

Commissioner Clark: Thanks Dean Weiser and thanks Mr. Schultz for your sponsorship of this event and all the good work that you are doing at Colorado Law. Thanks especially for a tip of the hat to my home state of North Dakota.

I've been in DC for about a year now full time, about a year and a half on the Commission – I commuted for a while. I am reminded daily of just how small a world it is in North Dakota and the roots that I'm very proud of. I was reminded of it the other day. Everybody sort of knows each other in North Dakota in case you don't know and aren't familiar with small states.

But I was getting packed up at home, and my middle son Alex was watching me put some things together. I was getting packed up for a trip, I happened to be going back to Bismarck to speak at an energy conference there last week, and I said, "Alex I'm heading back home, do you want me to say hi to anyone?"

He said, "No, no, not really." And then he paused for a second and he said, "Dad am I still a North Dakotan or am I a Virginian now?" Of course I wanted to answer the question for him but I didn't, I kind of played cool and said, "I don't know Alex, what do you think?"

He thought about it a little bit and he said, "I think I'm still a North Dakotan." Of course I was really happy when I heard that, and so I said, "You've got lots of friends of here, too. You made the hockey team; you are having a good time with that. You've got good friends at school." He said, "But, yeah, in North Dakota I had adult friends."

And I thought, oh boy, where is this going. I said, "Well what do you mean by that?" And he said, "Well, you know, like the governor."

I thought of two things. Number one, I was glad that he was still proud of his North Dakota heritage and, number two, after one year in Washington he has already picked up that annoying habit of being a name dropper.

In any case, it has been an enjoyable experience, my first about now a year and a half on the Federal Energy Regulatory Commission.

What I thought I might talk about a bit tonight are really two issues in relationship to the passage of the Energy Policy Act of 2005 that deal with reliability and market manipulation, those things that the FERC has authority over. And that is some light pre-dinner fare for all of you who are here at 5:30 in the afternoon, so I thank you for hanging in there.

Hopefully it will be an interesting tour and a bit of a retrospective now on this law that we've had a number of years to get our sea legs, as it were, at the Commission.

This past summer, 2013, the United States passed an anniversary that came and went with at least a little bit of fanfare in the media, although for those of us who are involved in the energy regulatory world it probably offered a little bit more upon which we could reflect. What it was is this August, actually, marked the 10-year anniversary of the northeast US blackout, which

blackout a large portion of the country. About 50 million people from the Northeast through the Midwest and into Canada lost power because of that event.

That event took place really almost two years exactly after another cataclysmic event in the energy industry and that was the meltdown of Enron and the revelations of extensive manipulation of energy markets in the western US.

These two events taken together really created the legislative impetus and the political will to overhaul how we oversaw these activities in the US. These two events were really the watershed events that changed how we oversee these activities and how FERC enforces them. The legislation that was passed was the Energy Policy Act of 2005. I'll probably shorthand it and call it EAct '05 throughout the rest of the speech. It dramatically changed how the Federal Energy Regulatory Commission was empowered to enforce laws related to reliability and to market manipulation.

FERC's enforcement program prior to EAct '05 was limited in its effectiveness, and that was due to the absence of authority to impose any meaningful civil penalties to enforce the Natural Gas Act and Part II of the Federal Power Act. EAct '05 cured those deficiencies by amending the Federal Power Act to provide for civil penalties of \$1 million per day, per violation of any provision of rule or law or order of the Commission. This \$1 million per day, per violation increase was significant because, previously, the Commission's authority was limited to only \$10,000 per violation, per day.

EAct '05 also explicitly for the first time made illegal market manipulation. In this day of political gridlock in Washington, DC, that we've all watched over the past several years it is easy to forget that, in fact, government can work and can move from time to time to address needs that are important to the American people. It didn't happen overnight of course, nothing in Washington, DC, or at least very little does happen overnight. It took two years between that blackout and almost four years between the events in the western US before this law was passed.

But yet the fact that the federal government did act is a testament to just impactful these events of the early 2000s really were. EAct '05 was passed with overwhelming bipartisan support. It passed the House with the support of 200 Republicans and 75 Democrats; it passed the Senate with the support of 48 Republicans and 36 Democrats. Large majorities of both caucuses.

On August 8, President Bush signed the legislation, and since it has become law it has been actively and appropriately administered by both Democrat- and Republican-led FERCs. In almost all enforcement proceedings it has been a unanimous coalition of Democrat and Republican commissioners, regardless of which party holds the Commission seat at any given time when we deal with these orders.

So with this history as a bit of a backdrop, what I thought I might do today is talk about these two areas in particular that we've now dealt with since the passage of the Act – reliability and market manipulation.

In so doing, I'll offer probably a little bit of the nuts and bolts of how the Commission addresses these two areas of our work, but at the same time I hope to offer a bit of a retrospective into some of the lessons I hope we are learning along the way both as regulators and those who are operating in the regulated industry.

Let's begin with reliability, and as I do that I will have full disclosure here. This is not fancy stuff, reliability. It is the nuts and bolts of the utility world. But I will also say this. It is very, very important stuff. This is about keeping the lights on. It is about public health and safety. It is about the very life blood of the American economy and the modern way of life that we have all come to enjoy.

Getting back to where I began the talk, the Northeast blackout of 2003, a joint US-Canada task force that was convened after that blackout studied the cause and effect of it and identified the need to make reliability standards mandatory and enforceable with penalties for noncompliance. So in EPAct '05, Congress entrusted the Commission with a major new responsibility to oversee mandatory, enforceable reliability standards for the nation's bulk power system.

The importance of this change cannot be understated. The business of reliability became not just a set of industry best-practices, it became a matter of national importance. It was underscored by mandatory rules enforceable by significant penalties.

But Congress did not draw a straight line between FERC and the regulated industries and standard-setting process. Congress created an interesting creature which, as those of you in the energy industry probably know about, has become known as the FERC-NERC process. I'm going to throw a lot of acronyms at you tonight. Through section 215 of the Federal Power Act, Congress authorized FERC to certify an electric reliability organization or ERO.

I think we all knew that NERC would probably become it because it was the only entity that was involved in this particular business. NERC is the North American Electric Reliability Corporation. It is a not-profit entity, whose mission is to ensure the reliability of the bulk-power system in North America. It was actually created after the last great blackout prior to that, the 1968 blackout, but its standards had always been more voluntary than anything else.

So what does this all mean? Well, NERC develops and enforces reliability standards, it annually assesses seasonal and long-term reliability, it monitors the bulk-power system through system awareness, and educates and trains industry personnel. NERC is subject to oversight by FERC, and it is under similar obligations in Canada.

But more important, while FERC can direct NERC to take up certain matters, it is NERC that develops the standards. We, as federal energy regulators at FERC, can ultimately approve them, which makes them mandatory and enforceable, or we can reject them, but we cannot unilaterally amend them.

To give you a high-level overview of what these mandatory reliability standards cover, they collectively define the overall acceptable performance with regard to operating, planning and designing the North American bulk-power system. Some of the reliability standards focus on

how utilities prepare their own employees; how they train them; the standards that are required of those utility companies; best practices in regard to training and education. Some of them focus on how utilities prepare their employees and their systems for things like cyber attacks or for snow storm events. One of the big triggers for the Northeast blackout happened to be trees growing into high-power transmission lines, so we have vegetation management standards that address the level of tree-trimming that utilities have to undertake to ensure that the bulk-power system can remain free from both the danger trees and hazard trees.

And for those of you who are law students here and aspiring lawyers who love this sort of minutia I will tell you, yes, there actually is a difference in the law, in our regulations between danger trees and hazard trees. I won't bore you with that right now, but in the Q&A maybe I'll get into that.

NERC and FERC, through our Office of Reliability and the Office of Enforcement, often work together to investigate severe weather reliability events that impact the bulk-power system. At the end of the investigation we will issue a report of findings so that other utilities can learn from the events that we have. It is not uncommon, however, for FERC on its own motion to undertake separate investigations after some sort of reliability event and potentially assess penalties for noncompliance with the reliability standards by the users, owners or the operators of the bulk-power system.

But today we are increasingly learning that threats to the grid go far beyond just the physical grid itself. It extends, increasingly, into the world of cyberspace. Here, too, EPAct '05 has served us fairly well at least as far as it goes.

Many of you may recall that in February of this year President Obama issued an executive order entitled, "Improving Critical Infrastructure Cyber Security." In that executive order the president declared that the cyber threat is one of the most serious economic and national security challenges we face as a nation, and that America's economic prosperity in the 21st century will depend on cyber security.

In that context, an important part of FERC's current responsibility is to oversee the development of cyber reliability standards for the bulk-power system. The first version of these critical infrastructure protection standards, which you will sometimes hear referred to as CIPs, was proposed by NERC in 2006. Since then the Commission has directed NERC to make numerous changes to the standards to improve cybersecurity.

Seven years later we are asking the industry to implement and to come into compliance soon, potentially, with what are known as CIP version 5. So we have come through five iterations of these, which just proves that as the electric grid evolves and as threats to the electric grid evolve through cyber threats, so must the standards.

With the help of audits and members of industry working with NERC, the FERC continues to promote industry best practices in order to minimize potential vulnerabilities, raise security awareness, strengthen the cyber defense policies and procedures to protect the bulk-power system from malicious cyber attacks.

And while these are important steps, I would also hasten to add that they are really just first steps because I would be the first to acknowledge that they are not the be-all and end-all for cybersecurity protection. Indeed, the term standard itself – quote, unquote – in the context of cybersecurity, I think is a bit of a misnomer. When you are talking about cyber, as soon as a detailed standard is written down on paper it, in the cyber world, can quickly become obsolete.

Rather, it is probably better to think about what FERC is doing in the cyber world as attempting to promote an ecosystem of security, wherein best practices are instituted to significantly reduce potential bad outcomes. Yet for all its good work, the FERC-NERC iterative process is not well-suited to address what have come to be known as fast-moving threats in the cyber world.

FERC staff testified before Congress shortly after the president's executive order and stated that FERC's current legal authority is simply inadequate to protect against entities intent on attacking the US through vulnerabilities in our nation's electric grid. Staff explained that the NERC standards development process is too slow, it's too open and it is too unpredictable to ensure responsiveness in cases where national security is endangered and circumstances require urgent actions.

I think it is also worth noting here what happens with FERC's jurisdiction when it actually comes to protecting the grid and keeping the lights on. The term bulk-power system, which is where FERC really gets its authority is over that bulk-power system, is defined in the Federal Power Act, and it excludes most facilities that are used for local distribution as well as any facilities that are in Hawaii or Alaska. The current NERC interpretation of bulk-electric system excludes virtually all of the grid facilities in certain large cities, such as New York, thus precluding the Commission from taking action to mitigate cybersecurity or other national security threats to reliability that involve threats to major population centers.

It is also important to note that much of the smart grid equipment that is being installed on these facilities gets installed at the distribution level, in other words sort of the local town level or at the meter level, and these do not fall under Commission jurisdiction. These jurisdictional dividing lines between state and federal regulators necessitate a continuing and ongoing dialogue to share information and to raise awareness about the threats and vulnerabilities to the electric grid at both the transmission and the distribution level because to a customer who is sitting there and whose lights come on, they don't really care if that volt came at the transmission level or the generation level or the distribution level. They just know their lights don't work.

Let's move on to my second area of promised discussion, which is about market manipulation. These matters tend to take on a fairly high-profile view in the realm of the work that the Commission does. I suppose it is because they bring back very vivid memories for many of us of Enron and the corporate greed and malfeasance, and really the debacle of the entire situation in the early 2000s. If bad enough, they can take on a life of their own, not only in civil proceedings but they can take on aspects of criminal proceedings as well.

I would just say at the outset, I would stress how very seriously I personally take these issues of market manipulation both in the energy markets and the natural gas markets. My first few months as a state regulator, I guess when I was kind of a baby regulator, were in 2001 right at the

clasp of when the California energy crisis was happening. And like so many others who watched that and subsequently have read a lot of the reports and books, and so on and so forth, that have detailed how that event all went down and the lead up to the event, both industry decisions and regulatory decisions, what happened now 13 years ago had a great impact on me.

I never necessarily thought, at least until recently, that I would end up at FERC. As a state regulator I'd read through those books and think, you know, if I'm ever in a position to stop the next Enron, I am going to do what I can, at least in my role, to ensure that that doesn't happen again.

So I take these matters very seriously in market manipulation. Without constant and effective oversight of the markets within our jurisdiction, we run the risk of permitting bad actors, be they individuals or companies, to harm our markets and, ultimately, innocent stakeholders and consumers. A few bad actors can stymie investment in an industry that desperately needs it and deserves it.

I'm sure many of you follow the various trade presses and other general publications, I know I do, and I would imagine that you've probably seen some of the efforts of our Office of Enforcement over recent months that have been fairly high-profile issues with some of the market participants, especially as it relates to investigating market manipulation and potential fraud in the energy markets.

The concern that we as regulators face in an era of some of the energy scandals that I talked about – but even on a larger scale things like Libor and Madoff and Countrywide – is that some companies may still not believe that the benefits of compliance outweigh the costs of getting caught. That is troubling.

When I speak to industry, my advice to compliance officers or in-house counsel, or similarly situated people that are in various levels of management in energy companies is as follows. If you are asked by your employees or the board of directors whether a particular transaction or a practice that you are about to engage in is proper, or maybe if it is even legal, what you should first ask yourself is whether you'd feel comfortable if all of the details of that transaction were printed in the Wall Street Journal.

Former SEC Chairman William Cary has argued that companies and their counsel should not only accept that public opinion influences regulation, they should also anticipate what type of conduct would then result in a public outcry against that particular action. Many practices that are safely pursued in private will lose their justification in public.

This is perhaps a good segue into something I believe that many regulators struggle with. This is the notion of rules-based enforcement versus principles-based enforcement. I'll tell you a little bit about what I mean by that.

Rules in the law, and that regulatory agencies promulgate, generally have very clearly defined meanings and they are meant to be easily applied to specific actions. So this makes rules-based enforcement much easier compared to principles-based enforcement, and it is often less

controversial because you can point to a specific action in a tariff or in a rule book, and you can see that a violation has occurred and then you can enforce that.

Principles, on the other hand, are a bit more vaguely defined. They require substantial investigation, usually a good deal of investment in both investigation and litigation, in order to enforce them. Because things like the concept of, quote unquote, fraud is defined in a more general way. A finding of fraud requires either a value judgment as to whether a misrepresentation was made, or a certain practice occurred with fraudulent intent, or evidence of that fraudulent intent and whether that evidence actually exists.

A regulator like FERC, or any regulatory agency really, cannot possibly create an all-inclusive list of every possible prohibited activity. There is simply no exhaustive or comprehensive rulebook of all possible scenarios that could result in some violation of our anti-manipulation rule, so the market participants, shareholders and regulators have to at some point rely on judgment.

Industry may demand, and often does, clear instruction via very proscriptive rules. But at the end of the day when you are dealing with statutes like manipulation and fraud, industry still has to make judgment calls. And this is where knowledge and forethought of how the actions will be received by public opinion can be instructive for those private actors. There is no single method by which fraud is best detected and, therefore, each case is intensely fact specific.

In March of 2012, so not that long ago, Andrew Fastow, who I'm sure many of you remember and know about, gave a speech. In fact it was a speech right here in Boulder at the Colorado Business School. As you recall, he was chief financial officer of Enron. It was kind of a profound speech in a lot of ways. He acknowledged that he and Enron had, quote unquote, used the rules to subvert the rules.

The key problem, Fastow told students here in Boulder, was that when rules are complex it creates a, quote unquote, business opportunity. He acknowledged that there are people who look at the rules and find ways to structure around them. The more complex the rules, the more the opportunity. Fastow explained that what Enron was doing was with the approval of the board of directors and with the accountants and the attorneys. He said the question that should have been asked was not what is the rule, but what is the principle.

Ultimately, the proper regulatory objective of principles enforcement allows for variations of the facts in cases, while giving enough notice to industry such that the law-to-fact applications are clear enough to provide guidance on the Commission's interpretations of its regulations and of its standards.

But this is a two-way street. The regulator must provide clear guidance as to the nature of prohibited conduct. The industry must apply the principles to specific instances so that, as Mr. Fastow stated, the rules aren't used to break the rules.

In so interpreting the laws we enforce, the Commission is guided not only by years of precedent, much of it is related to Securities law which has existed for 70 some years, but also by the

district courts, which have acknowledged that – this is a great quote from I think it was a 1971 case – “the methods and techniques of manipulation are limited only by ingenuity of man.” While Enron and others would have demanded that regulatory agencies have the prescience to include in a rate schedule all specific misconduct in which a particular market participant could conceivably engage, that standard is unrealistic and would either render regulatory agencies impotent to address newly conceived misconduct or would put us in the position where we are always attempting to follow last year’s misconduct, but never this year’s misconduct or future year’s misconduct.

The absence of a list of specific prohibited activities does not lessen the reach of regulatory agencies like FERC’s anti-manipulation rules, nor does it support the contention that FERC enforcers are simply making up the rules as they go along. It should come as no surprise that courts have recognized this and, in the context of fraud, that specific regulations cannot begin to cover all of the infinite variety of cases to which they may apply, and by requiring regulations to be too specific, courts would be opening up large loopholes allowing conduct which should be regulated to escape that regulation.

This brings me to my final point regarding the Commission’s interpretation of its regulations and standards, and that is compliance and the proper corporate culture. FERC staff, as we go through the auditing process, has reviewed countless compliance manuals that different companies have come up with. Usually they are written by very well-paid attorneys, very knowledgeable and competent people who understand exactly how these documents are to be written.

One of things that really stands out as we’ve gone through this review is that the compliance documents almost always get it right. They remarkably are written in a very exceptional fashion, probably exactly how in many cases our own enforcement staff would write it. Which begs the question on those occasions when a company’s conduct violates its own compliance guidance, were these just merely window dressing?

Requiring employees to attend an annual compliance workshop, which almost all companies do, is a good thing but it is going to have a limited impact if that just goes on a shelf until next year’s annual meeting. Having an active, well-trained internal audit department and a corporate culture that encourages the reporting of improprieties is essential. Studies show that corporate culture is a critical element of prevention; it is maybe the most critical element of prevention.

One of the better site visits that I had the opportunity to do in my time at the Commission was actually to a trading floor, an active trading floor. The manager of the floor was giving me a tour of how his compliance function has really beefed up in recent years.

He said that he basically has two requirements for someone who is going to be a compliance officer on their trading floor. First of all, that person has to have an expertise in the field itself. They have to know the nitty-gritty about how these trades go down and what sorts of thing go through traders’ minds when they’re making specific transactions. Number two, he said no wallflowers. What he meant by this was he wanted people who are aggressive in asking their own traders why deals were consummated.

They also wanted someone who was smart enough to know when the wool was being pulled over their eyes.

Transparency is another powerful tool for regulated entities. When companies self-report to the Office of Enforcement, frankly there are a lot more success stories than failures if you want to be honest. Companies on the whole do a fairly good job of self-reporting. There are occasions, as I've indicated, where that doesn't happen and compliance costs and enforcement can ramp up quickly from there.

But when companies do self-report to the Office of Enforcement, staff will often ask: How did the violation occur? Who was responsible? Who was harmed? And most importantly, what has the company done since then to mitigate and ensure that doesn't happen again?

Every year our Office of Enforcement issues an annual report that is actually a pretty good document to go through to get a sense for exactly how some of these cases ebb and flow. Each of these reports typically gives examples of self-reports in investigations that are closed with no action, despite the fact that there was actually a technical violation of a rule or law that took place.

The way a company responds after discovering a violation speaks volumes. We tell companies not to wait until they are caught. No matter how insignificant they think something is, we ask for a reporting. And then they should be prepared to show that compliance is meaningful part of that organization's ongoing business model.

In closing, it's fair to circle back to those two big events, the blackout and the western energy crisis, and ask – now 10 years after the blackout, 12 years after the energy crisis – how are we doing?

When it comes to reliability I'd say it is probably a tale of two cities. On those matters where the direct cause of that Northeast blackout exist, we are unquestionably, unquestionably better off than we were 10 years ago, today. Standardized reliability practices, required training, vegetation management standards, the technological advancement of grid monitoring – all of these things make it far less likely that we will have a similar event to what happened 10 years ago today in the next 10 years.

That is not to say it can't happen again. We've had smaller blackouts in certain regions of the country and reliability problems in the Southwest. There was one in San Diego not too terribly long ago. And it is probably expected to happen from time to time in a machine which is as complex as the electric grid is. And that is basically what it is; it is a very large, very complex machine. We have a significant chance for human error interacting with that. But we are in a much better spot. That's unquestionable.

Yet when it comes to emerging threats, like cybersecurity, that we didn't think about so much 10 years ago we are actually in a more precarious position. This is simply the nature of evolving threats, the evolving nature of cybersecurity and enemies that are more determined and technologically advanced than they have ever been before.

To respond to this threat we are going to need increased effort, we are going to need increased coordination and then increased results from multiple actors. It includes the executive branch, it includes Congress, it includes independent agencies like FERC and, importantly, the actual grid operators themselves and private industry.

When it comes to the issue of market manipulation, I think we are indeed in a much better spot than we were 12 years ago and certainly since the passage of the '05 Act. It takes a few years for any government agency to kind of get up to speed whenever you have a major new undertaking, such as the one that FERC was given post-2005. Today our Office of Enforcement, in prior years it would have been very small, since the enactment of the 2005 Act we have an enforcement office that has approximately 200 employees. Forty of them are tasked to something called the Division of Analytics and Surveillance.

These are basically the computer geeks who are really smart at writing algorithms and looking at a market and finding screens and writing automated screens to find when there is manipulative behavior to be able to give us insight into these markets. This is insight that we never had before but we do today. Today we have more eyes on the market; we have more boots on the ground than ever before. It gives us insight into what is happening and it helps us know when something is amiss so that we have the ability to follow up further.

Personally, I don't believe that the recent high-profile cases indicate any trend toward greater manipulation in the marketplace than we've had before. Rather, I think they are an indication that FERC is catching manipulation when it does occur, and I think we are catching it earlier in the process, which helps mitigate the negative impacts against other stakeholders and most importantly consumers.

All in all it is not a bad track record for a law that after all is only about eight years old. Is there more work to do? Sure, there is always going to be more work when we have a field like this, that's complex in nature such as the electricity grid and our energy markets are, and when we have to address threats in a very dangerous world.

What I simply hope is that the spirit that allowed us to collectively address the challenges in the early 2000s in a meaningful way still exists today so that we can impact those challenges of the next 10 years.

I think you for the invitation to be with you here today, and if there are any questions Dean I would be happy to entertain them.