

United states smart grid

As American homes and businesses take on ever-increasing numbers of electronic ...

OE leads national efforts to develop the next generation of technologies, tools, ...

Smart grid policy in the United States refers to legislation and other governmental orders influencing the development of smart grids in the United States.

The term smart grid describes a next-generation electric power system, that is classified by the increased use of communication and information technology in the generation, delivery, and consumption of electrical energy.¹ For individual consumers, smart grid technology offers more control over electricity consumption. Typically, the goal is overall greater energy efficiency (for example, programming home appliances to run at specific times when electrical demand is lowest).

The reliability and efficiency of the electrical grid can be enhanced by implementing smart grid technologies. However, this will require modifications to the current electrical system, and advances towards smart grid adoption in the United States have been slow. Key federal legislation driving the development of smart grid-related technology for the American electrical system includes Title XIII of the Energy Independence and Security Act of 2007 (EISA). Further, smart grid regulations will help to further drive the adoption of smart grid technology in the United States.

Some milestones²;

Title XIII of the Energy Independence and Security Act of 2007 (Pub.L. 110-140)¹²; is the only major piece of federal legislation that addresses the modernization of the United States' electric utility transmission and distribution system by upgrading to the Smart Grid.

Smart Grid on a broad scale, refers to an advanced distribution system, which accommodates for the "flow of information from a customer's meter in two directions: both inside the house to thermostats, appliances, and other devices, and from the house back to the utility".¹³ Smart Grid is designed to support operational and energy measures such as smart meters and appliances, renewable energy resources, as well as energy efficiency resources.¹³

The Department of Energy (DoE) is required by Section 1304 of the act to conduct Smart Grid research, development, and demonstration. In addition, the National Institute of Standards and Technology is to establish protocols and standards for Smart Grid equipment and systems. Smart Grid technology is subsidized by the creation of a program within the DoE that "reimburses 20% of qualifying Smart Grid investments".¹³ On a state level, utilities providers are encouraged to employ Smart Grid



United states smart grid

technology and to recover Smart Grid investments through rates.

According to Title XIII Section 1302, reports are to be made to Congress one year after enactment and every two years subsequently to give "the status of smart grid deployments nationwide as well as any regulatory or government barriers to continued deployment".¹⁴; The Smart Grid Task Force established in section 1303 will assist with this, and provide the current status and prospects of the smart grid including "information on technology penetration, communications network capabilities, costs, and obstacles".¹⁴; This task force can make recommendations for State and Federal policies or actions to ease in the transition to a smart grid.

A Smart Grid Interoperability Framework is mandated by Section 1305(a-e) of Title XIII whose purpose is to develop protocols and standards for the management of information so that smart grid devices and systems can interoperate within the existing electrical grid. The overarching goal of this framework is to "align policy, business, and technology approaches in a manner that would enable all electric resources, including demand-side resources, to contribute to an efficient, reliable electricity network".¹⁴;

Sec. 1306(a) provides for a federal matching fund for smart grid investment costs in which 20% of qualifying smart grid investments will be reimbursed by the grant program.¹⁴; Qualifying investments that are provided for in section 1306(b) include certain household appliances, specialized electricity-using equipment like motors and drivers, metering devices and transmission and distribution equipment. The computer software that enables devices to engage in Smart Grid functions is also considered qualifying investments, as well as hybrid vehicles.

Contact us for free full report

Web: <https://www.kary.com.pl/contact-us/>

Email: energystorage2000@gmail.com

WhatsApp: 8613816583346

