

BRUCE WALKER –Good morning, and thank you for that great introduction. As we move forward, I may not make the judging this afternoon because Mike says he's going to take me to the control center. I may not leave the control center; as a matter of fact, I may not go back to Washington. I may just stick around and stay there.

Thank you everybody here at WAPA that gave me a warm welcome to the third Inclusion Innovation and Technology Summit. I see my good friend Sue Kelly, and I look forward to hearing your unique perspective regarding this. What I would like to say is that the Department of Energy, the I2T, is part of partial of who we are. Later, I will speak to many of the things that we are working on back at headquarters for which WAPA, particularly under Mark's leadership, you've been an integral part of. I hope to shed some light on that.

Personally, I spent the better portion of my career ensuring and promoting diversity to enhance career development, identify process improvements and most importantly, support and encourage innovation. In fact, when I began my career at ConEdison as a management intern, I was introduced to all facets of the company and its diverse workforce. Upon successfully completing that program and recognizing the value of diversity, I continued for the remainder of my career for nearly two decades to promote this throughout our company in New York City. As part of the final selection committee for that program, I was steadfast in expanding its mission to include hiring women in the electric and gas operations, which was something that previously really hadn't been done.

This was my focus in my last job as Deputy County Executive for Putnam County New York, about thirty miles outside of New York City. There, I promoted women into key leadership positions including my Commissioner for Planning, Risk Manager my Director for Human Resources and Director of Consumer Affairs. I am proud to say that one of the young women that I promoted, who was my Risk Manager in Putnam County, is here today undertaking the extremely challenging task of being my Chief of Staff, and that's Adrienne Lotto. She has to corral Mark and me when we are trying to get together trying to actually get things done. When you take a look back at that, and I look at like Sue Kelley and Dawn, you are leaders in this industry, and I really look to encourage more leaders', particularly women's, participation because again, it provides that diversity that enables us to look at things from many various perspectives.

I am a direct result of ConEd's culture and its mission I started while in college, and every step of my career leadership, they sought my opinion and incorporated my thoughts into the mission as we move forward. As I moved throughout the company, no matter where I was, no matter what position I held, my opinion mattered. Just like WAPA's leadership understands and values each of its employees so does DOE at Headquarters. In short, your opinion matters even though sometimes it may not appear that it does. But that is why I am here to assure you that your opinion in fact does matter.

Today I am honored to participate in such a thoughtful and constructive initiative. I do not think there has been a more important time in recent history in the energy sector to focus on this type of initiative.

Today we are faced with grave challenges in the industry the likes that we have never witnessed before. Just last week Dan Coats with the Director of National Intelligence highlighted the possibility of a “crippling cyberattack on our critical infrastructure.” Likening daily cyberattacks to the alarming activities the U.S. Intelligence Agency’s detected before the World Trade Center events on September 11, 2001, he said the system is blinking red. Here we are two decades later, and I am telling you the system is blinking red. I was running control center during 9/11 in New York City. I am here to tell you that the daily threats we have are becoming real, they’re sophisticated and they are becoming more frequent. We must unleash our best capabilities and these best are realized when we are inclusive and innovative.

I want to talk a little bit about my office, the Office of Electricity, to give people a little perspective and understand where WAPA fits into that, as well as all the PMAs. There are 16 critical infrastructures throughout the United States as set forth by DHS. Each of these sectors relies upon energy to provide its vital sources for their respective sectors, especially electricity.

In 2015 Congress passed the Fixing America’s Surface Transportation Act, which, among other things, required the Secretary of Energy to define within 180 days the defense critical electrical infrastructure. Seemingly, the FAST Act established the provision designating certain information received by the energy industry to be determined to be critical electric infrastructure in an attempt to facilitate DOE’s ability to define and establish DCEI.

My office the Office of Electricity is uniquely positioned to develop strategic initiatives to ensure the reliability of the electric grid and support the needs of national security for critical infrastructure. The Office of Electricity is presently embarking upon a significant initiatives, including developing a North American energy model, which will completely intergrade at a transmission level. The interdependencies among the various forms of energy that impact the electric grid, not limited to natural gas, petroleum, but all forms of distributed generation coal, nuclear and hydropower.

Specifically, the development of this model will enable the evaluation of the electric grid as it relates to the most critical infrastructure throughout North America. The Office of Electricity will work with FERC, NERC, RTOs and ISOs and utilities throughout North America to provide valuable information regarding the impact of certain investments on the North American energy model.

However, and more importantly, we will work across federal agencies with industry asset owners to provide comprehensive understandings regarding the viability of the electricity grid as it relates to the ability to provide service to defense critical electric infrastructure. The ability to provide energy services to DCEI facilities during times of crisis are absolutely necessary to show the continuity of government and our Constitution. WAPA has been a key partner in this initiative, recognizing its vast and unique footprint and leadership who recognize the importance of this mission.

First, the CEII designation is presently near completion and will be shortly be placed on the *Federal Register*. After which, the Department of Energy will be able to work collaboratively with industry partners throughout the electricity, natural gas and petroleum sectors to gather

information and evaluate the risk associated with information that would otherwise be gleaned through the Freedom of Information Act. The CEII process will also facilitate working with respective utilities that presently provides services to DCEI facilities, like WAPA, thereby enabling strategies to develop focus on securing the nation's most critical assets. WAPA was instrumental in showing the CEII process, which was securely defined in order to help provide protection.

Secondly, the DCEI designation is also presently near completion and includes significant inter-agency efforts including extensive work by the Department of Defense, DOE's National Nuclear Security Administration, the Army Corp of Engineers and the Department of Homeland Security. The Office of Electricity leads this initiative and has, in conjunction with the development of others, developed a complete list and has developed a near term initiatives to eliminate, mitigate and remediate certain risk associated with these critical sites.

The Office of Electricity has worked extensively with DOE's Power Marketing Administration organizations to identify opportunities to address the needs of DCEI assets that reside within the respective footprints. The fact that DOE's PMAs provide service for over two million square miles, which various DCEI assets, provides a unique opportunity to integrate the efforts of the Office of Electricity with the efforts of the PMAs. By reorganizing the Office of Electricity, the PMAs have a champion at Headquarters who is focused on national security through every energy effort.

Most notably, WAPA has been the proving ground for the best way to move forward with this initiative, not surprising given the 1.4 million square mile footprint. Ensuring an innovative, inclusive work force focused on progressing technology, the PMAs are uniquely critical for the federal government, especially as PMAs represent nearly one-third of the federal workforce. Moreover, the PMAs represent significant investment return on capital for the Treasury for the one billion dollars going back on an annual basis.

In addition, the PMAs transmit and market power nearly 40 thousand miles of transmission lines to a hundred million Americans and Native American tribes, thus providing the most notable and direct link to the PMAs and DOE. Lastly, PMAs are key resource for national security by providing electric service to many U.S. military bases and national labs. I am confident that through the continued innovation and focus on strategic mission our PMAs will continue to play a critical role as we seek to improve our nation's security posture. I know as my office, the Office of Electricity, addresses its mission of securing national security, WAPA and other PMAs have and will continue to play and expanding role.

As we continue to work through the developing of this model, it will be important to recognize there are various innovative components that will need to be completed. Specifically given the fact that the model will be able to do contingency analysis like an N-1-1, which is traditional to the industry due to the interdependencies of the system, the computer power necessary to do it will be extraordinary. In an effort to complete that, new algorithms and new systems and capabilities will be necessary to actually ensure that the contingency analysis will be completed.

Additionally, the model will have the ability to do next-worst-case analysis, meaning it will iteratively evaluate each of the different scenarios possible through the interdependencies of all the assets on a system. Again, this will be absolutely necessary to develop innovative ways of using technology to solve these problems.

Our failure to do it will place the country in further risk if we do not understand what we need to do as we move forward with regards to the development and the investment the strategic investments to shore up the system that was not designed to deal with physical threat nor cyber threat. Today as we move forward, as I mentioned earlier, we are facing significant cyber threat.

Recently, my office put forth a funding opportunity for \$25 million into industry in an effort to develop innovative solutions regarding architecture for cyber. The idea was to take a step back into the 1950-era, when there was no such thing as the internet, and develop solutions that recognize what the challenges are today. That means getting a bunch of relay engineers in a room, the most creative people you can, locking the door, give them a week and let them come out when they have a solution. I have no doubt, which is why I put \$25 million on the table, that there are people in industry, WAPA included, Bonneville Power, that can and will solve this problem today. As Mark mentioned earlier, things go into our labs, and we spend years developing new technologies. The important piece of this that we need to look at, and you heard my quote from Dan Coats, we need solutions today. Innovation today is the key.

Inclusion of every person in this company who has different ideas looking at problems from a completely different perspective and who are not wed to the design criteria of the past are going to be those who actually take us out of this problem and solve our issue with cybersecurity. It is an absolute imperative issue that we must deal with today. That is why a summit like this is so critically important. We need to solve problems, and as Mark noted solving the here, getting into the system, is really the key component. We can talk about it all day long, but until we deploy them, get them into the systems, they don't provide any protection.

So, I think, in conclusion, innovation is a way of thinking. Clearly summits like this promote it and encourage it as we move forward. At DOE, we promote a culture of innovation by practicing it every day, and by practicing it, it becomes a habit.

The physical-cyber threat that you confront, exacerbated by the set of circumstances, are highlighted and really laser focused due to the interdependencies that we have allowed to develop in the system. Mainly by the system being designed and modified through market conditions rather than good engineering principles has placed us in a situation where innovation needs to take the front seat and solve the problem.

Only through innovative thinking, innovative ideas, innovative solutions, pursuit of collaboration with our partners will we be successful. Failure is not an option. I look forward to being here for the remainder of the day—even if I do get stuck in control center for a little while. I am very much excited by the leadership here and by this endeavor, and I hope it continues going forward. I look forward to participating in it. Thank you!