

# PRINCIPLES FOR A RESTRUCTURED ELECTRIC INDUSTRY

*(Approved by the IEEE-USA  
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As a result of legislative and regulatory decisions, the United States electric industry is in the midst of a transition from the traditional world of vertically integrated utilities to a new world which relies, to a greater degree, on competitive markets. The regulatory policies governing this industry have not yet been fully developed, and continue to evolve. Some states now allow customers to choose their retail electric supplier, while others do not. Some parts of the country have implemented Regional Transmission Organizations or Independent Systems Operators with organized wholesale markets, while others have not. All systems must allow interconnection of generators not owned by traditional utilities. Economic operation of these resources is centrally coordinated in some areas. In others, it is not.

IEEE-USA believes policymakers considering decisions on electric industry restructuring must consider certain fundamental principles to protect the public interest, and to maximize societal benefit. These principles should apply regardless of the regulatory regime that is ultimately adopted.

IEEE-USA offers the following principles as guidance for policymakers:

1. **Reliability criteria of a single North American reliability organization should be the minimum applied by all systems regardless of the regulatory regime.** The organization developing the criteria must possess a depth of technical competence, and the criteria must be applicable to all market participants. State and federal policymakers should recognize these criteria as an authoritative technical basis for system operation.
2. **Prices of all market products must be established in a manner that provides proper incentives for reliable behavior of all parties, in addition to providing the correct economic signals to the markets.** This factor is essential in satisfying reliability standards. Market and reliability rules must be coordinated. Market rules must promote both reliability and economic efficiency, in order to ensure effective and efficient dispatch of generation in real time, and anticipate and relieve transmission congestion when it arises. Procedures for fair and effective mitigation of market power must also be developed. Emergency operating protocols must be established to enable maintenance of system reliability when market mechanisms fail to provide the necessary resources.

3. **Means and incentives for the effective planning, construction, operation and maintenance of transmission system infrastructure should be incorporated into all market structures.** Coordinated generation, transmission and distribution development is essential to assure reliable operation and enable minimization of costs. Market and reliability rules must include provisions to ensure that accurate information is available on a timely basis to those responsible for both long-term development and operational planning. Enforceable contracts that define the requirements placed upon each market participant can assure that proper coordination takes place.
4. **Long-term resource adequacy requirements, as typically reflected by installed reserve margins, are necessary to assure that sufficient supply resources are developed.** These requirements should be applicable to both integrated and restructured systems. Compliance mechanisms, such as the extent of reliance on organized forward markets, may differ. Information about forward commitments of supply and demand resources to cover load must be made available to system operators. Assessment of reactive power supply adequacy is also a fundamental requirement.
5. **Compatibility must exist between the regulatory and institutional framework for the electric industry and the technical fundamentals of the power system.** The laws of physics cannot be changed, but the regulatory regime can be designed to accommodate them. Similarly, the regulatory framework ultimately adopted will influence the development and selection of technology solutions.
6. **Within the context of the technical fundamentals, policymakers should work cooperatively to establish a clear and stable framework for coordination among state and federal regulators.** Regulatory uncertainty regarding the division of responsibility between state and federal authorities is highly detrimental to the reliable and efficient performance of the system.
7. **Design of state administered retail rules should facilitate demand response to price and should be compatible with the design of wholesale market rules in a particular region.**

This statement was developed by the IEEE-USA Energy Policy Committee and represents the considered judgment of a group of IEEE-USA members with expertise in the subject field. IEEE-USA is an organizational unit of IEEE, created in 1973 to advance the public good, while promoting the careers and public-policy interests of the more than 225,000 technology professionals who are U.S. members of the IEEE. For more information, go to <http://www.ieeeusa.org>.