



CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

June 30, 2011

Grid Cyber Security Act

*As ordered reported by the Senate Committee on Energy and Natural Resources
on May, 26, 2011*

SUMMARY

This legislation would amend existing law regarding the regulation of facilities that transmit electric power. Under existing law, most of the standards governing the reliability of the electric power system are issued by the Electric Reliability Organization (ERO), subject to approval and enforcement by the Federal Energy Regulatory Commission (FERC). This bill would establish special procedures and deadlines for modifying the ERO's reliability standards if FERC determines that new guidelines are needed to protect the security of computer networks used to facilitate electric power transmission (known as cybersecurity). Other provisions would direct the Department of Energy (DOE) and the Department of Defense (DoD) to conduct studies on issues related to the security of the nation's electric power grid and would establish procedures for responding to emergencies and protecting information related to cybersecurity.

CBO estimates that implementing the bill would have a discretionary cost of \$16 million over the 2012-2016 period, assuming appropriation of the necessary amounts. This legislation would affect direct spending by the federal power agencies that would be subject to any new cybersecurity standards; therefore, pay-as-you-go procedures apply. The legislation also could affect revenues and direct spending to the extent that it results in additional costs to the ERO. CBO estimates, however, that any effects of the legislation on net direct spending and revenues would be negligible.

The bill would impose intergovernmental and private-sector mandates, as defined in the Unfunded Mandates Reform Act (UMRA), on entities that transmit electric power. Because the costs to comply with those mandates would depend on future regulations, CBO cannot determine whether the aggregate cost of the mandate would exceed the annual threshold for private-sector mandates (\$142 million in 2011, adjusted annually for inflation). Because public entities own and operate only a small fraction of the nation's electric power infrastructure, CBO expects that the aggregate cost of the mandate would fall below the annual threshold established in UMRA for intergovernmental mandates (\$71 million in 2011, adjusted annually for inflation).

CBO has not reviewed provisions of the act that would provide FERC and the Secretary of Energy with expedited or emergency authority to protect the electric transmission grid from threats to those computer networks for intergovernmental or private-sector mandates. Section 4 of the Unfunded Mandates Reform Act excludes from the application of that act any legislative provisions that are necessary for national security. CBO has determined that those provisions fall within that exclusion.

ESTIMATED COST TO THE FEDERAL GOVERNMENT

The estimated budgetary impact of this legislation is shown in the following table. The costs of this legislation fall within budget function 270 (energy).

	By Fiscal Year, in Millions of Dollars					2012-2016
	2012	2013	2014	2015	2016	
CHANGES IN SPENDING SUBJECT TO APPROPRIATION						
Estimated Authorization Level	16	0	0	0	0	16
Estimated Outlays	3	6	7	0	0	16

BASIS OF ESTIMATE

For this estimate, CBO assumes that the legislation will be enacted by the end of fiscal year 2011 and the necessary amounts will be appropriated. Outlays are estimated to occur at historical rates for similar activities.

Spending Subject to Appropriation

Assuming appropriation of the necessary amounts, CBO estimates that implementing this bill would cost \$16 million over the 2012-2016 period. Most of those costs would stem from provisions directing DOE to study the susceptibility of key electrical facilities to geomagnetic disturbances, such as solar flares, and electromagnetic pulses caused by natural or man-made sources. Based on information from DOE, CBO estimates that the cost of that assessment could range from about \$10 million to \$20 million, depending on the extent of any equipment purchases. For this estimate, CBO assumes that costs would be in the midpoint of that range and that the study would be completed within the three-year period specified in the bill. DoD's study of grid security in certain states and territories would cost about \$1 million, CBO estimates.

Finally, CBO expects that implementing this legislation would expand FERC's workload and increase the agency's administrative expenses, which are controlled through annual appropriation acts. Because FERC recovers 100 percent of its costs through user fees, any such increases in its expenses would be offset by an equal change in fees that the commission charges, resulting in no net budgetary impact.

Direct Spending and Revenues

Taken together, the four federal power agencies own and operate about 15 percent of the nation's electric power, providing much of the transmission service in certain regions of the country. Spending by the Tennessee Valley Authority (TVA) and Bonneville Power Administration (BPA) constitutes direct spending because those agencies are authorized to collect and spend proceeds from the sale of electricity and to borrow funds to finance capital projects. Based on information from both agencies, CBO estimates that the net effect of the legislation on direct spending would be negligible because the new standards would probably be similar to those currently followed by federal agencies as a result of other statutory directives.

If FERC determines that new guidelines related to grid security are needed, the legislation also could expand the ERO's workload and increase its administrative costs. For purposes of the federal budget, the ERO is considered a governmental entity and its spending, which is not controlled by annual appropriation acts, is considered direct spending. The ERO derives its funding from fees charged to users of the bulk-power system; those fees are considered revenues. Under the legislation, any increased direct spending by the ERO would generate a corresponding change in revenues to offset the entity's costs. Based on information from FERC and the ERO about current levels of spending related to grid security and the likely administrative costs involved with revising standards, CBO estimates that any increases in direct spending by the ERO and related revenues would not exceed \$500,000 in any year.

PAY-AS-YOU-GO CONSIDERATIONS

The Statutory Pay-As-You-Go Act of 2010 establishes budget-reporting and enforcement procedures for legislation affecting direct spending or revenues. This legislation would affect net direct spending and revenues, but CBO estimates that any such effects would be negligible for each year and in total over the 2011-2021 period.

INTERGOVERNMENTAL AND PRIVATE-SECTOR IMPACT

The bill would impose intergovernmental and private-sector mandates as defined in UMRA by authorizing FERC to order the ERO to issue or modify standards to protect the electric power system from cyber threats. Any increase in administrative costs of the ERO would result in additional fees charged to public and private users of the bulk power system, but CBO estimates that any increase would not exceed \$500,000 annually. Additionally, public and private facilities that transmit electric power could be affected by the standards issued or modified by the ERO. Because the costs to comply with those standards would depend on future regulations, CBO cannot determine whether the aggregate cost of the mandate would exceed the annual threshold for private-sector mandates (\$142 million in 2011, adjusted annually for inflation). Because public entities own and operate only a small fraction of the nation's electric power infrastructure, CBO expects that the costs of the mandate would fall below the annual threshold established in UMRA for intergovernmental mandates (\$71 million in 2011, adjusted annually for inflation).

CBO has not reviewed provisions of the act that would provide FERC and the Secretary of Energy with expedited or emergency authority to protect the electric transmission grid from threats to those computer networks for intergovernmental or private-sector mandates. Section 4 of the Unfunded Mandates Reform Act excludes from the application of that act any legislative provisions that are necessary for national security. CBO has determined that those provisions fall within that exclusion.

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