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Preparing a Nation for Disaster – One Community at a Time

By Catherine L. Feinman



Each year, the Federal Emergency Management Agency’s (FEMA) Ready campaign recognizes September as National Preparedness Month. Agencies and organizations across the United States participate in this national preparedness effort by sharing educational resources, organizing events, and mobilizing action to help reduce risk and build community resilience. FEMA recognizes that, when individuals and communities prepare for any of the numerous potential threats they may face, the nation as a whole benefits.

For optimal effectiveness, these jurisdictional preparedness efforts should not be siloed. Joint planning teams can help [integrate jurisdictional plans](#) from various disciplines at all levels to build comprehensive plans and strategies focused on combating foreseeable and unforeseeable hazards, risks, and threats. Such integrated efforts would inform crisis management before a disaster, help protect lifeline sectors, and ensure continuity of operations following a disaster.

There is no “one-size-fits-all” approach when preparing for a disaster. Initial efforts must target the communities they serve and expand from there. For example, effective law enforcement training for an active shooter incident could actually induce harm on other community stakeholders. Understanding the role that previous [physical or psychological trauma](#) plays in emergency preparedness and response would help close the preparedness gap.

Lifeline sectors, like the electric grid, pose many additional challenges as communities depend on them for everything from small daily tasks to life-saving interventions. If power were lost for an extended period, there would be cascading, widespread effects. [Effective regulation](#), as well as adequate funding and support, from the federal level is needed now to ensure that communities fully comprehend the current threat environment and the effectiveness of current interventions.

As National Preparedness Month ends, the preparedness efforts at the local, state, and federal levels will continue. Although collaboration at all levels is crucial, contingencies must be in place to ensure continuity of operations at the local and state levels even when lack of collaboration itself is the threat. Whether faced with another massive hurricane or another extended [government shutdown](#), individuals, corporations, nonprofits, and government agencies are reminded to prepare for the worst, hope for the best, and continue to expect the unexpected.

Trauma-Informed Crisis Management

By Michael Ross

There is a growing industry of “realistic active shooter” drills. Many are focused on teaching participants how to “survive” an event. These drills involve imitation attacks, physical confrontations, fake weapons, and simulated deaths. Some of these drills have led to actual shootings, people being locked in closets or storage rooms, and deployment of tactical squads who were not pre-briefed or included on the drill. These drills do not promote resilience.



Realistic active shooter drills could result in severe commercial and educational disruption, secondary trauma and toxic stress, and even injuries and deaths. [Statistics](#) show that trauma is already pervasive throughout society: one in five children have witnessed violence in their families or neighborhoods within the past year. Drills do not need to add to already-existing societal violence.

Mental Health’s Societal Impact

The prevalence of mental health needs within communities needs to be acknowledged and taken into consideration when designing planning drills. According to the National Alliance on Mental Illness (NAMI), mental health related issues are widespread across communities:

- One in five U.S. adults experience [mental illness](#) each year;
- One in six U.S. youth aged 6-17 experience [mental health disorders](#) each year;
- and
- [Suicide](#) is the second leading cause of death among people aged 10-34.

According to a 4 September 2019 *New York Times* article (“[When Active-Shooter Drills Scare the Children They Hope to Protect](#)”), numerous “realistic active shooter” drills and scenarios have had documented outcomes that were psychologically damaging and traumatic for participants. During a [drill](#) in June 2018 held at Short Pump Middle School in Glen Allen, Virginia, school officials staged an unannounced active-shooter drill featuring multiple fire alarms, loud noises, and unseen people jiggling the handles of classroom doors. Believing it was a real attack, students wept and sent “goodbye texts” to parents.

The number, style, and purpose of active shooter/assailant drills in schools has received more attention as the number and lethality of shootings has increased. Thirty-nine states currently require [active shooter or lockdown drills](#). Although some states require parental notification before or after an event, none require a pre-assessment of how the training is being conducted, or how they may trigger negative outcomes. Administrators and parents have questioned the likelihood of such drills triggering past trauma or inducing new trauma in children.

Being involved in an actual active shooter event is still significantly less likely than being struck by lightning. Yet, even if an actual active shooter event is *extremely* unlikely to happen, communities still need to be prepared. Since the act of preparation itself is not disturbing or traumatic, informed exercises incorporate established baseline competencies for drill organizers around mental health and psychological trauma. An evidenced-driven approach would then leverage scientific knowledge to create a sense of calm and an opportunity to learn.

Interdisciplinary Lessons Learned

Preparation for building fires occurs without setting fires. Preparation for nuclear attacks and airplane evacuations occur without dispersing radiation or jumping from planes. Fire, hazardous materials, and airline industries have developed systems that work, and principles that can be universally applied. For example, passengers sitting in exit rows on airplanes understand that they will need to work with trained flight attendants during an evacuation, with emergency lights indicating exit routes. In a building fire, automatic doors will suppress smoke or flames when the alarms or operators recognize a danger. Such proven safety systems assume that the best decisions are made when people are not traumatized.



Realistic and repetitive active-assailant training was conceived for military and law enforcement purposes. The more realistic the training, the better it is for soldiers and police. However, this does not apply to a civilian population, which is generally untrained in handling toxic stress and exposure to potential trauma.

The focus needs to be on avoiding the creation of psychologically traumatic events and ensuring *training effectiveness* when it is critical. Indeed, the two cannot be de-coupled – effective training is non-traumatic. Traumatizing people when they are being “trained” to save themselves and others could lead to these same people being less capable of performing when needed during an actual event. [People who experience traumatic events](#) are three times more likely to be absent from work, and 15 times more likely to commit suicide. The purpose and conduct of safety and preparatory drills should reduce, rather than add to, these trauma statistics.

Despite many efforts to move toward parity in mental and physical health and treatment of the “whole human,” the focus of drills remains on mitigating physical damage and injury.

Ensuring that all drills are trauma-informed is a first step to motivate change that comprises wide-ranging and long-term benefits.

The Four Rs

A trauma-informed approach considers the biological, sociological, neurochemical, and psychological impacts of toxic stress and trauma on individuals, families, and communities. Trauma-informed drills acknowledge the prevalence of trauma histories already within society and avoid additional stress or triggers for the individual and the group.

At the heart of a [trauma-informed approach](#) are the four Rs:

1. *Realize* the widespread impact of trauma and understand potential paths to resilience and resistance.
2. *Recognize* signs and symptoms of toxic stress and trauma in participants during all phases of engagement.
3. Empower communities to *respond* to toxic stress and trauma by providing foundational knowledge about trauma.
4. Enhance grit and encourage success by selecting approaches that actively *resist re-traumatization*.

Numerous professional organizations and associations have now developed standards and protocols for conducting school safety drills. The National Child Traumatic Stress Network has issued [guidelines](#), and the National Association of School Psychologists has described [approaches](#) to mitigating the psychological effects of lockdowns.

To avoid triggering traumatic stress when planning for events that are high consequence but low occurrence (such as an active shooter), observations of violence in all arenas must be considered. An entire generation has grown up since the Columbine shooting in 1999. This generation has seen what was once unthinkable – theaters, concerts, churches and synagogues, factories, and government offices becoming the locations for mass murders. Locations formerly considered sanctuaries from other life issues are now potential sites for disaster. Occupants must now prepare to live, work, and worship in these locations, without needlessly experiencing fear and traumatic stress.

Facilities across the country – including but not limited to schools, factory floors, places of worship, and recreational spaces – face a variety of threats every day. Too many people already live with toxic and traumatic stress, yet participation in exercises and drills is still critical for fully and effectively responding to active shooter threats. Therefore, the best approach for developing preparedness and resilience trainings does not involve the triggering or exacerbation of mental illness and traumatic stress.

Michael Ross, MSW, LCSW, is on the faculty at Indiana University School of Social Work. He is a licensed clinical social worker whose clinical focus is evidence-based modalities for the treatment of trauma and the development of resilience. He has expertise in system transformation, disaster response, mental health policy, countering violent extremism, and community-based research. He currently works in education and policy in Indiana and can be contacted at Micharos@IU.edu

Integrating Jurisdiction Plans

By Allen B. King III

Guidance for developing an integrated, coordinated, and synchronized emergency operations plan (EOP) is provided in Comprehensive Preparedness Guide 101 (CPG 101). Although many emergency managers consider the EOP the foundation of emergency and disaster plans, CPG 101 acknowledges that it is not the only plan that supports emergency management within a jurisdiction.



The coordination and integration of disaster and emergency planning should be between all departments and levels of government and with public and private sector providers of critical services, whose plans often are based on compliance with industry standards and regulations. Integrating the knowledge and resources of the private sector into planning is key to preparing for and successfully executing response and recovery. It is also important for the jurisdiction to integrate planning with nongovernmental and private sector planning as well as the resources and services they provide.

Various Plans & Strategies

Strategic Planning. The [2016 Emergency Management Standard](#) requires jurisdictions to develop a multi-year strategic plan. This plan is required to provide a vision statement, a specified mission, and milestones for achieving the goals and objectives; as well as a method for implementation, evaluation, and revision. The jurisdiction is required to have one or more committees for integrating input from various stakeholders.

Comprehensive Plan. A comprehensive plan describes current and future direction and pace of development of the economic, social, and environmental features of the jurisdiction. Some jurisdictions title this plan the “General Plan,” “Master Plan,” or “Consolidated Plan.” The plan usually includes three- to five-year forecasts for: land use, open space; public utilities, safety; and transportation.

Comprehensive Economic Development Strategy. The U.S. Development Administration recommends jurisdictions integrate their Comprehensive Economic Development Strategy ([CEDS](#)) with other sub-state regional plans such as land-use, transportation, and workforce development. CEDS can also help ensure that hazard mitigation strategies are integrated to increase resilience across multiple jurisdictions and sub-stated regions.

Hazard Mitigation Planning. FEMA Region III promotes [integration of the hazard mitigation plan](#) into other jurisdiction planning. Jurisdiction planners are encouraged to

integrate natural hazard and risk mitigation actions through collaborative planning and interagency coordination. The integration of plans across the agencies and between various disciplines – to include emergency managers, engineers, community planners, and sub-state regional partners – is the stated goal for increasing resilience.

Jurisdictions should integrate the hazard mitigation plan with the comprehensive plan, the capital improvement plan, the economic development plan, the transportation plan, the stormwater management plan, the wildfire protection plan, the watershed protection plans, the EOP, the recovery plan, and the continuity of operations plan. [Integrating the mitigation plan with the comprehensive plan](#) can increase resilience by limiting the extension of infrastructure and development in hazard areas. Jurisdictions should also integrate their plans with neighboring multi-regional organizations such as Councils of Governments.

Resilience Planning. Jurisdictions are recommended to integrate planning for determining the risks and improve [resilience for buildings and infrastructure systems](#) that support key social functions. Resilience planning should be integrated into the jurisdiction's comprehensive plan, land use plan, infrastructure plan, transportation plan, economic development plan, housing plan, mitigation plan, environmental plan, EOP, and continuity of government plan.

Planners can identify and confirm jurisdiction goals and priorities through an integrated review of all jurisdiction plans and planning processes.

Continuity of Operations. Jurisdictions should integrate continuity planning with preparedness, resilience, and emergency plans, with continuity planners participating in the development of those plans. Successful implementation of the EOP is more likely when integrated with the continuity plan. Continuity planners need to integrate planning with the private sector and other providers to ensure utilities and other essential services are provided during the disaster. [Continuity plans](#) for jurisdictions need to be integrated with the business continuity plans of businesses within the jurisdiction.

Recovery Plans. Jurisdictions should integrate the results of all other plans when developing [pre-disaster recovery plans](#) or post-disaster recovery strategies. Jurisdiction planners should look for interdependencies among potential impacts. In addition, recovery plans and strategies should include input from all sectors of the community.

Integrating Jurisdiction Planning

Planners can identify and confirm jurisdiction goals and priorities through an integrated review of all jurisdiction plans and planning processes. One outcome of this review is to

identify and resolve potential conflicts. A critical part of planning is the identification and development of planning assumptions. Jurisdictions should consider pulling disaster-planning assumptions from other planning efforts within the [jurisdiction](#). The full spectrum of priorities for a jurisdiction are found in the various plans such as the Comprehensive Plan, Hazard Mitigation Plan, Recovery Plan, Economic Development Strategy, or the Capital Development Strategy (see Table 1). Examples of jurisdiction priorities usually include: retaining population; restoring the tax base and stabilizing revenues; restoring schools and education programs; reopening key industries; implementing mitigation actions; and [restoring environment and cultural resources](#).

Table 1. Example of Integration of Other Plans to Inform the Hazard Mitigation Plan

Plan Name	Element Incorporated into Hazard Mitigation Plan
Emergency Operations Plan	All-hazards approach to event response, evacuation, and recovery
Comprehensive Plan	Demographic data, land use policies, development trends
Capital Improvement Plan	Hazard area and critical facility construction
Building Code	Higher standards at the local level than required by states or federal government
Zoning Ordinance	Flooding hazards and land use
Capital Improvements Program	Stormwater projects
Stormwater Management Plan	Public outreach and watershed education

Source: Federal Emergency Management Agency Region III ([July 2015](#)).

[Integrated planning](#) is implemented through the zoning ordinances, regulations for subdivisions, and building codes. Examples are zoning restrictions, increased building codes, and the permitting process. Mitigation actions can inform land-use planning and the development or modification of building codes for local jurisdictions. Land-use is managed locally through zoning regulations. The proper design of new neighborhood developments is managed for safety issues, hazard areas and mitigation requirements, water and stormwater management, soil concerns, environmental issues, and landscaping through subdivision regulations.

Why This Topic Is Important

Jurisdictions are required to develop and maintain numerous plans, primarily for community planning and emergency management. The guidance for developing many jurisdictions' plans do not target or include emergency managers. Guidance written for emergency managers and guidance targeting community planners often use different terminology and different planning perspectives. Most planning guidance does not provide



language and structure that informs jurisdictions on how to integrate these plans. A lot of the planning guidance promotes integration of the plans, but the guidance lacks language and structure to describe how a jurisdiction should integrate these plans.

Path Forward

Jurisdictions should develop an integrated planning team that includes planners from other

planning disciplines – ranging from emergency managers to community planners. Together with their planning partners, jurisdictions should strive to accomplish the following:

- Integrate jurisdictional planning using shared hazard and vulnerability assessments.
- Integrate planning within jurisdictions, sub-state regions, and the state.
- Integrate the nongovernmental and private sector planning within the jurisdiction planning.
- Integrate resilience-building strategies.
- Integrate continuity planning for essential services that are provided during disasters.

A major requirement for FEMA's National Emergency Management Advanced Academy ([NEMAA](#)) is a research paper between the third and final week of a one-year course. The author chose to research open-source planning guidance to determine the jurisdiction plans that emergency managers should be involved in developing, in addition to the emergency operation plan (EOP). This research was based on the theory that pre-disaster planning for jurisdictions needs to be integrated to be effective and increase resilience. This article is adapted from the author's NEMAA research paper and promotes enhancing the effectiveness of planning and increasing resilience through the integration of jurisdictions plans.

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Life Support – Ensuring Proper Regulation of the Electric Grid

By Michael Mabee

With few exceptions, human beings in the United States are literally on life support – plugged in to the electric grid. If that connection is unplugged, everything necessary to sustain the human population stops, including: food, water, fuel, transportation, medical resources, communications, and financial resources. According to a 28 March 2017 [Senate report](#), in a long-term national-scale blackout, millions of U.S. citizens could die. After only a few weeks, deaths would escalate from waterborne diseases, starvation, and societal collapse. Immediate action could reduce these threats.



The bulk power system (“[the grid](#)”) is actually comprised of more than 1,000 companies – both public and private sector – that operate in an interconnected system to facilitate the generation, transmission, and distribution of electrical power. The grid is comprised of power generation – such as nuclear, coal, and gas-fired power plants, wind turbines, and solar farms – and high-voltage transmission lines that span long distances across the country and local distribution lines. This interconnected – and vulnerable – patchwork is what allows the United States to support its human population.

Regulating the Grid

The North American Electric Reliability Corporation ([NERC](#)), a not-for-profit corporation, acts as the self-regulatory organization “whose mission is to assure the reliability of the bulk power system (BPS) in North America.” The Federal Energy Regulatory Commission ([FERC](#)) is an independent federal agency that regulates the interstate transmission of electricity, natural gas, and oil. FERC’s specific authority over the electric grid is to “oversee the reliability of the bulk power system.” The grid regulation process between NERC and FERC is complex.

Adding another layer of complexity, the bulk power system consists of approximately 1,500 entities operating at 100 kilovolts or higher, which are regulated by NERC, and overseen by FERC. However, the bulk power system does not include distribution to end-users, which falls under the jurisdiction of state public utility commissions. This means that there are more than 50 state and federal government agencies as well as a number of nonprofit corporations involved in the regulation of the electric grid.

The [Energy Policy Act of 2005](#) added Section 215 to the Federal Power Act. This gave FERC the authority to certify an organization as an “Electric Reliability Organization” (ERO), which would develop reliability standards for the industry, subject to FERC’s approval. This equates to the industry writing its own reliability standards. On 20 July 2006, [FERC certified NERC as the ERO](#). Other entities objected and [administrative appeals and litigation ensued](#). Section 215 states that FERC,

[U]pon its own motion or upon complaint, may order the Electric Reliability Organization to submit to the Commission a proposed reliability standard or a modification to a reliability standard that addresses a specific matter if the Commission considers such a new or modified reliability standard appropriate to carry out this section.



In other words, FERC can order NERC to develop a particular standard and submit it for FERC’s review and approval, but this is time consuming. For example, inadequate vegetation management (i.e., a tree branch in Ohio) caused the “Great Northeast Blackout” of 14 August 2003. The ensuing cascading failure resulted in 55 million people out of power – almost the entire northeastern United States and part of Canada. This blackout was the direct impetus to develop a standard for vegetation management. It took the industry and FERC until 21 March 2013 – nearly a decade – to establish and approve a final rule for “Transmission Vegetation Management” ([FAC-003-2](#)).

Funding & Controlling NERC

NERC’s annual funding is provided through assessments to the entities that it regulates. Moreover, although technically anybody can become a “member” of NERC, the [membership structure](#) favors the electric industry as far as the election of NERC’s “independent trustees” (the board that governs NERC). According to [NERC rules](#), all members are assigned to one of [12 groups](#):

1. Investor-owned utility
2. State/municipal utility
3. Cooperative utility
4. Federal or provincial utility/Federal Power Marketing Administration
5. Transmission-dependent utility
6. Merchant electricity generator
7. Electricity marketer
8. Large end-use electricity customer
9. Small end-use electricity customer

10. Independent system operator/regional transmission organization
11. Regional entity
12. Government representatives

With two sectors being customers, one being the government, and the other nine being the electric industry, the electric industry gets 9 votes whereas customers and the government get 3. In essence, NERC is funded, run, and its leadership elected by the electric utility industry that it allegedly regulates. Thus, FERC (the government) cannot easily tell NERC (the industry) what to do. In this structure, the “ratepayers” have little voice. However, the need to secure the grid and the dependent critical infrastructure is a national security issue.

Lobbying to Fight Against Electric Grid Security

When electric customers pay electric bills, they are paying for NERC and industry groups like the Electric Power Research Institute ([EPRI](#)) and the Edison Electric Institute ([EEI](#)). Both of these groups are funded by the electric utility industry. Put simply, paying an electric bill means paying for an army of lawyers and lobbyists who are fighting against stricter grid security regulations and lobbying against protections from a catastrophic national-scale power outage. In fact, according to [The Center for Responsive Politics](#), the electric utilities in 2018:

- Spent \$122,281,276 on [lobbying](#)
- Made [total contributions](#) of \$24,413,992 (including soft money and PACs)
 - Including of \$12,059,457 in [political contributions](#) to members of the House
 - Including \$3,731,572 in [political contributions to members of the Senate](#)

There is no federal law that says that the grid has to protect itself from hazards and threats. The minimum effort being made currently is not enough to protect families and secure the grid from threats such as [EMP](#), [GMD](#), [cyberattacks](#), [extreme weather](#), and [errant tree branches](#).

Notifying the Public on Electric Disturbance Events

In 1974, Congress passed the [Federal Energy Administration Act](#), which created a new government agency to oversee energy in response to the oil embargo of 1973. A few years later, the Federal Energy Administration became the Department of Energy ([DOE](#)), which is tasked with collecting information on “electric disturbance events.” DOE collects this information on what is known as a Form OE-417 (“Electric Emergency Incident and Disturbance Report”). Only a small amount of this information is [available to the public](#) in the form of a spreadsheet that is difficult to find, even more difficult to read and analyze, and not frequently updated.

DOE maintains archives (2000 to present) of these spreadsheets on its website. The form has changed a bit over the years and has changed names from the EIA-417 to the present OE-417. Depending on the type of event (or “alert criteria”), there are three different time requirements for reporting:

- An “Emergency Alert” must be reported within 1 hour
- A “Normal Report” must be filed within 6 hours
- A “System Report” must be filed within 1 business day.

In addition, updates are required if there are significant changes to the initial report and a final report must be filed within 72 hours. There are 24 alert criteria listed on the [Form OE-417](#) and the [instructions](#).

A personal analysis of all the publicly available OE-417 data from 2010 through May of 2019 revealed 166 different “event types” reported, many of which were either duplicates or related. For example, there were at least 24 different “event types” that denoted a physical attack. There were at least 50 “event types” that denoted a disturbance caused by weather.

No federal law says the grid has to protect itself from hazards and threats – EMP, GMD, cyberattacks, extreme weather, errant tree branches – but it should.

Grouping these 166 “event types” into 15 categories (actually “causes”) provides a sense of what has actually threatened the electric grid in the past 8.5 years.

There have been 1,766 electric disturbance events filed on OE-417 reports

during the period of 1 January 2010 through 31 May 2019. However, for 251 (14%) electric disturbance events, it was not possible to identify a cause. Also, there were 68 generation, transmission, and distribution interruptions that could not be distilled into what caused the “interruptions.” Therefore, there were 319 (18%) electric disturbance events where the cause could not be identified. The 1,447 (82%) known electric disturbance events revealed the following:

- 749 (52%) *weather-related* events
- 578 (40%) *physical attacks* on the grid
- 61 (4%) *fuel supply deficiency* events
- 29 (2%) *cyberattacks*
- Other 30 (2%) disturbance events were *equipment* (15), *natural disaster* (10), and *wildfire* (5)

Comparing OE-417 & NERC Reliability Reports

There is a disconnect between what the industry defines as a cybersecurity or physical security incident and what is reported on the OE-417s. During the 2010-2018 period, NERC reported the following in its [annual reports](#):

- **2019 Report** (page ix): “In 2018, there were no reported cyber or physical security incidents that resulted in an unauthorized control action or loss of load.”

- **2018 Report** (page viii): “In 2017, there were no reported cyber or physical security incidents that resulted in a loss of load.”
- **2017 Report** (page 3): “In 2016, there were no reported cyber or physical security incidents that resulted in a loss of load.” (Note: The [Buckskin Utah transformer attack](#) took place in 2016.)
- **2016 Report** (page v): “In 2015, there were no reported cybersecurity incidents that resulted in loss of load. There was one physical security incident that resulted in a loss of approximately 20 MW of load.”
- **2015 Report** (page 7): “[N]o reportable cyber security incidents or physical security reportable events resulted in loss of load on the BPS in 2014.” (Note: The Nogales Station in Arizona [was attacked by an IED](#) in 2014.)
- **2014 Report**: No mention of cyber or physical attacks. (Note: The [Metcalf Transformer attack](#) took place in 2013.)
- **2013 Report**: No mention of cyber or physical attacks.
- **2012 Report**: No mention of cyber or physical attacks.
- **2011 Report**: No mention of cyber or physical attacks.

Despite the Metcalf attack, the Nogales attack, and the Buckskin attack being significant physical attacks against the grid, NERC did not include any of it in its annual reports. In contrast, with regard to cyberattacks, the U.S. Government Accountability Office (GAO) stated the following in [Congressional testimony](#) on 21 October 2015:

Cyber incidents continue to affect the electric industry. For example, the Department of Homeland Security’s Industrial Control Systems Cyber Emergency Response Team noted that the number of reported cyber incidents affecting control systems of companies in the electricity subsector increased from 3 in 2009 to 25 in 2011. The response team reported that the energy sector, which includes the electricity subsector, led all others in fiscal year 2014 with 79 reported incidents. Reported incidents affecting the electricity subsector have had a variety of impacts, including hacks into smart meters to steal power, failure in control systems devices requiring power plants to be shut down, and malicious software disabling safety monitoring systems.

Between 2010 and 31 May 2019, 578 physical attacks and 29 cyberattacks against the grid were reported on the OE-417s, but the NERC only reported one physical attack and no cyberattacks. In addition, DHS has a completely different number of cyber incidents than DOE, whose numbers are different from NERC.

Recommendations

The public and Congress are currently not getting enough information to determine: (1) what incidents are occurring; and (2) whether the regulatory regime is effective. First, NERC is withholding the names of critical infrastructure protection (CIP) violators, which means

that any egregious or repeat violators cannot be identified and held accountable. Second, the flawed OE-417 information lacks the causes behind 18% of the reported disturbances. Finally, there is an unexplained disparity between the OE-417 reports and the NERC annual reliability reports. These deficiencies must be corrected and could be addressed with the following recommendations.

- For the Department of Energy (DOE):
 - List a root cause for every disturbance reported on each OE-417;
 - Ensure accuracy in the “Number of Customers Affected” block on the OE-417; and
 - Convey the same information on the OE-417 and the NERC reliability reports (since DOE owns the OE-417, ask NERC to address the OE-417 data in its annual reliability reports).
- For the Federal Energy Regulatory Commission (FERC):
 - Convey the same information on the OE-417s and the NERC reliability reports (as NERC’s regulator, ask NERC to address the OE-417 data in its annual reliability reports); and
 - Provide transparency and disclosure of the names of CIP violators in order to incentivize the industry to fix the longstanding physical and cybersecurity weaknesses that plague the electric grid.
- For the North American Electric Reliability Corporation (NERC):
 - Understand that NERC is not the industry’s champion, but rather its regulator;
 - Disclose the names of the CIP violators once violations are mitigated, which would incentivize the industry to improve cyber and physical security; and
 - Discuss and analyze the OE-417 data in NERC’s annual reliability reports.
- For Congress:
 - Develop legislation to ensure that the public and Congress receive reliable and accurate data on the threats to the electric grid.

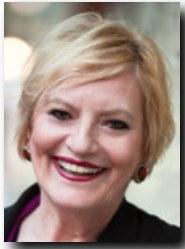
The electric grid is vulnerable to numerous threats. Protecting the names of CIP violators is an avoidable risk. For national security of critical infrastructure, the industry must hold some accountability for physical security and cybersecurity.

Michael Mabee has served as an emergency medical technician (EMT), paramedic, and law enforcement officer. He also has worked in the military and federal government service. As a sergeant major in the U.S. Army, he had two wartime deployments to Iraq and two humanitarian missions to Guatemala. He was decorated by both the U.S. Army and the federal government for his actions on 9/11 at the World Trade Center. He authored “The Civil Defense Book” and is a member of InfraGard National Disaster Resilience Council (NDRC) and Secure The Grid Coalition.

Government Shutdowns: Emergencies, Disasters, or Expected Events

By Kay C. Goss

The 35-day government shutdown of 2018-2019 became the longest in U.S. government history. Food banks, firefighters, and community services agencies ramped up their food and other care services. Much like during natural disasters, a significant number of federal workers and contractors did not have sufficient savings to cover expenses during this hiatus in pay and experienced uncertainty in insurance and other financial considerations during such a lengthy and uncertain time, occurring during the Christmas holidays.



Agencies generally delayed notifying workers that they were or were not in “exempt” status, meaning that they would be sent home without pay. That first day happened to be the first day most federal employees would report to work following the Christmas holiday. Employees monitored the news, trying to keep as informed as possible to avoid confusion. Congress was unable to secure a feasible plan to avoid at least a partial shutdown.

Federal Agency Response

The National Science Foundation furloughed the highest percentage of employees, and sent some advanced notices to inform their employees whether they would be exempt. At NASA, 95% of workers were furloughed. The stress and apprehension in this workplace reportedly conjured up the image of “the Grinch.” The Housing and Urban Development Department (HUD) also furloughed 95% of its employees. At the State Department, most employees were exempt or excepted, continued to work during the shutdown, and were paid only once the government reopened. The National Passport Center, for example, continued to operate during the shutdown.

Some agencies budget their staffing expenses to have staffing funds authorized but not fully expended, which leads to little flexibility with payroll. The Environmental Protection Agency (EPA) reversed course from its previous shutdown operations, staying completely open aside from its inspector general’s office. However, EPA only had sufficient carry-over and no-year appropriations to cover their employees for the first week of the shutdown. No year appropriations means that an agency can “carry over” some funding to spend in subsequent fiscal years. Rather than encouraging the employees, this situation depressed them even before the actual shutdown occurred.

The U.S. Agency for International Development (USAID), including its Office of Foreign Disaster Assistance, furloughed half of its employees, many of whom travel internationally and frequently for their jobs. Those plans/activities were completely disrupted due to uncertainty about fiscal 2019 funding.

The [Agriculture Department](#) issued a statement on 21 December 2018 noting that certain activities would continue because they are related to law enforcement, involve protection of life and property, or are financed through available funding, such as user fees. During the first week of the shutdown, 61% of employees were exempted or excepted from shutdown activities. As the shutdown continued, the percentage decreased. [Activities were reduced](#) as available funding – such as new timber sales, rural development loans, statistical reporting, investigations of fraudulent activities, and some recreational sites – decreased.

In total, a little more than 800,000 federal employees were either [furloughed or working without pay](#). As departments and agencies immediately furloughed approximately 345,000 federal employees without pay. About 500,000 other federal employees continued to work with the promise of back pay once the government reopened.

Federal Employees Reaction

On 14 January 2018, Government Business Council and [GovExec.com](#) released a survey, which was sent to a random sample of government executives, [Nextgov.com](#), and *Defense One* subscribers. The [survey](#) included 1,228 federal employees and had a margin of error

of plus or minus 2.8%. According to that survey, federal employees were cemented in their overwhelming opposition to the shutdown, with 72% against it and just 21% supporting it.

Government shutdowns involve many uncertainties. Preparedness professionals must have contingencies in place for such events.

According to the survey results, lower-ranked employees were slightly more supportive of the shutdown. About 26% of employees in General Schedule-12 (GS-

12) positions or below supported it, whereas only 20% of senior leaders in grades of GS-13 or above said the same. Many employees were worried throughout the shutdown about their status, day to day. One-quarter of those who were not furloughed said they might be sent home at any time.

Congressional Response

Some legislation was proposed to help federal employees when faced with future furloughs. The House proposed one bipartisan bill (HB 67, with more than 60 cosponsors) to maintain the traditional practice of Congress authorizing back pay for furloughed workers after the government reopens. In the Senate, a similar bill (SB 24) was proposed by Senator Chris Van Hollen, D-MD, “As we work to resolve this crisis, we must ensure that federal employees – who have nothing to do with this – are held harmless.”

Lawmakers suggesting that federal shutdowns are just “[part of the job](#)” received much pushback. Meanwhile, the House Oversight and Reform Committee considered and passed bills aimed at preserving federal employee benefits during any future government shutdown.

The proposed Ensuring Federal Employees Health Benefits Program (FEHBP) Coverage During Shutdowns Act ([H.R. 2003](#)) declared that employees tasked with implementing the federal government's health insurance program and those who enroll employees in FEHBP are deemed excepted during a future lapse in appropriations. The bill was introduced after reports that federal workers were unable to change their insurance during the partial government shutdown after major life events, like the birth of a child.

Then on 3 January 2019, bipartisan groups of House and Senate lawmakers [reintroduced legislation](#) from the previous Congress to guarantee retroactive pay for all federal employees during partial government shutdowns, regardless of status. The Senate passed the [Government Employee Fair Treatment Act](#), [introduced](#) by Senator Bill Cardin (D-Md.), on 10 January 2019. The House [also passed](#) the bill, guaranteeing back pay to more than 800,000 federal employees, on 11 January 2019. President Trump [signed the bill into law](#) on 16 January 2019.

The Ensuring Federal Employees Dental/Vision Program (FEDVIP) Coverage During Shutdowns Act ([H.R. 2004](#)) would prevent dental and vision insurers from removing furloughed and excepted employees from their plans for nonpayment during a shutdown. Currently, FEDVIP remains covered for the first two scheduled pay periods during a lapse in appropriations, after which insurers will bill employees directly.

The Federal Employee Fair Treatment Law was signed by the President on 16 January 2019.

The Federal Government Labor Unions' Reaction

Government unions were swift and direct in their comments in December 2018. [Randy Erwin](#), president of the National Federation of Federal Employees urged, "These are real people who have real families and real financial obligations. A shutdown means they are not getting paid. It means, at least for a short time, they don't know if they have a job."

[J. David Cox](#), president of the American Federation of Government Employees, further said that lawmakers, rather than the employees, should be held accountable. "Any insinuation that the hardworking veterans, law enforcement officers, and civil servants that comprise the federal workforce are to expect shutdowns or being forced to work without pay 'as part of the job' is absurd."

Federal Contractors' Reactions

Nearly 10,000 companies contract with the government, putting \$200 million at risk each week for private sector salaries and income. The question of whether federal contractors would be paid and, if so, when, was raised immediately. The House voted 227-194 to pass its second minibuss spending package for fiscal 2020, a bill providing for back pay to low-wage federal contractors for time they spent furloughed or on mandatory leave during the 35-day shutdown. The measure was part of the appropriations bill setting funding levels for the Commerce, Justice, Agriculture, Veterans Affairs, Transportation, and Housing and Urban

Development departments ([H.R. 3055](#)). Unlike federal employees, contractors at unfunded agencies who were furloughed, forced to leave, or laid off were not given back pay after the government reopened in January.

A Congressional Panel met on 6 May 2019 to hear directly from contractor executives. David Berteau, president and CEO of Professional Services Council, described the problem of most contracting offices being shuttered during the shutdown. Berteau indicated that, although federal employees were affected broadly by the shutdown, 800,000 workers from 10,000 private government contractor companies also felt the shock.

Even companies whose [contracts were still funded](#) could not communicate with the appropriate personnel to meet deadlines, did not receive payment for work already done, or received incorrect information about the status of their work. Some contracting officers were totally nonresponsive for weeks – while contracting offices were trying to catch up and new contracts going through the proposal process were significantly behind. Therefore, new services or initiatives scheduled to take place under those contracts were also delayed.

[Roger Krone](#), CEO of Leidos, observed that, during the shutdown, “work on 22 important projects came to a halt.” This left 893 people with limited or no work. During the 35 days, his company lost an estimated \$400,000 each day in revenue and delayed \$18 million in payments. His company offered an assistance program of \$2,500 grants for employees experiencing “extreme financial hardship.” During the closure, 50 employees requested grants.

[Alba Aleman](#), CEO of Citizant, a small IT contractor, stated at the 6 May panel hearing, “Six out of seven programs were impacted, causing the company immediately to lose \$430,000 in revenue directly from the shutdown.” However, she emphasized that the greater loss was the lasting impact. The accrued unpaid federal invoices forced the company into \$4 million debt and “maxed out” its borrowing capacity. “We struggled to meet our \$750,000 payroll every two weeks for months after the shutdown ended.” She concluded that the Department of Homeland Security issued her company a



stop-work order during the shutdown. However, that order contradicted the agency's head of procurement, who had said that contractors not requiring ongoing guidance to complete that work could continue working.

Aleman said, "The problem is they sent the notice the day after the shutdown, and they were no longer able to read their emails, so they didn't know that. They shut us down temporarily, and we got a copy of the memo, because one customer that was working sent it to us." Even contracts that were scheduled for renewal or review lapsed during the shutdown. As such, contractors were forced to abandon work that they otherwise would have continued with those government agencies. "Several key, highly technical leaders from the Department of Homeland Security left in the middle of the shutdown to go back to industry." Although some contractors with unfunded projects procured contracts with open agencies, the technical requirements and security clearance for employees prohibited many employees from transferring in time.

These corporate executives shared how difficult it is recruiting high-tech workers, given the tightening labor market and fewer government-centered businesses moving into the Washington, D.C., area. One company resorted to allowing its employees to take a negative balance of paid time off, meaning that they continue working to earn the time that was already spent. As stated at the 6 May panel hearing, "It will take them years to build up that paid time off bank. Contractors requested that contractor employees should get back pay, just as federal employees did, and that legislation should be designed to minimize or eliminate the use of shutdowns as a political negotiating tool."

Congressional & Administration Support for Federal Employees

On 9 May 2019, the Service to America ([SAMMIE](#)) Medals (staged by the nonprofit Partnership for Public Service) held a breakfast to honor the award finalists. Senator James Lankford, R-OK, spoke at the event and complimented the federal workforce's endurance during the shutdown and described it as "a remarkable gift to the country." With Sen. Maggie Hassan, D-N.H., Lankford co-sponsored a bill to [end shutdowns](#) and hold federal workers "harmless." He also helped author a Senate [resolution](#) to honor federal workers during Public Service Recognition Week. He emphasized his appreciation for the award recipients by [stating](#) that lawmakers "can disagree with colleagues on policy, but the last people we're angry at is you." Other speakers include Veterans Affairs (VA) Secretary Robert Wilkie and Commerce Secretary Wilbur Ross. Wilkie acknowledged the VA's 20 public service awards in 18 years and cutting-edge medical research. Ross emphasized the societal importance of federal workers, "Without good government, society suffers morally, financially, emotionally, intellectually and psychologically." However, he also emphasized their need to "perform at the highest level, embrace the digital revolution, and stay attuned to the demands of the electorate."

The National Capital Region Economic Impact

Professor Stephen Fuller, long-time and legendary regional economist with George Mason University, estimated in January 2019 that, during the 35-day shutdown, the local economy lost [\\$1.6 billion](#). “The impacts are widespread. The cost can be measured by the number of jobs lost and the jobs that didn’t receive payment.” Fuller found that, in addition to the federal employees and federal contractors who were not paid during the shutdown, “There were another 100,000 other workers, restaurant workers, and retail workers, in and around federal enclaves that didn’t work. Many of them were minimum wage workers who lost a month’s worth of work.” He even predicted that the shutdown would “[haunt](#)” the Washington, DC, Region for years to come. Specifically, Fuller predicted that the region’s projected growth rate could go from 2.9% to 2.7% in 2019. “That is considerable underperformance for the potential of the economy. That can be blamed on the shutdown.” He also warned that working in Washington, DC, may be less desirable, “Who would want to work in Washington now? More federal workers will probably leave their jobs and move to other jobs outside of the region after this experience.”

Conclusion

It appears that there is at least a short-term solution with the Congressional agreement raising the debt ceiling until 2021, especially if the September 30 deadline on debt limit is successfully negotiated. This provides some time for individual federal employees and families, lawmakers, and emergency managers to consider approaches to planning and assisting with such potential future challenges. As such, preparedness for emergencies and disasters becomes crucial and requires smart contingency planning by individuals, corporations, nonprofits, and government agencies. The hardworking federal workforce and their partners deserve no less.

[HRO.com warns](#), “The budget agreement takes a default off the table and makes a shutdown far less likely, but it certainly does not guarantee that there will not be a shutdown. If I were still a federal employee, I would prepare accordingly.”

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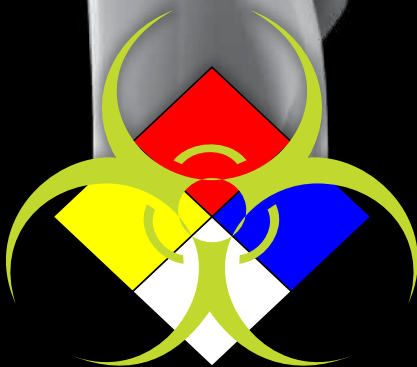
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