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Prepared Testimony of

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Good morning, Mr. Chairman and members of the Subcommittee. My name is David Cook and I am General Counsel for the North American Electric Reliability Council (NERC).

Summary

NERC strongly urges Congress to enact reliability legislation in this session of Congress. NERC and a broad coalition of state, consumer, and industry representatives are supporting legislation that would transform the current set of voluntary electric system operating guidelines into a set of mandatory transmission system reliability rules, promulgated and enforced by an industry-led reliability organization, with FERC oversight in the United States. NERC firmly believes that steps must be taken now to ensure the continued reliability of the electricity transmission system if the Nation is to reap the benefits of competitive electricity markets. The changes taking place as the electric industry undergoes restructuring are recasting the long-established relationships that reliably provided electricity to the Nation's homes and businesses. Those changes will not jeopardize the reliability of our electric transmission system IF we adapt how we deal with reliability of the bulk power system to keep pace with the rest of the changes that the electric industry is now experiencing. NERC believes that the best way to do this is through an independent, industry self-regulatory organization, modeled after the

securities industry, where the Securities and Exchange Commission has oversight of several self-regulatory organizations (the stock exchanges and the National Association of Securities Dealers).

NERC is a not-for-profit organization formed after the Northeast blackout in 1965 to promote the reliability of the bulk electric systems that serve North America. It works with all segments of the electric industry as well as consumers and regulators to "keep the lights on" by developing and encouraging compliance with rules for the reliable operation of these systems. NERC comprises ten Regional Reliability Councils that account for virtually all the electricity supplied in the United States, Canada, and a portion of Baja California Norte, Mexico.

What is Reliability?

Reliability means different things to different people. For the consumer it could mean, "Does the light come on when I flip the switch?" Or, "Does a momentary surge or blip re-boot my computer or cause me to lose a whole production run of computer chips I was manufacturing?"

To NERC, reliability means making sure that all the elements of the bulk power system are operated within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of that system will not occur as a result of sudden disturbances such as electric short circuits or unanticipated failure of system elements. It also means planning, designing, and operating each portion of the bulk power system in a manner that will promote security in interconnected operations, not burden other interconnected systems, and not interfere with the functioning of competitive markets.

NERC sets the standards by which the grid is operated from moment to moment, as well as the standards for what needs to be taken into account when one plans, designs, and constructs an integrated system that is capable of being operated securely. The NERC standards do not specify how many generators or transmission lines to build, or where to build them. They do indicate what tests the future system must be able to meet to ensure that it is capable of secure operation. NERC's rules, which are not enforceable, have generally been followed, but that is starting to change. As economic and political pressures on electricity suppliers increase, NERC is seeing an increase in the number and severity of rules violations. Hence, the voluntary approach is no longer adequate for maintaining the reliability of the bulk power system. Just as the rest of the electric industry is changing, the reliability infrastructure must change too.

Voluntary Reliability Rules Will Not Work in a More Competitive Electric Industry

NERC's formation in 1968 was the electric industry's response to legislation that had been introduced in the Congress following the 1965 blackout in the Northeast. That legislation would have given the then Federal Power Commission (FPC) a central role in the reliability of the bulk electric system. Instead of adopting that legislation, Congress opted for an industry-led effort. For more than thirty years, this industry-based voluntary system has worked very well and we have had an extremely reliable electric system. But the reliability rules or standards have no enforcement mechanism. Peer pressure has been the only means available to achieving compliance.

As good as that system has been, voluntary standards will not suffice in the future. Here is why:

- The grid is now being used in ways for which it was not designed.
- There has been a quantum leap in the number of hourly transactions, and in the complexity of those transactions.
- Transmission providers and other industry participants that formerly cooperated willingly are now competitors.
- Rate mechanisms that in the past permitted utilities to recover the costs of operating systems reliably are no longer in place, or are inadequate given increased risks and uncertainties.
- The single, vertically integrated utility that formerly performed all reliability functions for an area is being disaggregated, which means that reliability responsibilities are being divided among many participants.
- Some entities appear to be deriving economic benefit or gaining competitive advantage from bending or violating the reliability rules.
- Construction of additional transmission capacity has not kept pace with either the growth in demand or the construction of new generating capacity, meaning the existing grid is being used much more aggressively.

A number of factors have contributed to our present circumstance. Demand has been steadily increasing over the past decade and is expected to increase. This past summer several utilities in the Eastern Interconnection experienced new all-time peak demands on their systems. The good news is that merchant generators are now building or planning to build hundreds of new plants across the country to meet this increased demand. The bad news is that the same is not true for transmission.

Ten years ago North America had a little less than 200,000 circuit-miles of high voltage transmission lines. Today we have about 200,000 circuit-miles of lines. Ten years from now we are projecting that we will have just a little over 200,000 circuit-miles of high voltage transmission lines. All of these new generators will need to access the transmission grid to get their power to where it is needed. For the most part, however, the transmission dollars that are being spent today are just to connect new generation to the grid; they are not going to build major new power lines that will strengthen the grid's ability to move large blocks of electricity from one part of the country to another, or in some instances, such as Texas, from one part of a State to another. That lack of additional transmission capacity means that we will increasingly experience limits on our ability to move power, and that commercial transactions that could displace higher priced generation with lower priced generation will not occur.

Moreover, the existing grid is being pushed harder and is being used in ways for which it was not designed. Historically, each utility built its generating stations close to load centers, which were largely cities. As the cities grew, the electric systems grew with them, spreading outward from the center. The weakest part of the electric grid is generally where one system abuts another. Initially, utilities installed connections between adjacent systems for emergency purposes and to share generating reserves to keep costs down. Gradually those interconnections were strengthened so that adjoining utilities could buy and sell electricity when one had lower cost generation available than did the other. But these systems were not designed to move large blocks of power from one part of the country to another, across multiple systems, as is happening today. The

volume and complexity of transactions on the grid have grown enormously since the advent of open access transmission.

Electric industry restructuring adds to the challenge. In the past, vertically integrated utilities with monopoly franchise service territories had complete responsibility for all aspects of their electric systems. They planned and built their transmission systems, ensured that sufficient generation was constructed, and operated and maintained their transmission and distribution systems, all to serve customers within designated service areas. With restructuring, there may no longer be a designated group of consumers for which to plan service. Instead, responsibilities to construct and maintain generation, transmission, and distribution are being divided among multiple entities. In some cases, those responsibilities may be falling between the cracks. Regional Transmission Organizations (RTOs) may provide a means to reintegrate some of these functions. But the RTO proposals that have been filed to date vary considerably in the extent to which the RTO will have the authority to plan and expand the transmission system, not only to connect new generation, but also to meet broader needs of wide-area reliability and commerce.

The result of all this is that the transmission grid is being increasingly stressed. NERC is seeing more congestion on the grid, for more hours of the day. NERC is also seeing increasing violations of its reliability rules. If these trends continue, we risk the increased likelihood of grid failure.

Legislation is Needed to Ensure Bulk Power System Reliability in a More Competitive Electricity Market

We need legislation to change from a system of voluntary transmission system reliability rules to one that has an industry-led organization promulgating and enforcing mandatory rules, backed by FERC in the United States and by the appropriate regulators in Canada and Mexico. In August 1997, NERC convened a panel of outside experts to recommend the best way to ensure the continued reliability of North America's interconnected bulk electric systems in a competitive and restructured electric industry. On a parallel track, in the aftermath of two major system outages that blacked out significant portions of the West in July and August 1996, the Secretary of Energy convened a task force on reliability, chaired by former Congressman Phil Sharp. Both groups came to the same conclusion: The current system of voluntary guidelines should be transformed into a system of mandatory, enforceable reliability rules, AND the best way to accomplish that was to create an independent industry self-regulatory organization, patterned after the self-regulatory organizations in the securities industry, with oversight in the United States by the Federal Energy Regulatory Commission.

On June 18, 2001, NERC and a broad coalition of state, consumer, and industry representatives (the American Public Power Association, the Canadian Electricity Association, the Edison Electric Institute, Institute for Electrical and Electronics Engineers — USA, the Large Public Power Council, the National Association of Regulatory Utility Commissioners, the National Association of State Energy Officials, the National Association of State Utility Consumer Advocates, the National Electrical Manufacturers' Association, the National Rural Electric Cooperative Association, the

Northwest Regional Transmission Association, the Transmission Access Policy Study Group, and the Western Interconnection Coordination Forum) sent a letter to each member of the House Energy and Commerce Committee in support of legislation to authorize creation of such an industry self-regulatory organization to develop and enforce reliability rules. That legislation would accomplish the following goals:

- Reliability rules would be mandatory and enforceable.
- Rules would apply to all operators and users of the bulk power system in North America.
- Rules would be fairly developed and fairly applied by an independent, industry self-regulatory organization drawing on the technical expertise of industry stakeholders.
- FERC would oversee that process within the United States.
- Approach would respect the international character of the interconnected North American electric transmission system.
- Regional entities would have a significant role in implementing and enforcing compliance with these reliability standards, with delegated authority to develop appropriate regional reliability standards.

This Subcommittee approved one version of the NERC legislative language when it passed H.R. 2944 in 1999. Last year the Senate passed the NERC consensus legislative proposal as S. 2071, but that bill was not considered in the House. This year, Mr. Wynn and a number of other members have reintroduced the NERC legislative proposal (H.R. 312). In addition, the President's National Energy Policy endorses development of

legislation authorizing an industry self-regulatory organization subject to FERC oversight within the U.S.

Since the June letter, the organizations supporting the NERC reliability legislation have continued to work with representatives from across the electric industry, as well as state and consumer interests, in an effort to strengthen and broaden support for the legislation. One of the major criticisms of the earlier legislative language has been that the proposal is longer and more detailed than may be appropriate for a legislative enactment. To address that concern, as well as to respond to other concerns that have been raised over the recent months, we have developed revised legislative language that is shorter, less detailed, and more flexible to accommodate whatever structural changes emerge in the industry. I have attached a copy of that language to my testimony.

The revised legislation preserves from the earlier version the essential features for authorizing creation of a self-regulatory electric reliability organization. In addition, the revised legislation:

- provides FERC with additional flexibility and authority in shaping the development of the electric reliability organization and in overseeing its ongoing standards development and enforcement activities;
- clarifies the respective roles of the electric reliability organization and evolving regional transmission organizations; and
- includes definitions of "adequacy" and "security," the two components of reliability.

Together with the state savings clause from the earlier legislation, these new definitions place bounds on the scope of the electric reliability organization's standard-setting authority.

Under this legislation, FERC can assure harmonization of reliability standards developed by the electric reliability organization and market rules in two ways. First, FERC must approve the process by which reliability rules are developed. The legislation requires that process to be open, balanced, not dominated by one particular sector, and consistent with the requirements of due process. FERC can assure that market interests are adequately represented in that process. Second, FERC must approve the reliability rules before they take effect. If, despite the balanced process, a proposed reliability rule intrudes too far into commercial or market activities, FERC can reject the proposed rule and direct the electric reliability organization to make appropriate changes.

Changes to this revised reliability legislation were made just before the horrific events of September 11, and those events have interrupted efforts by those who have supported the NERC legislation in the past, as well as others, to complete their review of this language. In light of the Subcommittee's hearing schedule and the Chairman's stated desire to move forward on electric restructuring legislation, including reliability, NERC believes it appropriate to submit the proposed language to the Subcommittee now. NERC as well as all those that supported the earlier language believe this revised legislative proposal to be a considerable improvement over the earlier language, but it maintains all the essential features of that earlier language. Support for this proposal is not unanimous, and doubtless the language can be improved further. NERC is prepared

to work with Members of this Subcommittee and Subcommittee staff, as well as with others from the industry, to make whatever changes are necessary.

In addition, on September 21 Chairman Barton released a discussion draft of electric restructuring legislation. NERC commented on Title III, the reliability provisions of that draft, in a letter to Chairman Barton on October 2. A copy of that letter is attached to my testimony. NERC believes that Title III of the September 21 discussion draft, with the changes recommended in our October 2 letter, would form a workable basis for moving forward with reliability legislation. NERC stands ready to work with Members of this Subcommittee and Subcommittee staff, as well as with others in the industry, to develop appropriate language. What is critical is that we act now to update how we deal with reliability, even as the rest of the electric industry is undergoing profound changes. The horrific events of September 11 only serve to underscore the importance of that effort.

An Industry Self-Regulatory Organization Is the Best Approach for Developing and Enforcing Reliability Standards

Having an industry self-regulatory organization develop and enforce reliability rules under government oversight takes advantage of the huge pool of technical expertise that the industry has been able to bring to bear on this subject over the last 30 plus years. FERC does not now possess and is not likely to achieve anything approaching the level of technical sophistication inherent in the NERC standard-setting process, which involves dozens of committees and working groups and thousands of professionals representing all segments of the electric industry. Having FERC itself set the reliability standards through its rulemaking proceedings, even if based on advice from outside organizations,

converts matters that ought to be resolved by those with technical engineering expertise and commercial markets expertise into matters that are the province of lawyers. These complex rules need to be worked out together, using a fair and open process, in a collaborative fashion by all segments of the industry.

The electric industry is in a great state of flux, as regional transmission organizations are forming, reforming, and consolidating. The path is not yet clear about how many RTOs there will be, or how extensive will be the participation in those RTOs, or when they will all come into existence. With all the uncertainty as to who will ultimately operate and plan the interconnected transmission system, it is more important than ever that an industry-led self-regulatory organization be created to establish and enforce reliability standards applicable to the entire North American grid, regardless of who owns or manages it. The self-regulatory organization can focus on reliability as its primary mission, even while new market structures and new RTOs are being formed. Because FERC will provide oversight of the self-regulatory organization in the U.S., FERC can ensure that the self-regulatory organization's actions and FERC's evolving RTO policies are closely coordinated.

An industry self-regulatory organization also addresses the international character of the interconnected grid. There is strong Canadian participation within NERC now, and that is expected to continue with the new organization. Having reliability rules developed and enforced by a private organization in which varied interests from both countries participate, with oversight in the United States by FERC and with oversight by provincial regulators in Canada, is a practical and effective way to address the common set of rules needed for the international grid. Otherwise, U.S. regulators would be

dictating the rules that Canadian interests must follow — a prospect that would be unacceptable to Canadian industry and government alike. Or regulators on either side of the border might decide to set their own rules, which would be a recipe for chaos. There are also efforts under way to interconnect more fully the electric systems in Mexico with those in the United States, primarily to expand electricity trade between the two countries. Expanded international electricity trade is a key element of the President's National Energy Policy. With that increased trade, the international nature of the self-regulatory organization will take on even more importance, further underscoring the necessity of having an industry self-regulatory organization, rather than FERC, set and enforce compliance with grid reliability standards.

Conclusion

NERC commends the Subcommittee for attending to the critical issue of ensuring the reliability of the interconnected bulk power system as the electric industry undergoes restructuring. A new electric reliability oversight system is needed now. The continued reliability of North America's high-voltage electricity grid, and the security of the consumers whose electricity supplies depend on that, is at stake. An industry self-regulatory system is superior to a system of direct government regulation for setting and enforcing compliance with grid reliability rules. The revised NERC Coalition legislative language presents the best approach for achieving that goal. It is also the approach that has had the most consistent, widespread support among industry, state, and consumer interests. Title III of the September 21 discussion draft, with the changes we have recommended, would also provide a workable basis for moving forward. It would then

contain the essential features of the NERC approach. The reliability of North America's interconnected transmission grid need not be compromised by changes taking place in the industry, provided reliability legislation is enacted now.