NATIONAL INFRASTRUCTURE ADVISORY COUNCIL

BUSINESS MEETING AGENDA
1310 N. Courthouse Road
3rd Floor, Virginia Room
Arlington, VA 22201
April 17, 2012
1:30 PM – 4:30 PM EST

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	*Nancy J. Wong*, DFO, NIAC, DHS *William F. Flynn*, Acting Assistant Secretary for Infrastructure Protection (IP), DHS *Brian Kamoie*, Senior Director, Preparedness Policy, National Security Staff
IV. APPROVAL OF JANUARY 2012 MINUTES	*Nancy J. Wong*, DFO, NIAC, DHS
V. NIAC POTENTIAL STUDY TOPICS	*Michael J. Wallace*, NIAC Working Group Chair
VI. PUBLIC COMMENT: DISCUSSION LIMITED TO MEETING AGENDA ITEMS AND PREVIOUS NIAC STUDIES	
VII. CLOSING REMARKS	*Suzanne Spaulding*, Deputy Under Secretary for the National Protection and Programs Directorate, DHS *William F. Flynn*, Acting Assistant Secretary for Infrastructure Protection (IP), DHS *Brian Kamoie*, Senior Director, Preparedness Policy, National Security Staff

VIII. Adjournment *Nancy J. Wong*, DFO, NIAC, DHS

MINUTES

NIAC MEMBERS PRESENT IN WASHINGTON:
Mr. Jack Baylis; Mr. David Grain

NIAC MEMBERS ATTENDING VIA CONFERENCE CALL:
Mr. Gilbert Gallegos; Mr. Glenn Gerstell; Ms. Margaret E. Grayson; Mr. David Kepler; Ms. Constance H. Lau; Mr. James Nicholson; Dr. Linwood Rose; Dr. Beverly Scott; Mr. Michael Wallace

MEMBERS ABSENT:
Mr. David Bronczek; Mr. Wesley Bush; Mr. Albert J. Edmonds; Mr. Philip Heasley; Commissioner Raymond Kelly; Mr. Donald Knauss; Mr. Thomas E. Noonan; Mr. James Reid; Mr. Bruce Rohde; Mr. Gregory A. Peters; Mr. Greg Wells;

SUBSTANTIVE POINTS OF CONTACT PRESENT IN WASHINGTON:
Ms. Frances Paulson (for Mr. David Bronczek);

SUBSTANTIVE POINTS OF CONTACT ATTENDING VIA CONFERENCE CALL:
Mr. Kenneth Schneiweis (Commissioner Raymond Kelly); Mr. Gerald Buckwalter (for Mr. Wesley Bush); Ms. Joan Gehrke (for Mr. James Nicholson)

OTHER DIGNITARIES PRESENT:
Ms. Suzanne Spaulding, Deputy Under Secretary, NPPD; Mr. William F. Flynn, Acting Assistant Secretary, IP, DHS; Mr. Brian Kamoie, Senior Director, Preparedness Policy, National Security Staff; 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 Acting Assistant Secretary for Infrastructure Protection Mr. William F. Flynn, NIAC members and their staff, Mr. Brian Kamoie, Senior Director for Preparedness Policy on 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 and in the critical infrastructure environment, and on which the National economy and public safety depend. She noted that during the Council's 11 year history, it completed 21 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.

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 second NIAC meeting of 2012.

III. OPENING REMARKS AND INTRODUCTIONS — *Nancy J. Wong*, DFO, NIAC, DHS

William F. Flynn, Acting Assistant Secretary for Infrastructure Protection, DHS

Brian Kamoie, Senior Director, Preparedness Policy, National Security Staff

Ms. Wong explained that in the absence of the Chair and Vice Chair of the Council, the Federal Advisory Committee Act (FACA) framework provides that the Council's Designated Federal Officer will provide continuity for the Council by running the Council's meetings until new Council leadership is appointed. Ms. Wong invited the Acting Assistant Secretary William F. Flynn to make an opening statement.

Mr. Flynn thanked Ms. Wong and the NIAC members in attendance for the service to the Council and the country. Mr. Flynn stated that he read with great interest the recent NIAC report on Intelligence Information Sharing (the Report). He noted one of the Report's recommendations, asserting critical infrastructure protection and resilience a security priority, was of interest to the Office of Infrastructure Protection and that the Office supported it fully. Mr. Flynn further stated that he was pleased that the Report acknowledged the ability to leverage the private sector as a force multiplier.

Mr. Flynn noted that the Report highlighted progress that the Office of Infrastructure Protection has made in information sharing, such as the creation of the Engagement Working Group; the development of information sharing tools such as Homeland Security Information Network (HSIN); deployment of the Regional Initiative effort, which is conducting sessions in the Federal regions to highlight capabilities and requirements at the regional level; and the implementation of the private sector security clearance program that ensures partners are properly cleared and able to participate in essential information sharing environments. Mr. Flynn noted that to date there are over 1,500 private sector partners with security clearances. In conclusion, he noted that 72 fusion centers across the country are able to bring together the appropriate partners when needed.

Ms. Wong thanked Mr. Flynn and invited Mr. Brian Kamoie, Senior Director, Preparedness Policy, National Security Staff, to make an opening statement. Mr. Kamoie thanked Ms. Wong, Mr. Flynn, and the Council for their participation and commitment. He provided an update on the implementation of Presidential Policy Directive 8 (PPD-8), the review of Homeland Security Presidential Directive 7 (HSPD-7) on Critical Infrastructure Protection and Resilience, and the importance of regionalization.

Mr. Kamoie noted that the President articulated the three key principles that comprise PPD-8:

- Whole Community approach to preparedness to leverage existing community resources that already exist
- Retaining key capabilities essential to protection and resilience of critical infrastructure
- Developing metrics to measure and report progress

These concepts, Mr. Kamoie noted, reflect the Council's decision to study Regional Resilience. He mentioned that since 9/11, the focus has evolved from protecting the critical infrastructure to promoting overall resilience and the accompanying efforts. Mr. Kamoie concluded that the PPD-8 approach and principles are designed to stabilize the infrastructure systems, minimize health and safety threats, and restore operations as efficiently and effectively as possible.

With respect to HSPD-7, Mr. Kamoie commented that the partnership between the Federal Government and owners and operators of infrastructure has been a guiding principle during the review process. Mr. Kamoie stated that this foundation helps expand the focus of HSPD-7 beyond

terrorism, which is still a priority for the Administration, to incidents related to natural disasters and cyber threats. Mr. Kamoie reiterated the expanded focus of HSPD-7 offers an all-hazards approach.

In conclusion, Mr. Kamoie noted that the regional perspective of the Council's proposed new study fits well with the Whole Community approach. Mr. Kamoie stated that in light of disasters such as Hurricanes in the Gulf of Mexico, it is important to leverage capabilities of communities during an event because it helps identify interdependencies. He concluded that the Administration will continue to promote the principles of the Whole Community concept and emphasize the importance of infrastructure resilience across the mission areas of preparedness.

Ms. Wong thanked Mr. Kamoie for his remarks and participation.

IV. APPROVAL OF JANUARY 2012 MINUTES

Nancy J. Wong, DFO, NIAC, DHS

Ms. Wong opened the floor to discussion of the January 2012 meeting minutes. In the absence of comments, it was moved to approve the minutes. The Council motioned to approve the minutes.

V. NIAC POTENTIAL STUDY TOPICS

Michael J. Wallace, NIAC Working Group Chair

Ms. Wong opened discussion of the NIAC potential study topic of Regional Resilience. Ms. Wong introduced Mr. Wallace, one of the Chairs of the Working Group, along with Working Group member Ms. Constance Lau. Ms. Wong stated that after the presentation she would ask for a motion to open up the floor for discussion and deliberation of the recommended topic led by Mr. Wallace. At the close of the presentation, Ms. Wong will issue a call for a vote on the recommendation by the Council.

Mr. Wallace thanked Ms. Wong. Mr. Wallace stated that he would present the background and the charge that the Council was given, proposed study objectives and the Council's recommendations, Ms. Lau would present the approach and the content the Working Group has documented.

Mr. Wallace elaborated that at the January 2012 NIAC meeting, the Working Group was established to recommend the subject of the next NIAC report. He recounted that in 2010 the NIAC published a Resilience study focusing on the Electricity and Nuclear sectors. Mr. Wallace noted at the January NIAC meeting, it was agreed that a regional focus of resilience rather than by sector was a more feasible approach. This would allow the goals, objectives, and more actionable recommendations to be created quicker. A Working Group was created, Mr. Wallace recounted, to outline a new study on regional resilience that would build upon the Council's previous resilience framework incorporating elements of regionalization, and clarify the scope in terms of a region and sectors.

Mr. Wallace acknowledged the members of the Working Group: Glenn Gerstell, David Grain, Constance Lau, Jim Reid, and Dr. Beverly Scott. He stated that all Working Group members were active participants in the series of five meetings. He further noted that the recommendations brought forth to the Council today heavily reflect the expertise of all Working Group participants. Mr.

Wallace also thanked the NIAC Support Staff and Ms. Wong for their participation and effort in the Working Group meetings.

Mr. Wallace reiterated that the objective of the study was to apply the resilience framework developed by the Council in a previous report to a region, determining how public and private critical infrastructure partners can work together in that context. He explained that the Working Group developed four sub-objectives: establish goals for improving resilience with a special emphasis what would be relevant at the national level; develop national requirements and capabilities to achieve the goals in the first objective; determine regional requirements and capabilities; and create a modular template for regional adoption. Mr. Wallace asked Ms. Lau to continue with the presentation.

Ms. Lau thanked Mr. Wallace. She recounted that the framing questions were developed to understand what makes certain regions more resilient than others, and to identify various stages of preparation towards resilience in each region. Ms. Lau cited factors that contribute to resilience, such as different methods for managing critical infrastructure, strong public-private partnerships and relationships, and how interdependencies among States, local, private sector, and Federal agencies are addressed. Ms. Lau stated that the answers to these questions could help regions strengthen resilience and support risk mitigation.

Ms. Lau noted that next the Working Group examined which regions could be assessed, and identified key factors to help select the appropriate region for this study. She recounted the Group's discussion of what constitutes a region – metropolitan areas, States, or cluster of States – and what would be the preferred unit of analysis. Ms. Lau stated that the Group decided a mega-region was most appropriate, and identified 11 mega-regions in the United Stated defined by population, interlocking economic systems, shared natural resources and ecosystems, and common transportation systems linking population centers.

Ms. Lau noted that the Working Group utilized a set of criteria to select one mega-region. Mega-regions were ranked according to factors such as economic significance, existence of risks that affect national resilience, presence of multi-jurisdictional issues and sector interdependencies, and presence of the life-line sectors (energy, water, transportation, and telecommunications). Ms. Lau stated that the Working Group categorization of the mega-regions according to the criteria were similar, with the Northeast, Great Lakes Region and Southern California ranking as the top three. She further noted that these rankings were also similar to the results of open-source research. Ms. Lau reported that the Group decided the Northeast was the most prominent mega-region due to its economic significance, risks profile, and its highly interconnected infrastructures.

Mr. Wallace thanked Ms. Lau for her presentation. Mr. Wallace noted that the selection of the Northeast was the result of extensive dialogue and analysis by the Working Group. He noted that four recommendations were created once the mega-region was selected:

- That the Administration direct the Council to launch a new study that builds on the Council's resilience goals as established in the 2010 report, and incorporates regionalization to leverage partnerships going forward.
- That the study focuses on the Northeast mega-region.
- That the study focus on the lifeline sectors, Commercial Facilities and Banking and Finance.

- That the study involve other NIAC members with applicable experience and expertise.

Mr. Wallace stated that Ms. Lau has agreed to be the Co-Chair with Dr. Scott.

Ms. Wong thanked Mr. Wallace and the members of the Working Group for their active participation and dedication. She then requested a motion do discuss the Working Group's recommendations to the Council.

Ms. Wong asked Mr. Wallace to lead the discussion to a deliberation of the Working Group's recommendations. Mr. Wallace asked the Council if there were any questions. Mr. Baylis noted that the definition of resilience accepted from the 2009 Resilience Study included "absorb, adapt and rapidly recover" whereas the President's Directive used "withstand" instead of adapt. Mr. Baylis asked the Working Group if they visited the definition used in the Directive or applied the definition from the 2009 Study. Mr. Wallace replied that the Working Group used the previous definition; however, if this study were chartered by the Administration, the new working group should revisit the definition of resilience. Ms. Lau commented that the group intended to build upon prior Council studies, and therefore kept the Council definition of resilience from 2009.

Ms. Wong asked if there were other comments. Mr. Flynn thanked the Working Group and stated that the objectives, approach and recommendations were outstanding. He asked if the criteria were analyzed for historical all-hazards type events. Mr. Wallace stated that the Working Group analyzed After Action Reviews on large Hurricanes for example. These After Action Reviews focused primarily on the region and any improvements in resilience.

Ms. Lau also recounted that the Working Group acknowledged the fact that a complex region would necessitate a complex report; however, it would highlight the interdependencies within the region. She further noted this could also help identify other interdependencies in other regions across the country.

In the absence of additional comments, Ms. Wong requested a vote to approve the recommendations. The Council voted to approve the recommendations.

Ms. Wong asked if Mr. Flynn and Mr. Kamoie would like to provide comments or a response to the Council's recommendations as the government representatives. Mr. Flynn thanked the Working Group for the outstanding product and scoping of the effort. He stated that the effort by the Council continued to demonstrate the partnership and the value to DHS and the infrastructure protection mission. In closing, he stated the new report initiative has his full support.

Mr. Kamoie echoed Mr. Flynn's comments, stating that the Council has identified key factors in the relationships between infrastructure and regions and the overall economy. He stated the Council is moving forward with the right criteria.

Ms. Wong noted that Deputy Under Secretary Spaulding joined the meeting. She stated that the Council received a tasking from the Government to move forward with the work proposed by the Working Group. Ms. Wong requested a motion to approve the establishment of a working group to continue with the Council's recommendations on the scope of a new study. In the absence of additional comments, it was moved to create the working group. The Council voted approve the

working group. Ms. Wong asked the Council for volunteers to supplement the Working Group. Mr. Baylis and Ms. Grayson volunteered.

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

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

Suzanne Spaulding, Deputy Under Secretary, National Protection and Programs Directorate, DHS

William F. Flynn, Acting Assistant Secretary, Infrastructure Protection, DHS

Brian Kamoie, Senior Director, Preparedness Policy, National Security Staff

Ms. Wong invited Deputy Under Secretary Spaulding to deliver closing remarks. Ms. Spaulding noted that she looked forward to the results of the working group on this important topic. She stated that the White Paper demonstrates the quality of the analysis DHS has come to expect from the Council. Ms. Spaulding thanked the Council for their dedication. She further noted that she is particularly interested in the relationships between regionalization, resiliency and the private sector. Ms. Spaulding elaborated that regionalization is a feasible concept at the Federal, State and local level, but its application in the private sector is not as obvious. In closing, she stated that this next study is information DHS needs. Ms. Spaulding thanked the Council for their service and the study.

Mr. Flynn thanked the Council for their work and support of the Homeland Security mission.

Mr. Kamoie thanked the Council for providing advice to the President and senior leadership.

VIII. ADJOURNMENT

Nancy J. Wong, DFO, NIAC, DHS

Ms. Wong 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: Nancy J. Wong Date: 7-30-12
Nancy J. Wong, Designated Federal Officer, NIAC

National Infrastructure Advisory Council (NIAC)

Regional Resilience Scoping Working Group

April 17, 2012

Michael J. Wallace
Former Vice Chairman and COO, Constellation Energy

David J. Grain
Founder and Managing Partner, Grain Management

James A. Reid
President, Eastern Division, CB Richard Ellis

Glenn S. Gerstell
Managing Partner, Milbank, Tweed, Hadley, & McCloy LLP

Constance H. Lau
President and Chief Executive Officer, Hawaiian Electric Industries, Inc. (HEI)

Dr. Beverly Scott
General Manager/CEO Metropolitan Atlanta Rapid Transit Authority (MARTA)

Agenda

- Background and Charge
- Working Group Members
- Proposed Study Objective
- Approach
- Recommendations

Background and Working Group Charge

- Background
  - At its January 10, 2012 meeting, NIAC established a Working Group to recommend the subject of its next study
  - The Council's 2010 study on resilience recommended that a resilience framework be used by sectors and Federal and State governments to help organize resilience strategies
  - DHS noted the value of a regional focus on resilience
- Charge from the Council
  - Outline a new study on regional resilience that builds on the Council's previous work and incorporates a strong element of regionalization that can best leverage partnership efforts
  - Help clarify the appropriate scope in terms of regions and sectors that could be studied

Working Group Members

- **Michael J. Wallace,** *Former Vice Chairman and COO, Constellation Energy*, (Chair)
- **Glenn S. Gerstell,** *Managing Partner, Milbank, Tweed, Hadley, & McCloy LLP*
- **David J. Grain,** *Founder and Managing Partner, Grain Management*
- **Constance H. Lau,** *President and Chief Executive Officer, Hawaiian Electric Industries, Inc. (HEI)*
- **James A. Reid,** *President, Eastern Division, CB Richard Ellis*
- **Dr. Beverly Scott,** *General Manager/CEO Metropolitan Atlanta Rapid Transit Authority (MARTA)*

Proposed Study Objective

- Apply the resilience framework developed by the Council to a region within the United States to determine how public and private CIKR partners can work together to:
  - establish goals for improving regional resilience, with special emphasis on those that would be relevant at the national level
  - determine national level requirements and capabilities to achieve these goals
  - determine regional requirements and capabilities to achieve these goals
  - create a model or template that can be adopted by other regions

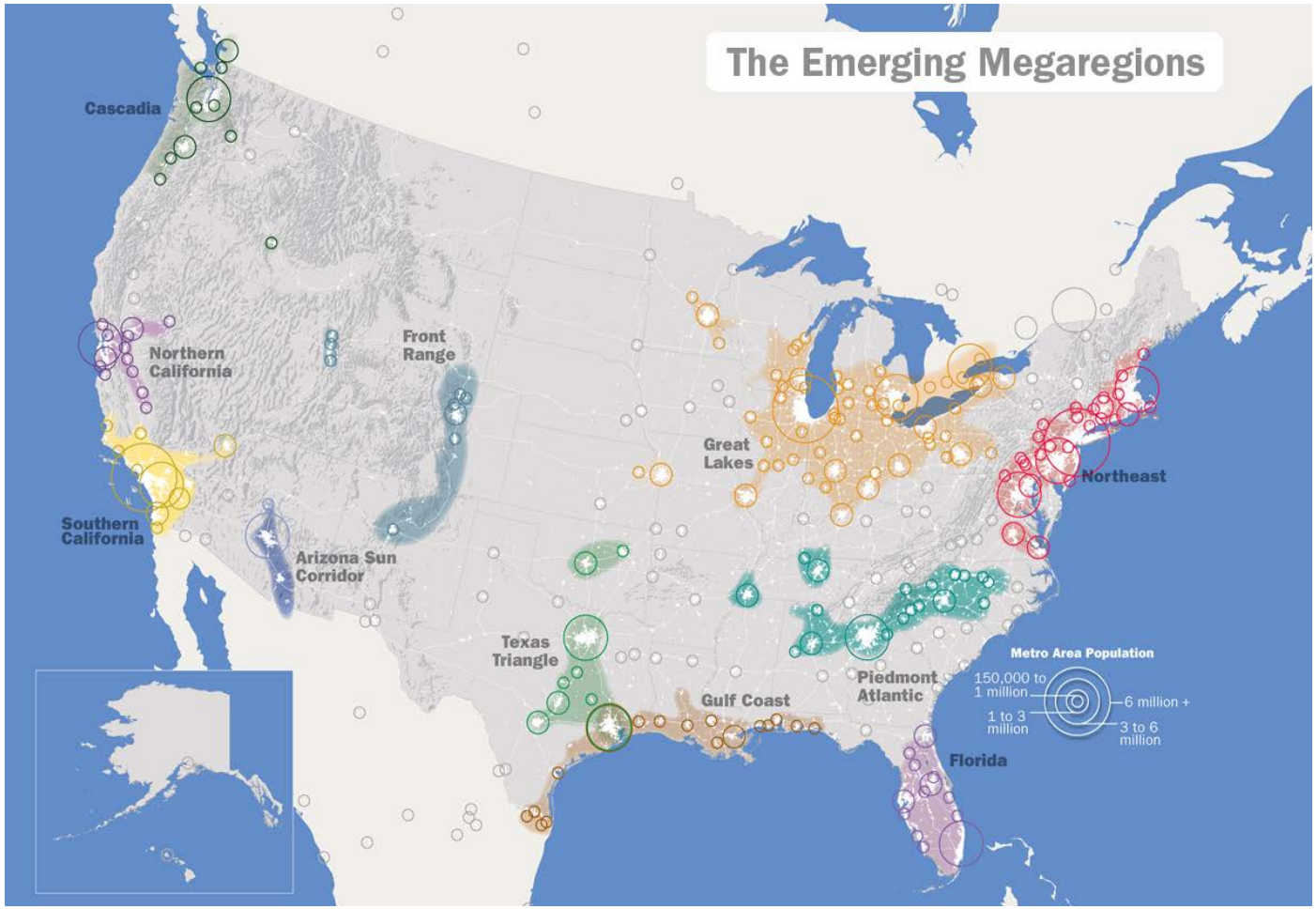
Working Group Approach

- Develop framing questions
- Assess possible regions for study
- Assess sectors to include
- Identify key factors

Framing Questions on Regional Resilience

- What are the characteristics that make some regions more resilient than others?
- How do regions manage their critical infrastructure to increase their resilience?
- How do public-private partnerships and relationships affect regional resilience?
- What is the relationship between infrastructure and economic resilience? Do owners and operators benefit from and value regional resilience?
- How can the federal government and its resources help to accomplish goals established for regional resilience?
- How can regions mitigate risks associated with infrastructure interdependencies?
- How can the federal government support risk mitigation for regional infrastructure?
- What are the implications for federal resources located within a region with respect to regional resilience?

Megaregions Used to Define Regions



Criteria for Assessing Regions

1. Economic significance
2. Regional risks affecting national resilience
3. Complexity: Significant multistate or multijurisdictional issues
4. Complexity: significant regional and sector interdependencies
5. Strength of public-private sector relationships
6. Supply chain vulnerabilities
7. Key sectors of interests
8. Experience with regional resilience exercises
9. Applicability of lessons learned for other regions

Results

Regions	Northeast	Great Lakes	Piedmont Atlantic	Florida	Gulf Coast	Texas Triangle	Front Range	Arizona Corridor	Southern California	Northern California	Cascadia
Cities	New York City Washington Baltimore Boston Jersey City/Newark Philadelphia	Chicago Indianapolis Detroit Twin Cities Kansas City St. Louis	Atlanta Charlotte	Miami/Ft Lauderdale Orlando Tampa	Houston New Orleans	Dallas/Fort Worth/ Arlington/Houston San Antonio	Denver	Phoenix	Anaheim/Santa Ana Los Angeles/Long Beach Riverside San Diego Las Vegas	San Francisco Oakland	Seattle Portland
Criteria											
Multistate/ multijurisdictional	X	X	X	0	X	0	X	0	0	0	X
Economic significance (Based on GDP)	X	X	0	0	0	X	-	-	X	0	-
Regional risks affecting national resilience*	X	X	X	0	X	X	0	-	X	X	0
Lessons transferrable to other regions*	X	X	0	0	0	0	-	-	X	X	0
Complexity and interdependencies*	X	X	0	0	0	X	-	-	X	0	0
Public-private sector relationships*	X	X	-	0	0	0	-	-	X	0	X
Supply chain vulnerabilities*	X	X	0	0	X	X	0	0	X	X	0

X	Major
o	Moderate
-	Minor/None

Priority Regions

Megaregion	Key Statistics	Major Sectors
Northeast	• Principal Cities: Boston, New York, Philadelphia, Baltimore, Washington D.C. • Percent of U.S. Population: 17% • Percent of US GDP: 21%	• Banking and Finance • Commercial Facilities • Energy • IT/Communications • Transportation • Chemicals
Great Lakes	• Principal Cities: Chicago, Detroit, Pittsburgh, Cleveland, Minneapolis, St. Louis, Indianapolis • Percent of U.S. Population: 18% • Percent of US GDP: 17%	• Food and Agriculture • Banking and Finance • Transportation • Critical Manufacturing • Commercial Facilities
Southern California	• Principal Cities: Los Angeles, San Diego, Anaheim, Long Beach, Las Vegas • Percent of U.S. Population: 8% • Percent of US GDP: 7%	• Defense Industrial Base • Commercial Facilities • Banking and Finance • Energy

Recommendations

1. The Council recommend that the Administration direct the Council to launch a new study that builds on the Council's Resilience Goals study and incorporates a strong element of regionalization that can best leverage partnership efforts.
2. The study focus on the Northeast region of the United States.
3. The study focus on the lifeline sectors (energy, water, transportation, and telecom) and key sectors important to the Northeast, such as commercial facilities and banking and finance.
4. The study involve Council members who have experience and expertise in one or more of the regions or sectors of interests.

National Infrastructure Advisory Council

Regional Resilience Scoping Study

March 23, 2012

Background

During the NIAC's January 10, 2012 Quarterly Business Meeting, the Council established a Working Group to help define the scope for a proposed NIAC study on regional resilience. The Council noted that their 2010 study, *A Framework for Establishing Critical Infrastructure Resilience Goals,* developed a framework for setting sector-wide resilience goals but was only able to examine two CIKR sectors: electricity and nuclear. The study recommended that all CIKR sectors use the NIAC-developed framework for setting resilience goals and that DHS should consider using this resilience framework as a common way to organize resilience strategies within Federal and State governments.

At the January meeting, DHS Assistant Secretary Todd Kiel suggested that the Council consider a study that aligns with ongoing regionalization efforts within the Office of Infrastructure Protection. Specifically, it was suggested that the Council might look at resilience requirements based on regions and consider how to best leverage the combined capabilities of private, federal, state, local, territorial, and tribal partners to meet these requirements. This is in line with the Council's 2010 study, *Optimization of Resources for Mitigating Infrastructure Disruptions,* which examined resilience from a community perspective and recommended community-level identification and assessment of infrastructure interdependencies, and the adoption of lessons learned from national-level infrastructure planning and analysis to regional and community-level systems.

The Working Group proposes that the NIAC recommend that the Administration charge the Council to launch a new study that builds on the Council's *Resilience Goals* study and incorporates a strong element of regionalization that can best leverage public-private partnership efforts.

Objective

The study will apply the resilience framework developed by the Council to a region within the United States to determine how public and private CIKR partners can work together to:

- establish goals for improving regional resilience, with special emphasis on those that would be relevant at the national level
- determine national level requirements and capabilities to achieve these goals,
- determine regional requirements and capabilities to achieve these goals, and
- create a model or template that can be adopted by other regions.

Scope

To achieve the objective, the Working Group agreed that the proposed study should focus on one or two regions that would serve as a good model for application to other regions. Although the resilience of national infrastructures is very important to public safety and economic stability, the Working Group recognized that most events that result in infrastructure failure occur in specific regions and states, which must respond to the catastrophe and address the consequences. Interdependencies among

critical infrastructures within local communities can trigger cascading impacts that may not be fully understood until an event has occurred. Key questions that this study might examine include:

- What are the characteristics that make some regions more resilient than others?
- How do regions manage their critical infrastructure to increase their resilience?
- How do public-private partnerships and relationships affect regional resilience?
- What is the relationship between infrastructure and economic resilience? Do owners and operators benefit from and value regional resilience?
- How can the federal government and its resources help to accomplish goals established for regional resilience?
- How can regions mitigate risks associated with infrastructure interdependencies?
- How can the federal government support risk mitigation for regional infrastructure?
- What are the implications for federal resources located within a region with respect to regional resilience?

Approach

Proposed Regions for Study

The Working Group examined a variety of regions and CIKR sectors that could be studied that would provide valuable new insights on how regions can determine their requirements and capabilities for infrastructure protection and resilience. The following criteria were used to assess regions for study:

1. Economic significance
2. Regional risks affecting national resilience
3. Complexity: Significant multistate or multijurisdictional issues
4. Complexity: significant regional and sector interdependencies
5. Strength of public-private sector relationships
6. Supply chain vulnerabilities
7. Key sectors of interests
8. Experience with regional resilience exercises
9. Applicability of lessons learned for other regions

The Working Group focused on U.S. mega regions, eleven geographic areas that are defined by population, interlocking economic systems, shared natural resources and ecosystems, and common transportation systems linking population centers together. Using the criteria and available data, the Working Group identified three priority regions for possible study:

1. NORTHEAST
   Region: Northeast and Mid-Atlantic seaboard - From Northern Virginia to Southern Maine, bounded by the Appalachian Mountains to the west and the Atlantic Ocean to the east.
   Principal Cities: Boston, New York, Philadelphia, Baltimore, Washington D.C.
   Percent of U.S. Population: 17%
   Percent of US GDP: 21%
2. GREAT LAKES
   Region: includes parts of Minnesota, Iowa, Missouri, Wisconsin, Illinois, Indiana, Michigan, Ohio, Kentucky, and Pennsylvania
   Principal Cities: Chicago, Detroit, Pittsburgh, Cleveland, Minneapolis, St. Louis, Indianapolis
   Percent of U.S. Population: 18%
   Percent of US GDP: 17%

3. SOUTHERN CALIFORNIA
   Region: Southern California / Nevada from the border with Mexico to Santa Barbara and east to Las Vegas
   Principal Cities: Los Angeles, San Diego, Anaheim, Long Beach, Las Vegas
   Percent of U.S. Population: 8%
   Percent of US GDP: 7%

Although these regions best fit the criteria used by the Working Group, several other regions were also deemed worthy of study in due course by the Council.

Proposed Sectors of Study

The Working Group noted the importance of the "lifeline" sectors in any regional resilience study. These include transportation, telecommunications, energy, and water. Each of the proposed regions includes all of these sectors. In addition, the study should consider other critical infrastructure sectors within a region that have significance at the national or regional level. Examples may include banking and finance, commercial facilities, food and agriculture, and defense industrial base. The proposed regional resilience study should examine the interdependencies among critical sectors, with particular attention to collaborative planning among the sectors and between the sector and state, local, and federal government agencies.

Proposed Method of Study

The Working Group does not propose a particular method of study for evaluating regional resilience. However, it was noted that the 2010 study, *A Framework for Establishing Critical Infrastructure Resilience Goals,* received valuable information based on a table top exercise that was conducted by the electricity sector of an extreme infrastructure failure that exposed gaps and seams in incident response. A regional event or exercise could also uncover key jurisdictional issues as well as important sector interdependencies.

The Working Group envisions four levels of insights to be gained through the analysis:
1. Regional requirements that could affect national economic and security interests
2. National capabilities that can meet regional requirements
3. Regional requirements that can be met by building regional capabilities
4. Regional resilience models and lessons learned that can be transferred to other regions.

Recommendations

The Working Group recommends the following.
1. The Council recommend that the Administration direct the Council to launch a new study that builds on the Council's *Resilience Goals* study and incorporates a strong element of regionalization that can best leverage partnership efforts.
2. The study focus on the Northeast region of the United States.
3. The study focus on the lifeline sectors (energy, water, transportation, and telecom) and key sectors important to the Northeast, such as commercial facilities and banking and finance.
4. The study involves Council members who have experience and expertise in one or more of the regions or sectors of interests.