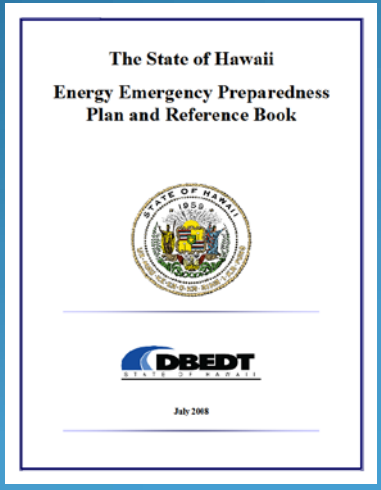
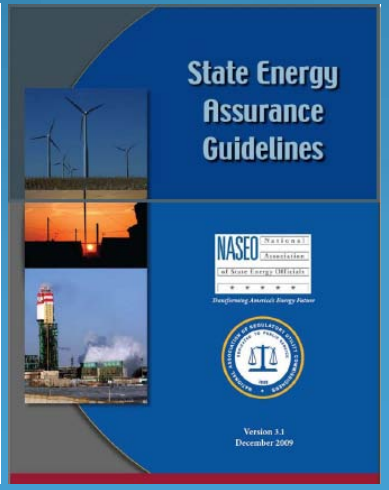
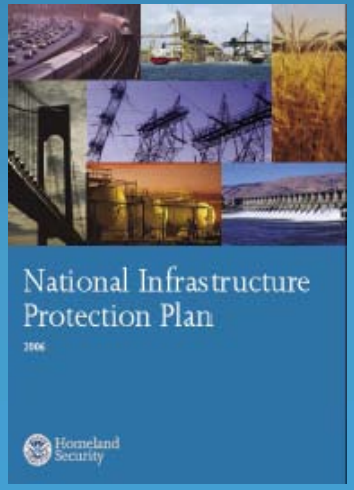
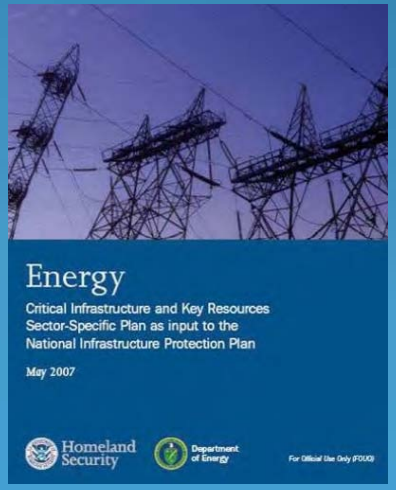
Energy Assurance Program & Plan Update

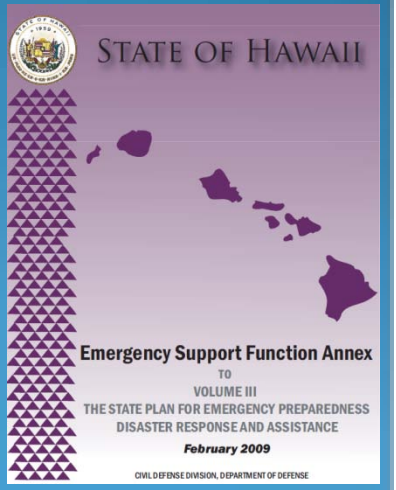
Hawaii State Energy Office









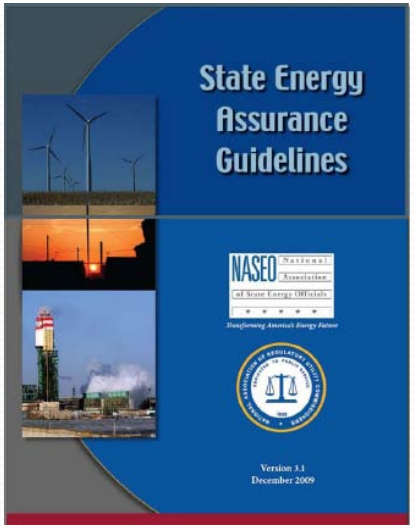


July 2011

What is Energy Assurance Planning?

Links Energy Emergency Planning with broader CIP efforts and Energy Shortage Mitigation Planning.

- All Hazards Approach
  - Sabotage / Terrorism
  - Civil Disturbances
  - Natural Disasters
  - Declared Shortage Events
  - Systemic Threats
  - Public Health Emergencies
  - Cyber Attacks



Hawaii EA Grant:

Enhancing State Government Energy Assurance Capabilities and Planning for Smart Grid Resiliency DE-FOA-000091 / DE-OE0000110

- Awarded: August 12, 2009 / Project End Date: Aug. 12, 2012
- Grant Value: $318,196
- Deliverables:
  - Quarterly ARRA and Grant Reporting
  - Project Management Plan
  - Workforce Development Plan
  - Energy Supply Disruption Tracking System
  - Energy Assurance Plan
  - Energy Assurance Exercises (Interstate & Intrastate)

Hawaii EA Contract: RFP-10-006-SID

- Awarded to SAIC / R.W. Beck: December 15, 2010
- Project End Date: August 12, 2012
- Project Value: $229,072
- Deliverables:
  - Project and Workforce Development Plans
  - Hawaii Energy Assurance Plan
    - Appendix: Reference Book
    - Appendix: Vulnerability, Risk Assessment and Inventory of Critical Infrastructure
  - Hawaii Policies, Rules, and Procedures related to Energy Assurance
  - State Energy Exercises

EAP Initiative Objectives

- Fund jobs to enable development and implementation of effective, energy assurance and resiliency plans
- Develop in-house expertise on infrastructure interdependencies and related vulnerabilities, including areas for improvement to lessen the economic and health and safety impacts of energy disruptions, cyber security, energy supply systems, energy data analysis, and communications
- Develop process or mechanism for tracking the duration, response, and restoration and recovery time of energy supply disruption events
- Develop new, or refine existing plans, and incorporate these plans into broader emergency management and homeland security activities

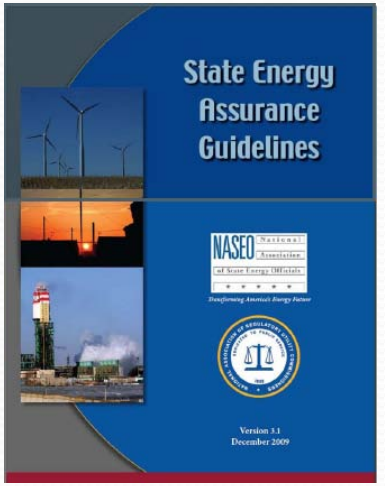
EAP Initiative Objectives (con't.)

- Revise current policies, procedures, and practices to reflect the Energy Assurance Plans
- Train appropriate personnel on energy infrastructure and supply systems and the content and execution of energy assurance plans
- Conduct energy emergency exercises to evaluate the effectiveness of the energy assurance plans
- Build organizational relationships and identify responsibilities within Local and State government, the private sector, and the region that support public/private partnerships
- Integrate of new energy portfolios (renewables, biofuels, etc.) and new applications, such as Smart Grid technology, into energy assurance and emergency preparedness plans

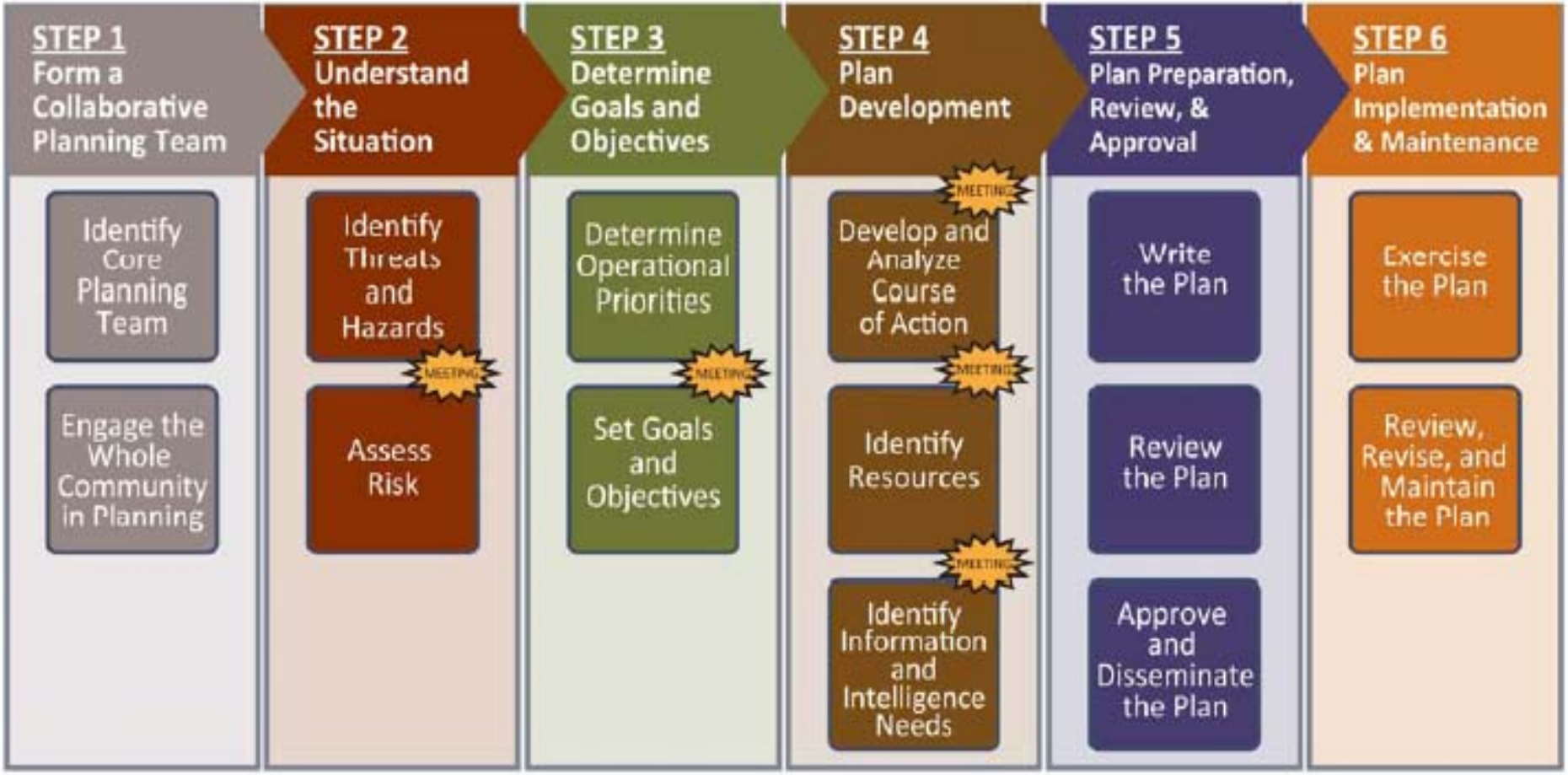
Energy Assurance Planning Framework

- Executive Summary
- Introduction and purpose.
- State's Energy Used and Expenditures.
- Past state energy shortages, and the response and future risks
- State agencies roles and responsibilities
- Methods for assessing the consequences and severity of energy emergencies and tracking the rate of recovery.
- Emergency Communication Procedure
- Management Decision Process
- Legal authorities
- Public Information Program

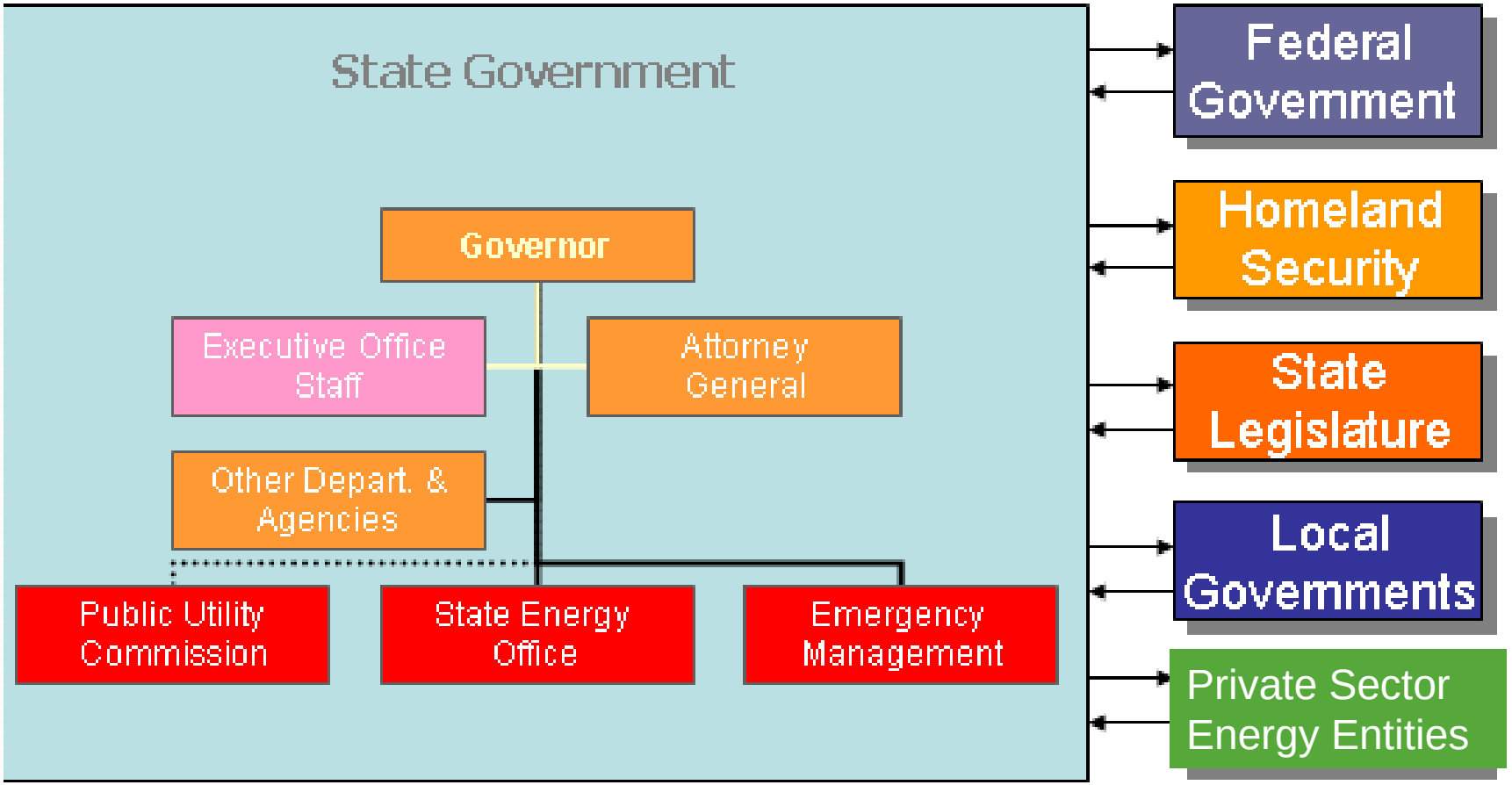
http://naseo.org/eaguidelines/framework/



Steps in the Planning Process

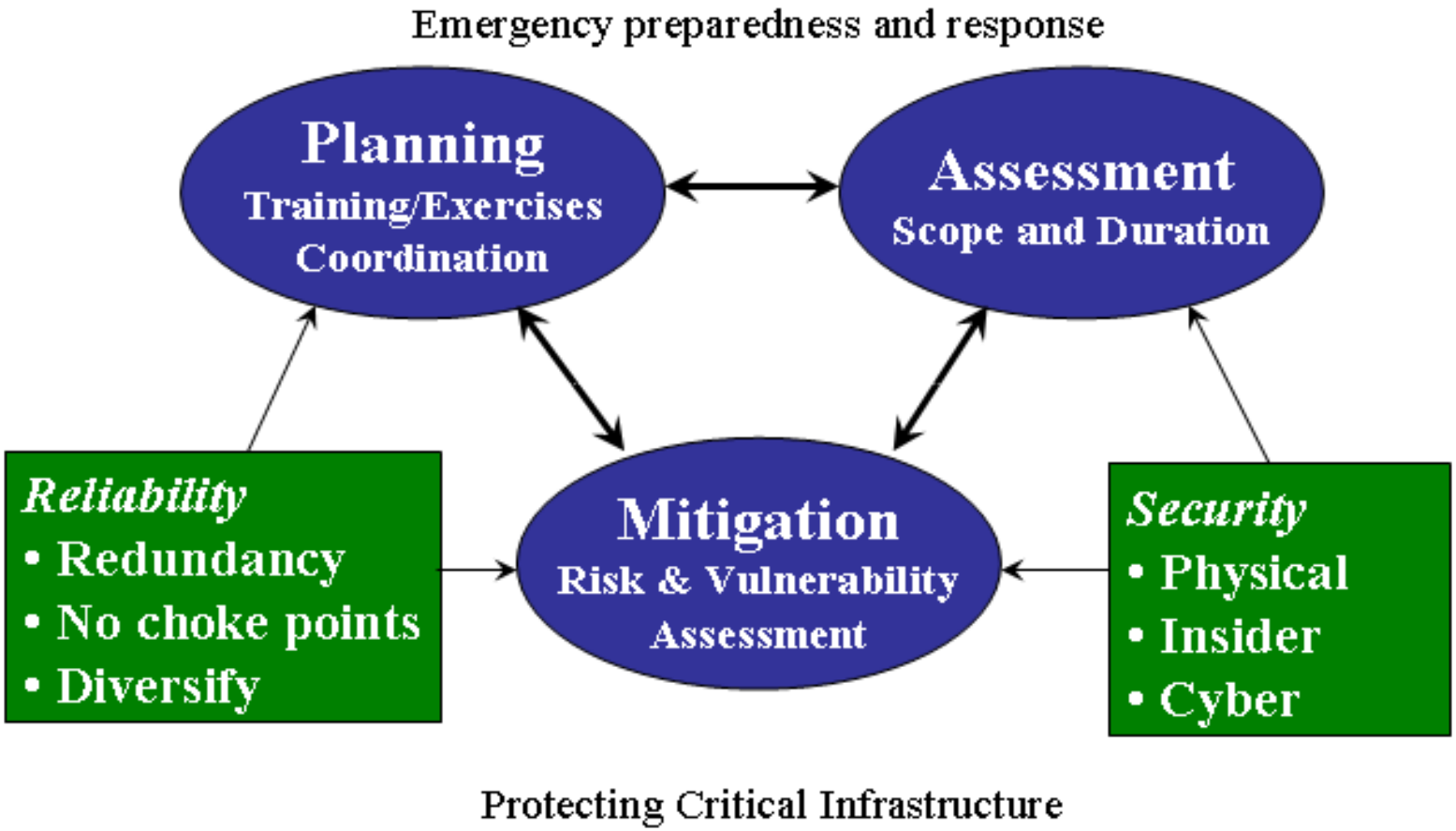


Key Stakeholders Involved in State Energy Assurance Planning



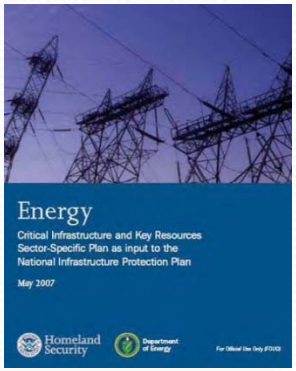
Source: *NARUC Technical Assistance Briefs: A Primer on Energy Assurance for Public Utilities Commissions*. April, 2005.

Relationship between Energy Emergency Preparedness and Responses while Protecting Critical Energy Infrastructure and Enhancing Resiliency



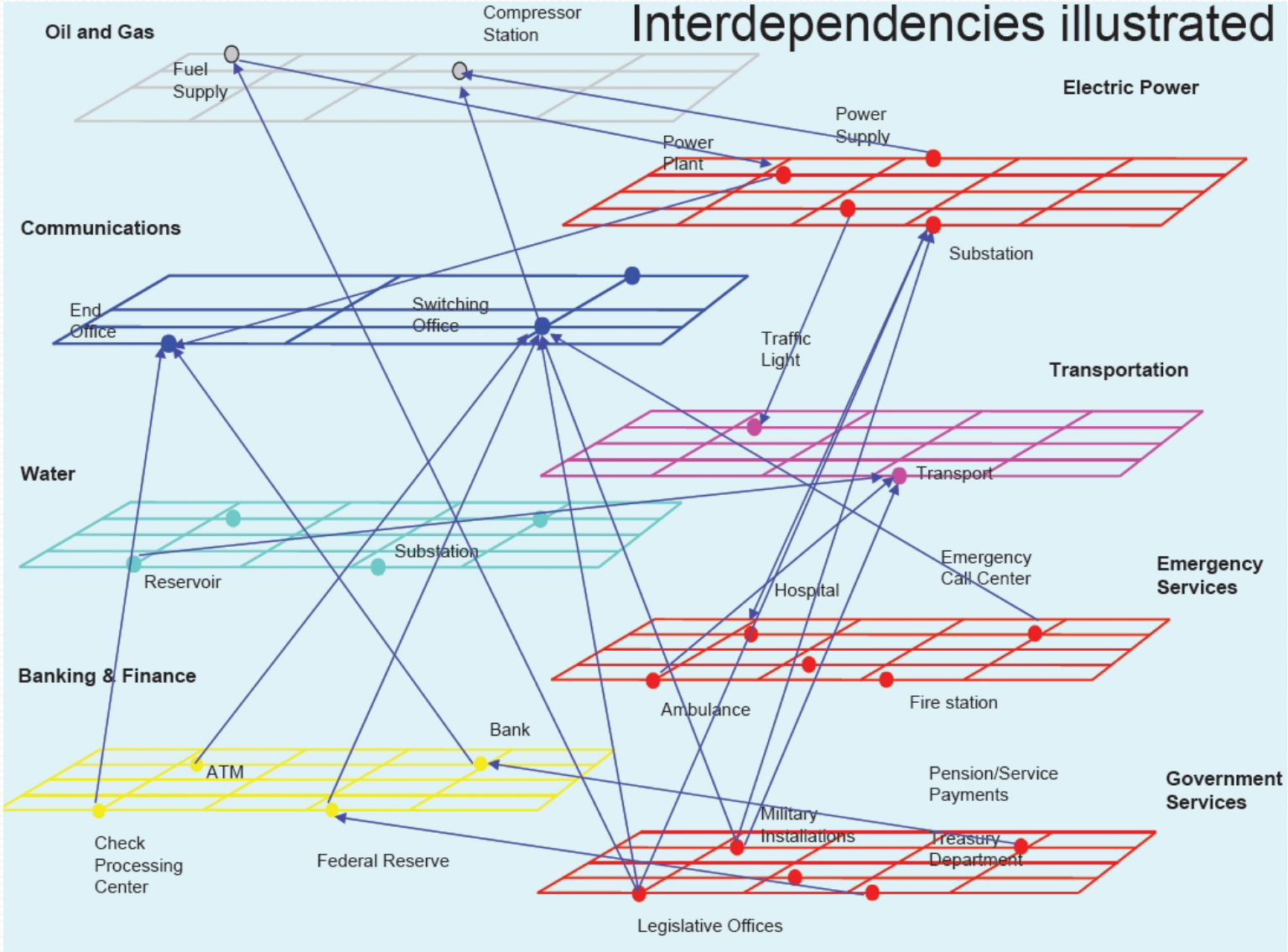
State Plans for Critical Energy Infrastructure

- States plans for reducing risk and building resiliency.
- What are the state agencies roles and responsibilities?
- Describe and prioritize critical state energy infrastructures and key assets.
- Assess risk, vulnerabilities, criticality and the nature of the threat/hazards
- Identify risk reductions and resiliency measures, some examples are:
  - Diversification of energy sources and integration of renewable resources (wind, solar geothermal, other.
  - Increased efficiency of systems.
  - Development of Smart Grid.
  - Cyber Security
- Policies and Procedures for handling sensitive information
- Describe public private partnership as envisioned in the National Infrastructure Protection Plan and Energy Sector Specific plan?



A collaborative effort between the Federal, State, Local Government and Energy Sector Participants

Supply Chain & Interdependencies



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Smart Grid & Cyber Security

- NASEO and EPRI are developing a paper on "Smart Grid & Cyber Security for Energy Assurance"
- **Smart Grid**
  - Describe smart grid implementation in the state.
  - Future planned smart grid Investments and projects.
  - List regulatory actions, State policies and programs to support Smart Grid implementation.
  - Other Smart Grid projects and funding, private or public.
  - Evaluate Smart Grid benefits that contribute to a more resilient, secure and reliable power supply.
- **Cyber Security**
  - Building awareness and understanding of cyber security in states agencies and then in the energy sector.
  - Identifying future standards and guidelines under development and how may they affect plans for smart grid deployment?
  - Considering and address the human elements of cyber security

Energy Sector-Specific Plan
Vision Statement

Energy Sector Vision: *The energy sector envisions a robust, resilient energy infrastructure in which continuity of business and services are maintained through secure and reliable information sharing, effective risk management programs, coordinated response capabilities, and trusted relationships between public and private security partners at all levels of industry and government.*

SID-ARRA FUNDED PROJECTS

Title of Project:	**Enhancing State Government Energy Assurance Capabilities and Planning for Smart Grid Resiliency**
Island:	Statewide
Audience:	Energy Producers, Suppliers, Energy Providers and Emergency Response Entities
Energy Sector:	Energy Assurance, Energy Emergency Preparedness, and Critical Energy Infrastructure Protection
Website:	Information on the Request For Proposal go to: http://governmentnotices.state.hi.us and click State & County Procurement Notices. Information on the "Enhancing State Government Energy Assurance Capabilities and Planning For Smart Grid Resiliency" Grant, visit: http://www.naseo.org/foa/energyassurance/index.html.
Description:	Since the goal of the American Recovery and Reinvestment Act of 2009 (ARRA), in part, is to: "facilitate recovery from disruptions to the energy supply" and "enhanced reliability and quicker repair of outages," this project is meant to help Hawaii have well-developed, standardized energy assurance and resiliency plans that can be relied upon during energy emergencies and supply disruptions. Hawaii will address energy supply disruption risks and vulnerabilities in its energy emergency response plans to lessen the devastating impact that such incidents could have on the economy and the health and safety of its citizens. In support of the Hawai'i Clean Energy Initiative's (HCEI) energy security goals, the project is focused on refining existing plans to integrate new energy portfolios (renewables, biofuels, etc) and new applications, such as Smart Grid technology, into energy assurance and energy emergency preparedness plans. The purpose of this project is to: 1) strengthen and expand State government energy assurance planning and resiliency efforts, 2) create jobs, and 3) build in-house State energy assurance expertise. The project also focuses on building regional energy assurance capability to allow Hawaii to better coordinate and communicate statewide and with other states on energy security, reliability, and emergency response issues.
Benefits:	Hawai'i is the most oil-dependent and geographically isolated state in the nation. Creating up-to-date energy assurance plans that incorporate new energy portfolios will allow Hawaii to be more informed and better prepared when responding to disasters, energy emergencies, and supply disruptions. This will also be a major step toward greater energy assurance and security for the State, which is vital to achieving Hawai'i Clean Energy Initiative's ambitious clean energy goals. Specific project-related benefits include creating in-house expertise at the State level on energy assurance planning and resiliency to better identify energy events and assess supply disruptions, which will ultimately reduce the response, restoration and recovery time from energy supply disruption events.
Quantify Results/ Significance of Project	Adequate supplies of energy are essential to the health, welfare, and safety of the people of Hawaii. Any severe disruption in energy supplies for use within the State would cause grave hardship, pose a threat to the security and economic well-being of the people of the State, and have significant adverse effects upon public confidence and order, and the effective conservation of energy. Building energy assurance expertise and capability within Hawaii will help relevant energy stakeholders and

emergency management agencies and staff become more aware of how energy systems work and their importance to other sectors. This will help the State quantify the severity and identify the potential duration of an energy supply disruption or emergency. Enhancing energy assurance capabilities will aid improvement in disaster and energy shortage preparedness, response, recovery, and mitigation measures and activities, thereby reducing the suffering and hardship of such an event.

The results of the funding provided for the project will be assessed according to the following performance metrics:

- Number of energy assurance plans created or substantially revised.
- Number of jobs created within State government agencies for energy assurance planning and response.
- Number of energy assurance training sessions, workshops and exercises conducted.
- Number of people trained in energy assurance related topics.
- Number of Hawaii energy stakeholders who both understand and exhibit a willingness to support State efforts to manage and mitigate energy shortages as part of their Energy Assurance and emergency management responsibilities.
- Number of Hawaii State Energy Office personnel who understand the Hawaii Energy Assurance Plan and can relate its contents to their everyday, overall energy planning and management activities.
- Number of State, County, Federal, and private sector officials who are familiar with State level Emergency Support Function #12 (Energy).

No. of Jobs: To be determined through execution of project.

Source of Funding and Cost: American Recovery and Reinvestment Act (ARRA) stimulus monies are funding this $318,196.00 DOE grant. Professional and technical services have been contracted for $229,072.00.

Total Revenues: N/A

Organization(s) involved (please list all companies) R.W. Beck, Inc. is the Contractor. SAIC Energy, Environment & Infrastructure, LLC is the Subcontractor.

Timing: Grant period of performance is from August 14, 2009 through August 14, 2012.

Photos N/A

Source/Contact Estrella Seese, Acting Administrator, Hawaii State Energy Office
Email: ESeese@dbedt.hawaii.gov.