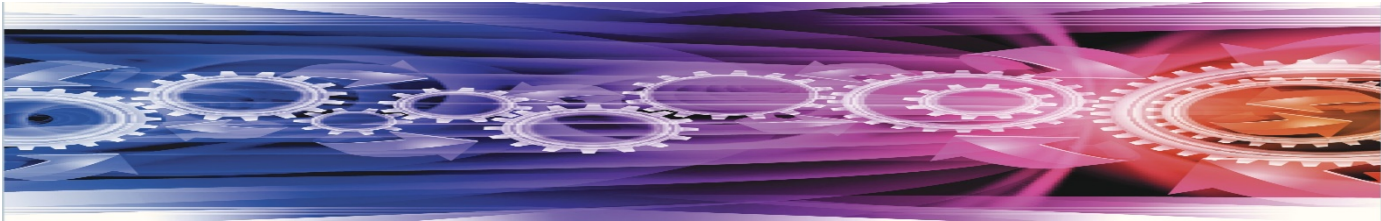




NARUC

128th Annual Meeting



Committee on Critical Infrastructure

Update on Governors' Efforts on Energy Assurance and Resilience

Presentation to NARUC Committee on Critical Infrastructure

November 14, 2016
Palm Springs, CA

Sue Gander
Division Director
Environment, Energy & Transportation Division
National Governors Association Center for Best Practices

Outline

- ▶ About NGA
- ▶ NGA Focus
 - ▶ Promoting Energy Assurance Collaboration and Coordination
 - ▶ Enhancing Planning and Preparation around “Black Sky” Events
 - ▶ Improving Cybersecurity
 - ▶ Assessing and Supporting Infrastructure Resilience
- ▶ Recommendations for Governors
 - ▶ Develop, update, and exercise robust energy assurance plans
 - ▶ Improve and institutionalize communication and coordination
 - ▶ Implement strategies that enhance resilience

About NGA

Office of Government Relations

- Collective voice of governors in DC
- Builds consensus on Federal issues
- National policy focus

Center for Best Practices

- **Comparative policy shop for state level efforts**
- **Provides governors and staff technical assistance and policy guidance**

Office of Management Consulting and Training

- Internal management consultants
- Training and advice for governors, chiefs of staff, legal counsels, policy directors schedulers, spouses



Governors

Governors Working to Protect Critical Infrastructure - Examples

- ▶ **Oregon** Governor Brown and **Washington** Governor Inslee have supported their states in a joint planning effort associated with a potential earthquake of magnitude 9.0 or greater within the next 100 years in the Cascadia Subduction Zone.
- ▶ Following disasters, **Colorado** Governor Hickenlooper established the Colorado Resiliency and Recovery Office and **New Jersey** Governor Christie and **New York** Governor Cuomo each established offices focused on rebuilding and recovery.
- ▶ Governors of Colorado, Oregon and **Virginia** Governor McAuliffe have designated Chief Resiliency Officers to better coordinate efforts.
- ▶ **Wisconsin** Governor Walker continued the work of the state's Homeland Security Council to gather state agencies for monthly planning sessions.
- ▶ Washington Governor Inslee supported developing a cybersecurity team within the state's National Guard force (similar to **Delaware, Maryland, Missouri, Rhode Island, Utah**).
- ▶ **Connecticut** Governor Malloy's Comprehensive Energy Strategy called for recommendations for how to address cyber and critical infrastructure.
- ▶ Energy plans released by **New Mexico** Governor Martinez and Utah Governor Herbert include efforts to evaluate the use of energy storage.

Promoting Energy Assurance Collaboration and Coordination

- ▶ NGA is signatory to DOE MOU on Energy Emergency Assurance Coordinator (EEAC) program (along with DOE, NASEO, NARUC, NEMA). Participated (with NARUC, NCSL, and NASEO) in 2015 DOE Risk Assessment initiative. Host FEMA at Seminars for New Governors to discuss emergency response.
- ▶ *Improving State Coordination for Energy Assurance Planning and Response*
 - ▶ Six states (HI, MD, MI, NC, OK, RI) participated in 3-day learning lab in New Jersey to discuss coordination and communication among state agencies and between state and local, federal, and private players based on lessons learned from Sandy. Each state team (energy and homeland security/emergency management advisors) developed list of action items to implement upon return
 - ▶ Paper released October 2016 highlighting lessons learned and actions taken, including:
 - ▶ **Creating more robust energy assurance plans**, including making sure plans address full range of threats and consequences and are aligned with other emergency response plans
 - ▶ **Enhancing communication and information sharing**, including institutionalizing communications between state agencies and improving information sharing among a variety of public and private partners
 - ▶ States also had a strong interest in role of **microgrids** in supporting resilience efforts

Promoting Energy Assurance Collaboration and Coordination (continued)

- ▶ *Initiative for Resilience in Energy through Vehicles (iRev)*
 - ▶ Partnering with NASEO and IEMA to improve understanding of the role of alternate-fuel vehicles in energy assurance
 - ▶ Participated in 2 regional workshops to date and planning workshop in January 2017 for governors' advisors
- ▶ *Executive Orders for Energy Emergency Response*
 - ▶ Will be hosting experts' roundtable in 2017 to help inform guidance for governors on their executive authority during emergency events
 - key takeaway following learning lab

Enhancing Planning and Preparation around “Black Sky” Events

- ▶ Project aimed at helping governors and their staff understand specific planning, preparedness and response issues tied to a widespread and prolonged disruption to the grid, regardless of hazard.
- ▶ Convened two Experts’ Roundtables (2014-15) to gather information about the potential threats, consequences to multiple interdependent critical infrastructure sectors, and similarities and differences between these type of events and less severe power outages – included participation from NARUC staff, state PUCs, and EIS.
- ▶ Supported two state-specific retreats (WI, WA) in 2016 to share information, identify critical concerns for states, and inform paper.
 - ▶ Commission chairs were both key players in developing retreats – Chair Nowak helped lead planning team while Chairman Danner provided input into agenda and spoke on WA UTC role

Enhancing Planning and Preparation around “Black Sky” Events

- ▶ Paper released November 2016. Key recommendations:
 - ▶ Determine potential state-specific **risks and consequences**
 - ▶ Identify current **plans** and determine if they are sufficient
 - ▶ Ensure that plans consider the effects to **other infrastructure sectors**
 - ▶ Conduct **joint exercises** to enhance stakeholder preparedness
 - ▶ Define **roles and responsibilities** clearly and appropriately
 - ▶ Understand and communicate the process for **power restoration**
 - ▶ Determine capacity and limitations for **backup generation**
 - ▶ Develop a strategy for **communication**

Improving Cybersecurity



- ▶ Year-long initiative selected by NGA Chari, Virginia Gov. Terry McAuliffe, that places states at the center of finding solutions to the growing cyber threats facing the U.S., with critical infrastructure as one of several areas of focus within initiative
- ▶ Roundtable in September 2016 in VA as part of Governor's Cyber and Physical Security Summit specifically gathered input from technology and higher education community around issues and needs pertaining to cybersecurity workforce needs in critical infrastructure sectors.
- ▶ First of three summit meetings held in October 2016 with 26 states. Two additional summits (March and June 2016) will continue that discussion.
- ▶ Recommended steps for governors:
 - ▶ Work with other governors and lawmakers to **evaluate costs and benefits** of potential regulation
 - ▶ Institutionalize regular **contacts** between relevant officials and state utilities
 - ▶ Audit existing **rules and practices**
 - ▶ Focus on **resiliency**
 - ▶ Explore **public-private partnerships** between state regulators and the private sector
 - ▶ Ensure that all **stakeholders** are involved

Improving Cybersecurity

- ▶ State Roles in Enhancing the Cybersecurity of Energy Systems and Infrastructure
 - ▶ Paper released August 2014 as part of ongoing NGA state resource center on cybersecurity. Key recommendations include:
 - ▶ **Adapt** existing response, recovery, and resilience measures for natural disasters to cybersecurity
 - ▶ Set specific **roles and responsibilities** for agencies that interact with the energy sector.
 - ▶ Promote a **risk-based approach** to cybersecurity among utilities that adapts to evolving threats
 - ▶ Convene state and regional players for **planning, exercises, and information sharing**

Assessing and Supporting Infrastructure Resilience

▶ State Strategies for Advancing the Use of Energy Storage

- ▶ Paper released October 2016 outlines the potential benefits associated with greater deployment of energy storage; barriers to adoption; and state policy and regulation that support energy storage.
 - ▶ Includes recommendation for states to **incorporate storage into energy assurance and resilience efforts**.
- ▶ State efforts to date have focused on pairing storage with solar PV or backup generation at critical facilities, or as part of microgrid demonstrations and deployments

▶ State Resilience Assessment and Planning Tool

- ▶ Forthcoming NGA Center project to develop **tool for helping states perform an assessment of their overall infrastructure resilience**
- ▶ Details still to be finalized, but will likely involve the following steps:
 - ▶ **Experts Roundtable** with state, federal, and private sector involvement to gather on what elements should be included in tool and how assessment should be designed to be most useful to states
 - ▶ **Retreats** in at least 2 states to pilot use of the tool and identify areas for tool improvement
 - ▶ Development and publication of the **assessment tool** for use by all states

Recommendations for Governors

NGA has identified several recommendations that cut across focus areas:

- ▶ ***Develop, update, and exercise robust energy assurance plans.*** Plans should include all hazards (natural, man-made, cyber), account for all consequences (including with interdependent CI sectors), set clear roles and responsibilities for relevant state entities, and align with other state, federal, and utility plans.
- ▶ ***Improve and institutionalize communication and coordination.*** This should occur both within state government (between governors' offices, PUCs, SEOs, and EM/HSAs) and between state, federal, and private entities – and should occur before, during, and after an event.
- ▶ ***Implement strategies that enhance resilience.*** Strategies could include utilizing storage or microgrids to mitigate the impact of disruptions, diversifying fuels in state fleets, or creating specific state resilience offices to coordinate resources across CI sectors.

Questions?

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National Governors Association

Center for Best Practices

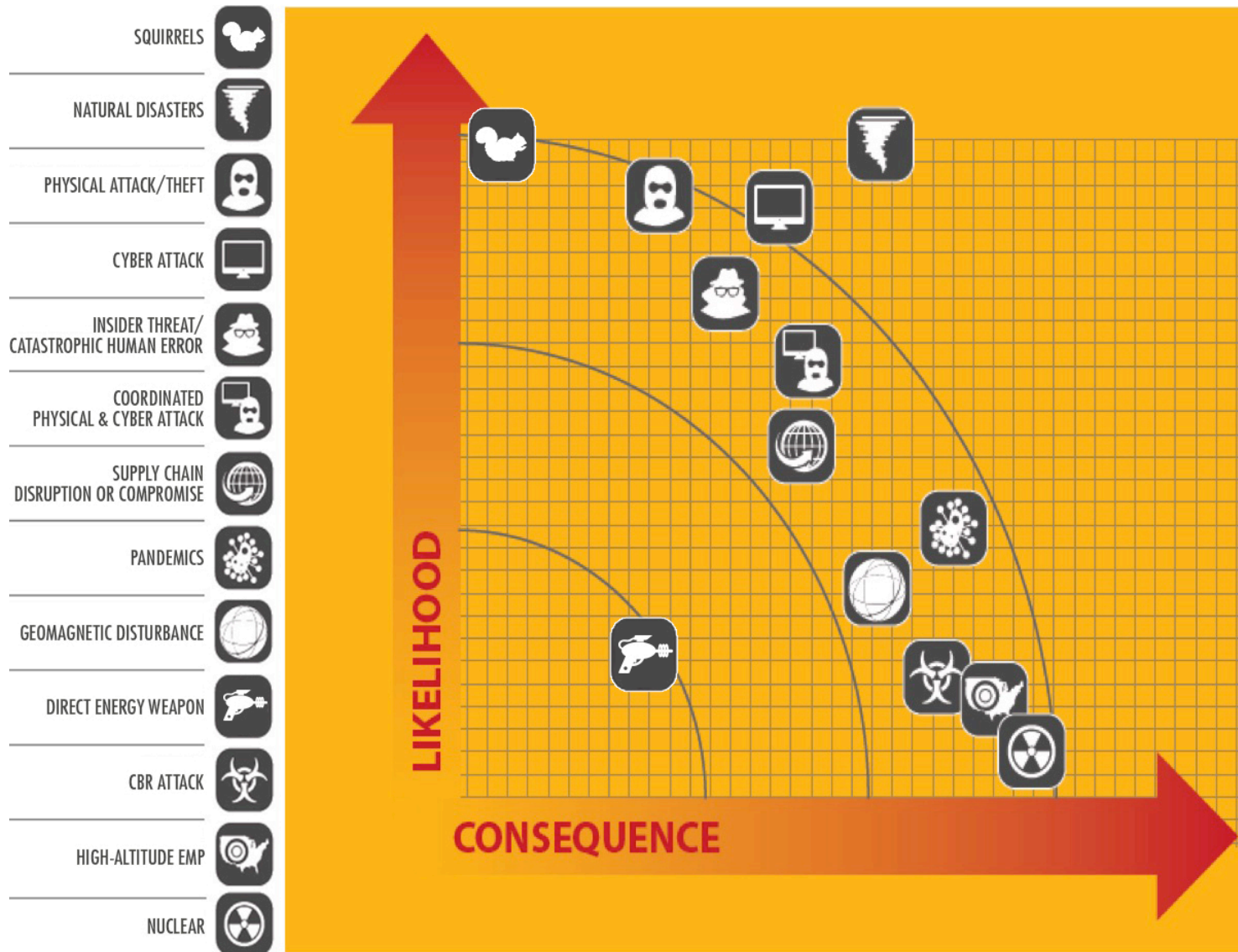
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Cybersecurity Mutual Assistance Program

David Batz, Senior Director Cyber & Infrastructure Security, Edison Electric Institute

The Threat Landscape

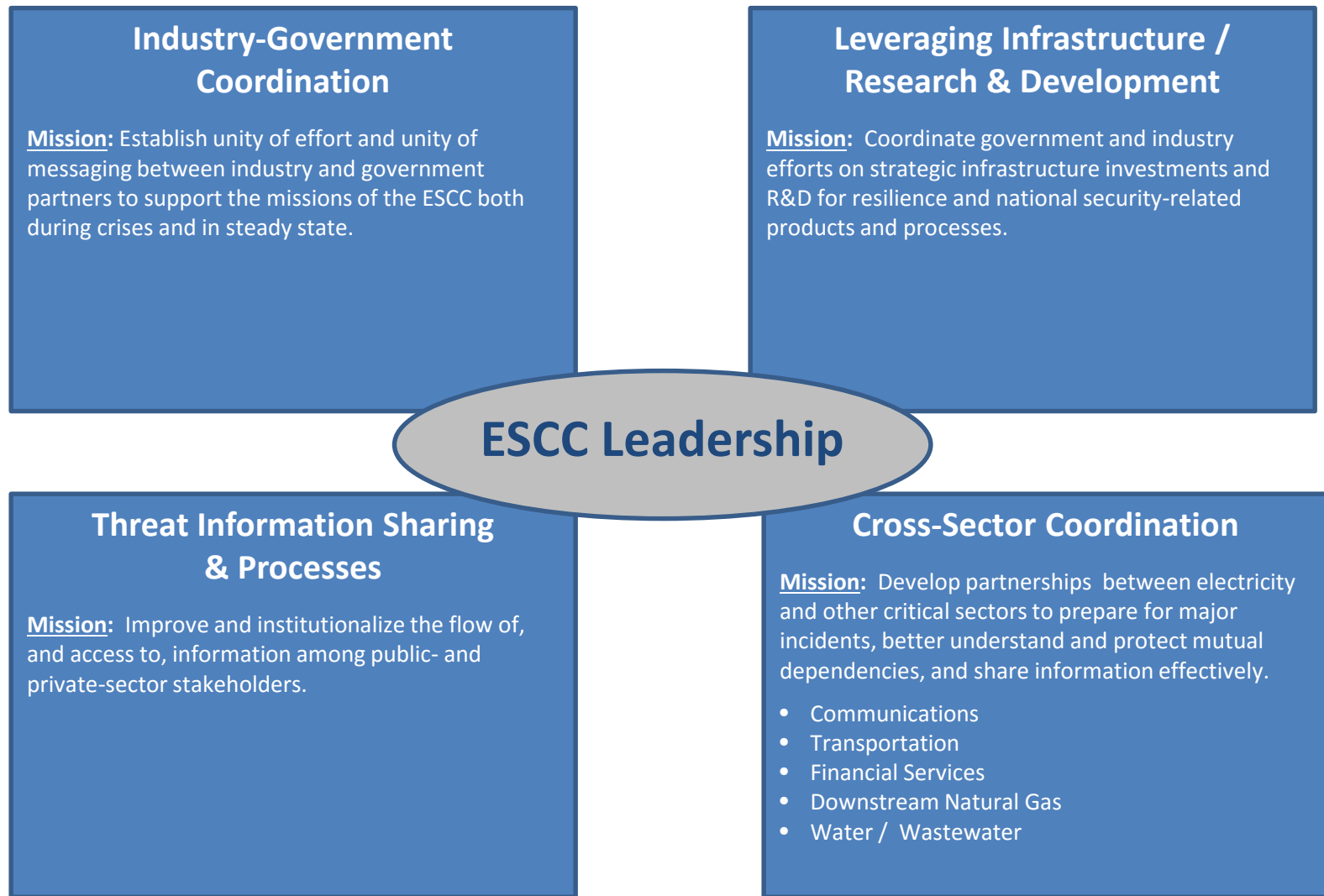


Source: The Chertoff Group

Purpose & Scope

Purpose:	The ESCC is the <u>principal liaison</u> between the electric sector and the federal government for coordinating efforts to prepare for, and respond to, national-level disasters or threats to critical infrastructure.
Scope:	The ESCC facilitates and supports <u>policy and public affairs-related activities</u> and initiatives designed to enhance the reliability and resilience of the electric grid. The ESCC is not operational.

ESCC Committee Structure and Areas of Focus



Cyber Mutual Assistance

- A New Approach
- ESCC Initiated
- Surge Capacity
- Delivery of Essential Services
- Bucket Trucks not Included
- NDA
- Costs – Subcontracting
- Legal Protections
- Voluntary



Cyber Mutual Assistance Challenges

- No Notice
- Not Geographically Bounded
- Am I Next?
- Detailed System Implementation

Cyber Mutual Assistance

Moving Forward

- Utilities (as of Early November 2016)
 - Investor Owned
 - Co-ops
 - Municipalities
 - Canadian
 - RTO/ISO

ESCC

Electricity Subsector
Coordinating Council

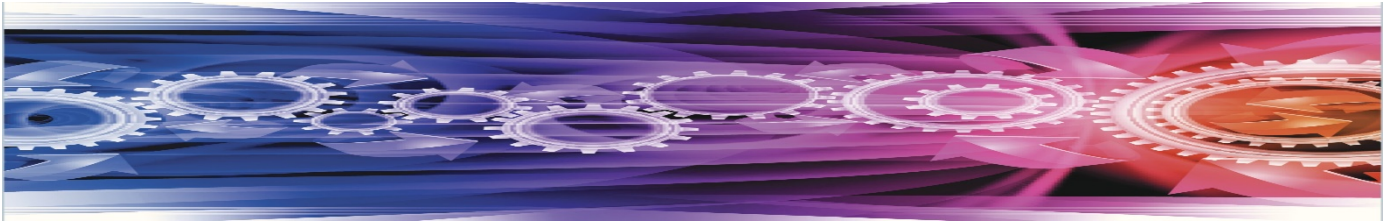
**To Join or for More information
Cyber Mutual Assistance:**

CMA@EEI.org



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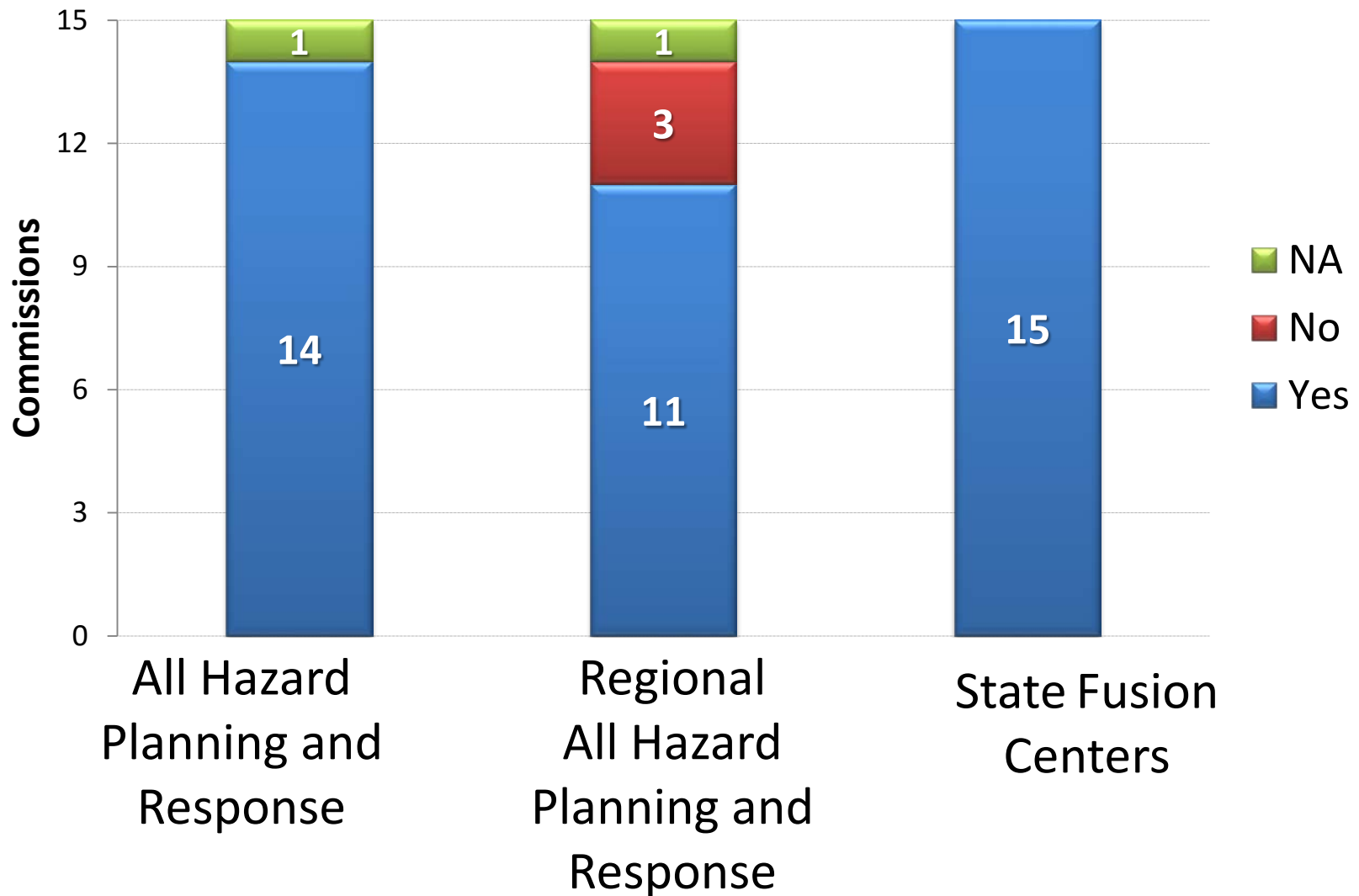
Catalog of Information on Cyber/Physical CIP Measures Taken By States

CI Survey Response Summary

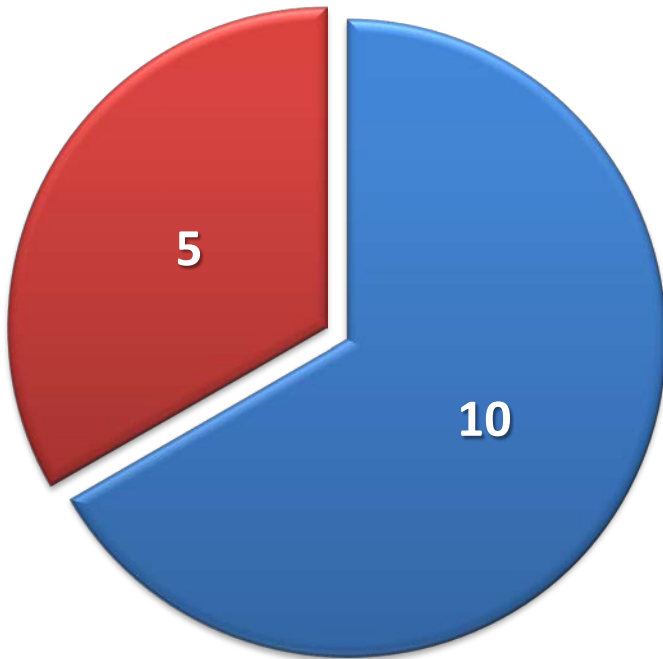
Richard Mroz
Chair

Critical Infrastructure Committee
November 13, 2016

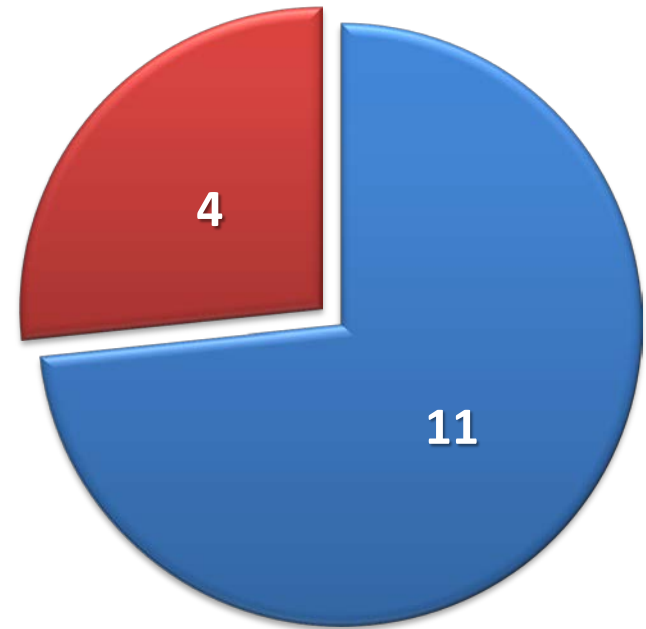
Emergency Management Frameworks



Emergency Management – Cyber



Cyber-specific
State or Regional
Emergency Management
Plan

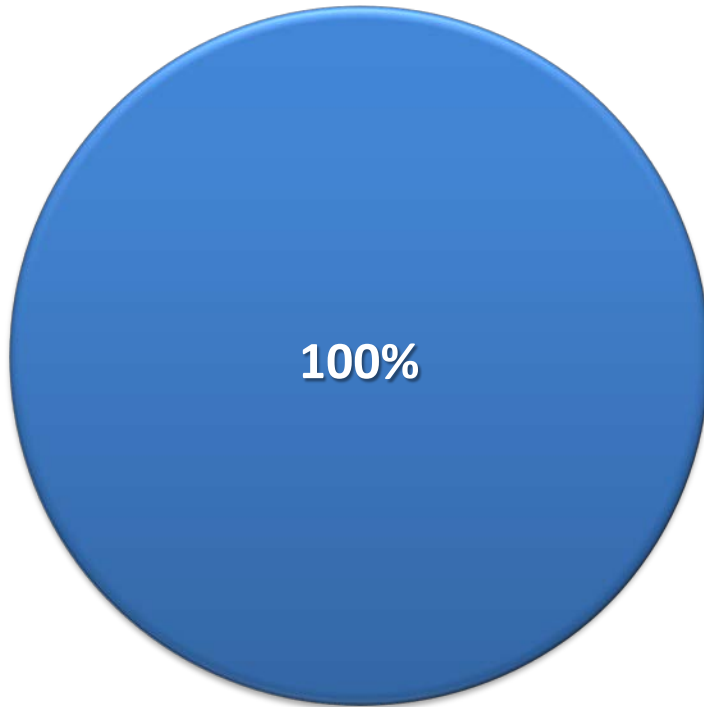


Cyber-specific
Incident Response Coordination
Plan for State Agencies

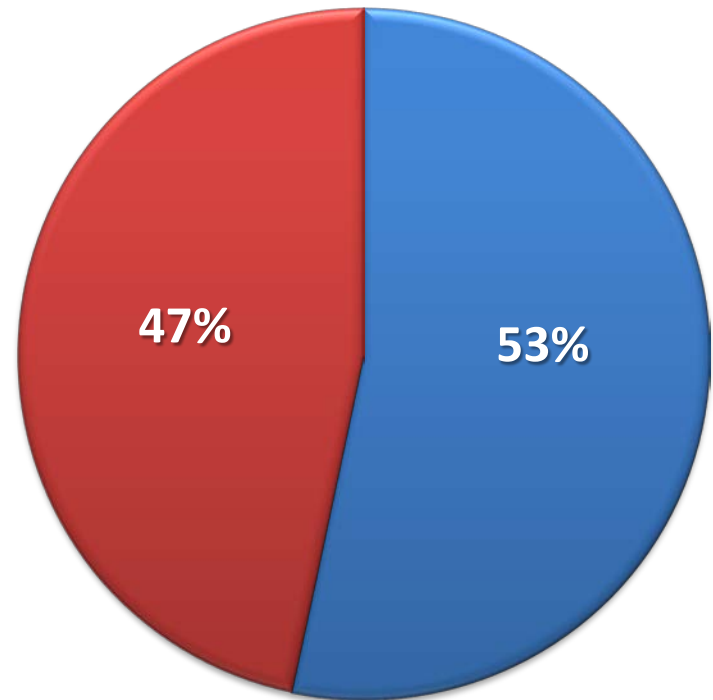
 Yes  No


Cyber Security

Engage Utilities?



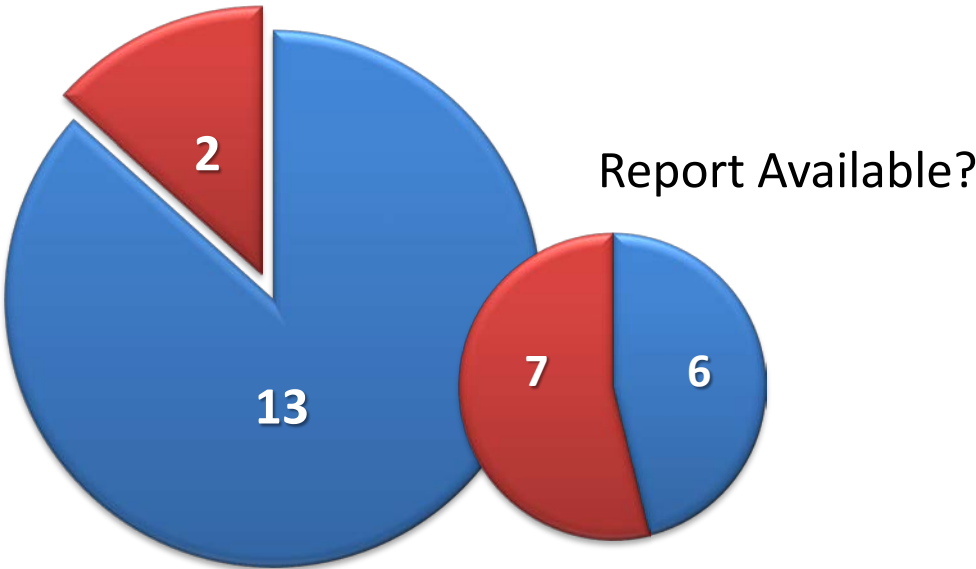
Issued Orders?



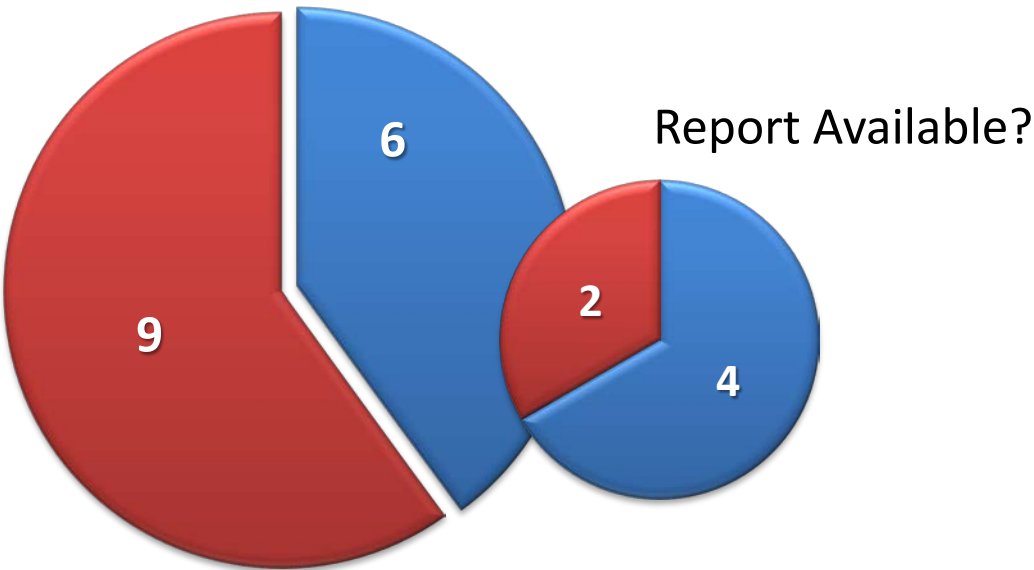
 Yes  No

Exercises

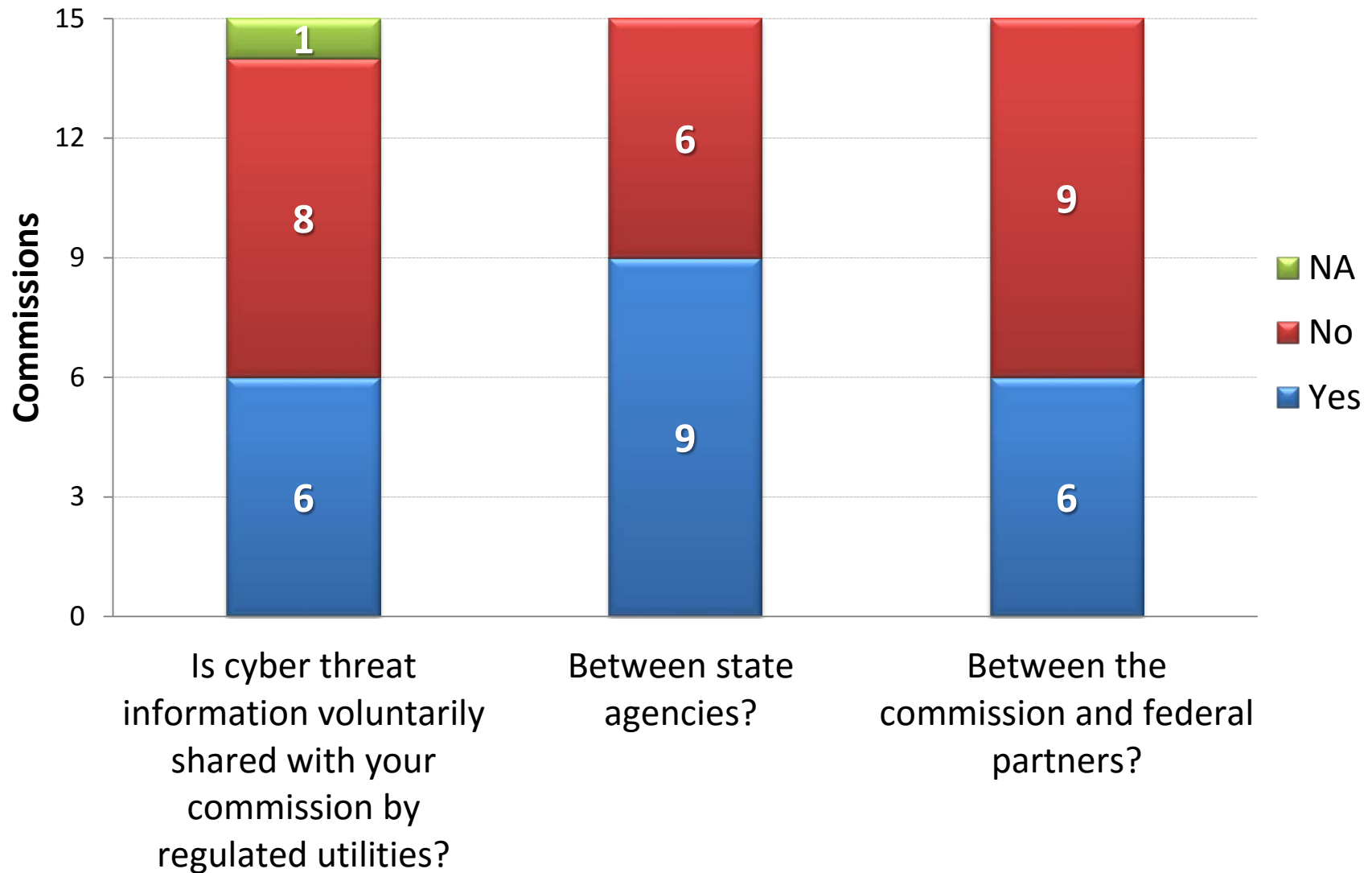
Has your state performed a tabletop or other form of exercise that involves public utilities?



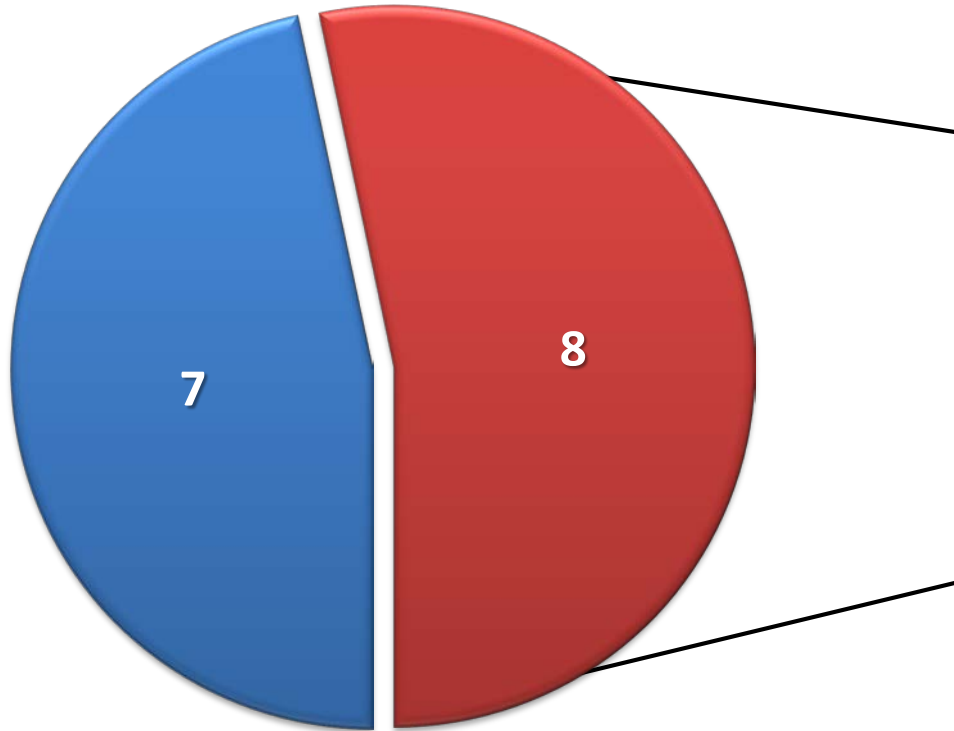
Has your state conducted an exercise based on a cyber security scenario?



Information Sharing



Security Clearances

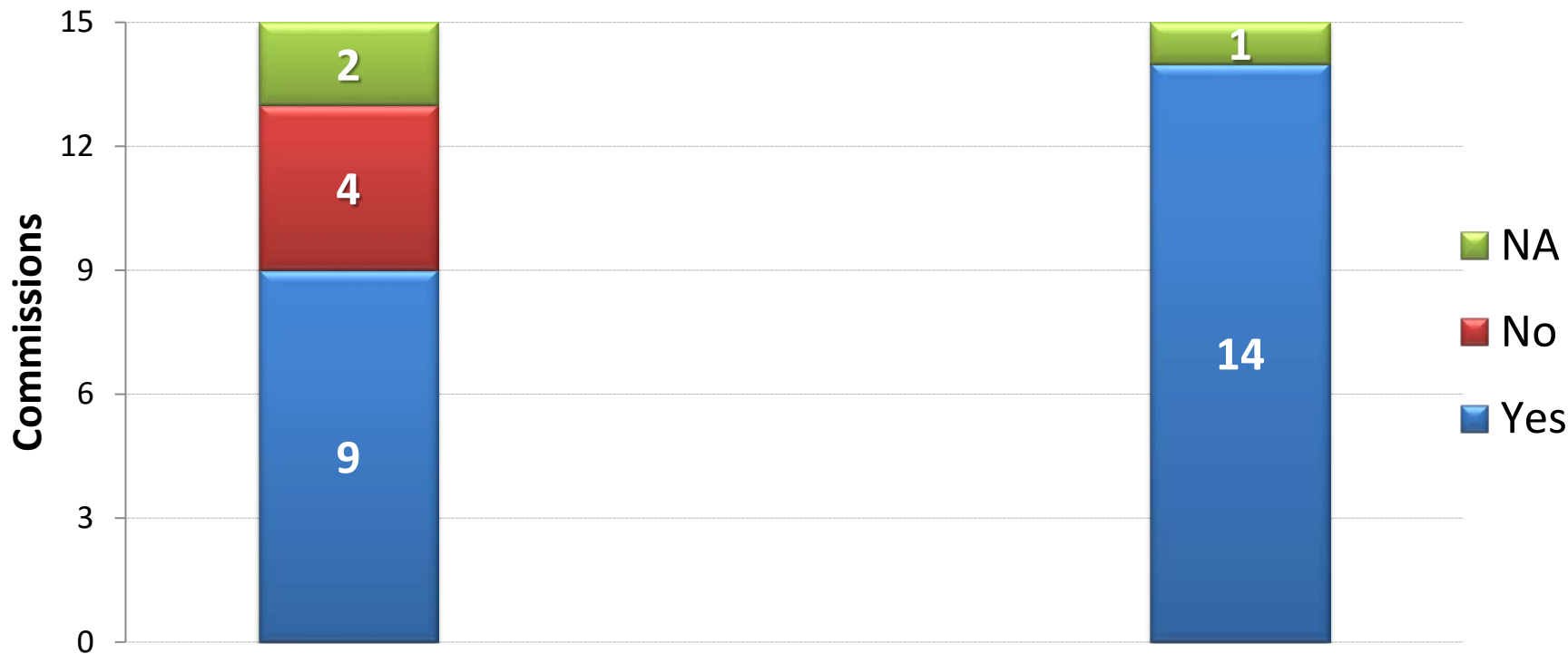


Does anyone on your commission have a security clearance?

 Yes  No



Confidentiality



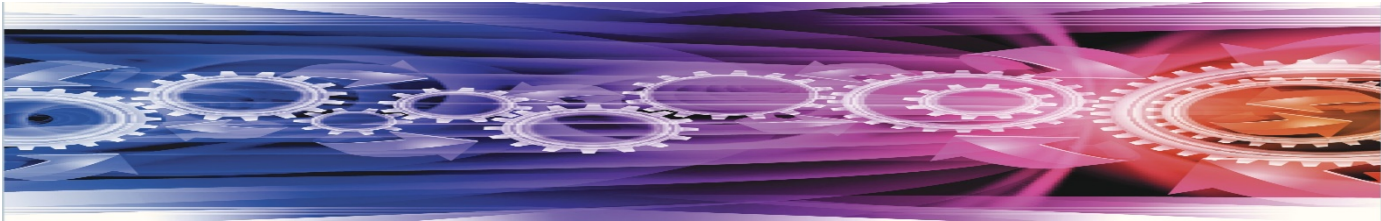
Ground rules established regarding which state officials should receive confidential or sensitive cyber information, and what steps should be taken to protect it

Authorities exist that allow the commission to deem certain sensitive data as confidential, i.e., "not a public record," and, thereby, protect it from public disclosure



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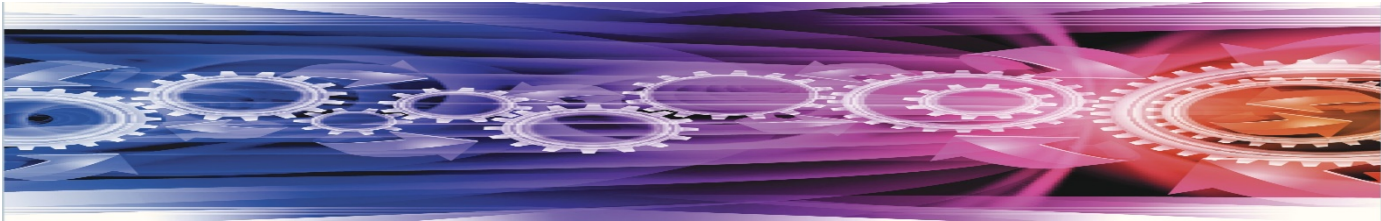


State & Industry Discussion: Costs Associated with Physical/Cyber Upgrades



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Resolution