Comments to:

NJCM Winter Summit - NJCM Business Council

By: Richard S. Mroz President, NJBPU January 28, 2016

THANKS FOR INVITE

Good morning everyone. I want to thank the NJCM and its President Mayor Raymond Heck, for inviting me to this afternoon's event to discuss how the Board of Public Utilities is doing its part in the Christie Administration to help make our state competitive and affordable. I also want to thank the NJCM and all of your members for working toward a mutual goal: growing the Garden State economy to ensure that New Jersey remains a great place to live, work and do business.

INTRODUCTION

I want to talk about two subjects this afternoon; one which affects every town, business and resident each and every day and the other which has the potential to disrupt communities and businesses, and the daily lives residents in New Jersey... and across the country. These are the State's Energy Master Plan and cybersecurity in the utility arena. But first I want to share some very positive news regarding the direction of the economy and business climate in the Garden State.

CHRISTIE ADMINISTRATION IS MOVING THE STATE FORWARD

As I am sure you've all probably heard by now, but it is worth repeating, Governor Christie has vetoed more than 400 bills – more than any other New Jersey governor – including tax increase after tax increase.

In fact according to Americans for Tax Reform, the Governor has vetoed more tax increases than any governor in the history of our country. This is a clear statement on this Administration's commitment to families and businesses of our state.

The Administration has stemmed the tide of anti-growth, anti-job policies and we've turned the tide in the right direction.

- The Administration is in the fifth and final year of phasing in \$2.3 Billion in tax cuts for businesses both large and small in New Jersey.
- The Unemployment Insurance Trust Fund has been brought back into solvency two years before predicted; saving businesses \$213 Million in federal taxes in 2014 and will save them another \$1 Billion because the solvency has triggered annual reversals of mandated employer tax table burdens
- And, the Christie Administration led a bipartisan push to renew our economic incentive and job retention programs in 2013 that are delivering results in parts of our state most in need of investment and renewal.
- Since the enactment of the New Jersey Economic Opportunity Act, under the Grow NJ and Economic Redevelopment and Growth (ERG) programs, 163 projects have been approved for up to \$3.3 Billion that is associated with capital investment of over \$5.1 Billion.

And the Administration's work together is showing itself in very real, positive ways too, with serious signs of life, growth and progress in our state's economy as a whole...

- The Garden State is seeing its strongest private sector employment growth in 15 years, with private sector employers adding 12,500 jobs in December to bring the total to 64,500 in 2015.
- This marks the **sixth consecutive year** that New Jersey has seen **private sector job growth**.
- Private Sector Employment: The private sector has added 233,500 jobs since Governor Christie took office (Feb. 2010).
 - New Jersey has now seen five consecutive years of positive private-sector job growth.
 - Private sector employers added 55,400 jobs over the past year alone (Nov. 2014 to Nov. 2015).
 - 48,200 of those jobs have been created in the just the past four months, with 20,900 more people joining the labor force between October and November 2015.
 - Breaking the 4.3 million mark, the number of New Jersey residents reporting to be employed hit another historic high in November, after hitting a record the month before.
 - In November, private sector job growth was posted in four of nine major industry sectors. Industries that recorded employment gains included education and health services (+3,800), construction (+2,100), professional and business services (+1,900) and trade, transportation and utilities (+1,800).
- Unemployment Rate: New Jersey's unemployment rate has plunged a full
 4.8 points since when the Governor took office, from a high of 9.8 percent in January 2010 to the current rate of 5.1 percent.
 - At 5.1%, New Jersey's jobless rate has plummeted for **7 consecutive months**, dropping 1.5 percentage points since May.

- Labor Participation Rate: The Garden State's labor participation rate continued to outpace the national rate, 64.1 percent to 62.6 percent in December.
- Business Investment Activity: Approximately 319 companies have used various economic development assistance programs, generating and retaining more than 82,000 jobs, bringing more than \$12 Billion dollars in total public-private investment to the Garden State.

Other signs of progress – Other economic indicators show continued positive gains in New Jersey's economy:

- Existing NJ home sales are up: December single-family home sales are +10.2% higher than a year ago while total sales for the year are +14.0% higher than a year ago.
- Townhome-condo sales were also up in December, +4.5% higher than a year ago, while total sales for the year were +10.4% higher than a year ago.
- Total home sales for 2015 were +12.3% higher than a year ago.
- NJ State building permits continue to rise: Residential construction in NJ also remains robust with 28,114 building permits issued year-to-date as of October which is 9.6% higher than a year ago.

The work has not been easy. The Governor has had to act decisively to bring the State's budget back into balance – and address \$13 Billion in combined projected deficits in the first 18 months of the administration.

And as we have all seen, the Governor put in motion a series of measures to restore fiscal sanity, rein in the cost of government to protect New Jersey taxpayers and create a more welcoming environment for business and economic growth.

BPU & EMP

The Board of Public Utilities has a significant part in the Christie Administration's efforts to make our state competitive and affordable when it comes to the provision and cost of utility service. In December 2011, Governor Chris Christie released the 2011 Energy Master Plan and, in doing so, the Governor asserted that the production and distribution of clean, reliable, safe, and sufficient supply of energy is essential to New Jersey's economy and way of life. Energy is a vital tool of economic growth and job creation. And it's no secret to anyone in this room today, that when considering where to locate or expand a business, often energy costs rank high in factors to consider.

The 2011 EMP has guided both the Administration and private-sector decision makers through a period of economic challenge and has provided long-term goals and implementation strategies flexible enough to respond to market changes and new information about the relative merit of competing energy technologies and strategies. As the Chairman of the cabinet level committee that assembled to review the EMP for an Update I can report that I had this perspective very much in my sights as we undertook our consideration of the Update.

UTILITY INDUSTRY ECONOMIC IMPACTS

When discussing the cost of energy we need to balance the costs of energy with the benefits energy offers – not just the benefit in the cost of your businesses to operate - we have all learned from recent severe storms that without energy your businesses closes. I'm also talking about the economic benefits that the production and delivery of energy to our homes and businesses has on New Jersey's economy. And we also need to recognize the direct and indirect impacts of the investments in the industry.

To offer some insight and to inform discussions of energy – and utility infrastructure in general - and the recently released Energy Master Plan Update - I want to share some facts about the positive economic impacts offered by not just energy related utilities, but all utilities operating in the state.

- According to the New Jersey Utilities Association, the regulated companies serve nearly seven million residential customer accounts and one million non-residential customer accounts 24 hours a day, 365 days a year
- They employ approximately 28,000 men and women for a combined payroll in excess of \$2.5 billion per year;
- New Jersey's investor-owned utilities own and operate physical infrastructure valued at more than \$37 billion;
- They contribute approximately \$837 million in annual revenues to local and state government through gross receipts, corporate business, property and various excise taxes; and,
- New Jersey's investor-owned utilities have been making capital expenditures in New Jersey averaging more than \$4.4 billion per year – investment that strengthens and enhances the State's economy and critical infrastructure
- In Gas Infrastructure the BPU has approved 938M and 280M pending
- These figures do not account for Generation Industry.
- In EE and RE NJ has invested over \$ 4 B in the last decade.

By any standard, the utility and the energy sectors make a financial contribution to the state's economy that is substantial. When the economic investments are coupled with the companies' critical mission of managing and maintaining their infrastructure, which keeps the electric, gas, water and data flowing, it's easy to

appreciate why stable and viable utility companies are critical for the existence of all businesses and residents in New Jersey -- we all depend upon the service they provide.

With this context I along with my colleagues on the EMP Committee understood that both the costs and benefits – financial, environmental and social – are paramount to this Administration. And this perspective is reflected in the State's 2011 Energy Master Plan and the Update of 2015. The EMP and the Update are a strategic vision for the use, management, and development of energy in New Jersey over this decade while maintaining New Jersey's strong commitment to preserving and protecting the environment.

Among other things, the EMP Update measures the State's progress toward achieving the five overarching goals contained in the 2011 EMP. They are:

- 1. Drive Down the Cost of Energy For All Customers
- 2. Promote a Diverse Portfolio of New, Clean, In-State Generation
- 3. Reward Energy Efficiency and Energy Conservation and Reduce Peak Demand
- 4. Capitalize on Emerging Technologies for Transportation and Power Production
- 5. Maintain Support for the Renewable Energy Portfolio Standard

New Resiliency Section

As you all know, since the release of the 2011 EMP, New Jersey suffered devastating damage from the impacts of Superstorm Sandy and other major storms and weather events. The Christie Administration has made it a priority to improve energy resiliency, and emergency preparedness and response.

Therefore, comments were sought and recommendations made in this new section are based on "New Jersey's Plan for Action" in the aftermath of Superstorm Sandy and include:

- protecting critical energy infrastructure
- improving the EDCs emergency preparedness and response
- increasing the use of microgrid technologies and DER
- and creation of long-term financing for resiliency measures like the ERB

From the beginning, we have been clear that the EMP Update was not intended as a development of a new EMP with revised goals. Throughout the process the Update was intended to bring the implementation status of those goals up-to-date and to add those new energy issues in response to Sandy.

While most comments submitted were important energy issues, some were not relevant to this EMP Update. Those comments were not in line with the purpose of the EMP Update; to report on the status of the 2011 EMP goals and potential adjustments to the 31 recommendations for achieving those goals. Still some comments supported a total rewrite of the 2011 EMP as they opposed policies as contained in the EMP.

For instance, some commenters opposed policies contained the in the 2011 EMP, such as the State's support of energy infrastructure improvements, including natural gas pipelines that allow ratepayers to take advantage of cleaner, low cost energy. While energy and the environment are intertwined, the energy component is broader than just the environmental issues and must

include the balance of reliable, reasonable and equal access to energy by all customers, residential, commercial and industrial.

Throughout the EMP Update process the Christie Administration was committed to making sure that stakeholders and the public have the opportunity to provide input into the EMP Update. To hear comments of interested parties on the 2011 EMP's five major goals and 31 policy recommendations, as well as a new area with regard to improving energy resiliency, I presided over the three public hearings held in August. A total of eighty-two (82) individuals with 1,093 written comments were received and reviewed before we issued the Draft Update – and upon publication of the Update we received 31 comments.

2015 Update & EMP Goals

I believe that the final Update, which was released a few weeks ago, is a good product of our efforts – and tells a good story about energy in this state. New Jersey has made good progress towards the five overarching goals and many of the 31 policy recommendations contained in the 2011 EMP. Overall New Jersey has lower energy costs, while at the same time advancing energy efficiency, demand response and renewable energy. The State has fallen from a high energy cost state to a range that falls within the national average for total energy costs (electricity, natural gas, fuel oil and gasoline).

Since the issuance of the 2011 EMP, electricity prices in New Jersey have fallen by approximately 8 percent for residents and small business in past years – this year prices are down about 4% since 2011 – and large and mid-sizes business that shop for their electricity probably have seen even steeper declines in prices.

The state has dropped from having the fourth highest electricity cost in the nation to tenth. This is progress, but it is not enough. We will continue to pursue measures that will help drive down prices even further, especially because future costs associated with building significant new transmission infrastructure, which are approved at the federal level and out of the State's control, will place upward pressure on prices.

The current vibrant and robust natural gas infrastructure in New Jersey has allowed residents and businesses to take advantage of low natural gas prices; helped to moderate energy prices overall in New Jersey; and has the potential to increase economic development in the State.

Today, New Jersey's natural gas prices are among the lowest in the country. Prices in our state were the 17th highest in the nation in 2011; today we rank among the <u>four least expensive</u> states in the country. This huge decrease was anticipated in the 2011 EMP and has been critical to successfully reducing the cost of electricity and improving the environmental performance of New Jersey's electric generation.

The State's commitment to actively promote new electric natural gas generation and the enhancement and expansion of the natural gas transmission and distribution system, has helped to reduce energy costs. Over the past several years, New Jersey has benefitted from the enhancement and expansion of its natural gas transmission and distribution systems. Expanding and upgrading the natural gas inter- and intra-state pipelines help to further lower the cost of energy to New Jersey's homeowners and businesses and reduce emissions. BPU has approved almost \$1 billion for natural gas utility infrastructure upgrades and

mitigation projects. An additional \$280 million in proposed projects are pending before the Board.

Looking beyond the price of electricity and natural gas, the word "energy" also can be used to encompass all sources that produce power. It includes electricity and the sources that generate it, fuels used for heating and industrial processing, and fuels used for transportation. Although retail electricity prices range higher relative to other states, the latest data from the United States Energy Information Agency (EIA) shows that the average New Jersey energy customer has a lower overall energy cost than most of the country when combining the cost of electricity, natural gas, and gasoline.

This simple fact, when viewed from the perspective of state energy policies, can assist the State in its overall economic development efforts, especially in industries that use natural gas as a raw material in the development of products, such as the pharmaceutical and chemical industries. It also can assist in developing and expanding clean in-state electric generation, including renewables and distributed generation, as well as advancing energy efficiency and demand response given the customers availability to potentially finance projects.

Further reductions in the cost of energy, especially electricity, will help to increase the State's economic competitiveness.

In addition to the lower cost for energy, the State's electric energy resources are diverse and clean. New Jersey was recently ranked among the 5 states with the lowest emissions from electric generation despite being the 22nd largest

electricity generating state. This is a direct result of the state's current resource mix of nuclear, natural gas and renewables.

New Jersey continues to meet its renewable energy portfolio standards as nearly 15% of electricity supplied comes from renewable sources; with solar accounting for almost 3% of the in-state generation mix this energy year.

New Jersey has also had success in reducing energy usage through its support for demand reduction and energy efficiency technologies. New and changing challenges need to be met to continue growth in the implementation of energy efficiency technologies in a market that is still growing, but reaching maturity.

Since my fellow Commissioners, the BPU's Business Ombudsman and other staff members frequently speak in great detail at NJCM events about available Clean Energy Program incentives for energy efficiency and renewable energy projects, I'll save you all from hearing the pitch once again. But I will say this: If you have taken advantage of the generous CEP incentives and/or assistance from our knowledgeable staff for the benefit of your town or business, you and other like you are the program's best ambassadors; share your energy efficiency experiences with your fellow mayors or business owners.

If your town took advantage of the Energy Savings Improvement Program, which provides all government agencies in New Jersey with a flexible tool to improve and reduce energy usage with minimal expenditure of new financial resources to finance energy efficiency projects, share your experiences with your fellow mayors. Let them know how easy it was to make energy related improvements to your town's facilities while paying for the costs using the value of energy

savings that result from the improvements. We are all in this together and energy conservation through efficiency improvements lowers the cost of energy for all ratepayers.

Cybersecurity, State Utility Commissions, and the Future

Now while our future energy needs and the costs of having sufficient supplies and reliability – at affordable rates are a challenge - I want to comment on challenges closely aligned with today's event theme – Cybersecurity. We see and hear about cyber-attacks on a regular basis these days. In fact, last June I was asked to speak about New Jersey's cybersecurity efforts at the Mid-Atlantic Conference of Regulatory Utilities Commissioners. I outlined what NJ is doing in this area – and how regulators throughout the northeast and mid-Atlantic states need to confront these threats.

Now Cybersecurity is not a new topic on Commission agendas, yet the goal of protecting our critical infrastructure from cyber intrusion remains elusive. This topic is unique and the threat is expansive. In recent months federal agencies have been highlighting numerous efforts and responses to cyber threats – including the highly public intrusion to OPM which might have opened threats to every federal employee. And we have seen the reports of attacks on our universities such as here at Rutgers last year. And almost weekly there seems to be a story about research or educational institutions being attacked.

We all realize that the need for resilience stems from various threats – natural or manmade or accidental and New Jersey is no stranger to the effects of any of these threats being realized. Notably natural threats from weather have significantly impacted this state and strengthened our resolve to confront them.

Just this last weekend we experienced another significant winter storm with heavy snowfall and both extreme wind and floods along the coast. There were significant effects particularly with flooding on the barrier islands. While there were sever impacts on those towns - thankfully this storm was not anywhere near as widespread as with Sandy where it affected the entire state; nor were the affects as lasting where this weekend our electric companies were able to restore the affected 270,000 customers within 24 hours of the end of the storm. With Sandy the affects were significant with 5 M out for 14 days and damage from the flooding which devastated areas.

So in New Jersey we look to protect from and then prepare for storms like Irene and Sandy or this last storm - accidents like a pipeline rupture – or...intentional acts of terrorism. However, confronting an issue like cyber security is like no other.

A primary reason – as cyber security experts will admit – is that they do not know how to prevent many of these attacks – at least not yet. The bad actors are faceless, possibly part of criminal enterprises, or political groups or nation states. We are just now starting to establish protocols to gather and analyze data for patterns of attacks. Integrated threat and incident reporting and analysis can help connect the dots and show that what might appear to be random or disparate electronic invasions – possibly in totally different types of companies or industries – could actually be part of a larger, coordinated attack.

So we will all need to be aware of how cyber threats are evolving and formulate plans and processes across our industries to asses and manage risks in this area – actively monitor threats and share information – and forge what I believe

to be a new paradigm of collaboration for us as regulators with law enforcement and security agencies and industry.

Review of National Situation

Report after report shows that attacks across all industries are increasing in both number and sophistication. According to once such report — <u>Verizon's 2015</u>

<u>Data Breach Report</u> — the number of those attacks that are actually successful — where defenses are actually breached — are increasing as well.

Neither we nor the utilities we regulate can afford to be content with cyber security achievements to date. We know that cyber security and resiliency programs are resource-intensive and the benefits are often hard to quantify. Yet, it is our job to ensure that regulated utilities are doing what is necessary and appropriate today and in the future to protect their critical assets and to prevent disruption of critical services. We also must ensure that potential regulatory gaps, such as those surrounding electric distribution, are purposefully addressed.

What the State and NJBPU are Doing

As many of you may have heard from Director Chris Rodriguez, Office of Homeland Security and Preparedness, earlier this morning;

• Cybersecurity is not just a national issue; it's a local one that demands shared responsibility, collaboration, and constant vigilance across industries and sectors, especially in a digitally dense State like ours here in New Jersey.

- Over the last year, the NJ Office of Homeland Security and Preparedness prioritized the integration of our physical security mission with our cybersecurity mission. The philosophy is informed by the reality that the physical and virtual worlds are increasingly interconnected and interdependent. As such, cybersecurity spans several State agencies and industry sectorson, from training to exercising to critical infrastructure protection.
- It has been increasingly imperative that we do all we can to protect New Jersey's digital landscape.

First, as with any threat we can start with an assessment of risk - a rigorous process whereby assets are inventoried, threats and vulnerabilities are systematically identified, and then carefully weighed against potential consequences. Effectively, the result is a prioritized list of assets to protect and a companion list of methodologies, tools and technologies.

This sounds easy — but it is anything but — as it takes time and expertise to do well. It must be a repeatable process and guided by best practices. No two industries or sectors in an industry, or any two utility companies are identical, nor are their risk profiles. From a regulatory perspective, a common, consistent set of baseline requirements may have value, but when we consider how rapidly the threat environment changes, we may also want to build in flexibility in our regulatory approach.

So another step we might want to consider is examining the adequacy of a utility companies' cyber risk management program itself and how effectively it is executed and improved over time. Looking at cyber security from this perspective would allow us to appreciate business differences, yet still ensure risk decisions are made in an effective and appropriate manner. We would be able to compare results year over year and, importantly from the regulatory perspective, we would be able to compare results across companies.

We look to other agencies in the industry like the National Institute of Standards and Technology (NIST) and other Federal Agencies like FERC and USDOHS, as well as the industry like EEI and EPRI. NIST framework is already being integrated into various sector-specific cyber risk programs. These include energy, water, and telecommunications. As we seek to mature our approaches to cyber security regulation, we will carefully consider how best to leverage performance-based frameworks such as NIST for comparability, consistency, and effectiveness over time.

Regulatory Approach to Cyber Security

We as state regulators and policymakers need to consider ways to encourage utilities to go further - to encourage cyber security self-improvement. We have engaged the utilities, seeking their opinions and support their risk management efforts.

The key to effective regulation — particularly any regulation around this evolving risk — is collaboration. And the key to collaboration, of course, is information. More particularly - information sharing.

Information sharing is a broad topic. From the utilities' perspective, information about cyber threats and vulnerabilities is essential to their risk management processes. Information about potential or actual cyber-attacks is crucial to detect, deter, respond, and recover from cyber incidents. But companies may be reluctant to share information — especially information that they may prefer to keep confidential.

And no single utility has all the necessary information it - or we collectively - will need to achieve a sufficient level of awareness of cyber threats as they evolve or as attacks are launched. Such information is culled from a variety of public and private sources willing to share sensitive, confidential data.

New Jersey Approach and Actions

In New Jersey we take the perspective that we need to be prepared for any emergency — whether natural or manmade or accidental. New Jersey has adopted the <u>federal all-hazards approach</u> to critical infrastructure protection and emergency response that includes not only natural disasters but intentional acts. And while experience has shown that the majority of past energy emergency events are the result of natural disasters - a state's energy and infrastructure assurance plans should incorporate elements of critical infrastructure protection that include sabotage, cyber-attacks and acts of terrorism.

Efforts to mitigate potential acts of terrorism and other intentional acts have been underway in New Jersey for over a decade. Given our dense population and our experience from horrific events particularly 9/11 — the background of Gov.

Christie who served as US Attorney for NJ — there is a robust public and private sector stakeholder process in the utility sector to address intentional threats.

Our response planning for cyber terrorism started in 2009 with a tabletop exercise focused on utility infrastructure. The exercise exposed serious coordination and information gaps. Stakeholders including utilities, BPU, FBI, State Police, the NJ Office of Homeland Security and Preparedness and the Attorney General's office worked together to find solutions.

With our OHS&P and OEM, we have developed protocols for protecting the State's critical energy assets in the event of an intentional act. During an emergency, BPU staff and utility personnel gather in dedicated space at the Regional Operations and Intelligence Center to work side by side with federal and state Homeland Security, Emergency Management, FBI, and other public and private partners to ensure effective communication, problem solving, and coordination.

To support all these cyber planning, response, and recovery initiatives, the BPU issued in 2011 - what we believe to be the first of its kind from a state commission - a Board order seeking cyber security information from our utilities.

We also have undertaken an active dialogue with our utilities and are planning to share information, discuss areas of potential threats, and consider additional procedures for responding to cyber-attacks. We have sponsored cyber threat briefings for critical infrastructure owners and operators in the various industry sectors and I have been meeting with representatives of various companies to better understand their response capabilities and information needs.

We are also evaluating our role relative to federal agencies to determine whether regulatory gaps exist — gaps in regulatory oversight, gaps in the types of critical assets subject to regulation, as well as gaps in information sharing. I realize that this effort will require a much more collaborative role for us at the BPU – to work with law enforcement, other federal and state regulators, and with infrastructure owners and operators across all utility sectors.

Last year Governor Christie issued an executive order that more particularly outlines efforts that New Jersey will take to confront cyber security threats – and to be innovative in the face of a new and evolving threat. The EO established a cyber "fusion cell" called the NJ Cybersecurity and Communications Integration Cell (pronounced KICK). The center is housed at our emergency management HQ and is collaboratively operated full time by NJ OHS&P and State Police. Analysts examine data from a variety of sources, search for patterns of cyberattacks and locations of possible intrusions, and share sector-specific threats, warnings, alerts and other pertinent information with state and federal agencies — both enforcement and regulatory – and with industry. We are inviting various industries to participate — specifically all our utilities. Now the NJBPU is in the process or evaluating our cybersecurity rules and within a few weeks we anticipating having a proposal to consider new rules and regulations on these matters in our oversight with the utility industry.

In Washington the federal government is very focused on cyber information sharing. And legislation is making its way through Congress right now on these very issues. It is incumbent upon us to watch closely as these events unfold, because they will affect our commissions, our utilities, and all of our other partners in security as well.

Particularly with these developments we must be sensitive to duplication of effort. Many utilities already report incidents upstream to entities like DHS, NERC, or to an ISAC. The reporting is generally voluntary – sometimes mandatory – so we must be clear about the additional information needs we have to fill existing regulatory "gaps."

We should work deliberately to minimize reporting overlaps yet ensure we receive the information we need from utilities. Close collaboration with stakeholders will be needed to identify and tap common information sources and outlets. Collaboration also will be needed for us to develop a clear articulation of cyber reporting requirements. It will necessitate investments in technology by utilities and commissions as well.

In Summary

In our approach to all-hazards reliability and security we must now include a cyber risk management element along with natural disasters, weather, and physical security. The future of Cybersecurity regulation is wide open and not without its challenges. Clearly, Cybersecurity will have a priority place on our agendas for the foreseeable future.

We are making solid progress to address our many challenges –whether they be financial or budgetary or regarding need to infrastructure or for or planning to have balanced energy supplies and the costs of those -- OR challenges from weather or intentional threats.

I know working together – government officials, state and local, along with the private sector – as the NJCM Business Council is doing – we here in New Jersey can meet these many challenges.

Thank you.