IEEE-USA

POSITION STATEMENT

National Energy Policy Recommendations

Adopted by the IEEE-USA
Board of Directors (27 June 2025)

ENERGY underlies most of the challenges facing the United States today: economic prosperity, national defense, and the environment. Electricity continues to be a key enabler in addressing these challenges. The electric power industry continues to manage a rapid evolution of technology and regulations, uncertainties in demand growth and generation supply development, and growing environmental concerns. IEEE-USA supports proactive electrical energy policies designed to serve energy stakeholders' needs economically and environmentally soundly. Priorities include:

- ***GRID MODERNIZATION*** – Modernizing and expanding the electrical energy infrastructure by transforming the network into a fully integrated (from generators to customers) intelligent and digital-ready grid and strengthening it to enhance reliability and resilience and capture economic benefits from various energy sources1.

- ***ENERGY AND DEMAND FLEXIBILITY*** - Promoting productive energy use and reducing consumer costs by improving efficiency in generating, delivering, and using electrical energy and increasing the emphasis on developing and implementing flexible demand options.

- ***PUBLIC AWARENESS*** – Developing support by educating the populace on electrical energy topics.

- ***WORKFORCE***- Assuring the availability of an engineering and skilled trades workforce with the necessary knowledge and skills to research, develop, design, plan, construct, operate, and maintain modern energy systems.

- ***NUCLEAR*** - Taking action to maintain, strengthen, and expand the U.S. nuclear power industry. Nuclear energy is a sustainable, low-carbon energy source for electric power and provides significant potential for competitive production of alternative fuels and storage options.

[1] Building an intelligent electric grid for the 21st Century, IEEE-USA White Paper, 2020, https://ieeeusa.org/assets/public-policy/white-paper/IEEEUSAWP-BuildinganIntelligentGrid2020.pdf

- ***ELECTRIFIED TRANSPORTATION*** - Improving national security, increasing overall efficiency, reducing emissions, and reducing cost by enabling the transportation sector to reduce its dependence on oil. Electrified transportation, including full electric and advanced plug-in hybrid vehicles, reduces exposure to supply and price volatility in world oil markets while providing clean and efficient low-cost operation applications.

- ***SUSTAINABILITY*** - Improving the sustainability of the electric power system by taking advantage of renewable energy sources, reducing emissions from less efficient power generation, and recycling wherever possible. Improving the sustainability of the electric power supply will require continued technological advancement, expanded grid capability, economic assessment, and careful regulation and coordination of economic incentives and priorities across all elements of the electric markets and components of the fully integrated grid.

- ***ADAPTABILITY*** - Building flexibility and adaptability into all elements of our energy infrastructure's physical, regulatory, and institutional aspects, providing the ability to integrate a range of future technologies into our supply and delivery system more efficiently.

- ***CYBER AND PHYSICAL SECURITY*** - Defending electric infrastructure against the impacts of cyber-physical attacks by applying technology solutions as part of developing the intelligent grid. Built-in security as part of its design.

This statement was developed by the IEEE-USA and represents the considered judgment of a group of U.S. IEEE members with expertise in the subject field. IEEE-USA advances the public good and promotes the careers and public policy interests of the nearly 160,000 engineering, computing, and allied professionals who are U.S. members of the IEEE. The positions taken by IEEE-USA do not necessarily reflect the views of IEEE or its other organizations.