Minutes for the December 13, 2023, NIAC Meeting

NATIONAL INFRASTRUCTURE ADVISORY COUNCIL

December 13, 2023, NIAC Meeting

2:25 PM – 4:00 PM ET

CALL TO ORDER AND OPENING REMARKS

Ms. Celinda Moening, Cybersecurity and Infrastructure Security Agency (CISA) and Alternate Designated Federal Officer (ADFO) for the President's National Infrastructure Advisory Council (NIAC), called the December 13, 2023, NIAC Quarterly Business Meeting (QBM) to order. She informed attendees that the NIAC is registered under the Federal Register Number docket number CISA-2023-0012 and is a Federal advisory committee, governed by the *Federal Advisory Committee Act* (FACA). As such, the meeting was open to the public and would be recorded. She confirmed that the NIAC did not receive a request for public comment. Following roll call of members present in the room and virtually via WebEx, Ms. Moening turned the meeting over to NIAC Vice Chair, Ms. Maria Lehman, GHD, American Society for Civil Engineers (ASCE).

THE INFRASTRUCTURE INVESTMENT AND JOBS ACT UPDATE

Ms. Lehman introduced the first keynote speaker, Mr. Mitch Landrieu, Senior Advisor to the President and Infrastructure Implementation Coordinator.

Mr. Landrieu thanked the NIAC members for their important work. He noted that the President of the United States also believed the NIAC was producing critical work and is very involved in the NIAC's topics of study, as evidenced in the closed NIAC session earlier in the day, which the president attended. In the last two years, Mr. Landrieu stated that the Administration invested \$400 billion in 40,000 infrastructure projects, which included rebuilding roads, bridges, airports, ports, and waterways, ensuring access to high-speed internet and clean air and water, and transitioning to clean energy. He said that the answers to the growing infrastructure challenges must be both site and sector specific, and funding will be a key task to ensuring the solution is comprehensive and resilient.

He expressed that they are accomplishing the mission of the Infrastructure Investment and Jobs Act (IIJA), which was supplemented by the Creating Helpful Incentives to Produce Semiconductors (CHIPS) and Science Act and then incentivized by the Inflation Reduction Act (IRA). Mr. Landrieu also spoke about workforce being an overarching issue that cuts through all sectors, which the NIAC has reported on previously. He stated that a current challenge in the workforce is how to incentivize women to join; the key to which is access to childcare.

DELIBERATION AND VOTE: NIAC REPORT TO THE PRESIDENT ON MANAGING THE INFRASTRUCTURE CHALLENGES OF INCREASING ELECTRIFICATION REPORT

Ms. Lehman asked the Chair of the Electrification Subcommittee, Mr. Gil Quiniones, ComEd, to present the revisions to the *Managing the Infrastructure Challenges of Increasing Electrification* report. Mr. Quiniones recognized the work of all the subcommittee members in their devotion to the subcommittee, which received over a dozen briefings in total, and he thanked those who contributed feedback during the September QBM.

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Since September, the Electrification Subcommittee met with the following White House offices: the National Economic Council, the Office of Science and Technology Policy, the Office of Climate Policy, the Office of Clean Energy Innovation and Implementation, and the Office of Infrastructure Implementation. Mr. Quiniones remarked that the White House offices expressed no concerns about the report, and the White House offices appreciated that the information in the report intersects with the work already underway. This illustrates how the challenges identified in the report can only be solved by coordinated efforts throughout all levels of government and through collaboration between regulators, policymakers, and the industry.

Mr. Quiniones said that a draft of the report was circulated to the NIAC in early November, after which the NIAC members reviewed and sent back with comments. Mr. Quiniones summarized the minimal changes made, which included the following:

- Language was added regarding public safety power shutoffs to note that some users of
 electricity, such as those with disability, require special consideration and
 accommodation during events that necessitate those shutoffs.
- In the reliability-forward recommendation, language was added to show the complexity of cascading electrification impacts to the grid and how adequate contingency resources are needed.
- Language was added to emphasize the importance of equity in the transition to broader electrification as well as an emphasis on including communities and trade workers in the energy transition and a focus on the Justice40 Initiative.
- The NIAC removed CISA as the suggested lead for the recommended national security assessment and instead recommended that the Office of Cybersecurity, Energy Security, and Emergency Response at the Department of Energy conduct the effort in line with efforts already underway.
- A paragraph was added to highlight the National Cybersecurity Strategy and the National Cybersecurity Strategy Implementation Plan that involves work towards clean energy.
- Sentences were added to show the importance of preparing for climate risk, especially when varying technologies that are used may behave differently depending on the situation.
- A sentence was added to acknowledge the Electric Sector Coordinating Council and its wildfire subcommittee that leverages face-to-face meetings for efficient information sharing.
- Other changes were added for readability and clarity.

NIAC members expressed their gratitude to Mr. Quiniones for his leadership, which Ms. Caitlin Durkovich, Deputy Assistant to the President and Deputy Homeland Security Advisor for Resilience and Response, echoed and commented on the additional work tasked to the subcommittee by the POTUS.

Ms. Lehman asked the NIAC members if they had comments on the revised report, and hearing no objections, she proceeded with voting on the report. NIAC members voted unanimously: all were in favor, and none opposed. Ms. Lehman officially stated that the *Managing the Infrastructure Challenges of Increasing Electrification* report received full approval and was accepted.

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RISING CYBER ATTACKS AGAINST CRITICAL INFRASTRUCTURE

Ms. Lehman introduced the second keynote speaker, Ms. Anne Neuberger, Deputy Assistant to the President and Deputy National Security Advisor for Cyber and Emerging Technologies, to brief members and raise awareness on the rising cyberattacks on critical infrastructure.

Ms. Neuberger discussed the White House's current threat perspective and approach and introduced areas where the NIAC's counsel was welcomed. From a threat perspective, she noted the combination of country threats and criminal threats that have resulted in successful attacks because new cybersecurity practices are not being followed diligently. She shared two recent examples of both country and criminal threats.

First, she cited a successful Iranian government cyberattack against 10 water systems in the U.S. The systems were easily hacked by the Iranians because in all 10 cases, the water system still had the default password of "1-1-1-1," and the Iranians used that password to access and deface those systems. Ms. Neuberger suggested more visibility on programs and resources available from the Federal government.

As a second example, Ms. Neuberger cited three recent criminal cyberattacks against the U.S. healthcare system that have occurred in the last 11 months. This caused a significant impact to hospitals, with ambulances being turned away, elective services canceled, and rural clinics closed. In addition, many hospitals exist in chains, so when one hospital is compromised and access to their electronic medical records is obtained, the broader electronic medical records systems across the chain is compromised. Six weeks prior to this attack, she said that the Federal Bureau of Investigation and CISA had issued an alert that predicted, detected, and warned against the attack on encrypted medical files, but there was no preventative action taken by the targeted medical association. Therefore, the Department of Health & Human Services released cybersecurity performance goals and an outline of what will be mandated practices in Medicare and Medicaid in the near future, as well as resources that are available to hospitals and healthcare systems.

In a final example, Ms. Neuberger shared that the White House is aware of the Chinese government pre-positioning on various parts of critical infrastructure, including electricity systems as identified by commercial entities and pipelines. Initially, pre-positioning was thought to be advanced malicious software. However, they have since learned that the Chinese government gains access to known administrator accounts and uses that to maintain a position, study the system in a way that would enable them to come in at a time of their choosing, and use the core command of the system to disrupt their systems.

Ms. Neuberger said that the president and his Administration are extremely interested in hearing more about the issues in critical infrastructure and developing a strategy to improve the resilience of both physical and digital systems, including requiring minimum cybersecurity practices. The White House is in the process of working with public-private partners to integrate a set of cybersecurity performance goals in companies, which allows them to have visibility on the state of cybersecurity in key critical infrastructure companies so they can see what government resources are needed.

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The Transportation Security Administration's (TSA) response was to release their performance goals. They gave organizations and utilities ample time for implementation, then requested the results of the vulnerability assessments so that the TSA teams could assess them and work one-on-one with the company. The Environmental Protection Agency also rolled out their rule last April, but they were sued by several attorney generals, so the rule was pulled back. As a lesson, she said the performance goals must be voluntary.

Ms. Neuberger asked for counsel and advice on the threat discussion and how to create the urgency for private actors to meet performance standards while advertising that the government will make resources available for those companies.

Mr. Michael Hayford, NCR Corporation (Former), shared that his company was the victim of a recent cyberattack by Russian government. He observed that most if not all companies are experiencing similar attacks; the difference is that some companies disclose that they have been hacked and other companies do not. He expressed the importance of information sharing for this reason and emphasized the cost of these attacks to our companies and economy. Mr. Hayford also expressed that minimum standards should be required rather than being voluntary and that the government should be more prescriptive and directive in their cybersecurity standards.

Ms. Neuberger replied that it's clear from her first example – regarding the water systems security – that there is a minimum cyber standard that is needed. Because many of the cybercriminals that the U.S. has seen have been from Russia, the U.S. has been focused on disruptions of infrastructure and on cryptocurrency. In the last two years, U.S. entities paid \$2.3 billion in ransom pay. So, she asked, is it surprising that the criminal ransomware activity continues? Ms. Neuberger supports banning ransomware payouts to reduce the financial incentive of cybercriminals. Her team met with ransomware negotiators to understand what can be learned from their experiences, and they shared that companies that had offline backup recovered more quickly from a ransomware attack than companies that paid the ransom.

Mr. Manu Asthana, PJM Interconnection, shared several points in reply to Ms. Neuberger. First, he said that Ms. Neuberger's goals align with the minimum standards recommendation in the NIAC's *Cross-Sector Collaboration to Protect Critical Infrastructure: Barriers and Recommendations for Improvement* report, and they would be happy to spread the word about the subject. Another recommendation from the *Cross-Sector Collaboration* report was to increase information sharing. Mr. Asthana wanted to emphasize CISA's guidance to raise awareness about threats; for example, CISA published guidance in May of 2023 to prevent the recent Volt Typhoon campaign. He said that CISA's guidance was helpful to scan for those vulnerabilities. Lastly, he suggested regulating cryptocurrency to limit Russia's ability to get paid.

Mr. David Gadis, DC Water, expressed that working with water systems is challenging because many water systems are under control of the cities and they decide how to spend their money across infrastructure, chemicals, or cybersecurity. He emphasized the need for the government to have a governing body devoted to water stewardship, as recommended in the NIAC's *Preparing United States Critical Infrastructure for Today's Evolving Water Crises* report, as well as a federal water cost.

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Ms. Neuberger welcomed Mr. Gadis' counsel on the water sector and said that the Administration is trying to raise awareness of some of the free practices, like changing default passwords and leveraging social services and vulnerability policies. Mr. Gadis noted that while some programs are marketed as being free, there is a cost to everything when running a utility. For example, DC Water has a full IT department that costs a lot of money to run. He said that smaller utilities do not have the funds for a full IT department, even though it is needed.

Mr. Anthony Thomas, Shinall Advisors LLC, supported Mr. Asthana's suggestion of utilizing CISA's defense practices against cyberattacks. He shared that his company received more vulnerability notifications in one month this year than his company did in a whole year in the past. He emphasized the need for information sharing, as private companies need to know what is available to them.

Mr. Vance Taylor, California Governor's Office of Emergency Services, stressed focusing on improving water systems to the point of resiliency. He suggested utilizing the North American Electric Reliability Corporation's (NERC) reliability standards model as a framework in the water sector. Ms. Neuberger was grateful for the suggestion and said that the NERC model was mentioned in the Water Association meeting as well, so she said it's a topic of future exploration.

Mr. Quiniones observed major electricity utility organizations like Exelon being compromised through third party providers. He asked if cybercriminals targeting service providers is a trend, which Ms. Neuberger confirmed. She added that they are using procurement to support the supply chain because they gain suppliers through the power of procurement. Ms. Neuberger cited President's Executive Order (E.O.) 14028, which has established critical infrastructure software standards to protect software and networks. She also praised Walmart's practices for modernizing its entire supply chain sector to track supplies, which helped to create standard protection.

Ms. Madhu Beriwal, Innovative Emergency Management Inc., supported the initiative to prevent the payout of ransoms to cybercriminals. She cited that during the pandemic, unemployment insurance fraud was excessive and cost the country 169 billion dollars, a significant portion of which went overseas. She suggested looking closely at transfer payments and called for strict enforcement of prosecution. Ms. Neuberger agreed and underscored the important role of encrypted, mobilized digital IDs in the identity verification process.

ADDITIONAL STUDY TOPICS DISCUSSION

Ms. Lehman moved on to the next topic on the agenda regarding the 2024 taskings from the National Security Council (NSC). These include the following two topics:

- The NIAC will provide a playbook for local governments to access private capital and novel financial tools to augment the historic Federal government investment in modernizing infrastructure:
 - What the Federal government can do to encourage private sector investments in resilient infrastructure?
 - What are the lifecycle costs of resiliency standards for projects?
 - o How should the standards for resiliency be defined?
 - o How can artificial intelligence be leveraged to support this effort?

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- The NIAC will identify ways the Federal government can better prepare and support communities as they find themselves in a continuous response mode to emerging climate hazards and hybrid threats:
 - o How should the Federal government evolve its role in disaster response and resilience given the increasing frequency, range, and impact of threats and hazards faced by communities?
 - What resources will state, local, Tribal, and territorial governments need to become more resilient in the face of climate hazards and other emerging threats?
 - o How can the Federal government incentivize state, local, Tribal, and territorial governments to rebuild and modernize infrastructure to the highest codes and leading practices to enhance its security and resilience?

Ms. Durkovich elaborated on the relevance and necessity of the study topics. She said that she has travelled with the president to communities impacted by disaster that face challenges because the frequency and intensity of disasters are increasing, and communities do not have the capacity to deal with them. She said that the emergency management community was not built to deal with emergencies that occur nearly nonstop.

These study topics, especially the second, assess how the Federal government can help state and local governments build capacity for emergencies and how to restructure/rebrand the emergency management paradigm to define all disasters as local. Within this mindset, Ms. Durkovich said that since disasters start local, they will be locally managed and state-supported, and when states need additional capacity, they will be supported federally.

Ms. Durkovich added that the trillions of dollars that the Administration has invested in infrastructure is not enough. She asked how to make sure that states and locals have enough money to make investments to modernize their water systems. She also stated that POTUS recognizes that some governors and local leaders understand this need while others are challenged. Lastly, Ms. Durkovich wanted the NIAC to consider how to use artificial intelligence (AI) to help states prepare for disasters.

Ms. Lehman said that it may be helpful to start with the mayors.

Mr. Hayford noted that the emergency response topic has a very large scope. He also said that preparedness and disaster response are two very different things, but they seem to be used interchangeably in the study topic question. In addition, he said that it will be important to change the definition of what a disaster is. Lastly, he asked for more explanation on the first topic.

Ms. Lehman explained that financing projects is the key point of the first topic. She mentioned that current infrastructure funds that finance the projects are not resilient as they do not last for their designated timeframe of approximately 30-40 years. A convincing case is needed to obtain the funding for resilient infrastructure that would withstand that duration. According to her, Federal, state, local, and private investments as well as resilient infrastructure funding projects are not integrated. She emphasized the need for long-term legislation, not just an Executive Order, and the NIAC should provide a framework to address the problem. She suggested a few action items which included establishing minimum standards, providing a definition for resilient

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infrastructure, restructuring disaster emergency response, and figuring out how to fund the project to provide the Administration with guidance.

Regarding the first topic, Mr. Hayford asked where the funding will come from, if not the traditional method of increasing taxes, and suggested looking for new tools to raise funds through bonds. Ms. Lehman stated, for example, that hurricane bonds last only five years, which is not enough time to rebuild resilient infrastructure. Ms. Lehman said that it will be important to divulge best practices and training to the communities to increase the local capacity for handling disasters. Ms. Durkovich agreed and added that the framework will need to be within the lens of resilience.

Ms. Beriwal shared the projection that between the years 2024 to 2050, the U.S. must invest \$200 trillion in infrastructure. She said that this number is preferable to the larger amount of money that will be spent fixing damages if infrastructure is not adequately invested in. That number puts a lot of emphasis on figuring out different ways of financing.

Dr. Conrad Vial, Sutter Health, shared a health care metaphor as it relates to emergency management. It would be extremely inefficient to treat all expression of disease in the emergency room (ER) – the ER was not intended for that purpose, and it would use up the resources meant for true emergencies. In this metaphor, the Federal Emergency Management Agency (FEMA) is the emergency room, and it's currently being used to respond to all disasters. He emphasized the need to utilize predictive analytics and AI to increase efficiency.

Regarding the finance study topic, Ms. Beverly Scott, Beverly Scott & Associates, emphasized the need to involve public procurement in financing resilient projects; otherwise, the topic will not have the intended impact.

Dr. Norma Jean Mattei, University of New Orleans, shared her experience from attending the recent Inspire conference. She cited a speaker from the conference who determined that if certain aging infrastructure does not impact public safety, healthcare, or welfare, it can be built to lower standards and rebuilt as needed. That solution would save money to use on rebuilding infrastructure that is higher priority. Ms. Lehman added that the ASCE has an International Code Council standard for structures. However, the standard only applies to critical infrastructure, not for individual homes. After emergencies, there is a need to provide services and shelter. There is not enough money to take care of everyone.

Mr. Taylor offered his preference for the second study topic. He suggested adding the word "inclusive" or "inclusion" in front of "preparedness response." There is a history of underserving vulnerable communities during disasters that must be addressed in the study topic to close those gaps. In another effort to use inclusive language, Ms. Christine Fox, Johns Hopkins Applied Physics Lab, suggested renaming the first topic from "financing..." to "enabling."

Ms. Beriwal agreed with Mr. Taylor's preference for the second topic but suggested separating the scopes of the two topics, so they do not overlap. She also commented on the second topic, stating that FEMA currently has plans to respond to 200 disasters. Currently, she said that FEMA's response to disasters is an automated process, which she believed is outdated in the current disaster environment. Also, she highlighted the difference between the "response" and "recovery" phases. FEMA's response to a disaster ends within the "response" phase; she

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suggested focusing more on long-term "recovery" after the disaster. She emphasized the need for accompanying legislation with the study topic framework.

Ms. Durkovich agreed that the focus must be on long-term recovery since rebuilding is sometimes the most difficult part of emergencies. She hopes that the new framework will prompt analysis on what was impacting the community before the disaster. In this way, the disaster response, recovery, and rebuild can leave the community even better and more resilient than it was before the disaster. For example, even before the wildfires devastated Maui, HI, in 2023, the city was facing a housing crisis. The Federal aid being used to rebuild there now is also addressing that previous housing crisis.

Ms. Lehman stated that these topics will be multi-agency efforts.

Ms. Camille Batiste, Archer Daniels Midland, recalled the September QBM, where there was discussion of tying in pandemic response into the study topic and asked if that would be part of the scope. Ms. Durkovich confirmed that the pandemic response aspect has been removed from the scope of the topic.

Ms. Lehman asked the NIAC if the topics should be tackled sequentially or in parallel. Several members liked the idea of completing in parallel, and Ms. Durkovich agreed, since 2024 will be the final year of the Administration's first term. Completing the topics in parallel ensures their completion in time for President Biden to act on them in his second term. Ms. Durkovich also added that some briefings will be needed for both subcommittees, which is another reason to stand them up in parallel.

CONCLUDING REMARKS AND ADJOURNMENT

In closing, Ms. Durkovich thanked the members, the NSC, and the CISA team for their flexibility due to the morning's event with the president. She noted that the date change occurred (the NIAC meeting was originally scheduled for December 12) due to the president's engagement the previous day with the President of Ukraine. She wished everyone a happy holiday and said she was looking forward to the next QBM in March.

Mr. Nitin Natarajan, Deputy Director, CISA, echoed Ms. Durkovich's thanks and remarked on the speed in which the NIAC delivered all three reports in 2023. He said that he is excited to hear more about the new study topics in the coming year. While completing the study topics simultaneously will be a challenge, he offered CISA's support in whatever capacity is needed. He said that the issues discussed in the meeting are challenging and must be tackled as a nation. He noted that CISA recently launched a resilience campaign with FEMA called Shields Ready, and it addressed the question of how to build up the capacity across the nation to spread the word about resilient infrastructure as well as individual and family resilience. He recognizes that cyber threats are not purely a domestic issue and that it's important to work with international partners on the issue.

Ms. Lehman appreciated the hard work done by the NIAC members in 2023 and remarked that no mountain was too high for them to climb. She expressed her hope that the NIAC's work is valuable to the various agencies, and she wished everyone a happy holiday season. She then adjourned the meeting.

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DECEMBER 13, 2023, NIAC MEETING PARTICIPANTS LIST

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