

Practice Advances

Outcomes of the 2022 InfraGard National Disaster Resilience Council Summit

Mary D. Lasky*

* Chair, InfraGard National Disaster Resilience Council, Mary.Lasky@jhuapl.edu

Introduction¹

InfraGard is a unique partnership between the Federal Bureau of Investigation (FBI) and individuals in the private sector for the protection of U.S. critical infrastructure and the American people. As one of the nation's largest public/private partnerships, InfraGard connects critical infrastructure owners, operators, and stakeholders with the FBI to provide education, networking, and information-sharing on security threats and risks.

InfraGard's national membership currently exceeds 80,000 members. It includes corporate security managers, directors and C-suite executives, cybersecurity and IT professionals, chief information security officers, financial services executives, healthcare professionals, emergency managers, military and government officials, academia, state and local law enforcement, and more — all dedicated to contributing industry-specific insight to advance national security. Today, there are members in 77 local InfraGard Member Alliances (IMAs), represented nationally by the InfraGard National Members Alliance (INMA). Each IMA is affiliated with the FBI Field Office in its region.

InfraGard's National Disaster Resilience Council (NDRC), with approximately 2,100 members, is a cross-sector council of InfraGard. Its mission is to facilitate information sharing about hazards and ways to mitigate high-impact threats to critical infrastructures. Special emphasis is placed on power, water/wastewater and communications failures exceeding 30 days that create catastrophic, cascading conditions. One of the goals of information sharing is to help people and organizations to survive and recover more quickly and more effectively from a simultaneous nationwide or regional collapse of infrastructure attributable to an individual or combination of hazards such as a human-made electromagnetic pulse (EMP) or other major intentional or naturally occurring hazard.

The 2022 NDRC Summit

The NDRC Summit convened October 18 -19 at the Johns Hopkins Applied Physics Laboratory (APL) in Laurel, Maryland. As NDRC Chairperson, I was responsi-

¹ Opinions expressed in this article are those of the author and do not necessarily represent those of the InfraGard National Members Alliance or the *Journal of Critical Infrastructure Policy*

ble for Summit planning and execution with a registration of over 800 individuals. Summit presenters included nationally prominent leaders in critical infrastructure security and resilience protection.

A number of themes having policy or professional practice relevance emanated from Summit deliberations. They are presented below.

Critical Infrastructure Lessons Learned from the Ukraine/Russia War

A detailed, three-dimensional assessment of the War's impact on Ukrainian critical infrastructure to date was presented, culminating in five general lessons:

1. Critical infrastructure is a key target during wartime
2. Even during wartime, both sides can have incentives against attacking critical infrastructure
3. Battlefield defeats often precede infrastructure attack
4. Escalating infrastructure attacks may erode incentives against future infrastructure attack
5. A losing infrastructure strategy can negate a winning military strategy

Attacks on critical infrastructure have become an instrument of modern warfare, which has been demonstrated vividly in Ukraine. Even after NDRC's 11-year focus on electric power grid vulnerabilities, the fifth lesson was unsettling. The bottom line is that that Ukraine would not be able to win the conflict—no matter how effective they were militarily—if Russia is able to incapacitate the country's critical infrastructure. This is a wakeup call for the US, especially coupled with recent physical attacks on a number of US electric substations. Summit participants recognized that we, as a nation, need to realize and formally acknowledge the essential nature of critical infrastructures, particularly national power grid vulnerabilities. We must make the protection and security of electric power from generation to transmission to distribution a top priority. It is the foundation for all the other critical infrastructures and fundamental to national survival.

Moreover, the creation of a new international policy should be considered to make potentially catastrophic attacks on critical infrastructure a war crime, which might deter some actions. In the US, it is essential that protection of critical infrastructure becomes an explicitly stated and actively implemented policy, and it is vital that adequate funding be allocated for the protection of major critical infrastructures. Protection from threats should include natural and manmade threats, and high among these are cyber, electromagnetic magnetic pulse (EMP) and solar storms.

Foreign Incursions in the Critical Infrastructure Arena

In early 2022, the FBI released a film, “Made in Beijing: The Plan for Total Market Domination.”² The NDRC regarded the film’s release as a call to action and has been studying the Chinese “36 Stratagems” to understand how the Chinese Communist Party (CCP) actively uses them to surreptitiously undermine US values and systems.³ The work of NDRC “36 Stratagems Working Group,” presented at the Summit, included information on what US citizens can do to strengthen our country. Speakers and experts brought some of the 36 Stratagems to life and suggested countermeasures. Each of the panelists had previously analyzed at least one of the Stratagems and had presented it to a group of NDRC leaders at a weekly NDRC virtual meeting. Several InfraGard National Member Alliance Cross Sector Council leaders have also chosen a Stratagem to present along with other NDRC members.

The Summit presentation illustrated ways that the CCP is working in the US right now. This includes buying farmland near military bases, educating children in CCP values even in grade school, to stimulating US dependency on China for specific types of strategic materials, such as batteries. China captures an assortment of rare earth minerals in the world market needed for batteries, while threatening US capacity to manufacture its own batteries. CCP-backed organizations continue to compete and undercut American businesses on price. Most US citizens do not comprehend this type of hybrid adversarial action, which includes non-military, espionage, intelligence, cyber and military.

The US could help thwart this CCP threat to democracy by creating, for example, a policy to restrict the sale of land near military establishments by foreign organizations, including those which are fronted by US companies. In addition, US high schools could make civics a required course emphasizing the tenets of democratic government in order to better understand democratic values and history.

Grid-in-the-Box

Cleveland area NDRC members presented “Grid-in-the-Box”, discussing how these members and partners are working to blend technologies capable of forming resilient “islands.” The geographic areas involved in this work would incorporate protected power and strong internal communication capacity. The “Grid in the Box” also includes water, which is looming as a critical issue for the entire country—with draughts, floods, water aquifer depletion, and water contamination. The

2 The film may be viewed here: <https://www.fbi.gov/video-repository/made-in-beijing-030722.mp4/view>

3 Temin, Davia, “Ancient Wisdom for the New Year: The 36 Chinese Stratagems for Psychological Warfare”, *Forbes*, January 2017 and “China the Next War,” *Strategy & Tactics Quarterly*, Issue #16, Winter 2021.

presentation included discussion of water increasingly becoming an instrument of war internationally. It has been one mode of critical infrastructure attack in Ukraine.

The “Grid in a Box” presentation explained conceptually how local communities could become “resilient community islands.” This was a concept that the NDRC originally presented in our 2016 book, *Powering Through: from Fragile Infrastructures to Community Resilience*. The Summit presentation discussed new technologies that could help make this a reality. The concept of an “island” is not new; it is used by the electric power industry when grid restarting is needed. The idea of a “resilient community island” is a locally defined area or jurisdiction that can stand on its own. In this context, community can be an actual community or a distinctive component such as a university campus, business park or hospital. Ideally, for example, a resilient community should have the capacity to be self-sufficient for months, providing power, water, food, and transportation within the island, thereby enabling government, business and individual survival. Security could be provided from local members of the National Guard, local first responders and also Neighborhood Watch groups. Schools are important in preserving the fabric and stability of individual communities, and parents may need to band together to ensure children’s education especially if teachers do not reside in the community. Theoretically, this concept can work whether the community is large or small. The “Grid-in-the-Box” concept moves a number of theoretical ideas forward.

A bottom-line policy that all cities could pursue would be to have the ability to become a resilient community island to the maximum extent feasible. The goal would be to maximize citizen safety during a large-scale, extended critical infrastructure collapse. Once again, this need is underscored by Ukraine’s experience.

Citizen Resilience

This topic was addressed in a series of presentations. An in-depth presentation emphasized the need to have a “Get Home Bag” in your car. While deceptively simple in concept, it is a complex undertaking to optimize the Bag for major disasters and other dislocative events. The purpose is to handle situations where individuals are away from home and their cars do not work post-disaster, such as a snow storm, flood, or EMP. A focus was on having the ability to walk home: a good pair of shoes, water, food, and proper clothes (e.g., in colder climates, adequate coat for weather conditions, gloves, and hat).

Considerable discussion occurred on how to be ready to support families and also get to work to support organizations. A large number of panelists shared their perspectives on “being ready.” The panel then discussed the topic in relation to strategies contained in NDRC’s second volume 2021 book, *Powering Through: Building Critical Infrastructure Resilience*.” Breakout sessions completed the day’s emphasis on being ready, considering the roles of family and neighborhood; criti-

cal infrastructure operators; as well as first responders and emergency managers to bolster national disaster preparedness, especially during a long-term power outage.

First responders in every community could take an active role in helping their community to be prepared for long-term, large-footprint infrastructure breakdowns. For example, local policy could incorporate first responder planning on actions to take if electric power suddenly ends and all critical infrastructures are in jeopardy in a major outage extending several months. Further, emergency managers could provide community education for population preparedness. Every local area should evaluate its risk level using a Threat and Hazard Identification Risk Analysis (THIRA) from the Federal Emergency Management Agency (FEMA). Emergency managers, in creating their THIRA, should define and include threats to major infrastructure, especially to electric power, so that they can take action to mitigate the threats.

Improving Critical Infrastructure Resilience

At the national strategic level, a panel reviewed successes and failures during previous critical infrastructure breakdowns, including but not limited to those associated with natural disasters. Different analytical approaches were employed, including a new system developed by the Foundation for Resilient Societies called Grid Clue. The system includes the ability to assess each state's energy resilience level. The discussion demonstrated the limited role that solar and wind are currently playing in the generation of electric power, along with concerns about the ways power could be generated to reduce carbon emissions. Several panelists emphasized that we must concentrate on understanding real world vulnerabilities – prioritizing and mitigating them. Practical lessons drawn from past statewide and national critical infrastructure lapses were presented.

Another panel focused on the fact that we cannot accomplish everything and need to set priorities, which is important from a variety of perspectives. Specific strategy approaches were presented.

Policies for resilience emanating from the latter two panels included but were not limited to: advancing the ability of Public Utility Commissions (PUCs) in every state to include hardening the electric distribution system against manmade threats and solar storms, and acknowledging that PUCs have traditionally concentrated on protection against natural threats. In that pursuit, they could benefit from the San Antonio Electromagnetic Defense Initiative (SAEDI), whose mission is to ensure that Joint Base San Antonio (JBSA) continues military operations in a post Electromagnetic Pulse (EMP) environment. The Base has built collaborations with their electric power and water utilities along with an assortment of local businesses to protect the Base and local citizens⁴. The NDRC has worked with

⁴ Joint Base San Antonio Electromagnetic Defense Initiative, <https://www.jbsa.mil/EDI/>

SAEDI leaders on an ongoing basis. Policy development could occur to encourage all communities near military bases to protect their community and become a “Resilient Community Island.”

Conclusions

Themes considered in the 2022 NDRC Summit can be used to improve both messaging and policies aimed at securing national critical infrastructures.

The US should reinvigorate national policy acknowledging that critical infrastructure is vital and provide sufficient funding and/or tax incentives to make vulnerability mitigation a reality.⁵

Local areas could consider policies to establish resilient community islands to make communities safer in times of extended disasters. Ensuring electric power, water, and food, along with communications, education, and government continuity would undergird community survival.

At the international and national levels, making massive critical infrastructure destruction a war crime could help protect all nations. Consistent with FBI public education, more widespread realization that the CCP is undermining American democracy could prompt more effective protection policies. High on the list is ensuring that children understand the values of national democracies and our form of government. Also important is protecting military installations from land purchases near individual bases by foreign countries. We need to upgrade policy to give preference to US companies in competitive situations so that US companies owned by foreign entities are not able to undercut US business based solely on price cutting.

NDRC intends to act on selected themes of the 2022 Summit. Current plans include meeting with all 77 InfraGard Member Alliance (IMA) chapters and discussing their infrastructure priorities for times of disaster, improving the ability of these jurisdictions to be secure in their homes and community. This will include best practices related to emergency bags in cars. This could also lead to planning-relevant discussion of “resilient island” concepts. In addition, NDRC intends to further elaborate the 36 Stratagems - and undertake actions related homeland security threats emanating from their use. The next NDRC Summit in December, 2023 will be held in San Antonio at the University of Texas San Antonio National Security Collaboration Center (NSCC).

5 Critical Infrastructure policy here is differentiated from the Infrastructure Investment and Jobs Act. While that legislation provided historic funding levels for transportation, alternative energy provision, water and other purposes, the Summit focused on lower probability high impact events capable of producing cascading critical infrastructure breakdowns with long-term, national consequences

Acknowledgements

The author sincerely thanks the following individuals who made the 2022 National Summit a success through service on the NDRC Advisory Group as well as chairing, and/or participating on Summit panels discussed in this article: Dr. George Baker, Bruce Churchill, Gary Gardner, Phil Froehlich, Dave Hunt, Dr. Richard Krieg, Lt Col Ed Stamper USAF (ret), Steven Volandt, David Winks, Thomas Popik, Michael Carpenter, Bjorn Simundson, John Juhasz, Stacey Moy, Dr. Paul Stockton, Richard Mroz, Dave Andrejczak, Dr. David Mussington, Brian Cavanaugh, Michael Mabee, Ambassador Henry (Hank) Cooper, and Lt. Blanche Dodoit.

Author Capsule Bio

Mary D. Lasky is the Chairman of the InfraGard National Disaster Resilience Council (NDRC), a member of the InfraGard Board and chair of the InfraGard Cross Sector Councils. She is the lead editor and author of “Powering Through: Building Critical Infrastructure Resilience (2021)” which addresses threats, impacts, consequences and preventative measures that organizations can take for long-term power outages and “Powering Through: From Fragile Infrastructure to Community Resilience (2016)” an action guide on being prepared if there is grid failure. She is a Certified Business Continuity Professional (CBCP). She serves on the Foundation for Resilient Societies Board of Directors. She also serves on the NARUC Emergency Preparedness, Recovery, and Resiliency Task Force and its Black Sky Subcommittee. She is a past president of the Community Emergency Response Network Inc. (CERN) in Howard County, Maryland. While she was president, CERN, received two FEMA grants on being prepared for a nuclear attack. She is a Past President of the Central Maryland Chapter of the Association of Contingency Planners (ACP).

Ms. Lasky has been the Program Manager for Business Continuity Planning for the Johns Hopkins Applied Physics Laboratory (APL). At APL, she has held a variety of supervisory positions in Information Technology and in business services. For many years, she was adjunct faculty of the Johns Hopkins University Whiting School of Engineering, teaching in the graduate degree program in Technical Management. She is the recipient of the InfraGard Linda Franklin National Achievement Memorial Award.