THE AUGUST 14, 2003, BLACKOUT: EFFECTS ON SMALL BUSINESS AND POTENTIAL SOLUTIONS

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SUBCOMMITTEE ON TAX, FINANCE AND EXPORTS

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WEDNESDAY, OCTOBER 8, 2003

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON TAX, FINANCE AND EXPORTS,
COMMITTEE ON SMALL BUSINESS,
Washington, D.C.

The Subcommittee met, pursuant to call, at 10:06 a.m. in Room 2360, Rayburn House Office Building, Hon. Patrick Toomey [chairman of the Subcommittee] presiding.

Present: Representatives Toomey, Chabot, Ballance, King.

Chairman TOOMEY. Good morning everyone. The hearing on the Subcommittee on Tax, Finance and Exports will come to order, as we examine this morning certain aspects of the August 14, 2003, blackout. In particular, its effects on some small business and also explore some potential solutions to at least certain aspects of the problems that emerged.

Last August's blackout was, as we all know I am sure, the worst blackout in our nation's history, hitting numerous areas of the northeast, the Midwest, the United States and Canada. I think the blackout was a stark reminder of how important some of the services we take for granted are. Electric power is certainly close to the top of the list.

It is an unprecedented event really and it posed severe threats to the health, safety and the well-being of our economy in many states; much of the nation in fact. Of course the consequences go far beyond the loss of personal conveniences and go right to the issues of safety and security and well-being.

According to a preliminary report by the federal government, the blackout cost Americans anywhere from $4 to $6 billion thus far. Obviously that is a substantial sum. Arguably amongst the hardest hit were America's small businesses, for the same reason small businesses are often the hardest hit.

Small businesses are usually struggling in the first place, have limited resources. In a case like this, small businesses are typically located in a single geographical area so they do not have geographical diversity to help them weather a storm in a particular location.

They do not have multiple revenue streams that insulate any one revenue stream from an unfortunate event and so small businesses tend to get hurt the worst by this sort of thing and that is part of why we wanted to have this discussion today.

But another part of this is to talk a little bit today about whether there might be mechanisms that exist in the marketplace that could help to if not prevent this kind of problem in the future, perhaps contain the magnitude of the disruption.

In August of this year, I had the opportunity to tour the Allentown facility of ABB, Inc.. ABB is a technology base provider of power and automation products, system solution and services and while there I was given a presentation on a technology that is referred to as a wide area measurement system. The presentation was made by a gentleman who will be a witness here this morning, Mr. Doug Voda, Senior Vice-President and General Manager.

I am looking forward to having Mr. Voda review the specifics of this technology. I should point out it is manufactured by a number of companies.

It is available in the marketplace all over the country, in fact all over the world and had this technology been in place throughout the electric grid across America, it is entirely possible that the blackout might have been contained to a much more limited geographical area. I am looking forward to the testimony of Mr. Voda in that regard.

[Mr. Toomey's statement may be found in the appendix.]

Chairman TOOMEY. I would at this point welcome an opening statement from my colleague, the gentleman from North Carolina, if he has one and then we will move on to an introduction of the witnesses.

Mr. BALLANCE. Thank you, Mr. Chairman. According to the Department of Energy, each year power outages and significant power fluctuations costs U.S. small businesses $30 billion in lost productivity.

On August 14, 2003, we experienced what has been reported as the largest blackout in our nation's history. Beginning at 4 p.m. that day, the power that spread across the northeast and up the midwestern United States and into parts of Canada, blackout affected 50 million people, leaving many without electricity for days.

While the actual cause of the outage is still being investigated, it is widely believed that the blackout began with failed transmission lines. The neighboring lines did not have the capability to handle the massive power surge and created a domino effect leaving much of the system without even a spark.

The focus of today's hearing is to assess the effects of the blackout and, Mr. Chairman, my particular interest, on small businesses and to determine what can be done to prevent these types of disasters in the future. The repercussions of the power outage are still being felt by small businesses as they attempt to restart and recover lost revenue.

I represent the rural part of North Carolina, the First District, whose economic base is found in small businesses. In the rural economy, the small business community not only includes traditional retail ventures, but also it encompasses our farms, electric cooperatives and small manufacturing plants. A similar power outage to our region could devastate an already struggling economy, potentially decimating entire communities.

The severe economic impact of the power outage affects the near term profitability of small businesses and jeopardized their long-

term financial futures. Small firms simply do not have the back-up generators and resources to withstand the hardship resulting from blackouts. It has been estimated that the economic loss from the August 14 power outage is around $6 billion nationwide.

Ultimately, this recovery has been lagging due to the federal government's failure to step in and provide assistance to struggling firms in the form of Small Business Administration disaster loans. These loans can stabilize small businesses, but by failing to provide this funding, the Administration is not only adding to our current economic downturn.

I know that traditionally such loans have been given out following natural disasters. However, the SBA provided disaster loans to the travel and hotel industry following the terrorist attack of 9/11 and then again to small businesses throughout Louisiana and Texas following the Columbia space shuttle explosion. Thus, we contend that is setting some kind of precedent that could be followed.

As small businesses try to recover their losses and prepare for future power outages, they look to their lawmakers, who in the process of creating new energy, promises to address these issues.

However, it is doubtful this bill will produce a tough, reliable federal regulatory system capable of preventing electric companies from overloading transmission grids, which is one of the most pressing concerns following this blackout. The legislation also fails to help small businesses incorporate new energy efficient technologies that will reduce their dependency on electricity.

Hopefully today's hearing will allow us to see what types of challenges they are facing as a result of this blackout of 2003 and will enable us to protect the small businesses, the main drive of our economy, from having to experience these difficulties in the future. Thank you, Mr. Chairman.

Chairman TOOMEY. Thank you. At this time I will introduce the three witnesses and then recognize each one in turn for their testimony, but to begin with our first witness today is a Ms. Patty Orzano. I understand that my colleague, the gentleman from New York, has a strong working relationship with Ms. Orzano and that she is a constituent of his. I would yield to the gentleman from New York to make that introduction.

Mr. KING. Thank you very much, Mr. Chairman. I really appreciate you giving me the privilege of being able to sit with the Subcommittee today and it really is a privilege because Pat Orzano and I have known each other for many years. She is a very good friend and she is a very hardworking businesswoman.

She really epitomizes what it means to be a small business franchise owner. She and her husband have maintained a business for almost 25 years. In fact, it is located I guess about a mile from my District office. She is in Massapequa, where I am in Massapequa Park.

She is very active in the local chamber of commerce. She really epitomizes what it means to work hard and she gets nothing for nothing. She works literally around the clock.

She is also a very effective lobbyist and advocate. Whenever I step out of line, she is right there to correct me and to let me know. She is on the phone the very next morning. She is knocking on my

door, whether it is here or in New York. I cannot escape her. Pat is always there advocating for small businesspeople, but she really is the best.

The small business community, as in so many places around the country, is really the lifeblood of the Long Island economy and the August 14 blackout had a real impact on the community as a whole, especially on small businesses. So I am sure her testimony today will be very important. It will be very perceptive.

Again, it is my privilege to be able to introduce her to the Subcommittee so you all will be able to see what I have been able to see for so many years: A very, very effective advocate for her cause.

I do not want her to get mad at me for this now. I do have to leave. I have a bill on the House floor and I do not want you knocking on my door later and say I run out on you. I did not hit and run. I am here to introduce you, but it really is a great, great privilege for me, Mr. Chairman and thank you for giving me this opportunity.

Chairman TOOMEY. Thank you. Also testifying with us this morning is Mr. Tom Lenard. Mr. Lenard is the Vice-President for Research at the Progress and Freedom Foundation. Mr. Lenard is an expert on energy policy and will be providing a synopsis of the current debates surrounding energy policy and various alternative measures that are potentially available. I thank you, Mr. Lenard, for joining us this morning.

Then as I stated earlier, we also have Mr. Doug Voda, the Senior Vice-President and General Manager of Substation Automation and Protection Products, the Automation Technologies Division of ABB, Inc.. Mr. Voda will be going over the specifics of this wide area measurement system technology.

Before joining ABB, Mr. Voda was Vice-President of the Operations for Schweitzer Engineering Laboratories. Prior to that, he served as the Director of Worldwide Operations and Contract Design Manufacturing for Keytronic Corporation, Product Assurance Manager for Compaq Computers and Advance Technology Supervisor for Motorola Universal Data Systems. Mr. Voda, thank you very much for joining us this morning as well.

At this time, I am delighted to recognize for her testimony Ms. Orzano. I would just like to mention to our witnesses, what we are going to do is we have a light system in front. We are going to follow the five-minute rule. The green light goes on. When there is 30 seconds left or one minute? When there is one minute left, the light turns orange and when the light goes red, your five minutes have been consumed.

After you have each had a chance to give your testimony and if you have more extensive testimony we will be happy to take that into the record, then we will ask a series of questions at that point.

At this time, I am delighted to recognize and welcome Ms. Orzano.

STATEMENT OF THE PATRICIA ORZANO, FRANCHISE OWNER, 7-ELEVEN, MASSAPEQUA, NEW YORK

Ms. ORZANO. Good morning, Chairman Toomey, Ranking Member Mr. Ballance and members of the Committee. I am Patty Orzano, franchise owner of the 7-Eleven store located in

Massapequa, New York. I have been the manager and co-owner, along with my husband, for over 25 years. We currently employ 14 people and are open 24 hours, seven days a week.

During my tenure as a franchise owner, I have become proactive in many community affairs and organizations, including the 7-Eleven franchise community, as a representative of the National Coalition Association and locally in the New York Association as Vice-President of Legislative Affairs.

I am here on behalf of myself and I want to thank you for the opportunity to testify on the impact of my business and the financial repercussions of the electric blackout in the northeast on August 14, 2003.

The community of Massapequa, New York is a heavily populated town of over 60,000 residents within the County of Nassau, a direct suburb of New York City. The blackout began at 4:15 p.m. and within 30 minutes the entire population of New York was aware of the severe crisis at hand.

The scene in my stores now transpired to one of complete bedlam, filling with people occupying every square inch of the floor. Many began grabbing for bags of ice, batteries, flashlights and other essentials while pushing others aside.

The back-up battery to the registers failed at 5:15. Now faced with long lines of customers, myself and my three employees were recording sales on paper. During the next three hours, we served over 500 customers. In order to manage the crowds, we required the aid of our local police officers, allowing only five or so customers at a time to be served.

The police officials asked us to close at darkness. The 7-Eleven Corporation representatives agreed that locking the doors at darkness was mandatory. After locking the doors, we were armed with flashlights and candles. Two of my employees and I began to clean and reorganize the store.

In order to secure the building, fixtures and physical inventory, I asked my midnight employees to report to work for their shifts, even though the store was closed and no business was being transacted. The additional labor costs were a necessity to ensure the security of the business.

The store reopened at 6:30 a.m. and the power was restored at 8 a.m. Some parts of Long Island did not have power until three.

At midday, I recessed my food spoilage costs to be approximately 3 percent of my total inventory. The 7-Eleven Corporation informed us that the company would cover our costs of food spoilage through their own blanket liability insurance, since none of our wholesalers would issue any credits. In the New York division alone, 255 stores lost power and over $200,000 in food costs are accessed.

Initially the losses were minimal, consisting of extra labor costs and loss of gross sales for a half a day. However, within days the 7-Eleven company informed us that their insurance would not cover our food spoilage. At most, 7-Eleven, Inc. would file a claim on our behalf in a future class action lawsuit against our energy companies.

Now as small business owners, we were faced with a large economic losses in which should have been our most profitable month

of the year. For many years I had my own food spoilage insurance policy included in a business liability package.

After the 9/11 terrorist attacks, our business liability insurance increased 40 percent, with a 200 percent rise in the deductible maintaining the food spoilage portion of the policy became unaffordable and certainly impractical.

Once again for the second time in two years we were dealt another economic hardship with no recourse. I would like to see Congress propose legislation that would grant additional tax credits for small business losses incurred by energy blackouts and unnatural disasters.

Perhaps in the future, Congress can consider a national small business liability insurance plan, similar to the National Floor Insurance Plan that would insure small businesses for unnatural occurrences.

Failures to expand and strengthen or infrastructure can have devastating effects on the survivability of small business. Even minor interruptions in service or spikes in price can cripple a small business ability to do business and have long lasting effects on cash flow afterwards.

Small business cannot prosper and thrive when essential public goods are neglected. When it comes to utilities, I have no choice in which I use. Congress must vigorously work to provide small business unfettered access to safe, cost-effective and reliable infrastructure.

I believe that the stability of small business, such as mine, is only as strong as the infrastructure on which our economy rests. I would again like to thank the Chairman and Ranking Member for having this hearing and for inviting me to testify.

[Ms. Orzano's statement may be found in the appendix.]

Chairman TOOMEY. Thank you very much and I commend you for ending your comments right on time. Very well done.

At this time I am pleased to welcome and recognize for his testimony Mr. Lenard.

STATEMENT OF TOM LENARD, VICE-PRESIDENT FOR RESEARCH, PROGRESS AND FREEDOM FOUNDATION, WASHINGTON, DC

Mr. LENARD. Thank you, Chairman Toomey and Mr. Ballance. I appreciate this opportunity to testify before you today and in the amount of time available to me I would like to provide a little context and particularly regulatory context for the issue which is the subject of the hearing today of the effect of the August 14 blackout on small businesses and potential solutions.

Let me start by suggesting that solutions to the problems of the electricity grid are not primarily going to come from Washington, but rather the best way to provide greater liability for small businesses and for everyone else is to continue to move towards a more competitive and more flexible electricity market and we have already made significant progress in this regard in particular in developing a more competitive bulk power market with lower wholesale prices. This has spurred substantial investment in new generating capacity.

I think that the progress that we have made to date is put at risk by the overly prescriptive approach that the Federal Energy Regulatory Commission is now taking and in particular, FERC's proposal for a nationwide standard market design.

FERC's SMD proposal, which is virtually unknown outside the industry, is an attempt to radically restructure the electricity sector and to design electricity markets at a level of detail that is virtually unprecedented for any industry.

Fortunately, the Congress with the energy legislation that is now under consideration, is in a good position to tell FERC to step back, take stock and return to a more modest and less prescriptive approach that it was taking before.

Although published over a year ago, well before the August 14 blackout, proponents of this rulemaking are now claiming that any delay in its implementation will interfere with FERC's ability to address reliability issues.

In fact, I believe the opposite is true. If adopted, SMD will make our electricity system more vulnerable to failure, with costs for small businesses and everybody else, because it is based on a fundamentally flawed premise and that is that the government is better equipped than the private sector to fix markets when they are broken.

One only has to look at the California experience for a counter example. Despite its obvious flaws, the California market design, which by the way was approved by FERC before it was implemented, was allowed to persist until it virtually bankrupted all the utilities in the state and even then it was "fixed" in a way that shifted enormous costs to the already overburdened taxpayers of the states.

While we do not know precisely what caused the breakdown of the electricity grid on August 14, it is unlikely that an electricity market designed by FERC is the answer and there are a number of reasons why.

Perhaps most importantly or certainly one of the most important reasons is that FERC's new plan would place billions of dollars worth of transmission assets under the control of non-profit, quasi-regulatory regional transmission organizations.

This separation of ownership from control of economic assets is virtually unheard of in our system and it is unclear what incentive structure will guide these entities, to whom they will be accountable or whether they will be responsive to the interested groups, such as small businesses.

This would be as if we were to take Ms. Orzano's 7-Eleven stores and put the control of them under a board of people who have no ownership interest and do not bear any of the financial consequences for any of the decisions that are made about the stores. Think about what effect that would have on the operation of those stores, on investment in them and a whole host of other issues. Their ability to operate efficiently, to pare costs, to serve their customers well.

More generally the proposal does little or nothing to improve the incentives for transmission investment. We know that there are serious electricity bottlenecks. All over the country everybody agrees on that and that is part of the reliability problem.

One of the benefits of getting to a market and I am running out of time, is that if you do get to a more competitive market, different customers have different preferences for risks. Some customers, chip manufacturers, hospitals, stores that have perishable products have a low tolerance for risk and other individuals in operations can tolerate it more.

If you have a more competitive market, you should be able to serve the different customers with different tolerances for risk.

Let me just conclude by saying that I think the most effective thing that Congress can do now to enhance reliability is to tell the FERC to abandon its SMD proposal and there is apparently language under consideration in the energy bill that would accomplish that.

Because if FERC goes forward with this proposal, I think it will take years before the inevitable mistakes are corrected, if they ever are and a stable set of rules emerges and the resulting confusion will yield a less, rather than a more reliable electricity supply. Thank you.

[Mr. Lenard's statement may be found in the appendix.]

Chairman TOOMEY. Thank you very much. At this time I would like to welcome and recognize Mr. Voda.

STATEMENT OF DOUGLAS A. VODA, SENIOR VICE-PRESIDENT AND GENERAL MANAGER, AUTOMATION TECHNOLOGIES DIVISIONS, ABB, INC., ALLENTOWN, PA

Mr. VODA. Thank you, Chairman Toomey, Mr. Ballance and Mr. King for the opportunity to appear here today. My objective is to initiate coordinated activities by government, utilities and technology providers like ABB, to implement solutions that reduce potential for cascading blackouts, such as the disruption that occurred in the Northeast on August 14.

I appear before you today in my role as Senior Vice-President and General Manager of the Automation Technologies Divisions of ABB, Incorporated in Allentown, Pennsylvania and Coral Springs, Florida.

Our business provides protection and control systems, including electromechanical and microprocessor relays and supervisory con-

In addition, identification of the source helps media and government agencies communicate to its citizens accurate information.

Today, utilities' monitoring and control systems gather information from within their own boundaries, relying upon neighboring utilities to do the right thing within their boundaries. Emerging problems within one utility can impact many others, as demonstrated by the cascading blackout on August 14, because of the unavailability of information at neighboring utilities.

Wide area monitoring systems technology, such as that offered by ABB and other corporations, is available today to provide real time information and indication of power grid change of state from stable to unstable situations.

I believe this is essential for utility operators to make the best decisions to activate circuit breakers in advance of impending critical events. This act contains cascading tripping and minimizes loss of electricity in massive regions of electric consumers.

What I seek is a clear agreement between regulatory agencies and utilities, deploying this technology to and from substations within the U.S.. I propose a government policy and regulatory action providing incentives for utility companies to invest in the implementation of this technology, as well as high voltage DC/flexible AC transmission systems and life extension of existing assets in the form of loan guarantees, DOE grants or investor tax credits.

The current House and Senate bill now in conference only includes depreciation changes. Thank you sincerely for this opportunity to make this presentation today.

[Mr. Voda's statement may be found in the appendix.]

Chairman TOOMEY. Thank you very much, Mr. Voda.

My first question is going to be for Ms. Orzano. Could you estimate for us just what your financial losses were as a result of this blackout or do you not know yet?

Ms. ORZANO. Approximately $3,000.

Chairman TOOMEY. Do you think that is probably typical of a store such as yours throughout the blackout area?

Ms. ORZANO. Yes. My store is approximately 2,500 square foot and that was the average in my industry, convenience store. I do not know actually what supermarkets, what their losses would have been.

Chairman TOOMEY. Do I understand correctly that at this point it appears as though you are not going to be able to recoup those losses from insurance?

Ms. ORZANO. Correct.

Chairman TOOMEY. Is that because these are just typically not covered losses or you have provisions that cover food spoilage under other circumstances, but not under these circumstances, is that correct?

Ms. ORZANO. Yes. The company's liability policy, they are self-insured, but it does not cover for these unnatural occurrences. It would if it was the hurricane situation. We had Hurricane Gloria back in the 1980's and they did cover our food costs.

Chairman TOOMEY. Right. Would business interruption insurance cover this?

Ms. ORZANO. In this particular case, I made in my statement I did have for the past 20 years, prior to 2002——.

Chairman TOOMEY. But it became so expensive?

Ms. ORZANO. Yes. With the deductible, I probably would have recouped maybe $500. The insurance was not worth it.

Chairman TOOMEY. Right. I do not know if you have checked, but I would not be surprised if insurance premiums have gone up again after this blackout. Do you know whether that has happened?

Ms. ORZANO. My renewal is in January. So I guess you gave me forewarning.

Chairman TOOMEY. It is not a prediction. I hope I am wrong, but I would be concerned about that.

Mr. Lenard, you mentioned that your preference, if I could paraphrase, for a competitive model, one in which economic incentives by virtue of private ownership would create the incentives to minimize these kind of disruptions, rather than a government imposed solution. I am generally very sympathetic to approach.

But some people would suggest that a provision of electricity is a natural monopoly and that it is by its very nature unavoidable that this is going to be a monopoly situation and therefore it requires much more extensive government regulation.

Could you address the issue of how it is possible to achieve a competitive model in the distribution of electricity?

Mr. LENARD. I agree that the wires of the transmission distribution systems currently have natural monopoly attributes and are going to have to be regulated in some form for the foreseeable future. I am not suggesting to deregulate there.

I do think that we should be doing more to develop innovative ways of performance incentive type regulation. I think we are behind on that, but I am not suggesting we deregulate. But I think we should try to have as much competition as is possible and have our regulatory framework be as simple and straightforward as possible to let market forces develop.

Chairman TOOMEY. Thank you. I am going to ask Mr. Voda a couple of questions and then after, I recognize the gentleman from North Carolina. I am going to go through a second round because I have a lot of questions for Mr. Voda and I will not have time to do it under my allotted question time.

Let me start with the first and see if I understand this, because your testimony is a bit technical and for those of us who are not so technically oriented, I want to see if I understand the gist of this technology. So please correct me where I go wrong on this.

But my understanding is that there is a technology that exists that your company and other companies make that would allow a given utility that is responsible for the distribution of electricity in a particular area, to monitor what is going on in other areas essentially, to get information about problems that develop in other parts of the grid, other networks so that when a problem starts to approach their grid, they would be able to isolate themselves and thereby prevent this cascading collapse that we saw. Is that a fair way to characterize this?

Mr. VODA. That is an accurate statement.

Chairman TOOMEY. This technology exists today?

Mr. VODA. Correct.

Chairman TOOMEY. Have any utilities deployed it?

Mr. VODA. Yes.

Chairman TOOMEY. Is it by its nature a product whereby a particular utility that wants to protect its own customers from this blackout, in order to do it, it somehow has to get information about other utilities? Is that what we are talking about?

Mr. VODA. Would you restate that for me?

Chairman TOOMEY. I guess what I am saying is if a given utility says you know I want to go to great lengths to make sure that my customers do not experience a blackout that originates somewhere else, but affects my area, in order to achieve that protection, that higher likelihood of providing the service, the nature of this technology is such that someone else has to have this monitoring system? The other utilities that you are worried about have to be providing you with information, is that correct?

Mr. VODA. Not absolutely correct.

Chairman TOOMEY. Okay.

Mr. VODA. In the situation of the blackout of the northeast, if certain groups would have had this technology in place today, any one along the region of the cascading event could have halted the continued tripping events that occurred that ultimately led to the power outage in Long Island.

It could have been stopped in Michigan or Pennsylvania or New York or Canada and at any one of those points could have halted the potential tripping event. The difficulty today is that the events can come from any one of a number of locations, as it is a complex system.

The question of where to put them is as much of a problem as who is responsible to pay for it and who takes accountability, if they have this technology and an event occurs. Does that make sense to you?

Chairman TOOMEY. I think we are making progress on this.

Mr. VODA. Okay.

Chairman TOOMEY. But I think we are going to need another round of questions. My time is expired. At this point, I will recognize the gentleman from North Carolina for his questions and then I will proceed with the second round.

Mr. BALLANCE. Again thank you, Mr. Chairman and Ms. Orzano, thank you for coming and other witnesses. I will start with a few questions.

I am sort of more focused on the small business side of it and I know some of these questions will not be precisely directed at your business, because I have heard the answers you gave to the Chairman.

I understand that $5 million was made available through FEMA. In New York, that is a drop in the bucket. There was 36 million every hour I am told that was lost. Did any of that money make its way into your business?

Ms. ORZANO. No. We have not been directed to it. Similar to the 9/11 attacks, there were so many requirements and I guess we were 35 miles away and even though we were affected, but not directly. I think the requirements are probably too vast for spread, but I definitely will look into it and pursue that.

Mr. BALLANCE. Among your colleagues, I know from your testimony that some were harder hit than you were. What has been the experience that you know about, if you do know, of their attempts

to work through SBA or some of those federal programs for loans or any other help? Have you had any experience in that?

Ms. ORZANO. From my dealings with the chamber of commerce in my area and again not my 7-Eleven colleagues, but from other businesses, I know that some did apply for small loans and were successful. Again, I think it had to do with certain criteria, like restaurants that were directly affected and that is really all that I know of in my experience.

I have just seen after 9/11 and I have seen so many small businesses close, because they were directly affected by the economy and the people that were involved day-in and day-out were not frequenting their business.

As far as the blackout situation, obviously anybody that is a 24-hour business and does not close at five o'clock was affected the most and some areas did not receive their electric back until three in the afternoon. They might have been affected for almost two days of business.

Mr. BALLANCE. Again from your chamber experience, what were you told, those who may have had generators? I guess there may have been some who did have gas generators.

Ms. ORZANO. Those who had the generators I believe they were able to hold on as far as their lights and immediate equipment. In our situation, a generator would only provide for the lighting and perhaps the cash registers. It could not maintain the equipment capacity. I really do not have too much experience. I do know a few people have them, but——.

Mr. BALLANCE. So you need the power?

Ms. ORZANO. We absolutely need and we are being forewarned by LIPA that this may occur again in the near future.

Mr. BALLANCE. Thank you. Mr. Lenard, what would you say to those who argue that we have voluntary reliability standards, it is a lack of enforceable standards that lead to the problems on this date August 14 and that ultimately led to the blackout?

Mr. LENARD. I do not know that we know exactly what caused the blackout and I do not know that there is evidence to suggest that the voluntary standards were not being complied with. I am a little skeptical of mandatory reliability standards.

I think a lot of this may take coordinated action, but in a lot of industries we have voluntary standard setting bodies that work very well and set technical standards for the industry in a lot of contexts. I am a little skeptical that having reliability standards, especially as many of the current proposals have it under the overall auspices of the FERC, which is the economic regulatory agency.

Mr. BALLANCE. Talking about FERC and moving into that area, in your article in the Washington Times I believe, you do not have too much confidence in FERC being able to——.

Mr. LENARD. I think FERC is currently what they have been doing in the last year or two with the standard market design proposal. As I said, designing this market in so much detail and they cannot possibly know whether that is right. Nobody really knows whether that is right.

Various market institutions develop by themselves by a course of trial and error. If this is all being done by the government, it is going to be a very slow process to correct these errors.

Mr. BALLANCE. Mr. Chairman, if I can ask one more question. It seems to me we have a nationwide system that has just been thrown together. I do not know how it got together, but somebody has to sort of put some controls on it, it seems.

I do not know if one individual or two individual companies can do it. Who is going to put their arms around this problem?

Mr. LENARD. As I said, I do not know that any one entity has to put its arms around the whole problem. I think that you need to have a system which is what market systems do, where the individual companies have the right incentives to serve their customers, to provide reliable service to their customers, to invest in the upkeep and the expansion and to buy the types of products that ABB produces in order to provide reliable service to their customers.

I think the competitive system will do that better than having a government agency try to write rules for the entire network.

Mr. BALLANCE. Thank you.

Chairman TOOMEY. Thank you. At this time I will recognize for questions the gentleman from Ohio.

Mr. CHABOT. I thank the Chairman for recognizing me. I had a Committee meeting. A markup in another Committee. I apologize for being late. I look forward to reviewing the testimony that you have submitted here today.

The one question I have and Ms. Orzano, you would be best to perhaps able to answer this, I just saw it in your testimony and that was about one of the things that small business folks oftentimes struggle with is how much insurance coverage to have and what they are going to cover and especially after September 11 when the rates were going up dramatically.

Could you just comment perhaps what you or maybe others in the small business community had to deal with, with respect to insurance coverage and in general it is state regulation rather than us up here at the federal level that are involved in that?

I am just wondering what the small businessperson struggles with when they are determining how much coverage they want to have and whether most of your colleagues were covered or were not covered and how they are dealing with that.

Ms. ORZANO. The majority of my colleagues dropped the entire business interruption package, because of the rates rising. They were over 40 percent. In their respect, they felt it was not worth it. I myself has an extensive security system. My husband actually owned the store for over 33 years. Obviously I have not been involved that long.

We always believed in no matter what the costs were, but this 9/11 situation, the food spoilage with a $1,000 deductible on each piece of equipment, you know when you are dealing with an inventory of say frozen food and food of say maybe $20,000 and then you have a $1,000 deductible on each case and then the insurance costs as much as the deductible almost. Obviously it was very impractical and unaffordable. However, we did have it for the prior 30 years.

With the other members of my group, we had a meeting approximately two weeks ago on this subject and they all were screaming that they could not afford the insurance. I myself dropped my in-

ventory coverage. I used to have full coverage for my inventory. I now dropped it to probably 50 percent, because of the rates.

We are basically looking in lines of $1,000 a year just for inventory coverage, as long as it is under $100,000. Then you add business interruption. You go down into the smaller things like food spoilage. The package becomes roughly $5,000 on my small business, where we used to pay $500 perhaps for the whole package.

Therefore you know, just like any other cost cutting thing, you have to start eliminating where you feel that it is not necessary as much. The thing is with blackouts, they occur from time-to-time or the cases go down and quite often the vendor will supplement us, but obviously in this magnitude they would not. It was an individual store basis. That is why a lot of franchisees say I am not going to have it or other business people, because the vendor might help us out.

In this case, since it was everybody, whether it be a supermarket or convenience store, they were not going to offer any aid.

Mr. CHABOT. Thank you very much, Mr. Chairman. Yield back the balance for now.

Chairman TOOMEY. Thank you. I would like to pursue with Mr. Voda a little bit better understanding of how this works and what the obstacles are to implementing this.

Let me ask a couple of layman's questions. First of all, the technology that you are advocating, the widespread management system, is this a device or a system that is designed to evaluate subtle changes in electrical current and analyze them? Is that part of what this does?

Mr. VODA. Yes.

Chairman TOOMEY. Go back to my earlier example or hypothetical. If I were a utility and I distributed electricity and produced and distributed electricity say throughout Pennsylvania and I was concerned that a major power outage, a problem such as which originated in Ohio, could come in and have an impact on my state and I wanted to prevent that, would the solution for Pennsylvania be to deploy your system throughout my grid in Pennsylvania? Is that how you prevent an occurrence elsewhere from cascading through and knocking out?

Mr. VODA. Correct.

Chairman TOOMEY. It is. I thought that it was important to understand what is happening in other parts of the grid.

Mr. VODA. You would understand what was happening in other parts of the grid and the information you would deploy the technology on let's say your nodes, the point of inter-tie between the utility in the Commonwealth of Pennsylvania and the inter-tie of a utility in another neighborhood, another region.

That information basically reaches across state boundaries and allows you to know if frequency shifts are occurring at an accelerated rate or voltage or current instability conditions are occurring.

From that information then the Commonwealth of Pennsylvania, the utility company represented by that, would then trip the circuit breaker and island themselves away from the instability on the neighboring utility company.

Chairman TOOMEY. If that is the case, then is it true that I could, as a Pennsylvania utility, deploy this system and thereby in-

sulate my customers, without necessarily having any active participation from other utilities?

Mr. VODA. Correct.

Chairman TOOMEY. I could do this all on my own?

Mr. VODA. Correct. In fact, that is one of the difficulties is utility companies main purpose is the creation of generation and the delivery of electricity.

The mistake that they do not want to make is to falsely island themselves and thereby disrupting power to their neighboring utility companies, when it was unnecessary to do so.

Chairman TOOMEY. Presumably the systems that you and others manufacture has a sophistication to identify when it really needs to island itself and when it is not really necessary?

Mr. VODA. And the answer to that question is that the time interval for critical events, like the event of August 14, it actually was a duration of greater than minutes. It was into hours when the first situations began to occur and then the actual cascading event took place. It was over a period of several minutes.

Operators in each one of the utility companies was not made aware that critical events were occurring in their neighboring utilities and as a consequence were not prepared for the action, when the action began. What this does is give you advance warning in order to prepare yourself to island.

Chairman TOOMEY. Okay. Since the technology is out there, how long has this technology been available in the market roughly?

Mr. VODA. The activities have actually been occurring with universities and in trials for better than five years.

Chairman TOOMEY. The technology is out there. It is available in the marketplace. A company can go out and buy this and deploy this technology and then thereby protect its own customers. Why haven't all the utilities done it?

Mr. VODA. The answer to that question is that the way that it works in the marketplace today is that each utility company recognizes that the responsibility for their neighbor is their neighbor's responsibility. In other words, they rely upon a utility company that inter-ties with them to be in control of their system and to contact them via phone or some other mechanism if situations are inappropriate or going out of control.

There has been no motivation for them to apply this technology as a consequence of this action, because if they inappropriately take the action, if they inappropriately island themselves, then they could become financially liable through a variety of other reasons.

It is very difficult for them to make the decision to put this system in amongst all of them. Within the U.S. government though, in companies like Tennessee Valley Authority and Banderville Power Administration, they are moving forward to that as that is a much more mandated requirement within the more government controlled utility companies.

Chairman TOOMEY. Are you suggesting that the biggest impediment to companies deploying this system and thereby protecting their customers from cascading blackout is a fear of a legal liability in the event that the system islands itself inappropriately?

Mr. VODA. Inappropriately, correct. If they islanded themselves preventing the transfer of energy amongst inter-ties, it is not clear who would be liable. Operators, as I have been educated, rely upon the microprocessor relays that we manufacture as well to take automated control of the system, but the only time that will occur is when the system's static condition becomes so great that the circuit breakers activate in order to protect assets, not to protect customers.

Chairman TOOMEY. Right. At that point, the customer has lost service?

Mr. VODA. Correct.

Chairman TOOMEY. In the process of that. Gentleman from North Carolina care to ask any other questions?

Mr. BALLANCE. Just a small follow-up. We have a lot of small co-ops, probably elsewhere, but particularly in northeastern North Carolina. This technology that you are talking about is it affordable among those small co-ops, even if they got past——.

Mr. VODA. The direction of the solution would principally be for transmission owners, because the opportunity of cascading blackouts typically does not move into or can be prevented from moving into distribution areas and most of your co-ops actually are not generators and long distance transmitters of electricity, but rather are the consumers and the distributors of the electricity.

The real direction is to make sure that it never gets down to a distribution level across multiple area so that your customer base is maintained by your transmission companies making sure that they have protected your cooperatives.

Mr. BALLANCE. These co-ops would have to rely on someone else then, as they do now?

Mr. VODA. Correct.

Mr. BALLANCE. All right.

Chairman TOOMEY. This will be my last couple of questions, Mr. Voda, but I just want to understand this thoroughly, because this is fascinating. What you are suggesting, if I understand it correctly, is that there is a readily available and affordable product that if thoroughly deployed across the grid, would prevent the blackout that occurred in the northeast from happening again? Certainly on anything approaching that magnitude.

Mr. VODA. I am always scared to say the word prevent.

Chairman TOOMEY. Okay.

Mr. VODA. What I am very comfortable at saying is that it would have absolutely provided the information to many of the utility companies in advance of the cascading event that took their areas out so that they would have had the information 20 to 30 minutes in advance of what actually began to occur and when it did occur, that it occurred and it was controlled by equipment, rather than by operators making conscious decisions.

Chairman TOOMEY. You have an engineering background.

Mr. VODA. Right.

Chairman TOOMEY. If you will allow me this hypothetical, had the systems, yours and others' comparable technology been deployed throughout the grid, do you believe that the result would have been a much more isolated blackout?

Mr. VODA. Absolutely.

Chairman TOOMEY. Do I understand you correctly that you believe that the single biggest impediment to a wide scale implementation of this is legal liability or the perception of legal liabilities on the part of the utilities?

Mr. VODA. That is one of them. I would also tell you that the question of ownership of the transmission systems, the investment that they would make and the return on that investment is unclear. That the subject of RTO's and ISO's and that type of an activity prevents them from considering a national plan or regional plan and so when they look at it from an investment standpoint, it is not desirable.

Chairman TOOMEY. I want to thank all the witnesses. Ms. Orzano, thank you very much for providing the personal impact that it had on you and your family and your business. I think it is important for us to be able to put a face on what is a huge, staggering cost.

Mr. Lenard, I appreciate your input and advocacy for market base reform. I think Mr. Voda, you have given us a lot to think about, in terms of whether we ought to be thinking about whether there need to be incentives in place and whether there perhaps needs to be legal liability reform measures so that there is an incentive for utilities to provide the kind of protection for their customers that is after all available on the market. I want to thank you for that input and thank everybody for being here this morning.

The hearing is adjourned.

[Whereupon, at 11:00 a.m., the Subcommittee was adjourned.]

Opening Statement Of Rep. Pat Toomey
Hearing – The August 14, 2003 Blackout: Effects on Small Business and Potential Solutions
October 8, 2003

Good Morning. Thank you all for being here. Today we are going to examine how the August 14, 2003 blackout affected small businesses and look at potential solutions to prevent future outages.

By far, the worst blackout in our nation's history, hitting numerous areas in the Northeast and Midwest of the United States and Canada, the blackout served as stark reminder of the importance of electricity in our society. This unprecedented event posed severe threats to the public health, safety, and economy of several states and two nations. The consequences go far beyond the personal inconvenience of lights, refrigerators or air conditioning. Emergency services were disrupted, sensitive security systems were knocked off-line, and the general disarray that followed, most notably in New York City, was a severe cause of concern for the general public's safety.

According to a preliminary federal report, the blackout cost Americans anywhere between $4 and $6 billion in total, obviously no small price tag. Among those hardest hit were America's small businesses. The problems caused were not simply lost perishable merchandise and the loss of sales. Although for small businesses, these problems alone are not simply a blip in the revenue sheet, but numerous other problems still plague small businesses, nearly two months after the lights came back on.

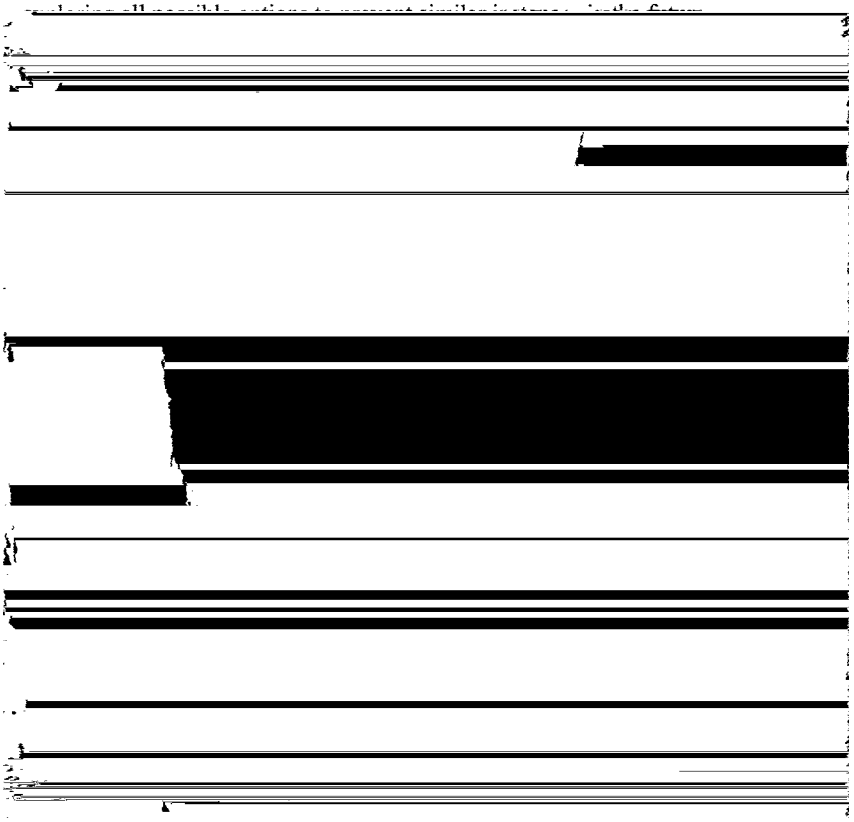
For example, the interruption of business activity resulted in the loss of millions of dollars of economic activity that will not be fully recouped through private insurance and state or federal programs. It is harder for small businesses to recover from events such as this. Small businesses do not have the numerous revenue streams of large companies; they do not have multiple locations to shift production to when there is a problem at one plant; nor do they have the resources to simply restock their merchandise immediately.

As is the case with most economic problems, small businesses were the hardest hit, and they need more time to recover. Unfortunately, in today's economy, time is what many of these folks simply do not have.

In August of this year, I had the opportunity to tour the Allentown facility of ABB, Inc. ABB is a technology-based provider of power and automation products, systems, solutions, and services. While there, I was given a presentation

on technology referred to as wide-area measurement systems by Mr. Doug Voda, Senior Vice-President and General Manager, who is with us today as a witness.

While I will let Doug give all of the specifics about this technology when he gives his testimony, it is my basic understanding that had this technology been in place at the various electricity substations across the country, the blackout could have been contained to a relatively small area. Given the cost, consternation, and lingering effects of this disturbance, I believe the federal government should be



Testifying today we have Ms. Patty Orzano. Ms. Orzano is the owner of a 7-11 franchise in Massapequa, New York. Ms. Orzano will be providing the Subcommittee with testimony regarding the extreme difficulties she has faced in the wake of the blackout.

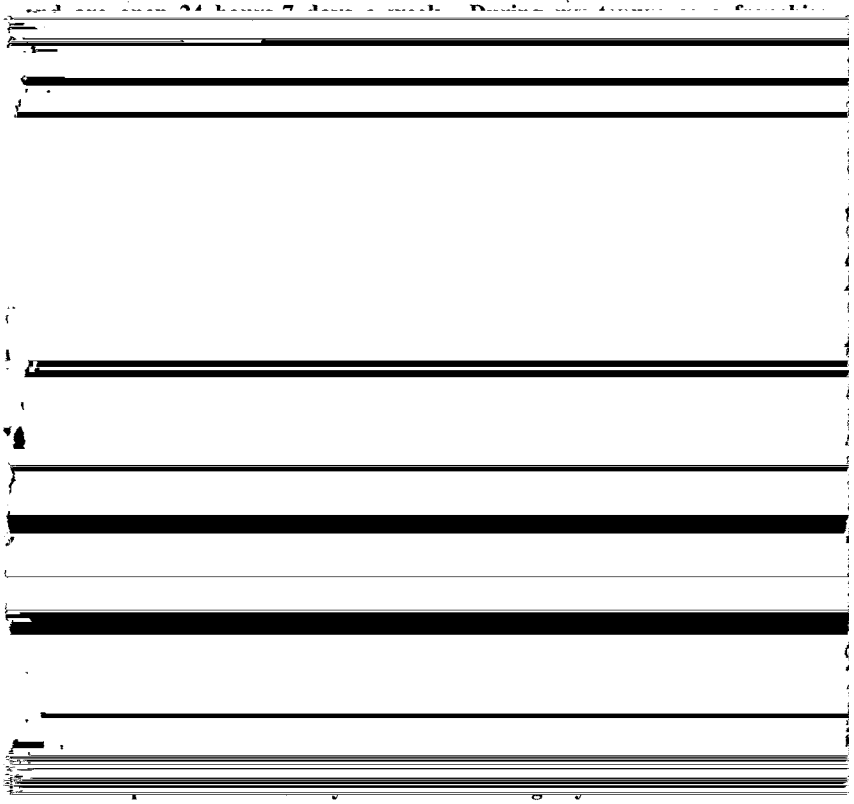
Also testifying is Mr. Tom Lenard, Vice President for Research at the Progress and Freedom Foundation. Mr. Lenard will be providing a synopsis of the current debate surrounding energy policy.

As I stated earlier, we also have Mr. Doug Voda the Senior Vice President and General Manager, Substation Automation and Protection Products, Automation Technologies Division, ABB Inc. Mr. Voda will be going over the specifics of the wide area measurement system technology. Before joining ABB,

Statement
on the
THE AUGUST 14, 2003 BLACKOUT: EFFECTS ON SMALL BUISNESS AND POTENTIAL SOLUTIONS
before the
HOUSE SMALL BUSINESS COMMITTEE,
SUBCOMMITTEE ON TAX, FINANCE, AND EXPORTS
by
Patricia Orzano

October 8, 2003

Chairman Toomey, Ranking Member Millender-McDonald and members of the Committee, I am Patty Orzano, franchise owner of a 7 Eleven located in Massapequa, New York. I have been the manager & co-owner along with my husband for over 25 years. We currently employ 14 people



The community of Massapequa, New York is a heavily populated town of over 60,000 residents within the county of Nassau, a direct suburb of New York City. The blackout began at 4:15 pm and within thirty minutes the entire population of New York was aware of the severe crisis at hand.

The scene in my stores now transpired to one of complete bedlam, filling with people occupying every square inch of the floor... Many began grabbing for bags of ice, batteries, flashlights, and other essentials while pushing others aside. The battery backup to the registers failed at 5:15pm, now faced with long lines of customers, myself and my three employees were recording sales on paper... During the next three hours, we served over five hundred customers. In order to manage the crowds, we required the aid of our local police officers, allowing only five or so customers at a time to be served...The Police officials asked us to close at darkness.

The 7-Eleven Corporation representatives called, and agreed that locking the doors at darkness was mandatory. After locking the doors, armed with flashlights and candles, two of my employees and I began to clean and re-organize the store. In order to secure the building, fixtures, and physical inventory, I asked my midnight employees to report to work for their shift, even though the store was closed and no business was being transacted. The additional labor costs were a necessity to ensure the security of the business.

The store was re-opened at 6:30 am, and the power was restored at 8 am. Some parts of Long Island did not have their power until 3pm. At midday, I recessed my food spoilage costs to be 3% of my total inventory. The 7-Eleven Corporation informed us that the company would cover our costs of our food spoilage through their own blanket liability insurance, since none of our wholesalers would issue any credits. In the New York Division, 255 stores lost power and over $200,000 in food costs was accessed.

Initially the losses were minimal consisting of extra labor costs and loss of gross sales for one half a day, however within days, the 7-Eleven company informed us that their insurance would not cover our food spoilage. At most, 7-Eleven, Inc would file a claim on our behalf in a future class action lawsuit against our energy companies. Now as small business owners we were faced with large economic losses in what should have been our most profitable month of the year. For many years, I had my own food spoilage insurance policy included in a business liability package. After the 9-11 Terrorist attacks, our business liability insurance increased 40%, with a 200% rise in the deductible maintaining the food spoilage portion of the policy became unaffordable and certainly impractical. Once again for the second time in two years we dealt another economic hardship with no recourse.

I would like to see Congress propose legislation that would grant additional tax credits for small business losses incurred by energy blackouts and unnatural disasters. Perhaps in the future, Congress can consider a National Small Business Liability Insurance Plan similar to The National Flood Insurance Plan that would insure small businesses for unnatural crisis occurrences.

Failures to expand and strengthen our infrastructure can have devastating effects on the survivability of small businesses. Even minor interruptions in service or spikes in price can cripple a small businesses ability to do business and have long lasting effects on cash flow afterwards. Small businesses can't prosper and thrive when essential public goods are neglected. When it comes to utilities I have no choice in which I use. Congress must vigorously work to provide small businesses unfettered access to a safe, cost-effective and reliable infrastructure. I believe that the stability of small business such as mine is only as strong as the infrastructure on which our economy rests. I again would like to thank the Chairman and Ranking Member for having this hearing and for inviting the me to testify.

Statement of
Thomas M. Lenard
Senior Fellow and Vice President for Research
The Progress & Freedom Foundation
Before the Small Business Committee
U.S. House of Representatives
October 8, 2003

Mr. Chairman and Members of the Committee. I appreciate this opportunity to testify before you today. In the brief amount of time available to me I'm going to try to provide some context for the issue which is the subject of your hearing today: the effect of the August 14 blackout on small business and potential solutions.

Let me start by suggesting that solutions to the problems of the electricity grid are not primarily going to come from Washington. Rather, the best way to provide greater reliability – for small businesses as well as everyone else – is to continue to move toward a more competitive, more flexible electricity market. We have already made significant progress in this regard. Greater reliance on market mechanisms since passage of The Energy Policy Act of 1992 has produced a more competitive bulk power market, with lower wholesale prices, and it has spurred substantial investment in new generating capacity. Indeed, the Department of Energy estimates that relying more on markets has saved customers $13 billion per year.

This progress is placed at risk by the overly prescriptive approach that the Federal Energy Regulatory Commission (FERC) is now taking – in particular, the agency's proposal for a nationwide Standard Market Design (SMD). FERC's SMD proposal – virtually unknown outside the industry – is an attempt to radically restructure the electricity sector and "design" electricity markets at a level of detail that is virtually unprecedented for any industry. Fortunately, Congress, with the current energy

legislation, is in a good position to tell FERC to step back, take stock and return to the more-modest, less-prescriptive course it was on before.

Although published over a year ago, well before the August 14 blackout, proponents of this rulemaking are now claiming that any delay in its implementation will interfere with FERC's ability to address reliability issues. In fact, the opposite is true. If adopted, SMD will make our electricity system more vulnerable to failure, because it is based on a fundamentally flawed premise – that the government is better equipped than the private sector to fix markets when they are broken.

The view that the FERC (or any government agency) has an advantage "fixing markets when broken" is simply not borne out by the evidence. Administrative processes are cumbersome, self-protective and subject to manipulation by political and other forces. Any government-designed market, no matter how flawed, will have beneficiaries and vested interests who will be able to slow down, and perhaps prevent entirely, the necessary fixes from being implemented. For example, despite its obvious flaws, the California market design – which, by the way, was approved by FERC before being put into place – was allowed to persist until it virtually bankrupted all the utilities in state. Even then, it was "fixed" in a way that shifted enormous costs to the already-overburdened taxpayers of the state.

Real markets, in contrast, self-correct rapidly once they process the relevant information, because private actors typically have sufficient incentives to deal honestly and forthrightly with each other. Despite any market imperfections that might have existed, there is little doubt that California's crisis would have been over more quickly

and cost the state's consumers and taxpayers substantially less if its electricity markets had been completely unregulated.

While we do not now know precisely what caused the breakdown of the electricity grid on August 14, it is unlikely that an electricity market designed by FERC is the answer. Here are just a few of the reasons to be concerned about what the FERC is proposing to do:

- FERC's new plan would place billions of dollars worth of transmission assets under the control of non-profit, quasi-regulatory Regional Transmission Organizations. This separation of ownership from control of economic assets is virtually unheard of in our system. It is unclear what incentive structure will guide these entities, to whom they will be accountable, or whether they will be responsive to the interests of groups such as small businesses.
- The proposal does little or nothing to improve the incentives for transmission investment. There are serious electricity bottlenecks in all parts of the country that remain neglected. At least part of the reason for this is the highly uncertain environment created by regulators, which is not conducive to investment. The FERC's new plan, which relies on cumbersome transmission planning processes, would only exacerbate this situation.
- The Department of Energy, which was initially a strong supporter of the FERC SMD proposal, was able to come up with only about a billion dollars of net benefits in its cost-benefit analysis. This is surely well within the margin of error for a $230-billion industry.

- The proposal does not even standardize market design everywhere, because it doesn't apply to public power entities. This may create opportunities for inefficient regulatory arbitrage between regulatory systems.

FERC is correct – and virtually everyone is in agreement on this – that the overall success of the effort to reform electricity regulation depends to a large extent on the treatment of transmission. An efficiently functioning transmission network with appropriate incentives to invest in capacity is essential to increase reliability, avoid market power problems and achieve the full benefits of electricity competition. However, while transmission continues to have monopoly attributes, and therefore will need to be subject to regulation for the foreseeable future, it is critically important that transmission be viewed as a business rather than just a "platform" for other businesses. Transmission owners must have better incentives to invest in their facilities, because – as is also generally acknowledged – investment in transmission has lagged in recent years. Moreover, the most cost-effective ways of expanding transmission capacity are likely to be by upgrades to existing systems by their current owners. A system that is bureaucratic and designed to squeeze every last cent of profit out of owners will not be conducive to investment or other system improvements. A system that requires transmission owners to hand over the control of their transmission assets to non-profit Regional Transmission Organizations (RTOs) will exacerbate the lack of transmission investment and lead to further regulation in an effort to increase investment instead of leading to more competition.

One of the great advantages of a competitive electricity market is that it can allow customers to purchase the amount of protection against risk that they want. In

electricity, risk comes in two forms, the risk of unacceptable price fluctuation and the risk of supply failure – an extreme form of price fluctuation. A competitive market should enable customers to purchase the amount of protection they desire from price or supply fluctuations.

Retail customers have greatly varying tolerance for these risks, but the existing limits on retail prices mean that differential risk aversion does not get expressed in wholesale markets. Some customers (e.g., computer chip manufacturers and hospitals) are unable to tolerate any supply failure and others (e.g., low-income residential customers and some manufacturing plants) have a low tolerance for price fluctuations. Others, particularly some industrial customers, can accommodate rapid price fluctuations and with reasonable warning can accommodate interruptions without undue hardship. A market must have instruments available directly and in secondary markets to hedge risks for individual customers or aggregated customer groups who demand such products. Indeed, different degrees of reliability are one of the major services that a competitive market will be able to provide, to appeal to the variety of customer preferences with respect to reliability. This could be especially important for small businesses, which, in the current system, may have greater difficulty than large businesses protecting themselves against price and supply risks.

Historically, system-wide reliability has also been augmented by voluntary reliability standards developed by the North American Electric Reliability Council (NERC). These standards were developed, mostly under the leadership of investor-owned utilities, in response to the increasing interconnectedness of the system and several severe outages. In recent years there has been an effort to make these NERC

standards enforceable by FERC through the federal regulatory process. I am somewhat skeptical about this approach. Voluntary, industry-developed reliability standards have a place in this industry as in many others. Indeed, because the industry is so interconnected, they may well be more important in electricity than elsewhere. Whether mandatory or voluntary, the standards should be technical in nature, establishing minimum levels of performance and limiting the consequence of individual events. Beyond that, markets in reliability should be allowed to develop.

Mandatory reliability standards, which some have proposed, would inhibit the development of such markets. Moreover, they would socialize the costs of reliability, forcing everyone to pay for an average level of reliability that may be more than an industrial plant or a household (whose major cost may be a day with the thermostat set at a higher setting) wants to pay, but would still not meet the needs of hospitals and the chip manufacturers, who may be forced to leave the system in order to obtain the reliability they require.

A major impediment to reliable and efficient electricity markets is the absence of price-responsive demand in electricity markets. There is a simple reason why demand is not price-responsive – prices are not allowed to change in electricity markets as they do in virtually all other markets. Once prices are permitted to change, we find that demand does respond. Moreover, investing in making the system more demand responsive may be one of the most cost-effective ways of investing in the network – less expensive than upgrading transmission. In the current environment – in which there is very limited demand responsiveness – the only way to adjust to an increase in price is to build more capacity.

The Federal government's ability to do something about this is somewhat limited, since retail price regulation is the domain of the states, but it should do what it can to encourage investments in demand-responsiveness and to encourage the states to move in that direction.

The most effective thing the Congress can do now to enhance reliability is to tell the FERC to abandon its SMD proposal, and there is apparently language under consideration in the energy bill that would accomplish that. Congress should be extremely concerned about endorsing a proposal that can only be described as a risky regulatory experiment. If FERC goes forward with SMD, it will take years before the inevitable mistakes are corrected (if they ever are) and a stable set of rules emerges. The resulting confusion will yield a less – not a more – reliable electricity supply.

TESTIMONY OF DOUGLAS A. VODA

SENIOR VICE PRESIDENT AND GENERAL MANAGER
AUTOMATION TECHNOLOGIES DIVISION
ABB INC.

BEFORE THE
HOUSE SMALL BUSINESS
SUBCOMMITTEE ON TAX, FINANCE AND EXPORTS

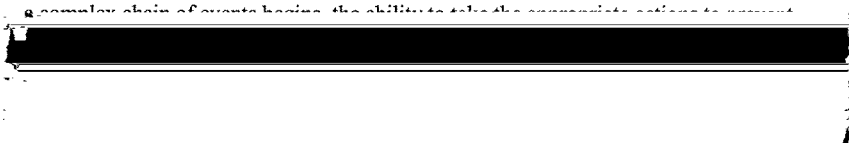
OCTOBER 8, 2003

Chairman Toomey, members of the Subcommittee, thank you very much for granting the opportunity to appear before you today to discuss the recent U.S. blackout, its effect on business and technological solutions which would reduce widespread power outages in the future. My testimony today will identify currently available technologies, with an emphasis on Wide Area Monitoring Systems. This technology should play an important role in reducing the potential for cascading blackouts, such as those that caused such a disruption in our economy on August 14.

I appear before you today in my role as Senior Vice President and General Manager of the Automation Technologies Division of ABB Inc, in Allentown, Pennsylvania. Our business provides protection and control systems including microprocessor relays and Supervisory Control and Data Acquisition, SCADA, to electric utilities and industrial customers. These systems monitor the condition of the electrical systems and signal protective devices, such as circuit breakers, to interrupt the circuit if there is a danger to the stability of the system or the equipment within it. Through ABB's development efforts, as well as those of our legacy brands such as Westinghouse, we have been a leader in bringing new technology to this business since the 1890's. Mr. Chairman, for reference, ABB is a leader in power and automation technologies that enable utility and industry customers to improve performance while lowering environmental impact. The ABB Group of companies operates in more than 100 countries and employs around 133,000 people. Here in the U.S., we employ greater than 10,000 people in over 40 states.

A great deal of speculation has surrounded the cause of the recent blackout, and I will not add to that today. Task forces have been commissioned to understand the precise sequence of events, some only milliseconds apart, that led to the extensive cascading of the blackout across many different systems.

of time, sometimes minutes, sometimes milliseconds. While it is not possible to predict or prevent all of these events, utilities have contingency plans that define the actions needed to maintain electrical service for most expected sets of problems. However, when



Wide Area Monitoring System (WAMS) technology, such as that offered by ABB, exists that utilizes GPS satellite signals to very accurately create measurement information and perform analysis on system conditions and indicate if system instability conditions are beginning to occur. These measurements can then be aggregated and compared to see if and where the system is beginning to be stressed. It is even possible to monitor neighboring grids, giving operators additional minutes to react to prevent the disturbance from spreading.

ABB's WAMS technologies have been deployed successfully in pilot projects over the past two years. I propose that direction be defined that provides a clear vision of expansion of these systems to and from substations across the US, thus giving added time to operators to prevent blackouts, or to certainly keep them from cascading as they did on August 14. WAMS is one tool that can be used by utilities to help maintain the needed reliability of their systems.

The performance and reliability of the nation's transmission grid can also be enhanced quickly with the application of proven technologies to increase capacity, with significantly lower environmental impacts, compared to conventional methods of upgrading the grid with overhead lines. Such proven technologies include:

- **HVDC Transmission:** High Voltage Direct Current power electronic systems allow power flow across regions, delivering power from generators to where it is needed without burdening the existing AC (Alternating Current) grid or adding to its congestion. HVDC links also have built-in overload control and

can be loaded fully without increasing the risk for cascaded line tripping. In addition to the benefits of traditional HVDC, this technology offers enhanced voltage control and black start capability.

- **HVDC Light:** In addition to the benefits of traditional HVDC, mentioned above, this latest technology will offer enhanced voltage control and black start capability. With this technology, utilities can the restart their systems more quickly following a total blackout. It is cost effective at lower power ratings than traditional HVDC systems, enabling it to be applied to smaller, but critical needs.
- **FACTS Devices:** Flexible AC Transmission devices, such as Static VAR Compensators (SVC) and Series Capacitors, enable more power to flow on existing power lines and improve voltage stability. They make the system more resilient to "system swings" and disturbances.

- **GIS (Gas insulated sub-stations) and underground cables.** Enhancements in conventional technologies have allowed large amounts of power to be transmitted and distributed in a compact and un-obtrusive way. Examples of such devices are gas-insulated substations, which can enhance the reliability of an urban network in a minimum of space.

- **Life Extension.** Modern materials and design analytics often allow manufacturers to economically upgrade the capacity of existing equipment, to improve its reliability and to increase its useful life.

These technologies can provide the insight into grid performance, increased grid capacity and tools to deal quickly with potential system interruptions that could have mitigated or prevented the widespread power outage of August 14.

Mr. Chairman, as a representative of one of the largest suppliers of solutions to the utility industry, ABB appreciates the opportunity offered in your letter of invitation to testify to offer comments regarding policy and regulatory issues related to the electricity sector. ABB has been very active in efforts leading to the current Conference now taking place on a new Energy Bill. We believe:

1. The NERC should have power to develop and enforce mandatory reliability rules and standards that are binding on all electric companies, transmission organizations and market participants. This is now part of both the House and Senate Energy bills now in conference.

2. The Department of Energy and the Federal Energy Regulatory Commission Agency, working in concert with utilities and transmission companies, should develop a consistent and common format that utilities and transmission organizations could utilize to undertake a system wide vulnerabilities assessment. The assessment, performed by the utilities and transmission organizations, would be submitted to the FERC for review and comment. FERC would report to the Congress as to content and implications of the reports. There is currently no provision for this

legislation in the either the House or Senate Energy bills now in conference..

3. A National Electrical Reliability Commission should be established with membership drawn from appropriate legislative committees and executive departments, and relevant members of the private sector. The focus would be on near-term specific recommendations that the federal government should undertake in a post-Energy Conference environment. The Commission should direct attention to long-term transmission investment, reliability, and the application of advanced technology to improve grid effectiveness. There is currently no provision for this legislation in the either the House or Senate Energy bills now in conference.

4. Incentives created for utilities and RTO/ITC's to spur adoption of new technologies—such as real-time wide area monitoring systems, HVDC Transmission, FACTS devices, GIS, and life extension of existing assets, —whether in the form of guarantee loans, DOE grants, or investor tax credits. The current House and Senate Energy bills now in conference only include depreciation changes.

5. ABB strongly supports a number of other provisions pending in either the House or Senate passed legislation:

- Changes in US Tax Code to provide enhanced accelerated depreciation for transmission and technology investments and a hold harmless for companies that sell or dispose of transmission assets.

- Support for enhanced pricing provisions for increasing rates of return and capital investment in transmission refurbishing and construction.
- Citing authority and permitting process reform.

- Transmission permitting process simplification on federal lands.

At ABB, we know that the United States has the world's most complex and demanding power system. This system must keep up with increases in demand and the emergence of competitive power markets. The technology exists to bring the nation's grid up to the desired level of reliability and performance. Congress has the duty and obligation to create an environment that will spur investment in the grid and to ensure against future power outages. ABB hopes our testimony today will help advance that goal.

Thank you

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