

NATIONAL INFRASTRUCTURE ADVISORY COUNCIL

BUSINESS MEETING AGENDA

October 16, 2012
1:30 PM – 4:30 PM EST
United States Access Board
1331 F Street, NW, Suite 1000
Washington, D.C. 20004

- I. OPENING OF MEETING** *Nancy J. Wong*, Designated Federal Officer (DFO), National Infrastructure Advisory Council (NIAC), Department of Homeland Security (DHS)
- II. ROLL CALL OF MEMBERS** *Nancy J. Wong*, DFO, NIAC, DHS
- III. OPENING REMARKS AND INTRODUCTIONS** *Constance H. Lau*, NIAC Chair
- The Honorable Rand Beers*, Under Secretary for the National Protection and Programs Directorate, DHS
- Caitlin Durkovich*, Assistant Secretary for Infrastructure Protection, DHS
- Charles Donnell*, Special Assistant to the President for Resiliency, National Security Staff
- Dr. Ahsha Tribble*, Senior Director for Response, National Security Staff
- IV. APPROVAL OF APRIL 2012 MINUTES** *Constance H. Lau*, NIAC Chair
- V. NIAC REGIONAL RESILIENCE WORKING GROUP UPDATE** *Constance H. Lau*, NIAC Working Group Chair
Dr. Beverly Scott, NIAC Working Group Co-Chair
- VI. PUBLIC COMMENT: DISCUSSION LIMITED TO MEETING AGENDA ITEMS AND PREVIOUS NIAC STUDIES** *Nancy J. Wong*, DFO, NIAC, DHS

VII. CLOSING REMARKS

Constance H. Lau, NIAC Chair

*Charles Donnell, Special Assistant to the
President for Resiliency, National Security
Staff*

*Caitlin Durkovich, Assistant Secretary for
Infrastructure Protection, DHS*

*Dr. Ahsha Tribble, Senior Director for
Response, National Security Staff*

VIII. Adjournment

Constance H. Lau, NIAC Chair

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MINUTES

NIAC MEMBERS PRESENT IN WASHINGTON:

Mr. Jack Baylis; Mr. Albert Edmonds; Mr. Glenn Gerstell; Ms. Margaret Grayson; Mr. Philip Heasley; Mr. Donald Knauss; Ms. Constance Lau; Dr. Beverly Scott; Mr. Michael Wallace

NIAC MEMBERS ATTENDING VIA CONFERENCE CALL:

Mr. David Kepler; Mr. James Reid; Mr. Thomas E. Noonan

MEMBERS ABSENT:

Mr. David Bronczek; Mr. Gilbert Gallegos; Mr. David Grain; Commissioner Raymond Kelly; Mr. James Nicholson; Mr. Gregory Peters; Mr. Bruce Rohde; Mr. Greg Wells

SUBSTANTIVE POINTS OF CONTACT PRESENT IN WASHINGTON:

Mr. Rick Houck (for Ms. Constance Lau)

SUBSTANTIVE POINTS OF CONTACT ATTENDING VIA CONFERENCE CALL:

Ms. Frances Paulson (for Mr. David Bronczek); Sgt. Eddie O'Brien (for Commissioner Raymond Kelly); Ms. Joan Gehrke (for Mr. James Nicholson); Margie Gladstone (for Mr. David Grain)

OTHER DIGNITARIES PRESENT:

Mr. Rand Beers, Under Secretary NPPD; Ms. Caitlin Durkovich, Assistant Secretary, IP, DHS; Mr. Charles Donnell, NSS; Dr. Ahsha Tribble, NSS; and Ms. Nancy Wong, DFO, NIAC, DHS

I. OPENING OF MEETING

Nancy J. Wong, DFO, NIAC, DHS

Ms. Nancy Wong, the DFO for the NIAC, called the teleconference meeting to order and welcomed all individuals, both in person and via teleconference, to the NIAC Quarterly Business Meeting. Ms. Wong introduced NIAC members and their staff, Mr. Charles Donnell, Special Assistant to the President for Resiliency, of the National Security Staff, other Federal Government representatives, and members of the press and public in attendance.

Ms. Wong provided a synopsis of the Council's formation, history, pertinent reports and studies produced, and feedback and reception of its products. She noted that the NIAC is a long standing committee as represented by the recent Executive Order renewal in October 2011. Ms. Wong identified the NIAC as a presidentially-appointed council, with its work directly related to Homeland Security Presidential Directive 7 (HSPD-7), which established a national policy for Federal departments and agencies to identify and prioritize critical infrastructure and key resources and to protect them from terrorist attacks. The Council provides the President, Secretary for DHS, and leadership of other relevant agencies with advice on the security and resilience of critical infrastructure supporting public and private sectors.

Ms. Wong reiterated the importance of the public and private sector partnership, which is exemplified by the Council representing the perspective of the critical infrastructure environment, on which the National economy and public safety depend. She noted that during the Council's 10 year history, it completed 22 studies on matters such as cooperation and partnership between the public and private sectors, policies and strategies involving risk assessment, information sharing, and critical infrastructure protection and resiliency impacting the public and private sectors.

Ms. Wong informed the Council that Mr. Wes Bush recently submitted his resignation due to added workload in his current position. She extended her thanks to Mr. Bush for his contributions to the Council, and recognized the work of one of his staff, Mr. Gerry Buckwater, who made major contributions to several of the NIAC studies including the Intelligence Information Sharing Study.

II. ROLL CALL

Nancy J. Wong, DFO, NIAC, DHS

Ms. Wong called the roll and recorded attendance, noting whether members were attending in person or via teleconference. She reminded members of the Council that the meeting is open to the public and that appropriate care should be taken if and when discussing potentially sensitive information.

Upon completion of the roll call, Ms. Wong explained the public comment period. Although the NIAC had received no requests for public comments, the time would be noted in the record. Ms. Wong then called to order the fourth NIAC meeting of 2012.

III. OPENING REMARKS AND INTRODUCTIONS

Nancy J. Wong, DFO, NIAC, DHS

Constance H. Lau, NIAC Chair

Charles Donnell, Special Assistant to the President for Resiliency, National Security Staff

The Honorable Rand Beers, Under Secretary for the National Protection and Programs Directorate, DHS

Caitlin Durkovich, Assistant Secretary for Infrastructure Protection, DHS

Ms. Wong called the meeting to order and introduced the new Council leadership, Ms. Constance Lau, Chair, and Dr. Beverly Scott, Vice-Chair. Ms. Wong turned the meeting over to Ms. Lau. Ms. Lau spoke of her pleasure at her and Dr. Scott's recent appointments by the President. Ms. Lau mentioned that she and Dr. Scott were recent additions to the Council, and praised previous NIAC members and Chairs for their leadership and for the high example they have set. Ms. Lau welcomed other Administration Officials to make opening remarks.

Mr. Donnell thanked the Council for its work and Mr. Beers and Ms. Durkovich for their work facilitating the public/private partnership. Mr. Donnell highlighted several academic studies that had been done in the resilience space and were related to the Regional Resilience Study that the NIAC is currently undertaking. The first, from the National Academy of Sciences, is called, "Disaster Resilience: A National Imperative". Mr. Donnell also recounted his recent visit to Johns Hopkins University to receive a briefing on a research project called, "Beyond the Storms: Strengthening Security and Resilience for the 21st Century". Mr. Donnell wanted to highlight specifically the Johns Hopkins report because of its focus on critical infrastructure protection. He believed that both of these are exceptional reports, continuing to provide the innovative ideas and focus on the same areas that the Administration are seeking to achieve in the resilience directorate at the National Security Staff.

Mr. Beers extended his congratulations to Ms. Lau and Dr. Scott on their appointments. He noted that recent events continue to bring resilience into the National conversation. Many meetings that Mr. Beers has attended recently have come back to that issue, and how the Nation's infrastructure is vital to the long term health of the American economy. Mr. Beers also discussed events in the financial services industry where there has been a series of denial-of-service attacks in recent weeks. This highlights the interwoven structure of physical and cyber infrastructure.

Ms. Durkovich thanked the Council for their dedication. She noted that the Council's efforts were remarkable as it is done in addition to the members' already demanding schedules. She acknowledged the Council's many studies and discussed how they were shaping policy decisions at DHS. She promised the Council that DHS would renew their commitment to tracking and implementing the hundreds of recommendations made by the Council over the years. Ms. Durkovich informed the Council on recent events within the Office of Infrastructure Protection (IP), the first was the Regional Resiliency Assessment Program (RRAP), a pilot program that began in 2009 that is a cooperative voluntary DHS led assessment of specific critical infrastructure and regional analysis. The RRAP provides an evaluation of the resilience of the geographic region based on developed assessment information and then follow on analysis. By the end of next September, the RRAP

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program will have examined critical infrastructure clusters in more than 29 States and Puerto Rico. This program has been very successful leading States to adopt and implement changes to improve resilience. For FY 2013 there are 10 RRAPs scheduled including one in the same Philadelphia area that the Council is studying. The second area Ms. Durkovich highlighted is the Regional Effort. The feedback from State, local, tribal, and territorial partners and regional owners and operators helps IP make its programs more useful and better meet those needs across the country. IP has received feedback from more than half of the country, including 13 critical infrastructure owner and operator focus groups with about 270 participants. IP will soon focus on FEMA Region III, which includes D.C., Delaware, Maryland, Pennsylvania, Virginia, and West Virginia.

IV. APPROVAL OF JULY 2012 MINUTES

Constance H. Lau, NIAC Chair

Ms. Lau opened the floor to discussion of the July 2012 meeting minutes. In the absence of comments, it was moved to approve the minutes. The Council voted to approve the minutes with provided administrative changes.

V. NIAC REGIONAL RESILIENCE WORKING GROUP UPDATE

*Constance H. Lau, NIAC Working
Group Co-Chair*

*Dr. Beverly Scott, NIAC Working
Group Co-Chair*

Ms. Lau discussed the working group's formation at the April 2012 Quarterly Business Meeting and thanked those NIAC members who have been participating. There have been 13 meetings as of this Quarterly Meeting. She restated the group's goal of identifying how regions can become more resilient and specifically the steps that the Federal Government can take to help the regions accomplish resilience goals. The working group has begun to interview experts and those interviews are helping inform the hypothesis for the Philadelphia area. The report is expected in the summer of 2013 and will focus on what the Council refers to as "process improvements", determining how public and private sector critical infrastructure partners can work together better.

Ms. Lau recalled the July meeting where Ms. Durkovich brought the Council's attention to the results of the regional focus groups that IP was conducting. Ms. Lau reported that the Council had reviewed the summaries from those meetings and found that there was a true commitment to building resiliency from the ground up and taking whole community approaches that transcend jurisdictional and geographic boundaries. The Council was interested in the cascading effects that were revealed by the Derecho, particularly the electric sector. This has helped the Council refine their definition of lifeline sectors to include those sectors whose cascading impact affects all other sectors. Ms. Lau also noted that the Council has taken to heart the comments of Mr. Beers and Ms. Durkovich from previous meetings and has been examining the cyber component of physical infrastructure.

The Council is currently forming the case Study Group that will focus on the Philadelphia region and hopes to report on their progress in January. Ms. Lau turned the presentation over to Dr. Scott to share the group's observations from their research.

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Dr. Scott noted that the work that has been done with the RRAP program has been very useful in building the case study. The group has found that many of the tools offered to regions by IP are not widely known and inconsistently utilized. The group was encouraged by the progress however, and believes that these programs will only improve with use. These programs and the private-public partnerships that are being developed are the building blocks of a culture of resilience. The relationships serve as a force multiplier for these programs and help foster good working relationships.

The Working Group looked at many “How-To Guides” that were being utilized in various community organizations. Dr. Scott said that the challenge was looking through all of these different approaches and narrowing down what the real best practices were. The group has found that whenever the process is inclusive, with stakeholders actively engaged, policies are more effective. She said that this speaks to the effectiveness of building the culture of resilience she referenced earlier.

Dr. Scott spoke about the challenges in building a case for pre-disaster investment. It is challenging to make the case when the return on investment is not immediately evident. She also noted the lack of a standardization or common framework for evaluating progress.

The Working Group’s goal is to build on existing work in this space. There has been much work done and the Council wants to focus its time on identifying holes in existing work and adding value. This began with an evaluation of the current statutory framework for multi-jurisdictional response including the Stafford Act. Dr. Scott said that the Stafford Act was very useful but has some limitations in terms of private engagement and the cyber component.

The Working Group has been able to look at what happened in the Philadelphia area immediately following the Derecho. Dr. Scott noted the tremendous impact on the electric sector with 4.2 million customers without power during a period with over 100 degree heat in the District of Columbia. Dr. Scott shared that her initial thoughts were about cascading effects to the transportation sector where the mobility services would be failing because users could not communicate with the services. The group is continuing the struggle of examining all of the various interdependencies in the system and looking at that through the lens of cyber and through the lens of aging infrastructure.

Mr. Edmonds was recognized for a comment. Mr. Edmonds noted that one of the major challenges in a disaster scenario is the lack of a unified communications plan. He used the electric industry as an example of a group that had information it wanted to disseminate but lacked a unified plan. Governors and owner-operators were often giving conflicting or duplicative information. Mr. Edmonds mentioned his concerns over the vulnerabilities of 911 systems and the cascading effects that are involved with communications.

Ms. Lau reinforced the Working Group’s commitment to looking at those interdependencies. Ms. Lau opened the meeting up to public comment or comments from Administration Officials. Ms. Wong moved the discussion to the public comment period. In the absence of speakers, she turned the meeting over to Ms. Lau.

Ms. Lau opened the meeting up to discussion from members and officials.

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Mr. Gerstell proposed that the Working Group integrate the results of the RRAPs into the Council's final recommendations.

Mr. Donnell welcomed the Council's interest in aging infrastructure and noted that it was a major priority for DHS and the National Security Staff as well.

Ms. Durkovich seconded the point made by Mr. Donnell and agreed with Dr. Scott's comments on the need for a common definition and understanding of the benchmarks that improvements can be evaluated against.

Dr. Tribble discussed the problem of programs being unknown to partners. She asked the Council to examine ways that information can be better pushed out in the future.

Mr. Wallace noted that the lack of awareness is a frustration shared by both the public and private sector. He suggested that many times the conversation is self-contained within the public sector and that the private sector is not always involved. This can create a scenario where programs are being discussed frequently but only among a small group. Mr. Wallace admitted that the government has been very progressive in how it pushes out information but that the private sector may not have developed the tools to pull that information in. Mr. Wallace expressed his belief that now, 10 years after the September 11th attacks, that the culture in the private sector may finally be at the point where the private sector is interested in what is going on. He expected that during the next 12 months there will be a great improvement in information sharing.

Ms. Grayson built upon Mr. Wallace's comments and discussed the impressive work being done with regards to the partnership. Ms. Grayson also addressed the scope of the report and suggested an examination of how cyber disruptions could compound physical disruptions.

Ms. Lau commented that as a Presidential Advisory Council the NIAC could look at the evolving nature of protection and provide some insight on the strategic shift from a terrorism prevention approach to an all-hazards approach. The Council is also one group leading a conceptual shift away from lists of Level 1 and Level 2 assets towards a more holistic regional approach. Ms. Lau turned the meeting over to Mr. Wallace for the second part of the Working Group presentation about engagement and trusted partnerships.

Regarding engagement, Mr. Wallace declared that what is starting to happen in the electricity sector may be one of the most significant things he has seen during the past 10 years. He hopes that other sectors can adopt the same approach. In 2010 the NIAC completed its report focused on the electric and nuclear sectors. During that report's development the Council used a roundtable of twelve CEOs to test a scenario designed to break the system. This resulted in those CEOs coming to the conclusion that the scenario was not unrealistic, and that more had to be done on the private sector side in regards to resilience. The group also realized that during a real crisis event, experienced sector leadership at the executive level would be required. Following the report, executives in the energy and nuclear sector sent a letter to the President consistent with that report's first recommendation of increased executive level engagement between the public and private sectors. Mr. Wallace highlighted that this meeting brought together all of the divergent parties on the private side. The Edison Electric Institute representing investor owned utilities, the National Rural Cooperative Association and the public power authorities. This meeting also brought in the nuclear sector. The

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meeting featured eight CEOs from the four groups, as well as the leadership of the Departments of Homeland Security and Energy. Mr. Wallace said that the meeting accomplished three things; It allowed four segments of the industry to come to a common point of view; It allowed executives to understand the DHS infrastructure mission; And it gave the industry a way to show their commitment to resilience to the Federal Government. Industry leaders are interested in doing this work on a voluntary basis outside of the regulatory sphere and Mr. Wallace said that it was important for them to show that they shared in the government's desire for increased resilience from the standpoint that these are their assets and they want to protect their interests. Mr. Wallace read from a letter from one of the participants in that meeting and shared his pleasure with the meeting's success and the renewed commitment of his segment to the goal of resilience. Mr. Wallace stated that his three key elements for success are trusted relationships, voluntary executive engagement where a tangible benefit can be demonstrated, and a simple process where owner-operators are not mired in bureaucracy.

Ms. Wong clarified that Mr. Wallace's report was based on information provided to him as a member of the private sector and not as a member of the Council.

Ms. Lau turned the meeting over to Dr. Scott for a proposal to adopt the Working Group's interim recommendations.

Dr. Scott introduced the Working Group's recommendation that the Council commend the White House for the increased dialogue and engagement with the electricity and nuclear sectors. The Working Group recommends that each sector be encouraged to determine if similar engagement would help resilience in their sector. Dr. Scott noted that the communications sector may already be following a similar path. She recommended that this recommendation be sent in a letter to the President.

Mr. Gerstell suggested that the letter be amended to commend not only the White House but the Departments of Homeland Security and Energy as well.

Several attendees stated that the term telecommunications may be misleading as it generally only referred to the voice component of communications and not the data processing component.

Ms. Lau said that the term telecommunications would be examined.

A motion to approve the letter as amended was made and approved.

VI. PUBLIC COMMENT: DISCUSSION LIMITED TO MEETING AGENDA ITEMS AND PREVIOUS NIAC STUDIES

Nancy J. Wong, DFO, NIAC, DHS

Ms. Wong moved the discussion to the public comment period. In the absence of pre-registered speakers, she moved the discussion to closing remarks.

VII. CLOSING REMARKS

Constance H. Lau, NIAC Chair

*Charles Donnell, Special Assistant to the
President for Resiliency, National Security Staff*

*Caitlin Durkovich, Assistant Secretary for
Infrastructure Protection, DHS*

*Dr. Ahsha Tribble, Senior Director for
Response, National Security Staff*

Ms. Lau invited Mr. Donnell to deliver closing remarks.

Mr. Donnell thanked the Council for their time and effort, and expressed his appreciation for the Council's work. He said that when these disasters occur we are individually still a part of a single community and that breaking down the legal constraints that will provide us with a better process to do the important work that we need to do.

Ms. Lau invited Assistant Secretary Durkovich to deliver closing remarks.

Ms. Durkovich thanked the members for their time and dedication. Ms. Durkovich lauded the progress that has been made over the last 10 years to enhance resilience and recommitted IP's resources to that effort.

Ms. Lau invited Dr. Tribble to deliver closing remarks.

Dr. Tribble thanked the Council and said that she looked forward to incorporating the Council's recommendations on cyber security and lifeline sectors into the White House's policy development.

VIII. ADJOURNMENT

Constance H. Lau, NIAC Chair

Ms. Lau thanked all in attendance and adjourned the meeting.

I hereby certify the foregoing minutes accurately represent the discussion and events that transpired at the meeting held on the date first noted above.

By: *Constance H. Lau* Date: *1-16-13*
Constance H. Lau, Chair, NIAC

National Infrastructure Advisory Council (NIAC)



Regional Resilience Working Group

October 16, 2012 – Report #2

Constance H. Lau

*President and Chief Executive Officer,
Hawaiian Electric Industries, Inc.*
Co-Chair

Dr. Beverly Scott

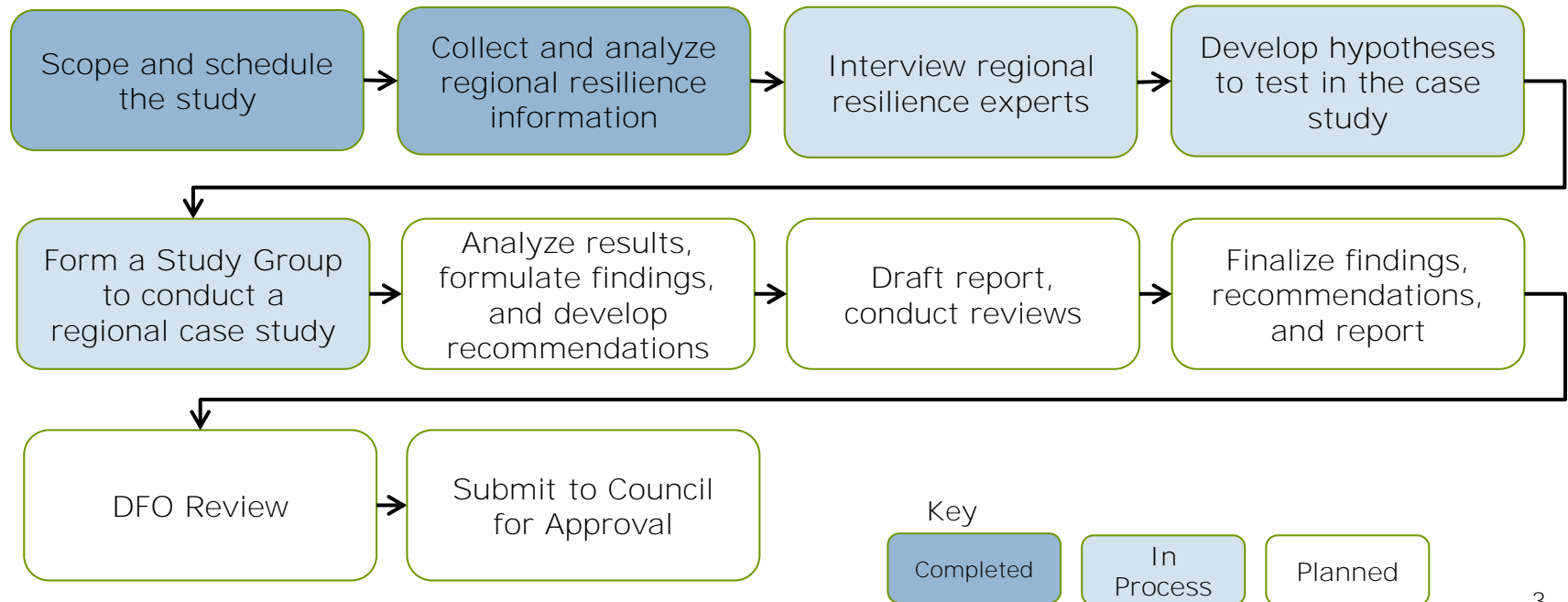
*General Manager/CEO
Metropolitan Atlanta Rapid Transit Authority*
Co-Chair

Agenda for Working Group Report

- Regional Resilience Study Update
 - Background
 - Recap of July 2012 QBM
 - Status Update
 - Initial Study Observations
 - Initial Study Themes and Hypotheses
 - Next Steps
 - *Public Comment*
 - *Discussion*
- Update on Executive-Level Engagement in the Electricity Sector applicable to Resilience Study
 - Interim Recommendation to Council to Reaffirm Recommendation on Executive-Level Engagement in the Lifeline Sectors
 - *Public Comment*
 - *Discussion & Deliberation*

Background

- The Council launched the Regional Resilience Study at the April 2012 Quarterly Business Meeting and formed an 8-member Working Group to conduct the study.
- The study seeks to identify ways regions can become more resilient and the steps the Federal Government can take to help regions accomplish resilience goals.



Study Objectives

- 1. Best Practices:** Identify the characteristics that make a region resilient and the steps that can be taken to improve resilience within a region.
- 2. Process Improvements:** Determine how public and private critical infrastructure partners can work together to improve regional resilience.
- 3. Federal Role:** Recommend how Federal Government capabilities and resources can help accomplish resilience goals and address any gaps that can help regions become more resilient.

Recap of July 2012 QBM

- Items discussed:
 - Summary of Working Group progress
 - Federal Government interest in the impact of the June Derecho
 - Possible value of the results of Regional Focus Groups
- Key takeaways from dialogue with Federal officials:
 - Commitment to an all-of-nation, whole-of-community approach
 - Desire to build resilient structures at the lowest level
 - The need to share capabilities across jurisdictional and geographic boundaries
- Security priorities for the Federal Government
 - Interdependencies between physical infrastructure and cyber vulnerabilities
 - Power surety and restoration
 - Aging infrastructure, including people resources

Status Update

- Working Group follow-up from the July QBM
 - Examined cascading impacts resulting from the power outages from the Midwest/Mid-Atlantic Derecho storm
 - Reviewed results of Regional Focus Groups
 - Focused on the importance of the lifeline sectors, particularly electricity
 - Increased focus on cyber vulnerabilities affecting physical infrastructure
- Continuing research and data collection
 - Completed examination of existing Federal authorities for response and recovery efforts
 - Prepared Research Compendium (Version 1) summarizing state-of-the-art regional resilience studies, guides, and measurement frameworks
 - Conducted 4 interviews with leading practitioners to understand effectiveness of regional resilience frameworks and barriers to their implementation and developed hypotheses to be tested in the Case Study
- Currently forming the Philadelphia Case Study Group to pressure test lifeline infrastructures and examine cascading impacts to other infrastructures in the Philadelphia-to-DC region

Study Observations:

IP Regional Focus Groups

- ❑ Regional Focus Groups indicate that existing DHS IP tools to help regions improve resilience are not widely known or consistently used by critical infrastructure owners and operators across regions
- ❑ Regions are more aware of available IP tools where there are strong public-private partnerships such as relationships with Protective Security Advisers, which serve as a delivery mechanism and force multiplier for available tools

Study Observations: Regional Resilience

Guides and Frameworks

- ❑ Comprehensive how-to guides for strengthening community resilience exist and are being piloted by community organizations.
- ❑ Successful regional resilience efforts engage all stakeholders: State and local leaders, non-profit community groups, utilities, and private businesses. Public-private regional coalitions for resilience are essential to drive the process but full participation has many hurdles.
- ❑ Resilience improvements can require significant capital, yet few mechanisms exist to pool shared resources for regional partnerships or organizations, or for owners and operators.

Study Observations: Regional Resilience

Guides and Frameworks

- Building the business case for pre-disaster investment in resilience improvements, or performing adequate cost-benefit analyses of improvements, is difficult
 - Regions do not have good tools to measure resilience and perform a cost-benefit analysis for needed improvements.
 - Good economic data—such as data from past disasters—is often unavailable.
- There is no standard way to evaluate regional resilience, though researchers have devised frameworks to identify the characteristics that make a community resilient
 - Regions would benefit from having a consistent, agreed upon set of resilience measures to determine their status and identify areas for improvement

Study Observations: Philadelphia Metro Area Preparedness

- ❑ Philadelphia conducted a comprehensive Emergency Preparedness Review in 2006
 - Review did not focus on impacts beyond the Philadelphia metro area.
 - **Proposes an ongoing forum for the region's highest elected officials** and private sector leaders to develop coordinated regional resilience approaches.
 - Recommends that the city increase existing regional planning and resource sharing.
 - Following review, the city increased engagement in the Southeastern PA Regional Task Force and conducted regional emergency planning and citywide electricity/gas disruption exercises
- ❑ The 2012 Natural Hazard Mitigation Plan prioritizes mitigation actions but notes that not all may be feasible
- ❑ Planned NIAC Philadelphia Case Study will examine infrastructure failures beyond the Philadelphia metro area and will examine cyber vulnerabilities

Study Observations: Federal Authorities

- ❑ The Stafford Act provides response and recovery for the public sector for physical disasters, with little focus on cyber events or prevention. It is not designed to help entire sectors recover in a large-scale disaster.
 - Only individual private organizations are eligible for limited Small Business Administration loans under the Stafford Act.
- ❑ Current Federal Government disaster planning reflects an all-of-nation, whole-of-community approach and a prioritization of resilience.
 - The 2008 National Response Framework and National Incident Management System provide an interoperable structure that can facilitate Federal, State, local, and private sector coordination to disaster response.
 - The five new National Planning Frameworks required under PPD-8 will further expand the national structure for disaster **response** coordination (originally established in the NRF) to other components of **resilience**: prevention, protection, mitigation, and recovery.

Study Observations: The Derecho and Importance of the Lifeline Sectors

- ❑ The Working Group examined impacts from the Midwest/Mid-Atlantic Derecho
 - 4.2 million customers lost electric power in 11 states and DC, outages lasted as long as 11 days
 - 22 killed, widespread economic damage
 - Electricity disruptions cascaded to other critical infrastructures
 - Derecho highlighted interdependencies, exposed gaps in disaster preparedness
- ❑ Research and Working Group discussions reinforced the importance of electricity and other lifeline sectors to critical infrastructures

Critical Infrastructure Disruptions due to the June 2012 Derecho*

Electricity

- 4,226,962 customers loss power across 11 states and the District of Columbia
- Largest number of outages in Virginia, Maryland, Ohio, and West Virginia
- ESF 12: FEMA National Response, FEMA Region III (Philadelphia), FEMA Region V (Chicago), and WV EOC activated
- More than 24,000 workers from Appalachian Power, Allegheny Power, Pepco, Dominion, and BGE worked on restoration, including workers from other states and Canada.

Transportation

- 184 state roads closed in MD, more than 400 lights out in Montgomery County; 20 primary roads and 201 secondary roads closed in Virginia, about 120 traffic lights out in Fairfax County alone MTA: knocked out power to Mobility Call center and disrupted Light Rail service

Oil and Natural Gas

- Service stations lose power and ability to pump gas, creating long lines of cars

IT

- Amazon Data center knocked offline in VA for 6 hours, cutting off Netflix, Pinterest, Heroku, and Instagram

Government Facilities

- Option for unscheduled leave or telework on July 2

Commercial Facilities

- Many commercial office buildings without power
- People flock to hotels and malls for power and to charge electronics

Emergency Services

- 911 Centers out of service in Fairfax and Prince William Counties and Manassas and Manassas Park—not fully reliable until July 3 (3 days).
- 911 calls in Fairfax increase 415% over the 3.5 hours following the storm, Fire and Rescue dispatched increasing by 2,400%
- Police and fire stations on emergency generators
- Public safety officials needed to direct traffic at dark intersections

Healthcare and Public Health

- 80 crew members and 46 bucket trucks needed to restore power to four Montgomery Co. nursing homes
- Larger lines supplying power to substations had to be repaired before hospitals and 911 centers

Food and Agriculture

- Restaurants report losing up to \$60,000 worth of food
- 70 of Giant's 173 stores lost power, many have backup
- Other supermarkets lost backup power; Chevy Chase Supermarket had losses over \$100,000 from 5 days without power

Water

- Load curtailment in PJM electric grid on 6/29, reducing water production
- 50 WSSC facilities without power
- Fairfax County loses power to 40 of 63 wastewater pumping stations; all 63 lose SCADA communications
- Larger lines supplying power to substations had to be repaired before pumping stations
- Several WSSC pump stations rely on generator power for a week or more
- Low water pressure, discolored water, mandatory conservation
- Falls Church Water Utility issued a boil water advisory.

Telecom

- Verizon: 156 downed utility poles and 897 downed copper or fiber cables
- Cell calls and data downloads strain wireless capacity, causing service disruptions
- T-Mobile: 25% of cell sites down for short periods
- Many cell towers on backup generators: 450 Verizon cell towers

* Derived from published news reports, congressional testimony, and government reports.

Initial Study Themes and Hypotheses

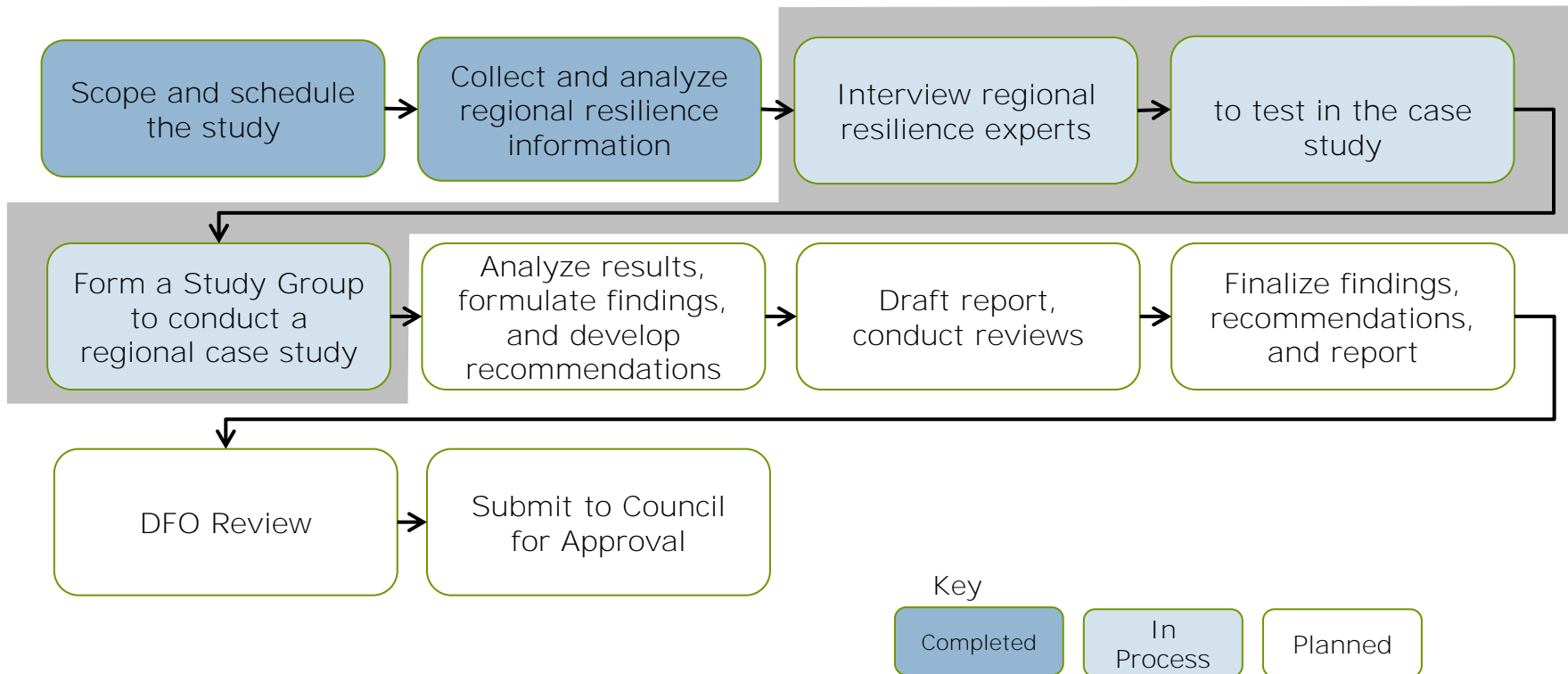
- ❑ Processes and expertise that enable regions to evaluate and improve their resilience posture are available and being used, although their effectiveness is varied.
- ❑ Regions would benefit from having a consistent, agreed upon set of resilience measures to determine their status and identify areas for improvement
- ❑ Increasing interdependence and interconnections among critical infrastructures within a region create risks that are not well understood by business and government and can cause cascading impacts across sectors and communities.
- ❑ The increasing integration of cyber systems in critical infrastructures is changing the risk profile of sectors and regions, especially in the lifeline sectors.
- ❑ It is often difficult to make the business case for improving regional resilience and making the needed investments. Regional resilience should not be just about loss avoidance; it should also be about growth opportunities.
- ❑ Trust, leadership, and partnership are the fundamental building blocks of effective regional resilience efforts.

Discussion Today on Initial Study Themes & Hypotheses

- ❑ Are the initial study focus areas (e.g., interdependencies, cyber/physical interface, making a business case, trust, leadership, and partnership) consistent with the interests of the Federal Government and the Nation? Are there other key areas that should be incorporated into the study?
- ❑ While the study will focus on regional disruption regardless of cause, should emphasis be placed on cyber disruption because the issue is so unique? Are there particular aspects of cyber vulnerabilities that would affect how a region responds?
- ❑ Are all components of resilience equally important (i.e., prevention, protection, mitigation, response and recovery) or should we focus more heavily on certain components?

Next Steps

□ Complete “in process” steps



Public Comment

Discussion Today on Initial Study Themes & Hypotheses

- ❑ Are the initial study focus areas (e.g., interdependencies, cyber/physical interface, making a business case, trust, leadership, and partnership) consistent with the interests of the Federal Government and the Nation? Are there other key areas that should be incorporated into the study?
- ❑ While the study will focus on regional disruption regardless of cause, should emphasis be placed on cyber disruption because the issue is so unique? Are there particular aspects of cyber vulnerabilities that would affect how a region responds?
- ❑ Are all components of resilience equally important (i.e., prevention, protection, mitigation, response and recovery) or should we focus more heavily on certain components?

Regional Resilience: Executive-Level Engagement

Concurrent Executive Engagement by the Electricity and Nuclear Sectors

- ❑ Leaders in the Electricity and Nuclear Sectors identified a need for public-private cooperation for catastrophic risk scenarios for the electric grid that had national implications
- ❑ Letters written to the President by electricity and nuclear private sector leadership
 - Edison Electric Institute engaged the leadership of the entire electricity and nuclear sector to coordinate interactions with Federal leaders
- ❑ Initial meeting with the Secretaries of DHS and DOE on July 23, 2012; concrete actions steps agreed to
- ❑ Classified threat briefing to 74 electricity and nuclear sector CEOs conducted on September 14
- ❑ Commitment of the electricity and nuclear sector CEOs; intent to make executive engagement very focused and solutions oriented
- ❑ Approach consistent with prior NIAC recommendations that encouraged executive-level engagement between the private and public sectors (2008, 2010, 2012)

Working Group Interim Recommendation to the Council on Executive-Level Engagement

Working Group recommends that the Council:

- ❑ Commend the White House for this increased dialogue with the electricity and nuclear sectors
- ❑ Reaffirm its recommendation that if other lifeline sectors wish to engage with senior Federal officials to address high-impact infrastructure risks, that these officials place a priority on such executive-level engagement
 - Each sector is encouraged to determine whether the sector has a high-impact infrastructure risk for which executive-level engagement can help improve resilience in the sector within a region
 - The Working Group notes that such dialogue has historically occurred and may currently be occurring in the telecommunications sector
 - The engagement process used by the electricity sector can serve as a model for the other lifeline sectors

Discussion and Deliberation Today on Interim Recommendation to the Council

- ❑ Would disruptions in other lifeline sectors have significant cascading regional impacts that would justify priority engagement?
- ❑ Are other lifeline sectors sufficiently interested and organized to engage? Are they already engaging and, if so, is such engagement adequate and occurring at the right levels?
- ❑ What challenges might be encountered to focused and productive dialogue between public and private sector executives?
- ❑ Would the process used by the electricity and nuclear sectors be appropriate for other sectors?
- ❑ Would Federal officials have the resources to engage at the senior level?

Public Comment

Discussion and Deliberation Today on Interim Recommendation to the Council

- ❑ Would disruptions in other lifeline sectors have significant cascading regional impacts that would justify priority engagement?
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- ❑ What challenges might be encountered to focused and productive dialogue between public and private sector executives?
- ❑ Would the process used by the electricity and nuclear sectors be appropriate for other sectors?
- ❑ Would Federal officials have the resources to engage at the senior level?

Appendix

Working Group Members

WG Member	Sector Experience
Constance H. Lau , <i>President and Chief Executive Officer, Hawaiian Electric Industries, Inc. (HEI)</i> Co-Chair	Electricity, Financial Services
Beverly Scott , <i>General Manager/CEO Metropolitan Atlanta Rapid Transit Authority (MARTA)</i> , Co-Chair	Transportation
Jack Baylis , <i>Executive Director and Senior Vice President for The Shaw Group</i>	Water
Glenn S. Gerstell , <i>Managing Partner, Milbank, Tweed, Hadley, & McCloy LLP</i>	Water, Telecommunications
David J. Grain , <i>Founder and Managing Partner, Grain Management</i>	Telecommunications
Margaret E. Grayson , <i>President, Grayson Associates</i>	IT, Defense Industrial Base
James A. Reid , <i>President, Eastern Division, CB Richard Ellis</i>	Commercial Facilities
Michael J. Wallace , <i>Former Vice Chairman and COO, Constellation Energy</i>	Electricity, Nuclear

Previous NIAC Recommendations on Executive-Level Engagement

- Intelligence Information Sharing, January 2012
 - **“The White House should additionally employ current or new partnership mechanisms for senior executives in the private sector to engage their government counterparts to facilitate a truly national approach that leverages public-private resources for large-scale, persistent threats.”**
- A Framework for Establishing Critical Infrastructure Resilience Goals, October 2010
 - **“The White House should initiate an executive-level dialogue with electricity and nuclear sector CEOs on the respective roles and responsibilities of the private and public sectors in addressing high-impact infrastructure risks and potential threats, using an established private sector forum for high-level, trusted discussions between industry executives and government leaders.”**
- Critical Infrastructure Partnership Strategic Assessment, October 2008
 - **“The private sector should initiate a strategic dialogue between industry CEOs and the White House soon after the inauguration to reinforce their commitment to partnership principles, followed by similar dialogues with the Congressional leadership and state governors.”**

Lifeline Sectors*

- Energy
- Telecommunications
- Transportation
- Water

* As defined in the NIAC Regional Resilience Study. Some sources also identify Emergency Services and Food as “lifeline” sectors.