U.S. DEPARTMENT OF ENERGY

CLEAR PATH VIII

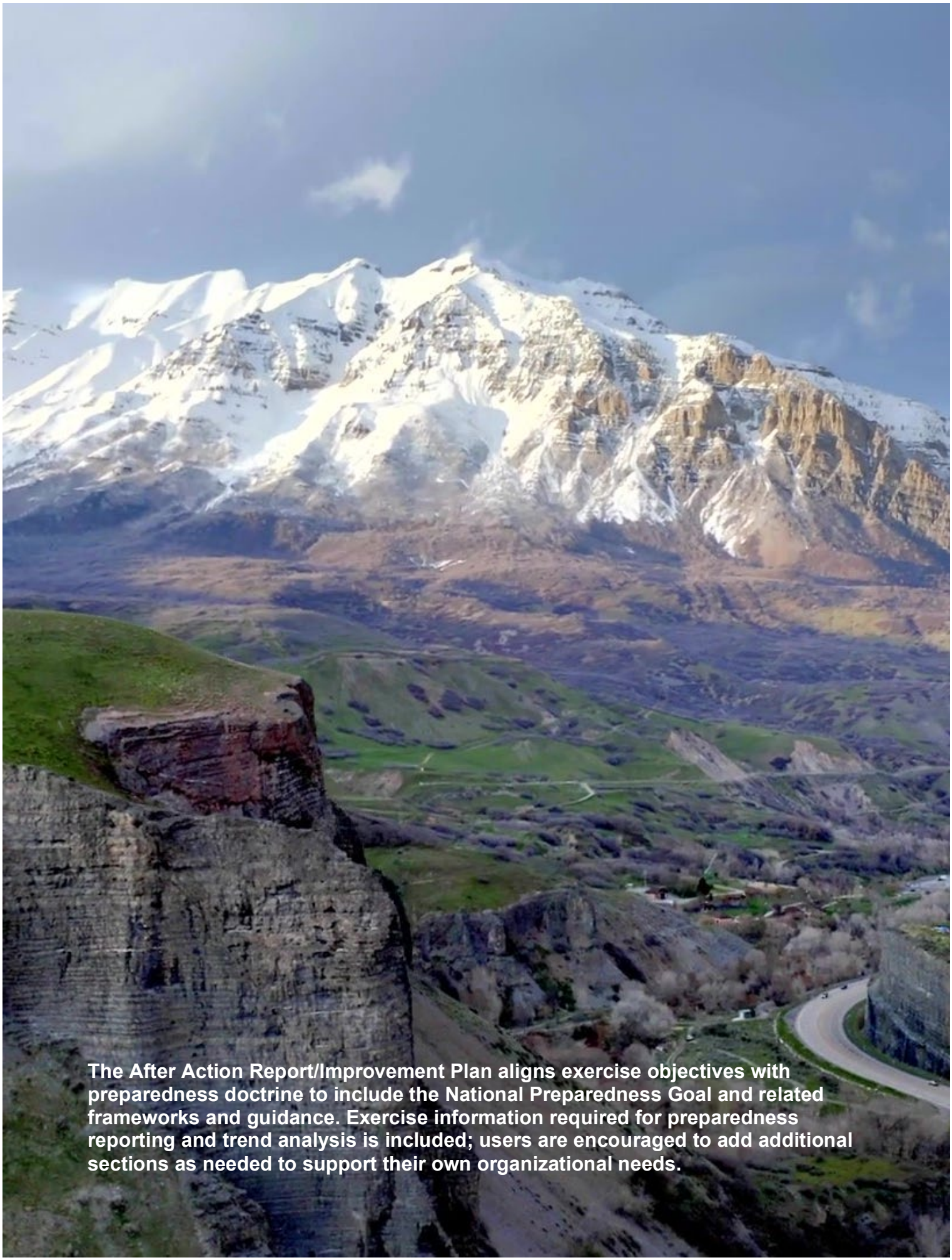
SALT LAKE CITY, UTAH




AFTER ACTION REPORT

NOVEMBER 19-20, 2020

DECEMBER 10, 2020



The After Action Report/Improvement Plan aligns exercise objectives with preparedness doctrine to include the National Preparedness Goal and related frameworks and guidance. Exercise information required for preparedness reporting and trend analysis is included; users are encouraged to add additional sections as needed to support their own organizational needs.

Contents

Handling Instructions

The title of this document is *U.S. Department of Energy's Clear Path VIII After Action Report/Improvement Plan*. The information provided shall only be released at the direction of the Program Manager, Energy Sector Exercises, Infrastructure Security and Energy Restoration, Office of Cybersecurity, Energy Security, and Emergency Response, U.S. Department of Energy.

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For more information on this exercise and proper handling procedures for the document, please consult the following point of contact:

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Exercise Overview

Exercise Name	Clear Path VIII Exercise
Exercise Dates	November 19–20, 2020 and December 10, 2020
Scope	Clear Path VIII was a discussion-based exercise conducted over three days. The exercise was held in a virtual format utilizing audio teleconference and web-based Adobe Connect for visual aids, breakout groups, and information exchange among the players.
Mission Areas	Response and Recovery
Core Capabilities	• Economic Recovery • Infrastructure Systems • Logistics and Supply Chain Management • Public Information and Warning
Threat or Hazard	Catastrophic Earthquake
Scenario	7.0 magnitude earthquake on the Wasatch Fault, Utah
Sponsor	U.S. Department of Energy, Office of Cybersecurity, Energy Security, and Emergency Response
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Executive Summary

Exercise Overview

The *Clear Path VIII Exercise* was developed to examine the energy sector's response and restoration roles, responsibilities, plans, and procedures following a catastrophic incident, stressing the interdependencies among multiple critical infrastructure sectors within the state of Utah.

The Clear Path Exercise Series is the annual U.S. Department of Energy (DOE), Office of Cybersecurity, Energy Security, and Emergency Response (CESER) all-hazards energy security and resilience exercise series. The Series brings together leading energy sector stakeholders to enhance policies and procedures, identify areas for collective improvement, and strengthen relationships and cooperation among industry and government energy sector partners.

The Clear Path series is the principal forum for enhancing the energy sector's ability to work together in response to catastrophic incidents. The series is a central pillar of DOE's efforts to constantly improve its ability to successfully meet its responsibilities as the Emergency Support Function (ESF) #12 Coordinator and the Sector-Specific Agency lead for the energy sector.

The Clear Path series encompasses a diverse array of exercise scenarios, challenging response officials and allowing planners to build on corrective actions and validate improvements made in response to lessons learned from both exercises and in the real-world. The purpose of the eighth iteration of Clear Path is to examine the energy sector's response and restoration roles, responsibilities, plans, and procedures following a major earthquake along Utah's Wasatch Fault Zone, stressing the interdependencies among multiple critical infrastructure sectors.

The emphasis of this exercise was on defining the roles and responsibilities of energy sector providers, facilitation of resource requests, developing situational awareness, and communications and coordination throughout the impact area.

Exercise Objectives and Core Capabilities

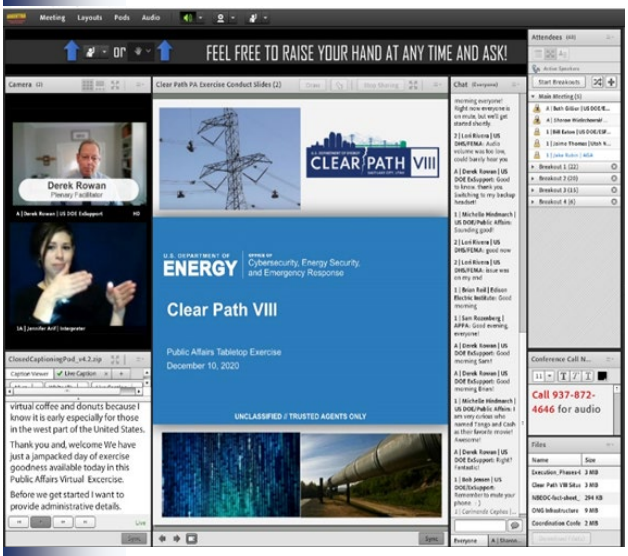
The following exercise objectives in Table 1 are linked to the *U.S. Department of Homeland Security Core Capabilities*, which are distinct critical elements necessary to achieve specific mission areas. The objectives and aligned core capabilities were selected by the exercise planning team.

Exercise Objective	Core Capability
Discuss the energy sector's recovery process that contributes to improvements in energy resiliency and sustainability, and economic recovery for the region.	Economic Recovery
Identify the process to coordinate the restoration of critical energy infrastructure systems by the energy sector and all levels of government to support ongoing emergency response operations, life sustainment, community functionality, and a transition to recovery.	Infrastructure Systems
Describe the process to request, prioritize, deconflict, and process resources/ mutual aid by the energy sector and all levels of government during a multi-jurisdictional/multi-agency response to ensure appropriate size, amount, location, type, and time of arrival of the resources.	Logistics and Supply Chain Management
Explain the process used to develop and deliver a coordinated and consistent message by the energy sector and all levels of government that informs all segments of the affected community on current response and recovery efforts.	Public Information and Warning

Table 1. Exercise Objectives and Associated Core Capabilities

Exercise Conduct

Clear Path VIII was conducted over three half-days to accommodate all participants and multiple time zones in the unique virtual environment. Days one and two (November 19–20, 2020) involved response and recovery personnel from the energy sector and government partners and focused on the core capabilities of *Economic Recovery*, *Infrastructure Systems*, and *Logistics and Supply Chain Management*. Day three (December 10, 2020) involved public affairs personnel from the energy sector and government partners and focused on the *Public Information and Warning* core capability. The exercise was attended by energy sector organizations from across the country as well as several state and federal agency partners. Planning team members worked together to develop the exercise core capabilities, objectives, scenario, and evaluation criteria.



The first exercise session was attended by approximately 200 players, observers, and exercise conduct staff and spanned two days. Day one focused on the response mission for the first 48 hours. Day two progressed the scenario approximately 30 days post-earthquake and involved the short- and long-term recovery challenges of returning the area to pre-disaster status. The virtual format engaged participants in multiple interactive discussion sessions and activities. The exercise gave participants an opportunity to identify any gaps and areas for improvement in planning, training, equipment, and other related areas to better protect the communities they serve.

November 19–20, 2020 Agenda Activities

- Activity #1—Re-establishing Infrastructure
- Activity #2—Resource Identification
- Activity #3—Demobilization
- Activity #4—Restoration
- Activity #5—Lessons Learned/Best Practices

The second exercise session was also conducted in a virtual format and was a single half-day event attended by approximately 80 players, observers, and exercise conduct staff. Players were given a unique training opportunity focusing on critical messaging coordination calls led by government agencies that occur post-disaster. The exercise concluded with an active discussion of the energy sector's social media strategy during a catastrophic incident. This exercise session gave more experienced public affairs specialists an opportunity to share best practices and lessons learned with newer members of the public information function.

December 10, 2020 Agenda Activities

- Activity #1—Overview of National Incident Communication Conference Line (NICCL), State Incident Communication Conference Line (SICCL), and ESF-14 Business and Infrastructure call process; Simulated U.S. Department of Energy Unity of Message call
- Activity #2—Social Media Coordination
- Activity #3—Lessons Learned/Best Practices

Scenario

On December 17, 2020, during a weekday afternoon, a 7.0 magnitude earthquake ruptures the Wasatch Fault—the epicenter is located just south of Salt Lake City on the Salt Lake City Segment and the violent shockwaves extend north toward Ogdon, triggering a rupture of the Weber Segment. Davis, Morgan, Salt Lake, Summit, Tooele, Utah, and Wasatch Counties all experience some level of ground shaking that severely affects critical infrastructure systems and public safety. *A copy of the complete scenario is in Appendix D*.

Strengths and Areas for Improvement

November 19–20, 2020

Strengths

- The exercise successfully met the goal of bringing together members of each energy subsector, government, and interdependent non-energy stakeholders to discuss their approach to response and recovery in a catastrophic scenario. Discussions were open and honest, and participants candidly shared their gaps and vulnerabilities as well as identified beneficial approaches to bring the community back to "normal."
- Self-sufficiency of energy sector response and recovery teams was noted as a challenge during austere conditions, but the industry has made great strides in working through various mutual aid programs to overcome this. This was demonstrated in real world incidents during the current year when investor-owned organizations and cooperative and public power organizations assisted each other with personnel, equipment, and crew support items (lodging, feeding, etc.) when responding to various disasters in 2020.
- An increasing number of energy producers and suppliers are adopting the Incident Command System in their management of response and restoration activities during a disaster. They have used this model during responses to various disasters with which their facilities and/or mutual aid personnel resources have been involved. They stated it has helped expedite the acquisition and management of personnel, resource tracking, task prioritization, and the maintenance of a common operating picture. Also, since the Incident Command System is widely used by first responder agencies and emergency management organizations, it has helped members of the energy sector integrate into the local command structure for response and recovery.
- Energy producers have recognized the need to support employees locally through employee disaster assistance programs. Local employees who are affected by the disaster need to secure their homes and ensure their families are cared for prior to returning to work. Thus, some of these programs deploy qualified employees from other areas to fill the vacant positions within the affected area, while the local employee is taking care of family and personal business.

Some of these programs also provide home electric generation, fuel, food, temporary housing (campers/recreational vehicles), and other essential supplies. These types of programs should be considered by all energy producers to ensure employees remain focused on family first, so they can then return to the job with a clear mind and can focus on performing mission essential functions.

- Energy sector partners are committed to rebuilding and maintaining service within the area. While they recognized that rebuilding times may be prolonged, they are there to support the customer base, help grow the workforce, and do their part to help return the community to a "better than" pre-incident state. To ensure the welfare of the energy workforce, personnel may be tasked with non-traditional responsibilities to decrease the need for temporary layoffs or the possible loss of employees that may want to relocate out of the area because of financial hardships.

Areas for Improvement

- Credentialing of resources within the energy sector continues to be inconsistent or unaddressed until an incident occurs. Participants discussed the need for a common credentialing and identification process that all members of the energy sector could adopt so that resources coming into a disaster-stricken area would not be impeded by security access points. Coordination is necessary between the energy subsectors, trade associations, local and state emergency management, and local and state law enforcement to determine the most effective and efficient process to implement a credentialing program.
- Participants noted that during a catastrophic incident, restoration may be greatly prolonged due to the energy sector's reliance on a few specialized vendors for personnel and resources. As has been seen in healthcare emergencies where many hospitals rely on the same vendor for a certain personal protective equipment item, there is a logistical struggle to acquire immediate assistance as many of the energy providers rely on the same restoration teams, clean-up and debris removal companies, heavy equipment providers, and consumable goods vendors (components, disposable supplies, tools, etc.). Additionally, other non-energy organizations within the area may also be competing for the same resources for their own recovery efforts. It is important that energy providers coordinate pre-incident with government partners to prioritize infrastructure restoration projects to help alleviate the competition for resources.

Assistance from federal government programs may not be sufficiently leveraged by all energy sector entities. Although direct financial support to private sector energy providers from federal agencies during a federally declared disaster/emergency is generally prohibited, there are other ways that federal and state partners can support private industry. For example, the U.S. Small Business Administration (SBA) has multiple financial assistance programs available to for profit, private sector organizations. These may include, depending on the nature of the incident, the Paycheck Protection Program, Economic Injury Disaster Loans and Grants, and traditional SBA programs such as 7(a), 504, and Microloan programs. Each incident is situationally dependent and there are some alternatives or exceptions for SBA eligibility but from a planning perspective, private sector entities should not rely on financial support from the U.S. Department of Homeland Security, Federal Emergency Management Agency (FEMA)

December 10, 2020

Strengths

- Participants identified multiple best practices for inclusion of vulnerable populations (i.e., deaf and hard of hearing people) in the public messaging strategy. These included using highway message boards, Certified Deaf Interpreters and real-time closed captioning in all briefings, and standard configurations for social media that are useable by screen reader systems to ensure accessibility by as wide of an audience as possible.
- The energy sector trade associations are engaged with member organizations to assist in promoting positive and accurate public information during disasters. While it is primarily the responsibility of the individual organizations to ensure customer facing interaction with the public, the trade associations aid where applicable. Examples of member support included posting pictures and response and recovery "success stories" on social media platforms of members' deployment activities and providing social media graphic templates to their members to use for public safety messaging in the affected areas. Some association representatives indicated they also monitor social media for "key" words and rumors connected to the incident response. Any misinformation and disinformation that is observed triggers communication with the organizations' members.
- The overview of the government coordination calls, and the simulated *Unity of Message* call provided participants with a better understanding of the various communications processes that are in place to exchange information during national or state-level incidents, and ensure a unified, consistent public message campaign.
- Participants recognized the need to use multiple, sometimes non-traditional methods to disseminate public messaging in an austere environment. They discussed the importance of creating a consistent and coordinated message as well as making sure that the message was delivered effectively. They stated that it would take a variety of messaging tools to reach each audience. The tools identified during the exercise included internet (web pages and social media tools), radio (FM and HAM frequency), multiple language formats, doorhangers/flyers, electronic message boards (static and

mobile), public address loudspeakers (first responders roving through neighborhoods), and the Integrated Public Alert & Warning System (iPAWS).

Areas for Improvement

- Energy sector members are often lacking in staff support for public affairs roles during large disasters. While larger corporate owned utilities have the depth to surge in public affairs personnel from other branches of the organization, many of the smaller organizations have only handful of personnel (in some cases only one or two) trained in public information leaving them to handle the massive influx of social media messaging and traditional media tasks such as development of press releases and addressing the news outlets. Development of a public affairs "incident management team" by mutual aid partners and trade organization representatives could provide the relief needed to the local public affairs specialists within the energy sector.
- Not all organizations are aware of their social media capabilities. While many participants discussed their social media strategy and the various platforms they use to communicate with the public, several participants were unsure if their organization utilized social media. With social media being one of the most effective means of communication in today's society, it is important that both private and public-sector entities have a planned strategy and trained staff to provide emergency messaging, measure the effectiveness of their public messaging campaign, and track rumors and misinformation/disinformation during a catastrophic incident. This lack of awareness of a key communication tool could negatively impact the effectiveness of message delivery.

Analysis of Core Capabilities

Aligning exercise objectives and core capabilities provides a consistent taxonomy for evaluation that transcends individual exercises to support preparedness reporting and trend analysis. The following sections provide an overview of the performance related to each exercise objective and associated core capability, highlighting strengths and areas for improvement.

November 19–20, 2020; Exercise Session #1

Economic Recovery

The strengths and area for improvement for the core capability aligned to this objective are described in this section.

Discuss the energy sector's recovery process that contributes to improvements in energy resiliency and sustainability, and economic recovery for the region.

Strengths

Strength 1: During the restoration process, much of the damaged equipment will need to be repaired and replaced. Participants discussed that as energy production, transmission, and distribution equipment is being replaced, efforts should be made to rebuild with new and more resilient equipment to limit future vulnerabilities. Increasing resilience during routine preventive maintenance along with improvements after a disaster will provide better service and products to the community with minimized energy sector disruption during future disasters. One funding avenue for pre-disaster infrastructure improvements is the Building Resilient Infrastructure and Communities (BRIC) grant through the Federal Emergency Management Agency. BRIC (https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities) supports states, local communities, tribes, and territories as they undertake hazard mitigation projects, reducing the risks they face from disasters and natural hazards.

Strength 2: Participants discussed how energy sector organizations are committed to remaining a part of the community and will rebuild in the area so they can continue to support the sustainment and recovery of the economy. While they recognized that rebuilding times may be prolonged, they are there to support the customer base, help grow the workforce, and do their part to

help return the community to a "better than" pre-incident state. To ensure the welfare of the energy workforce, personnel may be tasked with non-traditional responsibilities to decrease the need for temporary layoffs or the possible loss of employees that may want to relocate out of the area because of financial hardships. Participants also identified several factors that made remaining in the area the correct choice to help revitalize the economy of the state and/or region. The first of these factors was access to the required resources (fossil fuel, natural gas) to produce product. Another factor was a commitment to employees in the area because moving refineries and other facilities would mean a financial loss to the employees and the companies. There is a potential for a loss of labor as many families may not be willing to relocate. This would impact energy companies financially because they would have to retrain new employees and lost revenue due to the lack of production at facilities until the work force was fully trained. Participants also stated that relocating the workforce and rebuilding a facility from the ground up is not feasible due to all the associate costs such as research, facility design and engineering, environmental impact studies, and the cost of the property on which to build.

Strength 3: Energy producers have recognized the need to support employees locally through employee disaster assistance programs. Local employees are affected and need to secure their homes and ensure their families are cared for prior to returning to work. Thus, some of these programs deploy qualified employees from other areas to fill the vacant positions within the affected area, while the local employee is taking care of family and personal business. Some of these programs also provide home electric generation, fuel, food, temporary housing (campers/recreational vehicles), and other essential supplies. These types of programs should be considered by all energy producers to ensure employees remain focused on family first, then return to the job with a clear mind and can focus performing mission essential functions.

Area for Improvement

Area for Improvement 1: Assistance from federal government programs may not be sufficiently leveraged by all energy sector entities.

Analysis: Although direct financial support to private sector energy providers from federal agencies during a federally declared disaster/emergency is generally prohibited, there are other ways that federal and state partners can support private industry.

For example, the U.S. Small Business Administration (SBA) has multiple financial assistance programs available to for profit, private sector organizations. These may include, depending on the nature of the incident, the Paycheck Protection Program, Economic Injury Disaster Loans and Grants, and traditional SBA programs such as 7(a), 504, and Microloan programs. Each incident is situationally dependent and there are some alternatives or exceptions for SBA eligibility but from a planning perspective, private sector entities should not rely on financial support from the U.S. Department of Homeland Security, Federal Emergency Management Agency (FEMA).

Infrastructure Systems

The strengths and areas for improvement for the core capability aligned to this objective are described in this section.

Identify the process to coordinate the restoration of critical energy infrastructure systems by the energy sector and all levels of government to support ongoing emergency response operations, life sustainment, community functionality, and a transition to recovery.

Strengths

Strength 1: An increasing number of energy producers and suppliers are beginning to adopt the Incident Command System in their management of response and restoration activities during a disaster. They have used this model during response to various disasters that their facilities and/or mutual aid personnel resources have been involved with. The Utah Lifeline Emergency Management Resource Group has implemented the use of incident management teams and the Incident Command System in their planning for response to in-state emergencies. Participants stated the use of the Incident Command System has helped expedite personnel, track resources, manage by objectives, and maintain a common operating picture. Also, since the Incident Command System is widely used by first responder agencies and emergency management organizations, it has helped members of the energy sector integrate into the local command structure for response and recovery.

Strength 2: Because of the institutional experience responding to other disasters (winter storms, hurricanes, wildfires, etc.)

participants are well-versed in their organizational processes to assess, prioritize, and restore the energy sector. The participants discussed process to conduct an in-depth damage assessment of energy facilities and infrastructure. From that information, they were able to estimate the time of repairs and a possible time to deliver their services. They considered the possible lack of equipment, parts, and specialized crews needed for critical maintenance. Participants recognized the need to work with the local, state, and federal government organizations to prioritize infrastructure rebuilding for the affected area.

Strength 3: Throughout the exercise, life safety was a common and important theme for participants. It was stated many times that the safety of the energy sector personnel and their families should be at the forefront of all disaster recovery efforts. A balance of risk versus reward must be kept as crucial decisions are being made towards meeting operational objectives. The safety of responders and the community at large must always remain a primary objective.

Strength 4: The state of Utah has been proactive in the public and private sector developing plans and procedures for an earthquake incident. Participants have contingency plans in place that would activate following an emergency. When implemented, energy sector members would be able to effectively respond to damaged areas with internal sources initially, and with external support once it arrives in the area. Participants understood that any restoration efforts would require the prioritization of available assets (such as a limited workforce or specialized rebuilding projects) with energy sector partners as well as other critical infrastructure and key resources (health care, water/wastewater, communications, etc.) to enable a comprehensive damage assessment process. Also understood is the need to work with state and federal governments to conduct synchronized procedures across the sectors.

Strength 5: Following a natural disaster, routes to energy facilities or critical utility infrastructures may be unpassable due to damaged roadways or debris. The energy sector has adapted the innovative use of unmanned aircraft system technology, or drones to conduct damage assessments. Several participants indicated plans to use drones following a disaster to obtain aerial observations that could support an 'outside-in' damage assessment protocol. The use of drone technology would likely provide restoration planners with a better idea of interdependencies, extent of damage to infrastructure, and what area(s) should be given priority. Members

of the natural gas community also added that some drones can be equipped with gas detection devices to locate leaks in pipeline systems that are inaccessible by foot. The use of drone technology provides the ability to survey critical infrastructure with minimal safely related implications to damage assessment personnel.

Strength 6: Participants identified the importance of having an open dialogue between utilities and government officials regarding resilient restoration projects. During discussion about restoration projects, participants identified an important lesson learned during the recovery process following Hurricane Maria. The hurricane devastated the whole island and the electrical grid, leaving approximately 3.4 million people without power. To make the system more resilient, there was discussion about putting the grid underground where and when possible. When the idea was proposed by the government, the energy sector described the level of effort and work required to re-engineer the system, obtain property right-of-way, and install the system would delay complete restoration of the electrical grid by years, not months. The lesson learned is that energy sector experts must be engaged in discussion and planning for resilient or "green energy" projects prior to any regulatory changes during the recovery phase. While resilient projects may be of value in the future, costs and recovery time would increase significantly and delay providing an essential service to the community.

Areas for Improvement

Area for Improvement 1: Current plans do not address the high volume of debris that would be generated during a catastrophic incident.

Analysis: It became clear during participant discussions that very little repair and restoration of the energy sector could take place until debris had been removed. While the energy sector organizations and government emergency management agencies do have debris removal plans, a catastrophic incident as the one depicted in the scenario could generate an overwhelming amount of debris. This could cause debris removal to take weeks or months before access could be made to many facilities. The progress of everything is dependent on completion of access and egress to the site that is usually blocked by debris. Debris clearing resources will be in high demand and short supply with most private organizations all relying on a few vendors and public-sector agencies limited to government mutual aid. This compounds the issue as the removal must be coordinated to ensure priority facilities are accessible so

that power and fuel facilities can begin the rebuilding process. Another area of concern was the temporary storage of debris until it can be properly disposed. Much of the debris would likely be contaminated and storge for this type of hazardous waste has not been fully investigated for the area nor has storage for a high volume of debris. The Federal Emergency Management Agency encourages state and local governments, tribal authorities, and private non-profit organizations to take a proactive approach to coordinating and managing debris removal operations as part of their overall emergency management plan. Communities with a coordinated debris management plan are better prepared to restore public services and ensure the public health and safety in the aftermath of a disaster, and they are better positioned to receive the full level of assistance available to them from federal authorities. Energy sector organizations should consider becoming actively involved in local and state debris management plans to ensure their needs and concerns will be addressed during a catastrophic disaster.

Area for Improvement 2: Participants identified challenges related to ensuring communication to response crews in impact areas.

Analysis: Participants discussed the importance of a working communications infrastructure to ensure response crews are provided safety updates and utility operations repair updates. Although some energy sector participants indicated the availability of satellite phones and land mobile radios, those with this capability appeared to be the minority. During steady-state repairs, crews have access to cell and radio towers to communicate with a dispatch center or an operational element. During an emergency, there is no guarantee these cell or radio towers will be operational, especially in a catastrophic incident such as a high-magnitude earthquake. A lack of a resilient, back-up communications system is a threat to the health and safety of personnel. Additionally, it slows the progress of information exchange on the progress of restoration activities.

Logistics and Supply Chain Management

The strengths and areas for improvement for the core capability aligned to this objective are described in this section.

Describe the process to request, prioritize, deconflict, and process resources/mutual aid by the energy sector and all levels of government during a multi-jurisdictional/multi-agency response to ensure appropriate size, amount, location, type, and time of arrival of the resources.

Strengths

Strength 1: The willingness to share resources was evident as participants discussed response to previous incidents. Participants with real-world deployment experience took the time to explain individual needs and capabilities to participants with less experience and presented the cooperative effort of many in the energy sector. The exchange of best practices and lessons learned will prove valuable during future deployments.

Strength 2: Participants understood the benefits of utilizing Emergency Management Assistance Compacts to streamline and organize the resource request process. Participants realized that resources in the affected area would soon become exhausted. This would require a response to cover numerous operational periods, extending weeks and months and the resource request footprint would become quite large.

Strength 3: Participants acknowledged and described the use of a systematic process for acquiring resources both internally and externally, which ensures the resources for restoration and recovery are sequenced. Obviously, damage assessment is the first course of action taken by a utility or a processor. During the damage assessment phase, resources are acquired generally through internal resources. Knowing the typical recovery and restoration process, companies start by acquiring resources to remove impediments to accessing the damage. In the case of utilities, it may be debris removal teams to open access to transmission lines or a transformer. For refineries it may be teams specializing in pipefitting or storage tank repairs. The next step would be to begin repairs, for example transmission lines to bring power in would require personnel trained in construction of transmission line, not distribution crews. For large companies, resources can be acquired regionally or even internationally in the case of producers. Resources can also be obtained through mutual aid agreements and coordinated with the

trade association of which they are a member. Utilizing the same processes used for construction of new assets is a same concept for implementing the recovery and restoration process regarding the sequencing and acquisition of the right resources at the right time following a disaster.

ESCC
Electricity Subsector Coordinating Council

Strength 4: The Oil and Gas Subsector Coordinating Council and Electricity Subsector Coordinating Council were well represented during the exercise. Co-chairs of each organization moved from group to group during the breakout sessions to provide all participants with detailed information on how the trade organizations work together and partner with state and federal agencies during emergency incidents. This pro-active coordination provides a high-level of communication and information sharing across the energy sector.

Areas for Improvement

Area for Improvement 1: Competition for limited resources may cause a delay in the recovery process.

Analysis: Participants noted that during a catastrophic incident, restoration may be greatly prolonged due to the energy sector's reliance on a few specialized vendors for personnel and resources. Many of the large energy providers are independent private organizations who rely on internal resources and surge assistance into the area from other divisions within the organization or use national-level contracts to support the response. The smaller municipal energy providers are often members of sector-specific trade organizations who assist with the coordination of mutual aid. Specific to the Utah region, the Western Region Mutual Assistance Agreement is utilized by the electrical power subsector (and available to the natural gas subsector) to coordinate support during an incident response. However, there is a lack of a central coordination point for all energy sector partners during a large-scale incident. With limited available resources in a disaster-stricken area, the organizations are all competing for the same finite resources on a "first come, first served" basis. Additionally, other non-energy organizations within the area may also be competing for the same resources for their own recovery efforts. It is important that energy providers coordinate pre-incident with government partners to prioritize infrastructure restoration projects to help alleviate the competition for resources. As has been seen in healthcare emergencies where many hospitals rely on the same vendor for a certain personal protective equipment item, there is a logistical

struggle to acquire immediate assistance as many of the energy providers rely on the same restoration teams, clean-up and debris removal companies, heavy equipment providers, and consumable goods vendors (components, disposable supplies, tools, etc.). They may also compete for lodging, food, and transportation. Not having a coordinated logistical process in place could delay services required to restore critical infrastructure. Consider developing a community restoration prioritization plan (that includes private and public sector representation) that is not dependent on a specific organization's needs or priorities but the overall needs of the community to stabilize the incident and begin restoring energy services to most critical services.

Area for Improvement 2: Energy trade personnel qualifications may not be universally accepted from state to state.

Analysis: It was discussed that personnel licensed in one state may not have that license immediately recognized in the receiving state even though the qualification for the skillset is similar or may be identical between the sending and receiving states. Each state has their own "certification" criteria for energy sector training. For example, in most states electricians are licensed by a state licensing body. In other states, electricians are licensed at the local level. Some states have reciprocal electrician licenses, which facilitate working across state lines while others do not.

> *"As skilled tradesmen that perform highly specialized and potentially dangerous work, electricians are subject to strict licensing requirements that must be met to legally practice their craft. However, the conditions that must be met to advance through the three standard licensing phases are anything but uniform from one jurisdiction to the next."*
> ElectricianSchoolEDU.org

While the skillset and qualification process is similar, without creating an emergency waiver process, technicians may be delayed in their ability to start work, and a waiver may not be easily developed and executed in a timely manner depending on the conditions of the disaster. This delay in certification or license recognition will increase the time that is required to restore power during a disaster. Consider establishing a nationally recognized and accepted cross-sector standard for the various subsector specialty trades which would decrease the administrative "down time" often experienced in a disaster as skilled trades people wait to be approved to begin work.

Area for Improvement 3: There is no national standard for credentialing of resources within the energy sector.

Analysis: Participants identified inconsistencies with the energy sector's resource credentialing process. Currently there is no national guidance for credentialing of energy sector personnel during times of disaster; because each state has jurisdictional authority and implements this process through their counties. Participants discussed the benefit of common credentialing and identification guidance that all members of the energy sector could adopt so that resources coming into a disaster-stricken area would not be impeded by security checkpoints to access the areas, and reciprocal qualification standards to ensure visiting workers are properly certified. Coordination is necessary between the energy subsectors, trade associations, local and state emergency management, and local and state law enforcement to determine the most effective and efficient process for them to implement their credentialing programs.

Use of a common approach for managing access and phased re-entry is particularly important during incidents to ensure the flow of essential commodities, coordination of public or private sector response and recovery assets, and restoration of critical infrastructure and essential public services. Based on discussions during the exercise, the State of Utah has a simple approach toward getting response crews through law enforcement access control points by publishing a list of names that is provided to local law enforcement. There could be some efforts by the associations to coordinate reciprocal agreements similar to what they do for mutual aid. There may also be value in having a guidance document similar to the DHS CISA Critical Infrastructure Workers one as a basis for who states could consider qualified but the individual process for who is on that list and how to identify them would need to be managed by the state and local counties.

Area for Improvement 4: Planning efforts for personnel resource support (shelters, feeding, etc.) may not appropriately address long-term restoration and recovery needs/activities.

Analysis: Participants acknowledged the need to have operational rest and rehabilitation shelters that include basic necessities available when mutual aid response crews arrive. Damage to housing infrastructure (hotels, homes, etc.) would potentially eliminate the use of any buildings near the earthquake zone.

The current plan involves the use of tents or large sporting venues to house response crews and/or local residents; however, those locations would likely require heavy generators to ensure electricity for heating, cooling, and lighting as well as an independent water/wastewater system. It was also identified that these camps would likely be established quite a distance from the epicenter because of inaccessibility from debris and damaged roadways, causing longer travel times from the camps into impact areas. Although participants understood the need to have a staggered approach to bringing in outside personnel, the impacted area would require some time to establish adequate facilities for response crews. Long-term deployments also require additional support such as health care, morale support, personal comfort and hygiene supplies, and laundry facilities for personnel as well as equipment fuel, maintenance, and repair systems. Planning for resource support needs takes a coordinated effort between the industry and government agencies to ensure all potential responder needs are met. Coordination must occur before an incident occurs so that all participating organizations realize the requirements to support personnel as well as what each organization can provide.

December 10, 2020; Exercise Session #2

Public Information and Warning

The strengths and areas for improvement for the core capability aligned to this objective are described in this section.

Explain the process used to develop and deliver a coordinated and consistent message by the energy sector and all levels of government that informs all segments of the affected community on current response and recovery efforts.

Strengths

Strength 1: Participants identified multiple best practices for inclusion of vulnerable populations (i.e., Deaf and hard of hearing people) in the public messaging strategy such as using highway message boards, Certified Deaf Interpreters and real-time closed captioning in all briefings, and standard configurations for social media that are useable by screen reader systems (e.g., first letter of a post should be capitalized) to ensure accessibility by as wide of an audience as possible.

Strength 2: The energy sector trade associations are engaged with member organizations to assist in promoting positive and accurate public information during disasters. While it is primarily the responsibility of the individual organizations to ensure customer facing interaction with the public, the trade associations provide assistance where applicable. Examples of member support included posting pictures and response and recovery "success stories" on social media platforms of members' deployment activities and providing social media graphic templates to their members to use for public safety messaging in the affected areas. Some association representatives indicated they also monitor social media for "key" words and rumors connected to the incident response. Any misinformation and disinformation that is observed triggers communication with the organizations' members.

Strength 3: Participants recognized the need to use multiple, sometimes non-traditional methods to disseminate public messaging in an austere environment. Both the public and private sector participants stated that they have developed back-up and alternate communications strategies for use during a disaster that affects the energy sector. This communication continuity is important to ensure that entities can communicate with each other and their customers or citizens. Having the ability to communicate

can keep people more informed, reassured of any progress, and updated if there are additional issues or needs. They discussed the importance of creating a consistent and coordinated message, as well as making sure that the message was delivered effectively. Participants also recognized that previous forms of reaching the public, such as battery powered radios, was no longer a reliable source of delivering public information since most families no longer own or do not have access to these items. They stated that it would take a variety of messaging tools to reach each audience. The tools identified during the exercise included internet (web pages and social media tools), radio (FM and HAM frequency), multiple language formats, doorhangers/flyers, electronic message boards (static and mobile), public address loudspeakers (first responders roving through neighborhoods), and the Integrated Public Alert & Warning System (IPAWS).

Strength 4: Organizations have a better understanding of the purpose of the *Unity of Message*, NICCL, SICCL, and ESF-14 conference calls because of the exercise. Prior to the exercise, several participants were unaware of the conference calls lines and the information sharing tools that can be used during a large-scale incident. Some were aware of the conference call lines but did not understand how the calls could help in the collection and sharing of valuable information and situation awareness. This was primarily due to many of the local and state organizations not having experienced large-scale disasters that would trigger the use of these tools. After the presentation explaining the conference calls, organizations were able to identify why and how they could use the different conference calls to spread situational awareness and for information sharing concerning the incident response and recovery. This was shown by the participants discussing how they could use each other's information and incident updates to create a public information message strategy to inform the public concerning issues, updates, and timelines during response and recovery of an incident. Participants also identified risks if they do not align their public information messages and information sharing strategies. One example of a risk that was identified was, if the provided official information updates were varied, contradictory, or uninformative, the public could lose faith in the governments' and energy sectors' response capabilities. One recommendation made by participants for future *Unity of Message* calls is to consider including the Oil and Natural Gas Subsector Coordinating Council in the "topline" agenda items to ensure a sector-wide awareness of incidents.

Areas for Improvement

Area for Improvement 1: Participants were unable to describe a process for using data gleaned from the internet or social media platforms to determine the effectiveness of their public affairs efforts.

Analysis: Many participants indicated that their organizations monitor the internet and social media platforms for likes, dislikes, or mentions during emergency incidents. Some participants also described the analysis of data from these sources. Participants stated that while they are aware of social media's use as a tool, they simply do not have the resources, personnel, or knowledge to develop a social media communication strategy or to monitor the various social media platforms during and after an incident. Without the knowledge or tools needed to monitor or analyze social media posts by the public in impacted areas, gaps in understanding public concerns or identifying emerging issues/concerns can develop, leaving room for misinterpretation of public need and sentiment. In addition, without the knowledge of how to use social media effectively during response operations, there is a chance for public misinterpretation of information. Using social media to facilitate interactive communication between the government and citizens will help improve public information efforts. It can also open important channels and dialogue with key communities impacted by disasters. Having robust and effective interactive communication can help build and maintain public trust and confidence. Many of the energy providers do analyze social media activity on a routine basis for marketing purposes and public relations. This same process could be utilized to determine the effectiveness of disaster related public relations and the effectiveness of an organization's public affairs messaging. In its simplest form, if a public affairs officer notices an increase in rumors or inaccurate information via social media, then there must be an increased effort on social media to improve effectiveness. This may be a change in messages or targeting a specific audience. Without some form of social media analysis there is no way to know if what you are doing is effective. Public affairs team members should consider reviewing the National Incident Management System Basic Guidance for Public Information Officers (December 2020),

https://www.fema.gov/sites/default/files/documents/fema_nims-basic-guidance-public-information-officers_12-2020.pdf, for development of organizational public information plans and procedures. Energy sector trade organizations and government stakeholders should consider sponsoring training for energy sector providers on available resources and procedures to analyze data derived from the internet and social media during disasters.

Area for Improvement 2: Not all organizations are aware of their social media capabilities.

Analysis: While some participants discussed their social media strategy and the various platforms they use to communicate with the public, several participants were unsure if their organization utilized social media. This lack of awareness of a key communication tool could negatively impact the effectiveness of message delivery. The risk of not utilizing social media or developing a connection to the public is that agencies and departments will miss out on valuable information about emerging issues and public sentiment trends during the response and recovery efforts. They also miss the opportunity to combat misinformation/disinformation at the source. With social media being one of the most effective means of communication in today's society, it is important that both private and public-sector entities have a planned strategy and trained staff to provide emergency messaging, measure the effectiveness of their public messaging campaign, and track rumors and misinformation/disinformation during a catastrophic incident.

Area for Improvement 3: Energy sector members are often lacking in staff support for public affairs roles during large disasters.

Analysis: While larger corporate owned utilities have the depth to surge in public affairs personnel from other branches of the organization, many of the smaller organizations have only a handful of personnel (in some cases only one or two) trained in public information leaving them to handle the massive influx of social media messaging and traditional media tasks such as development of press releases and addressing the news outlets.