, this organization must include broad representation of owners, operators, users, and technology providers. Due to the international threat the Department should include other countries that face similar cyber security threats to share best practices to the extent possible. The Committee recommends that the Department provide up to 50 percent of the funding for cyber security to establish the organization and execute the recommended research, development and deployment strategy.

Congressionally Directed Spending Items.—The Committee includes $6,475,000 for the following list of projects that provide for research, development, and demonstration of electricity delivery and energy reliability technologies or programs. The Committee re-

minds recipients that statutory cost-sharing requirements may apply to these projects.

CONGRESSIONALLY DIRECTED ELECTRICITY DELIVERY AND ENERGY RELIABILITY PROJECTS

Project title	Amount	Requestor
Energy Development and Reliability	$325,000	Senator Dorgan
Navajo Nation Electrification Program	1,750,000	Senators Bingaman, Tom Udall
North Dakota Energy Workforce Development	1,900,000	Senator Dorgan
Oswego County BOCES Wind Turbine Model Project	200,000	Senator Schumer
Power Grid Reliability and Security	1,000,000	Senators Murray, Cantwell
Technology Development	300,000	Senator Dorgan
UVM Smart Energy Grid Research	500,000	Senator Leahy
Watkins Glen, Schuyler County Gas Storage project	500,000	Senator Gillibrand

NUCLEAR ENERGY

Appropriations, 2009	$792,000,000
Budget estimate, 2010	761,274,000
Committee recommendation	761,274,000

RESEARCH AND DEVELOPMENT

The Committee recommendation for nuclear energy research and development totals $761,274,000.

Integrated University Program.—The Committee provides $5,000,000 to restore funding to current year levels and sustain the ongoing collaboration between the Office of Nuclear Energy, NNSA's Office of Nuclear Nonproliferation and the Nuclear Regulatory Commission to support the education and training of engineers and scientists in nuclear engineering, as well as nonproliferation, nuclear forensics, and nuclear safeguards missions. This funding is to be used consistent with the authorization provided in section 313 of Public Law 111–8. This funding is not intended to supplant university research funding provided within the nuclear energy research and development activities. Studies by the American Physical Society, American Association for the Advancement of Science, and the American Nuclear Society recommended Federal investment in university research and training in nuclear engineering and forensics as well.

Nuclear Power 2010.—The Committee recommends $120,000,000, an increase of $100,000,000. This funding is to be used to support the engineering design work of U.S. reactor designs in the development of a license application to the Nuclear Regulatory Commission. Not only will this reactor design facilitate deployment in the United States, but will also support export sales, where there is strong interest in nuclear power.

Generation IV Nuclear Energy Systems.—The Committee recommendation is $143,000,000. The Committee has shifted $10,000,000 to the Research Reactor Infrastructure program to support university-led research and fund critically important equipment upgrades.

Within the available funds, $10,000,000 is provided to focus on existing light water reactor technology life extension. Consistent with the MIT Study "Update of the MIT 2003 Future of Nuclear

CONGRESSIONALLY DIRECTED SPENDING ITEMS—Continued

Agency	Account	Project title	Funding	Member
Bureau of Reclamation	Water and Related Resources	MIDDLE RIO GRANDE PROJECT	$160,000	T. Udall
Bureau of Reclamation	Water and Related Resources	MILK RIVER/ST. MARY DIVERSION REHABILITATION PROJECT	$1,500,000	Tester
Bureau of Reclamation	Water and Related Resources	MNI WICONI PROJECT	$10,000,000	Johnson, Thune
Bureau of Reclamation	Water and Related Resources	MOKELUMNE RIVER REGIONAL WATER STORAGE & CONJUNCTIVE USE	$500,000	Feinstein
Bureau of Reclamation	Water and Related Resources	NAVAJO GALLUP WATER SUPPLY	$7,791,000	Bingaman, T. Udall
Bureau of Reclamation	Water and Related Resources	NORTHERN UTAH INVESTIGATIONS PROGRAM	$500,000	Bennett
Bureau of Reclamation	Water and Related Resources	ODESSA SUBAREA SPECIAL STUDY	$3,000,000	Murray, Cantwell
Bureau of Reclamation	Water and Related Resources	OREGON INVESTIGATIONS PROGRAM	$150,000	Wyden, Merkley
Bureau of Reclamation	Water and Related Resources	PERKINS COUNTY RURAL WATER SYSTEM	$1,000,000	Johnson, Thune
Bureau of Reclamation	Water and Related Resources	PICK-SLOAN MISSOURI BASIN—GARRISON DIVERSION	$33,707,000	Dorgan, Conrad
Bureau of Reclamation	Water and Related Resources	ROCKY BOYS/NORTH CENTRAL MONTANA RURAL WATER SYSTEM	$15,000,000	Tester, Baucus
Bureau of Reclamation	Water and Related Resources	ROGUE RIVER BASIN PROJECT, TALENT DIVISION	$200,000	Wyden, Merkley
Bureau of Reclamation	Water and Related Resources	TUALATIN VALLEY WATER SUPPLY FEASIBILITY	$300,000	Wyden, Merkley
Bureau of Reclamation	Water and Related Resources	WEBER BASIN PROJECT	$1,000,000	Bennett, Hatch
Bureau of Reclamation	Water and Related Resources	WICHITA PROJECT—EQUUS BEDS DIVISION	$2,000,000	Roberts, Brownback
Bureau of Reclamation	Water and Related Resources	YAKIMA RIVER BASIN WATER ENHANCEMENT PROJECT	$1,500,000	Murray
Bureau of Reclamation	Water and Related Resources	BUREAU OF RECLAMATION ITEMS NOT LISTED UNDER STATES		
Bureau of Reclamation	Water and Related Resources	LOWER COLORADO RIVER OPERATIONS PROGRAM	$680,000	Feinstein
Bureau of Reclamation	Water and Related Resources	RESEARCH AND DEVELOPMENT		
Bureau of Reclamation	Water and Related Resources	SCIENCE AND TECHNOLOGY PROGRAM	$1,000,000	Feinstein, Bennet
Bureau of Reclamation	Water and Related Resources	TITLE XVI WATER RECLAMATION AND REUSE PROGRAM	$2,500,000	Reid
Department of Energy	Electricity Delivery and Energy Reliability	Energy Development and Reliability (ND)	$325,000	Senator Dorgan
Department of Energy	Electricity Delivery and Energy Reliability	Navajo Nation Electrification Program (NM)	$1,750,000	Senators Bingaman, Tom Udall
Department of Energy	Electricity Delivery and Energy Reliability	North Dakota Energy Workforce Development (ND)	$1,900,000	Senator Dorgan
Department of Energy	Electricity Delivery and Energy Reliability	Oswego County BOCES Wind Turbine Model Project (NY)	$200,000	Senator Schumer
Department of Energy	Electricity Delivery and Energy Reliability	Power Grid Reliability and Security (WA)	$1,000,000	Senators Murray, Cantwell
Department of Energy	Electricity Delivery and Energy Reliability	Technology Development (ND)	$300,000	Senator Dorgan
Department of Energy	Electricity Delivery and Energy Reliability	UVM Smart Energy Grid Research (VT)	$500,000	Senator Leahy
Department of Energy	Electricity Delivery and Energy Reliability	Watkins Glen, Schuyler County Gas Storage Project (NY)	$500,000	Senator Gillibrand
Department of Energy	Energy Efficiency and Renewable Energy	21st Century Renewable Fuels, Energy, and Materials Initiative (MI)	$1,250,000	Senators Levin, Stabenow
Department of Energy	Energy Efficiency and Renewable Energy	A123Systems Large Format Nanophosphate Batteries for Solar Energy Storage (MI).	$1,000,000	Senators Levin, Stabenow
Department of Energy	Energy Efficiency and Renewable Energy	Algae Biofuels Research (WA)	$2,000,000	Senators Murray, Cantwell
Department of Energy	Energy Efficiency and Renewable Energy	Algae to Ethanol Research and Evaluation (NJ)	$750,000	Senators Lautenberg, Menendez
Department of Energy	Energy Efficiency and Renewable Energy	Algal-Based Renewable Energy for Nevada (NV)	$800,000	Senator Reid
Department of Energy	Energy Efficiency and Renewable Energy	Alternative and Unconventional Energy Research and Development (UT)	$10,000,000	Senator Bennett