Emergency Response Working Group Meeting

New Mexico Energy, Minerals, and Natural Resources Department (EMNRD)
Energy Conservation and Management Division (ECMD)

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April 4, 2023

Introduction and Background

Threats and Vulnerabilities

Energy Security Roles and Processes

Next Steps

Introduction: Energy, Minerals, and Natural Resources Department Energy Conservation and Management Division

Louise Martinez

Director, Energy Conservation and Management Division

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Role of ECMD / New Mexico State Energy Office

- **Responsibilities as condition of State Energy Program funding through the U.S. Department of Energy**:
  - Monitor energy sectors across the state
  - Promote and implement energy security measures
  - Maintain and continually update the New Mexico **State Energy Security Plan (SESP)**
  - Serve as the primary agency for coordinating communications during an energy emergency per ESF #12 (Energy Annex of the New Mexico All-Hazards Emergency Operations Plan)

- **Efforts of ECMD in FY23**:
  - Contracted with Hagerty Consulting, Inc. for 2023 SESP update with extensive stakeholder engagement
  - Planning Tabletop Exercise and Workshop **May 2023**
  - Submitted application to U.S. Department of Energy for funding under IIJA Section 40101(d) to support implementation of electric grid resilience measures targeting areas with chronic outages and vulnerabilities
    - $7.2 million in first year for electric grid hardening and system upgrades to support resilience
    - Expected 60% set-aside for "small utilities"
    - Request for applications expected Summer 2023

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Regional Energy Security Tabletop Exercise in May 2023

To bolster energy preparedness, EMNRD ECMD will host an in-person **Regional Energy Security Tabletop Exercise** at the La Fonda Hotel in **Santa Fe on May 1-2, 2023**.

There are still spots available, and if you are interested in participating, please contact Jacqueline Waite as soon as possible.

Jacqueline.Waite@emnrd.nm.gov

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New Mexico's Renewable Energy Transition

- Governor Lujan Grisham signed the **Energy Transition Act** (ETA) into law in March 2019.
- The ETA sets a **statewide renewable energy standard** of 50 percent by 2030 for New Mexico investor-owned utilities and rural electric cooperatives and a goal of 80 percent by 2040, in addition to setting **zero-carbon resources standards** for investor-owned utilities by 2045 and rural electric cooperatives by 2050.
- The law transitions New Mexico away from coal and toward clean energy and provides tens of millions of dollars of economic and workforce support for communities impacted by coal plant closures, as well as the development of renewable replacement power in San Juan County.
- **An objective of the SESP update, as well as the facilitation of the Emergency Response Working Group Meetings, is to evaluate energy security needs as the state undertakes a renewable energy transition.**

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Introduction: Hagerty Consulting, Inc.

Brock Long

Executive Chairman

Katie Toskey

Project Manager

Hagerty Consulting, Inc.

Emergency management and homeland security consulting firm with nearly 20 years experience supporting all levels of government and the private sector. Assists clients, like the State of New Mexico, prepare for, respond to, and recover from disasters and other emergencies.

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New Criteria for State Energy Security Plans

- **State Energy Security Plans (SESPs) are an essential part of energy security planning**. An SESP describes the state's energy landscape, people, processes, as well as the state's strategy to build energy resilience.
- The updated SESP will **fulfill all requirements identified in Section 40108 of the IIJA**, including:
  - Addressment of all energy sources and regulated and unregulated energy providers;
  - Provision of a state energy profile, including an assessment of energy production, transmission, distribution, and end-use;
  - Addressment of potential hazards to each energy sector or system, including physical threats and vulnerabilities and cybersecurity threats and vulnerabilities;
  - Provision of a risk assessment of energy infrastructure and cross-sector independencies;
  - A risk mitigation approach to enhance reliability and end-use resilience; and
  - Addressment of multi-state and regional coordination, planning, and response and coordination with Tribal governments with respect to planning and response.

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2023 SESP Update

PHASE 1:
Project Introductory Email Outreach to Stakeholders and Virtual Stakeholder Kickoff Meeting

PHASE 2:
State Energy Security Assessment and Validation Workshops

PHASE 3:
Resilience and Mitigation and Emergency Response Working Group Meetings

PHASE 4:
Development of Updated SESP and Stakeholder Presentations

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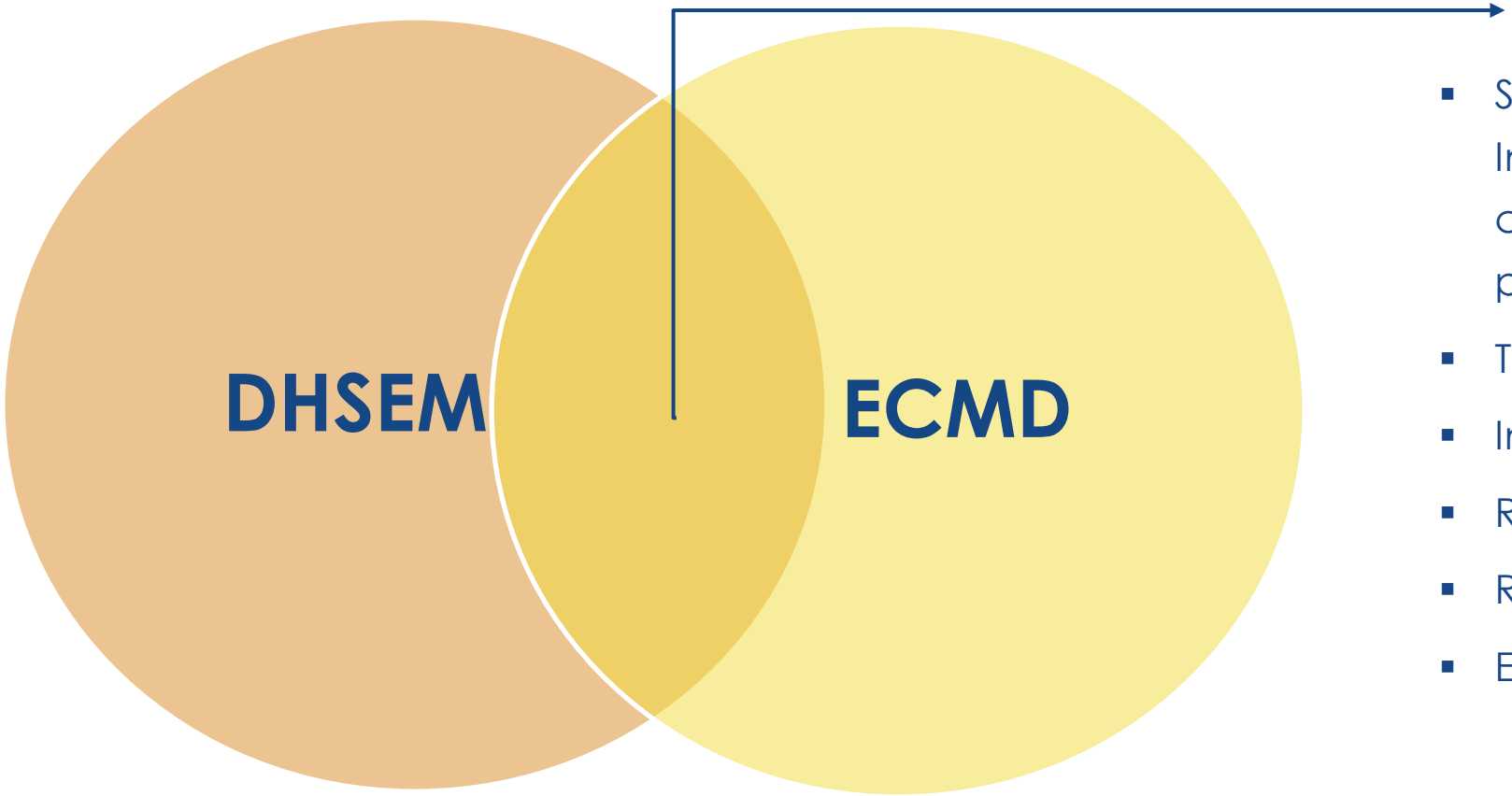
Shared Attributes of Homeland Security/Emergency Management and State Energy Security Plans



Shared Attributes

- Stakeholder Identification and Integration (cross-government collaboration and public-private partnership)
- Threats and Hazards Identification
- Integrated Preparedness Plan
- Risk Assessment
- Risk Mitigation Approach
- Emergency Operations Plan

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Purpose of Emergency Response Working Group Meetings

- Elicit **statewide and regional energy security priorities, planning and response capabilities, and mutual assistance in cybersecurity and physical security**.
- Dialogue will support development of an **Integrated Preparedness Plan** reflecting energy priorities for emergency management coordinators across the state and region, coordination between federal, state, local, and tribal partners, wider public-private integration, and next steps toward bolstering energy disruption planning and response.

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Electricity Sector Threats and Vulnerabilities

- The U.S. Department of Energy has identified the following leading threats to New Mexico's electricity sector that have also been informed by stakeholder perspectives shared during the Energy Security Validation Workshops in February:
  - **Natural Hazards (wildfires, winter storms and freezes, extreme heat, flash floods)**
  - **Physical Threats**
  - **Cybersecurity Threats**
- The U.S. Department of Energy has identified **human-caused events and asset health as the greatest vulnerabilities** to New Mexico's electricity sector.
- **Supply chain issues** also represent a vulnerability. There is a current critical shortage of transformers, and the need represents all utilities nationwide.

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Natural Gas and Propane Sector Threats and Vulnerabilities

- The U.S. Department of Energy has identified the following leading threats to New Mexico's natural gas sector that have also been informed by stakeholder perspectives shared during the Energy Security Validation Workshops in February :
  - **Corrosion** (when transported by transmission pipelines) (fourth leading cause nationwide)
  - **Outside Forces** (when transported by distribution pipelines) (leading cause nationwide)
  - **Asset Age**
  - **Cybersecurity Attacks**
  - **Severe Weather**
- 69% of New Mexico's 6,440-mile transmission system and 42% of New Mexico's 14,347-mile distribution system **were constructed prior to 1970 or in an unknown year.**
- Top events affecting natural gas transmission include: **1) Corrosion ($3.4M per year); 2) Outside Force ($156K per year); and Equipment Failure ($73K per year).**
- Top events affecting natural gas distribution include: **1) Outside Force ($1.02M per year); 2) Material/Weld Failure ($299K per year); and Incorrect Operation ($44M per year).**

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Petroleum Sector Threats and Vulnerabilities

- The U.S. Department of Energy has identified the following leading threats to New Mexico's petroleum sector that have also been informed by stakeholder perspectives shared during the Energy Security Validation Workshops in February:
  - **Outside Forces** when transported by truck (second leading cause nationwide)
  - **Materials Failures** when transported by rail (fifth leading cause nationwide)
  - **Equipment Failures** when transported by crude oil pipeline (eighth leading cause nationwide)
  - **Corrosion** when transported by product pipelines (second leading cause nationwide)
  - **Disruptions in Other States Impacting Supply**
  - **Cybersecurity Attacks**
  - **Severe Weather**
- 45% of New Mexico's petroleum pipeline systems were **constructed prior to 1970 or in an unknown year**.
- New Mexico has two petroleum refineries, and the leading causes of disruptions include:
  - **General Outages, Repairs, Closures** (third leading cause nationwide)
  - **Loss of Containment or Flaring** (leading cause nationwide)
  - **Maintenance** (second leading cause nationwide)

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Natural Hazards

The U.S. Department of Energy identifies the following **natural hazards** as causing the greatest overall property damage in New Mexico between 2009 – 2019:

- **Winter Storms and Extreme Cold** (21 events costing $39 million)
- **Wildfire** (five events costing $7 million)
- **Flood** (33 events costing $6 million)
- **Thunderstorm and Lightning** (113 events costing $6 million)
- **Tornado** (9 events costing $1 million)

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Stakeholder Feedback: Threats

The threats identified represent data available by federal and state agencies as well as stakeholder perspectives provided during the State Energy Security Validation Workshops in February:

1) **As the New Mexico State Energy Office proceeds with development of an Integrated Preparedness Plan to be incorporated into the updated State Energy Security Plan, do you agree with the priority threats identified?**
2) **Are there additional considerations for threats that should be taken?**

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- Federal Energy Regulatory Commission (FERC)
- North American Electric Reliability Corporation (NERC)
- Office of Electricity (OE)
- Office of Energy Efficiency and Renewable Energy (EERE)
- Cybersecurity, Energy Security, and Emergency Response (CESER)
- Grid Deployment Office (GDO)
- Office of State and Community Energy Programs (SCEP)

- Pipeline and Hazardous Materials Safety Administration (PHMSA)

- Federal Emergency Management Agency (FEMA)
- Cybersecurity and Infrastructure Security Agency (CISA)

- Federal Bureau of Investigation (FBI)

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PRC

New Mexico Energy, Minerals, and Natural Resources Department (EMNRD) Energy Conservation and Management Division (ECMD)

- EMNRD ECMD is delegated to serve as the **New Mexico State Energy Office**:
  - **Monitors energy sectors** across the state.
  - Implements **energy conservation measures** promulgated by federal and state acts.
  - Promotes and implements energy security measures.
  - Maintains and continually updates the **New Mexico State Energy Security Plan** (SESP).
    - Currently developing an updated SESP for 2023.
    - Two exercises will inform the 2023 SESP including a Cascading Energy Disruption Tabletop Exercise (November 2022) and a Regional Energy Security Tabletop Exercise (May 2023).
  - Serves as the **primary agency for coordinating communications during an energy emergency** per ESF #12 which is the Energy Annex of the New Mexico All-Hazards Emergency Operations Plan. The Energy Emergency Assurance Coordinator (EEAC) Team has been created to fulfill this role.

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New Mexico Public Regulation Commission (PRC)

- The PRC **regulates utilities** to ensure **fair and reasonable rates**, and to **assure reasonable and adequate services** to the public as provided by law.
- The **PRC Pipeline Safety Bureau** is responsible for ensuring compliance with federal regulations established by the Pipeline and Hazardous Materials Safety Administration (PHMSA) and oversees the safe transportation of energy and other hazardous materials by intrastate pipeline.
  - Periodic inspections review **integrity management plans** to confirm compliance procedures are identified and followed. Observation of field operations are a component.
  - Reviews **operator emergency operations plans** and receives **real-time updates on reportable incidents and accidents**.
  - Partnership with the **811call center which serves as a communication hub and location coordinating service for all companies and individuals planning ground-disturbing operations**. Operators required to call 811 two days in advance of any construction to indicate where ground-disturbing operations will occur.

New Mexico Department of Homeland Security and Public Safety (DHSEM)

- DHSEM oversees a comprehensive and coordinated program of mitigating hazards, preparing for emergencies, preventing attacks, and recovering from disasters regardless of cause.
  - **Emergency management work coordinated around: prevention, protection, mitigation, response, and recovery**.
- **Aids localities** when capabilities are overwhelmed and serves as the **conduit for federal assistance**.
- Oversees the **New Mexico All Source Intelligence Center (Fusion Center)** that forecasts and identifies emerging or evolving threats or trends, collects, evaluates, analyzes, and disseminates information, and provides situational awareness and warnings.
  - Expertise in man-made events, specifically cyber, and coordinates with federal agencies to determine the extent of events and recommended actions.
  - **Resource to energy providers** for system vulnerability analyses as preventive measures to cyber events.

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NM Department of Homeland Security and Emergency Management (DHSEM) (Cont.)

- Facilitates and distributes tens of millions of dollars in **federal grants** to New Mexico communities annually, including **mitigation funding**.
- Delivers robust schedule of in-person and **virtual training programs** and facilitates **exercises** to support emergency preparedness.
- Facilitates **state-to-state mutual assistance** during governor-declared states of emergency.

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Energy Emergency Assurance Coordinating (EEAC) Team

- The **Energy Emergency Assurance Coordinator (EEAC) Team** is the primary agency of responsibility during an energy emergency per, ESF 12.
  - Includes representatives from **EMNRD ECMD, PRC, and DHSEM**.
- The EEAC Program is a cooperative effort between US DOE's Office of Cybersecurity, Energy Security, and Emergency Response (CESER) and the states.
- EEAC Team representatives are **points of contact** with energy infrastructure owners, utility providers, DHSEM, DOE, FEMA and others concerning state efforts with energy security, energy emergency preparedness, energy conservation and energy efficiency efforts, and facilitating exercises on energy emergencies in concert with DHSEM.

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EEAC Team Pre-Emergency Roles and Responsibilities

ECMD

- Conduct and lead periodic meetings with EEAC team representatives.
- Analyze energy sectors for vulnerabilities and risks.
- Identify system interdependencies and potential cascading failure points for use during an event.
- Identify new equipment or capabilities required to prevent and respond to new or emerging threats and hazards, or to improve the ability to address existing threats.
- Develop recommended energy conservation, reduction, and alternative measures for implementation to mitigate potential events.
- Develop and maintain NM SESP.
- Monitor energy sectors for potential disruption and notification to governor's office and EOC of a potential event.

PRC

- Coordinate with utilities to preplan for energy disruptions and recommend energy system preventive actions to address risks and vulnerabilities.
- Point of contact with energy sector owners, providers, and other agencies concerning state efforts with energy security, energy cybersecurity, energy conservation, energy efficiency and emergency response preparedness.
- Maintain current key points of contact for energy emergencies for inclusion in the SESP.
- Maintain trained agency personnel to support energy emergency response and support teams.
- Inform governor's office and EOC of potential energy events and recommend implementation of preemptive actions in the event of an energy disruption.

DHSEM

- Prepare and facilitate emergency training exercises for an energy event.
- Maintain trained agency personnel to support energy emergency response and support teams.

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EEAC Team Emergency Roles and Responsibilities

ECMD

- Monitor event conditions and response efforts and coordinate information and assistance with other state support agencies and federal partners to better understand and respond to the event situation.
- Coordinate EEAC team efforts during an energy event to integrate information, provide situational awareness, review event for potential cascading failures and critical infrastructure interdependencies, assist with prioritization of service impacts if needed, and collaborate on recommendations for support and solutions during response and recovery operations.
- Provide trained staffing for support to the EOC ESF #12 desk and field operations, when required.

PRC

- Primary POC with EOC during an energy event providing information, support, assessment, and recommendations on actions to respond and recover from an emergency.
- Interface with representatives from utilities and other energy providers to acquire operational information to better understand resource and support needs to properly respond to and recover from the event.
- Provide trained staffing for support to the EOC ESF #12 desk and field operations, when required.
- Provide information on outages and estimates on time to restore utilities to EOC and ESF #12 desk and field operations.

DHSEM

- Provide trained agency personnel to support EOC and ESF #12 desk and field operations, as needed.

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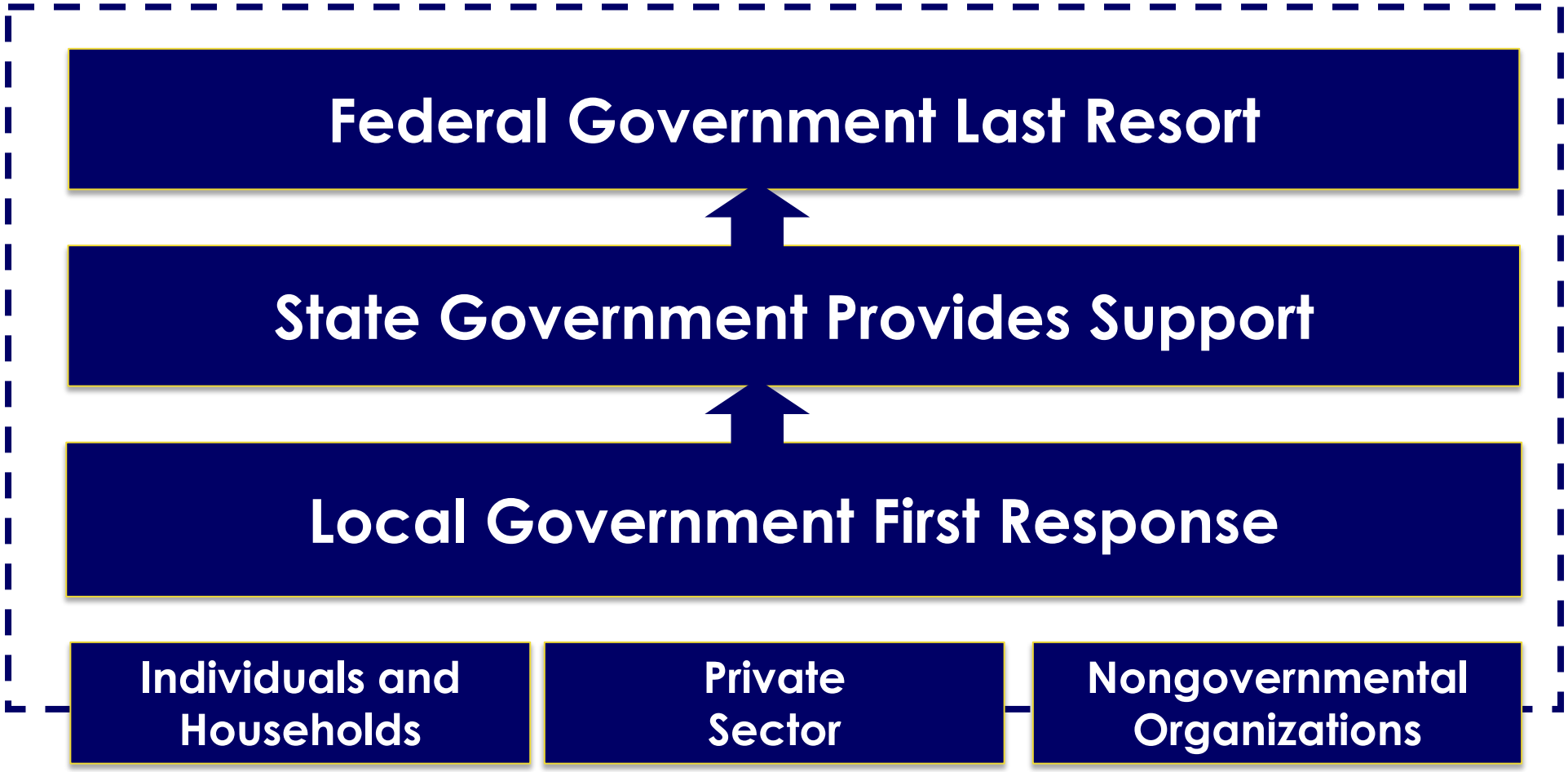
National Response Framework



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Energy Emergency Event Escalation

Monitor Energy Sectors for Disruption
- EEAC Team
- Fusion Center
- Energy Providers

Energy Disruption Occurs
- Fusion Center notifies EEAC Team of event.
- EEAC Team gathers information and confers.
- EOC notifies Chain of Command.
- Energy Provider notifies PRC.

Energy Event Activates Local/Regional EM:
- EEAC Team monitors and informs EOC of changing conditions.
- Fusion Center/Legal Counsel support EEAC Team as needed.
- EOC monitors and informs EEAC Team of change in conditions.

Energy Event Requests State EOC Support:
- EOC assesses impacts and provides response to local/regional/tribal EM.
- EOC requests activation from Chain of Command.
- EOC notifies EEAC Team ad activates ESF 12.
- EEAC Team provides support to EOC.

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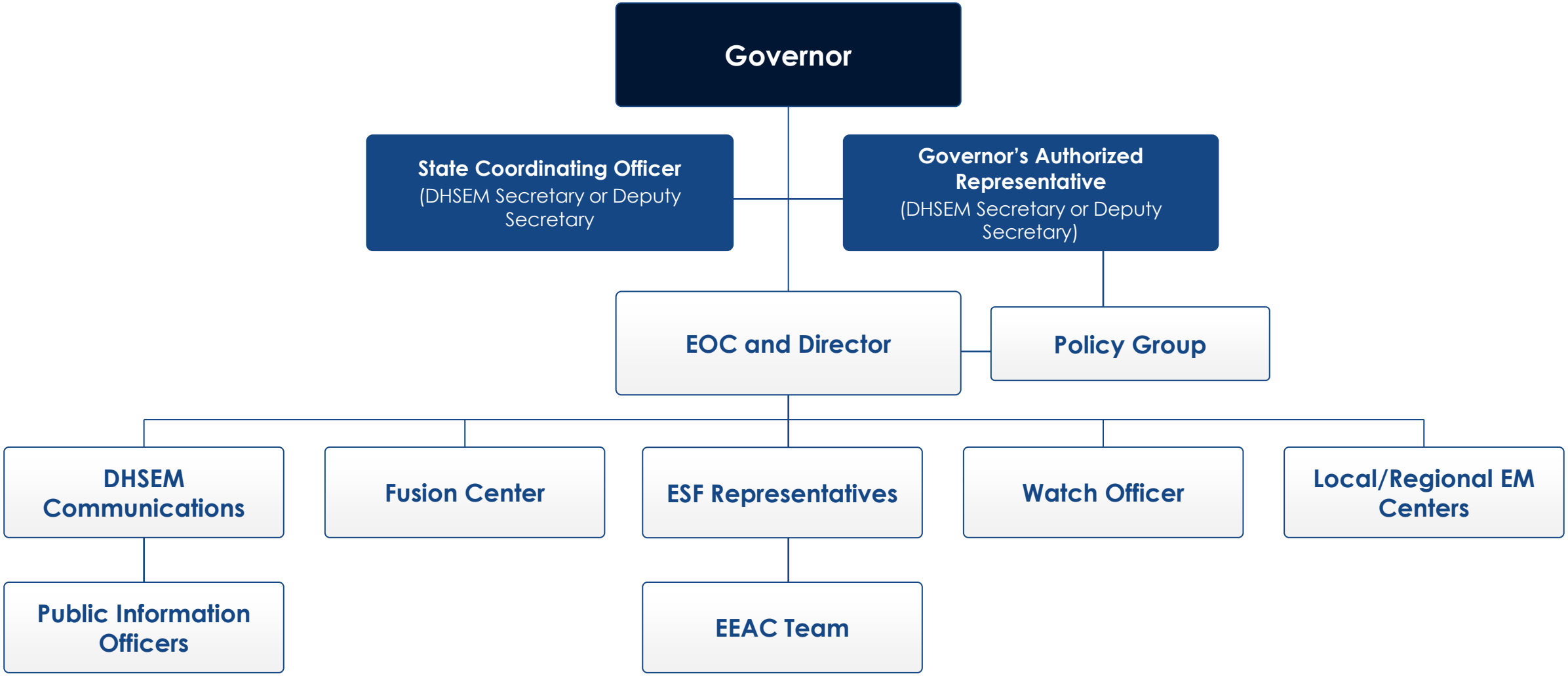
Incident Reporting Structure for Energy Emergency Event



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Stakeholder Feedback: Energy Roles and Responsibilities

1) What does energy preparedness look like at the local level? Is energy integrated into local preparedness plans and do you exercise them?
2) What pieces of energy preparedness and response processes address energy security well and are there areas that could be improved upon?
3) Do available trainings adequately prepare localities for energy emergencies, particularly related to the primary threats to New Mexico's energy sector (natural hazards, cybersecurity, physical security, asset health, and supply chain)?
4) What additional preparedness activities and resources are needed?
5) What are examples of public-private partnership related to energy preparedness and mitigation?

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Energy Sector Roles and Processes

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Objective of Upcoming Emergency Response Working Group Meeting

- A second Emergency Response Working Group Meeting will be hosted virtually on **Tuesday, April 18, from 10:00 – 11:30 am MST**.
- Prior to the second Working Group Meeting, the Project Team will use stakeholder feedback to begin developing an Integrated Preparedness Plan.
- The intention of the second Emergency Response Working Group Meeting is to:
  - Validate findings included in the Integrated Preparedness Plan.
  - Address themes from today's Working Group Meeting that may require additional dialogue.

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Key Stakeholder Dates

April 18, 2023:	**Emergency Response Working Group Meeting**
May 1-2, 2023:	**Regional Energy Security Exercise** (please email Jacqueline Waite if interested)
June 26, 27, 2023:	**SESP Stakeholder Presentations** (government and other stakeholders identified by EMNRD ECMD)

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Questions

Project Team

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