NARUC
National Association of Regulatory Utility Commissioners

Defense Energy Resilience Engagement Framework for Utility Regulators

Prepared for the National Association of Regulatory Utility Commissioners
By Converge Strategies, LLC
September 2024

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Disclaimer

Purpose

The purpose of this document is to provide public utility commissions with a framework to facilitate engagement with in-state military stakeholders and support consideration of defense-related utility applications. The framework also includes questions that would benefit the U.S. Department of Defense's (DoD) stakeholders as they prepare for future engagements and regulatory proceedings with commissions and utilities.

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Introduction

Grid Resilience and National Defense

Power outages represent a significant threat to DoD's missions and to national security (Stockton & Paczkowski, 2019). DoD's globally networked force relies heavily on domestic U.S. installations to complete its missions. DoD's domestic installations are almost completely dependent on the commercial electricity grid.

The U.S. electricity grid faces increased threats from extreme weather and homegrown violent extremism, at the same time that the nature of war is evolving (Morehouse, 2022). Although the U.S. has historically been insulated from physical strikes, the 2022 National Defense Strategy states that foreign adversaries could attempt to hinder U.S. military preparation and response by undermining our domestic critical infrastructure through cyber attack (DoD, 2022). The 2024 Annual Threat Assessment of the U.S. Intelligence Community reiterated this concern by stating that the People's Republic of China - if it believed a major conflict were imminent - would consider "aggressive cyber operations against U.S. critical infrastructure…designed to deter U.S. military action by impeding U.S. decision making, including societal panic and interfering with the deployment of U.S. forces (ODNI, 2024)."

DoD has a strong focus on energy resilience at the installation level. DoD is required by law to attain a minimum level of 99.9% uptime for the energy loads supporting critical missions by 2030 (10 U.S.C. § 2920). DoD issued additional guidance that facilities supporting certain missions (e.g., airfields, headquarters facilities, and radar) have 99.999% availability, whereas others such as missile fields and cyber operations facilities attain 99.9999% availability (USD(A&S), 2021) (see Section 1.4). These requirements translate into allowable downtimes of just seconds per year. Each of the military departments have also issued policies requiring that critical missions operate independently of the grid for up to 14 days (U.S. Department of Navy, 2020; U.S. Secretary of the Air Force, 2020; U.S. Secretary of the Army, 2020). The Army has also set a target requiring each installation to install a microgrid by 2035 (ASA(IE&E), 2023).

Although microgrids and back-up power systems are critically important, energy resilience for DoD installations requires a parallel focus on grid resilience. DoD depends on its personnel, many of whom live outside the base. DoD installations also rely heavily on water, wastewater, telecommunications, and natural gas service from civilian partners, which in turn relies on electricity. Regional electricity outages can impact military readiness even if the power at the base stays on. Grid outages can also last longer than DoD's power outage planning horizons. In 2021, for example, Hurricane Ida caused power outages for nearly three weeks - well past DoD's 14-day target.

In recognition of the grid's role in national defense, Congress amended the Federal Power Act to include a focus on defense critical electric infrastructure (DCEI). DCEI includes civilian electric infrastructure that provides power to critical defense facilities. The U.S. Department of Energy (DOE) is responsible for identifying critical defense facilities and engaging with utilities to strengthen the DCEI that serves them. DOE and DoD have signed a memorandum of understanding focusing on DCEI that envisions an expanded utility engagement for both departments (ASD(S) & DOE/OE, 2020). The memorandum states that the departments will "collaborate with Utility providers to provide input on Integrated Resource Plans (IRPs), future generation and other infrastructure siting, rates, and the prioritization of certain generation and transmission queues." In addition to the federal focus on DCEI, the utility industry is also collaborating with the military on grid resilience. The Edison Electric Institute, which represents investor-owned utilities, signed a memorandum of understanding with the Army to help secure the grid assets that support defense energy resilience (EEI, 2022). The emerging focus on defense energy resilience sheds light on the evolving relationship between the DoD and its utility partners, which in turn has implications for state utility regulatory commissions (referred to hereafter as public utility commissions, PUCs, or commissions).

Why this Framework?

The National Association of Regulatory Utility Commissioners (NARUC), through a program funded by the Department of Energy, supports PUC engagement with military and national security stakeholders through publications, webinars, convenings (NARUC, 2023), and a resource guide on military engagement.

As described in NARUC's 2021 publication, Regulatory Considerations for Utility Investments in Defense Energy Resilience, regulators are increasingly being asked to consider ratepayer investments in infrastructure related to national defense because of DCEI and similar policy initiatives (Rickerson, 2021). This trend creates a range of issues that regulators are attempting to navigate, such as:

- **Rate recovery.** Should DoD, other federal agencies, ratepayers, or a combination of these be responsible for supporting defense energy resilience investments?
- **Ratepayer benefits.** What types of ratepayer "co-benefits" can be derived from defense energy resilience projects, and how can we quantify these co-benefits?
- **Secure communications.** How can regulators investigate and consider defense energy resilience investments while preserving the security of sensitive national security information?
- **Cybersecurity.** Can cybersecurity investments create clearer mutual benefit for utility ratepayers and defense energy resilience than investments in physical infrastructure?

One of the primary issues identified in NARUC's 2021 paper relates to DoD engagement. NARUC published a short companion report in 2022 that provides a high-level overview of how DoD is organized around energy issues (NARUC, 2022). Most military installations' primary point of contact with the electricity system is with their utility - and not with commissions. Similarly, regulators do not regularly communicate directly with military installations. The closest that many utility regulators get to DoD engagement is to review utility filings that propose ratepayer investments in defense-related infrastructure. Commissions have expressed an interest in understanding DoD's presence in their states to better inform their decision making related to defense energy resilience. DoD offices have likewise expressed interest in understanding the utility regulatory process as they evaluate pathways to achieve their resilience objectives. The purpose of this document is to provide public utility commissions with a Defense Energy Resilience Engagement Framework ("Framework") to facilitate engagement with in-state military stakeholders and support consideration of defense-related utility applications. The Framework also includes questions that would benefit DoD stakeholders as they prepare for future regulatory proceedings or engagement with commissions and utilities.

How Can this Framework be Used?

This Framework was created in response to input gathered by NARUC and its partners ("the Project Team") over the last three years from a network of advisors and partners that includes commissioners, commission staff, DoD staff from multiple offices and military services, utilities and utility associations, national laboratory staff, and electricity sector experts. The Framework development process was not a formal effort to arrive at consensus recommendations, but rather designed to flexibly meet the needs articulated by practitioners. After developing a series of initial drafts, the Project Team convened a workshop, in partnership with a military installation, to test the usefulness of the Framework in supporting civilian-military dialogue on energy resilience (see Appendix 1). Based on the findings of the workshop, the Project Team made additional refinements to the Framework.

The Framework captures the experiences and information exchanged with the expert network and during the workshop. The Framework is intended as an information collection template and is not intended to imply a specific process for its use, including regulatory or decision-making processes. The Framework does not serve

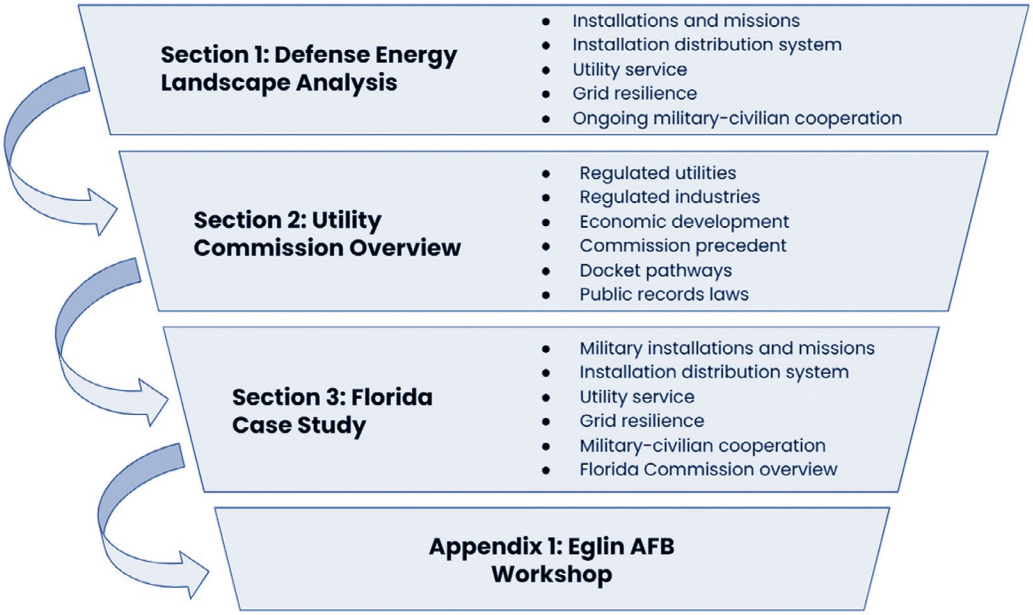
as a step-by-step planning document or a prescriptive set of recommendations. It offers considerations for effective stakeholder engagement and provides practical insights that illustrate its application.

The Framework is intended to help PUCs and other interested parties address questions related to defense energy resilience, and to inform regulatory decision making. The Framework includes four distinct modules to support regulatory proceedings or less formal engagement, that relate to defense energy resilience.

The Framework is structured as follows:

- **Defense Energy Landscape Analysis (Section 1).** This section is intended to primarily support commissioners and their staff as they engage with national defense issues. This section provides a series of questions that regulators and other stakeholders can use to assess the defense energy landscape within a state. The questions are designed to help regulators characterize the DoD's in-state presence, review their interactions with DoD stakeholders, understand the (non-ratepayer) funding that may be available, and map ongoing military-civilian coordination.
- **Utility Commission Overview (Section 2).** This section presents considerations for regulators when engaging with DoD, with a focus on the information that regulators can provide to DoD stakeholders regarding the process by which the Commission reviews specific projects for potential ratepayer investment, and the information required to support decision making.
- **Florida Defense Energy Resilience Case Study (Section 3).** Section 3 includes a case study of the Framework as applied within the State of Florida. The Project Team partnered with the Florida Public Service Commission and other stakeholders to pilot the Framework, in support of energy resilience at Eglin Air Force Base. The experience gathering the data for the case study led to refinements in Sections 1 and 2.
- **Eglin AFB Workshop (Appendix 1).** This section provides an overview of a workshop hosted by Eglin AFB and the Project Team to connect and align military and utility stakeholders, gather information, and validate the Framework. This Section includes an overview of the workshop attendees, agenda, and facilitation methods used to support dialogue. The Module serves as both a case study of workshop delivery, as well as a template that could be adapted for use in other states. The workshop was an integral part of the data gathering process summarized in Section 3.

Figure 1. Section Structure and Content of Framework



Rather than outlining a rigid process, the Framework provides guidance for collecting, examining, and documenting information that can guide commission consideration of defense energy resilience. The Framework is designed to be flexible, and individual commissions can start with the sections - or with the specific questions - that make the most sense. The Framework does not imply that commissions must address every category or assess every question within a category to effectively support their decision making.

1. Defense Energy Landscape Analysis

This Section provides a series of questions that regulators and other stakeholders can use to assess the defense energy landscape within a state. This section is intended to primarily support commissioners and their staff as they engage with national defense issues. The intent of these questions is to:

- Characterize the military presence in the state (Section 1.1) so that commissions can establish a baseline understanding of the number and location of the installations in the state, the types of missions located at installations, and any ongoing energy resilience priorities and projects.
- Identify the electricity service providers within the base and outside the base (Sections 1.2-1.3) to determine whether the entities are regulated by the commission, and to map the stakeholders that may need to be engaged about defense energy resilience.
- Investigate the relative criticality of the missions at different installations, and whether the electricity infrastructure that serves the installations is considered DCEI (Section 1.4).
- Survey ongoing military-civilian cooperation in the state (Section 1.5) to determine if there are policies that encourage, authorize, or require state entities to support DoD energy initiatives. This section also focuses on federal and state funding sources that are available to military installations, defense communities[1], and/or utilities as a supplement to, or replacement for, ratepayer investments in defense energy resilience.

1.1. Military Installations and Missions

What are the Major In-State Military Installations?

The formal definition of a military installation is broad and includes "a base, camp, post, station, yard, center, or other activity under the jurisdiction of the Secretary of a Department (10 U.S.C. § 2801)." The exact number of military installations within the U.S. is open to interpretation, since the definition can encompass properties that range from very large military bases and training ranges down to individual buildings.

Resources: Regulators can get a high-level list of in-state installations from DoD's MilitaryINSTALLATIONS website. For a more granular view, the DoD Base Structure Report lists DoD property by state and by Military Service, with a focus on sites that occupy at least 10 acres and have a property value of more than $10 million.

What are the Primary Military Units and Missions at the Installations?

Each installation has a host unit, which has jurisdiction over the installation, its property, and its on-base infrastructure. The commander of the host unit serves as the overall installation commander. The host unit provides utilities, communications, supplies, transportation, and other necessities for the entire installation. Many installations are also home to tenant units, which occupy some of the installation facilities and receive support from the host unit.[2] On larger installations, there may be dozens of tenant units. The host unit's head of engineering is responsible for the utility system on the base and is one of the primary stakeholders that interfaces with utilities that serve the base. The host unit's engineers are also responsible for understanding and supporting the energy resilience requirements of the individual tenant units and mission owners on the installation. Regulators can familiarize themselves with the host and tenant units to understand energy-related decisions at the installation.

In addition to the host and tenant units, it is useful to understand the nature of the missions for which the units are responsible. A mission is a duty assigned to an individual unit (USD(R&E), 2020). As an example, the Air

1 Defense communities are the towns, cities, counties, regions and states that serve as home to our nation's military missions, installations, and industrial partners (ADC, 2023).

2 A unit is a military group having a prescribed size and a specific combat or support role within a larger military organization. Examples include divisions, wings, and fleets. Host-tenant unit roles and responsibilities are defined in DoD Instruction 4000.19 Support Agreements (USD(A&S), 2020).

Force's 96th Test Wing is the host unit at Eglin AFB, and its missions are to test and evaluate weapons, and to support all the other missions located at Eglin AFB (see Section 3 for more about Eglin AFB) (Eglin AFB, 2022). Understanding the type of mission can help regulators recognize the required energy uptime (see Section 1.4), and the potential energy demands by mission type (see Appendix 1).

Resources: Host units and tenant units can generally be found on the website for each installation. An overview of the installation energy-related personnel and chains of command for the different services can be found in the NARUC (2022) *Defense Energy Resilience Key Resource Guide*. A more detailed example of how host and tenant units interact around energy resilience can be found in the RAND report, *Air Force Installation Energy Assurance: An Assessment Framework* (Narayanan et al., 2017).

Is the Installation Actively Pursuing Onsite Energy Resilience Initiatives?

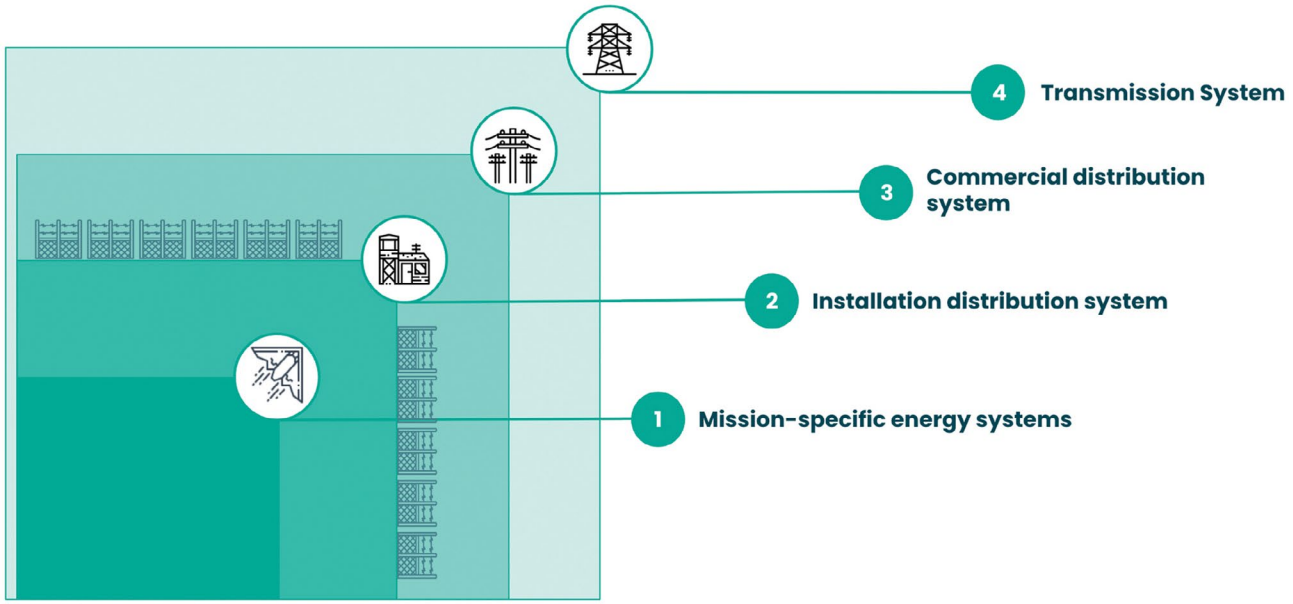
Many military installations are actively pursuing energy resilience projects inside the fence line. These can include, for example, distribution system upgrades, emergency generators, uninterruptible power supplies, and microgrids, among others. Military installations can secure funding through programs such as the DoD Energy Resilience and Conservation Investment Program (ERCIP) or the U.S. Department of Energy AFFECT program (DASD(E&ER), 2023; FEMP, 2023). DoD can also use a range of acquisition authorities to procure energy resilience using third-party financing, such as energy savings performance contracts, power purchase agreements, and enhanced use leases (Pina et al., 2021). Military installations can also participate in project accelerator programs, such as the Military Energy Resilience Catalyst (MERC) program (see Appendix 1). Installations will likely need to engage commissions directly to convey their current energy resilience priorities and ongoing projects.

1.2. Installation Electricity System

Are the Installations' Electricity Systems, or Other Utility Systems, Privatized?

The relationship between energy infrastructure located on-base and outside the installation is illustrated in **Figure 2** below. On-base and off-base systems are referred to as "inside the fence line" and "outside the fence line" systems, respectively. Historically, DoD built, owned, operated, and maintained its inside the fence line utility systems. The 1990s brought a push to privatize DoD utilities in order to reduce its support infrastructure and streamline its business practices (GAO, 1999). Since 1998, DoD has transferred ownership of

Figure 2. Installation Electricity System Relationship to Commercial Distribution and Transmission Systems



Source: Converge Strategies, LLC

more than 600 of its electricity, water, natural gas, and wastewater utilities to other entities through its utilities privatization (UP) authority (GAO, 2020). Under UP, the provider is responsible for any investments required to upgrade and maintain the on-base utilities.[3] Privatized utility systems on DoD installations are not regulated by utility commissions, but utility commissions should be aware of who the UP providers are and the roles that they play. UP providers are important stakeholders since they understand on-base infrastructure and how the on-base electric system interfaces with the utility systems "outside the fence line." Defense energy resilience projects may require coordination and engagement between the UP provider and the regulated utility (see, for example, Section 3).

Resources: DoD does not maintain a publicly accessible master list of UP contracts, and each of the Military Services has taken its own approach to privatization. The regulated utilities that serve installations are typically in contact with the UP providers.

1.3. Utility Service

Which Utilities Serve the Installations?

DoD is served by utilities of all types across each of the different electricity market structures. Investor-owned utilities serve more than 300 major military installations, while more than 125 rural electric cooperatives serve DoD installations in 41 states. Some military installations are large enough to be served by multiple utilities. Commissions' authority to regulate these utilities varies state to state (Section 2).

Resources: Regulators can gain an understanding of which utilities serve which installations through publicly available mapping resources, such as the U.S. Energy Information Administration's Energy Atlas map of electric retail service territories.

1.4. Grid Resilience

Are the Installations Critical Defense Facilities, and is the Electricity System that Serves the Base Considered Defense Critical Electric Infrastructure?

As discussed in the Introduction, Congress directed DOE to focus on DCEI, and to work with DoD to designate critical defense facilities (CDFs). It can be helpful for commissions to understand the locations of CDFs and DCEI within their states, to the extent that sensitive national security information can be protected under state public records laws (Section 3.1.4). As an alternative to gaining specific information about CDFs, commissions can review DoD's general guidance on the comparative energy uptime requirements for different mission types (see below). This guidance does not identify specific missions at specific installations, but it can be used as an initial reference point for commissions that are considering taking criticality into account as part of their decision-making process.

Resources: The CDF list was developed by DOE, DoD, and other partners. The location of specific CDFs has been communicated to the utilities that serve them. Regulators can consult with their utilities about CDF facilities. The CDF list is designated critical electric infrastructure information (CEII), so regulators could work with federal and utility partners to determine appropriate methods to access the list. In addition to the CDF designation, regulators can review DoD's guidance on the availability requirements for critical missions, by mission type (**Table 1**) (USD(A&S), 2021).

1.5. Military-Civilian Cooperation

In addition to gaining an understanding of DoD's in-state presence, it can also be useful for regulators to build familiarity with ongoing military-civilian collaboration related to defense energy resilience in the state.

3 Different entities serve as UP providers, including, for example, companies dedicated only to UP contracting and utility companies that serve wider service territories.

Table 1. Energy Availability Requirement by Mission Type

Mission Type	2030 Availability Requirement	Equivalent Annual Downtime
All critical mission energy loads (minimum)	99.9%	9 hours
• Operational headquarters facilities • Airfields • Harbor facilities • Munitions productions and storage • Radar • Space launch • Operational communications	99.999%	5 minutes
• Missile field • Ballistic missile early warning radar • Satellite control • Cyber operations • Biological defense	99.9999%	30 seconds

Source: Adapted from USD(A&S), 2021

These collaborations may shape and inform future regulatory proceedings, even if they do not initially involve regulated entities. In some cases, military-civilian collaborations may lead to infrastructure projects that are eventually submitted for commission consideration. In other cases, these collaborations may involve funding sources that could be used to supplement or replace ratepayer investments in defense energy projects. Commissions can review state and federal legislation or executive orders which create specific energy policies related to military installations, or that direct state agencies to cooperate with DoD on defense energy.

How Much Does DoD Spending Contribute to the State Economy?

Some military-civilian cooperation efforts are evaluated by regulators and other state agencies based on DoD's contribution to state economies (Section 2.3). DoD spent $558 billion in contracts, payroll, and grants in 2022, which accounted for 2% of U.S. gross domestic product (OLDCC, 2023a). As discussed in Section 2, utility commissions may be able to consider non-energy economic impacts in their decision-making process, depending on statute and legal precedent (Zitelman & McAdams, 2021).

Resources: The Office of Local Defense Community Cooperation (OLDCC) publishes the annual *Defense Spending by State* report, which presents data on DoD contribution to state GDP by funding type, Military Service, location, etc. (OLDCC, 2023a). Some states and regions have also conducted more granular assessments on military economic activity, such as the direct and indirect job creation attributable to specific installations.

Does the State Have a Military Advisory Group?

As of 2023, at least 36 states have formal military advisory groups that serve as liaisons between DoD, military installations, defense communities, and state governments. Advisory group responsibilities can include, for example, building base-community relations, making policy recommendations, and conducting studies to support activities that enhance installations' military value. Some states also have commanders' councils, which are composed of state military installation commanders, that serve as a forum to exchange ideas on issues that affect military readiness. In some cases, military advisory groups have focused specifically on installation energy resilience. The Connecticut Office of Military Affairs (2022), for example, has supported the development of a microgrid at SUBASE New London since 2015.

Resources: The National Council for State Legislatures' (NCSL) report, *Mission Ready: State Policy Options to Sustain Military Installations* includes background on state military advisory groups.

Does the State Have a Defense Community Investment Program?

At least 19 states have a grant or loan program in place designed to support projects in defense communities related to infrastructure, planning, land use, research, job creation, and other activities around military installations (NCSL, 2023). In some cases, the state military advisory group is responsible for administering the funds or advising the investment program. Some state funds explicitly include resilience as an eligible category (or criteria) for investment. In Texas, for example, the Defense Economic Adjustment Assistance Grant includes resilience as a scoring criterion for funding applications (Texas, 2023). The defense community investment programs in Florida are described in Section 3.

Resources: NCSL's *Mission Ready: State Policy Options to Sustain Military Installations* report includes background on state military investment programs.

Are There State or Utility Energy Policies that Encourage Cooperation with DoD or Treat Military Installations Favorably?

Several states have created policies that direct or encourage state agencies to cooperate with military installations on energy issues. California, for example, passed legislation requiring state agencies to consider the direct impacts on DoD "energy security and military mission goals" when developing energy policies (California, 2012). The California Energy Commission also signed a memorandum of understanding with the U.S. Navy to collaborate on energy resilience, climate initiatives, fossil fuel reduction, water consumption, and other issues (California Energy Commission, 2021). Some states have also created energy policies that provide favorable treatment for military installations in the form of set-asides or incentives.[4] While state energy policies relating to DoD may not directly impact commission proceedings, they inform the broader state policy context in which commissions operate.

Are there Ongoing, or Recently Completed, Regional Military-Civilian Resilience Planning Efforts in the State?

A growing number of defense communities are engaging in regional resilience planning in partnership with military installations. The Office of Local Defense Community Cooperation (OLDCC), for example, provides funding to support military-civilian planning through its Installation Resilience program (OLDCC, 2023c).[5] The Installation Resilience program supports studies of regional energy and climate resilience (also referred to as military installation resilience reviews (MIRRS)), military sustainability, and joint land use studies (JLUS), among other topics. OLDCC has provided funding to more than 80 regions across the country during FY20-FY23 (see **Figure 3**). A goal of OLDCC projects is to prioritize resilience concepts for further development and funding. Many of these projects have focused on energy infrastructure, and some of the OLDCC-funded initiatives have engaged with regulators about potential projects. Commissions should be aware of the ongoing regional resilience planning efforts and the pipeline of energy projects that they prioritize.

Resources: OLDCC maintains a map on its website of Installation Resilience program awardees (OLDCC, 2023d). OLDCC has a searchable repository of previous military sustainability studies, although most of these studies focus on joint land use, rather than regional resilience (OLDCC, 2021).

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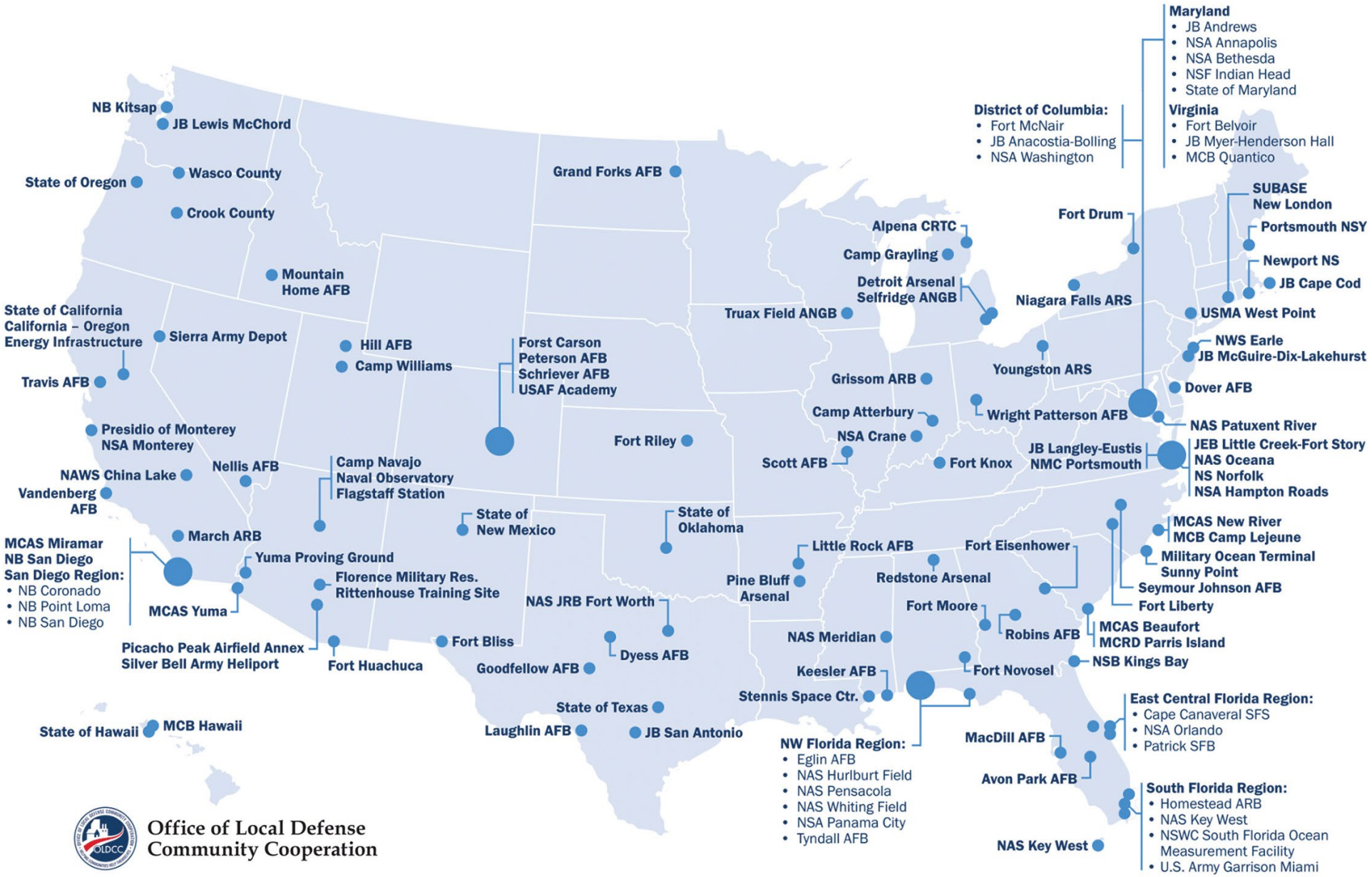
4 In North Carolina, for example, the legislature created a direct renewable energy procurement program for large customers in 2017 (H.B. 589). The program initially set aside 100 MW of program capacity for military installations, although the set aside was removed to allow any eligible customer to participate in 2022.

5 DoD OLDCC provides place-based grants and technical assistance to enhance readiness and resilience of DoD installations and ranges, and to deliver safe places for our members and their families. OLDCC also works to ensure that defense manufacturing and supply chains are agile, resilient, adaptive and responsive to defense needs; defense communities can support their local military installations through sustainable economic development and other civilian activities that are compatible with the Department's current mission and adapt to changes in mission requirements. See OLDCC.gov

Figure 3. OLDCC Installation Resilience Projects, by Region, Fiscal Years 2020–2023



Which Military Installations Have Been Awarded OLDCC Defense Community Infrastructure Program (DCIP) Grants, and for What Purpose?

The OLDCC Defense Community Infrastructure Program (DCIP) is a grant program designed to fund community infrastructure that supports military installations. The program made 65 grants during FY20-23, with awards averaging around $3 million, and the highest individual award being $14.9 million. DCIP projects can focus on installation resilience, among a range of other eligible issue areas (OLDCC, 2023b).

This program may invest in energy resilience for utility systems located both inside and outside the fence line. For example, the Northern California Power Agency[6] recently received $9 million to partially fund a new electric transmission line and substation upgrades to support Sierra Army Depot. The new line and upgrades will increase grid capacity and reduce the installation's energy vulnerabilities.

Resources: A list of past DCIP grantees is posted on their website. The description includes a project overview and the funding each awardee received. There has been a growing focus on projects within the utility sector with funding going from less than one percent of DCIP funding in FY20 to over 50% in FY22.

Are there State or Local Policies Relating to Land Use Around Military Installations?

Civilian energy infrastructure development may encroach upon the operation of DoD missions if not planned carefully. DoD has established a Military Aviation and Installation Assurance Siting Clearinghouse to protect DoD missions from incompatible energy development around military land, airspace, and sea space (DoD Clearinghouse, 2023). DoD and other federal agencies have a range of approaches to mitigating encroachment, such as the DoD Readiness and Environmental Protection Integration (REPI) grant program (DoD REPI, 2023), the DoD Joint Land Use Studies (now part of the Installation Resilience program), and the U.S. Department of Agriculture's Sentinel Landscape Partnership (USDA, 2023). Some state and local governments have also created policies limiting encroachment and/or requiring specific planning approaches (NCSL, 2006). These laws may limit energy resilience project concepts, but joint encroachment planning may also lay the foundation for regional resilience collaboration.

What are the State Clean Energy and Climate Policies, and How do They Overlap with DoD?

Many states have established policies to decarbonize the electricity grid in the past several years. As of December 2023, 23 states, Puerto Rico, and Washington, DC, had established 100% clean energy goals through legislation or executive order with targets ranging between 2032 - 2050 (CESA, 2023). These state policies align with federal Executive Order 14057, which requires DoD and other agencies to achieve 100% carbon pollution-free electricity by 2030 (E.O. 14057, 2021). Many states have also established resilience offices and/or climate adaptation plans and policies. DoD has set policies to manage the risks of climate change (DoD USDA&S, 2016), and each of the military departments has published their own climate adaptation strategies and implementation plans (ASA(IE&E), 2023). Although energy resilience is, in many ways, a distinct field from climate resilience or clean energy deployment, commissions can explore how the overlap between federal and state policies might enable or constrain resilience projects.

Resources: There are multiple resources that track clean energy policy on a state-by-state basis, including the National Regulatory Research Institute's State Clean Energy Policy Tracker, the Database of State Incentives for Renewables and Efficiency (DSIRE), and the NCSL State Energy Legislation Database. NCSL tracks resilience offices and organizations across the states (NCSL, 2023), and the Georgetown Climate Center tracks state climate adaptation plans (Georgetown, 2023).

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6 The Northern California Power Agency is a California Joint Action Agency, established in 1968 by a consortium of locally owned electric utilities to make joint investments in energy resources. See Northern California Power Agency.

2. Utility Commission Overview

This section presents questions that can help clarify regulators' roles and authorities for military representatives, defense communities, and other partners. The intent of this section is to support discussion between regulatory, utility, and defense stakeholders - but not to provide a comprehensive background on the regulatory process. It is helpful for DoD and its partners to understand the state regulatory process at the outset of their resilience planning. An understanding of the regulatory process can help defense energy resilience proponents shape potential projects to align with commission priorities or recognize early in the process that ratepayer investment would not be an appropriate or likely fit. The objectives of the questions in this section are to:

- Clarify which utilities are within the commission's regulatory purview so that installations can understand whether their utilities are subject to commission oversight (Section 2.1).
- Determine whether commissions can consider the economic or national security benefits of defense energy resilience to inform how DoD or its utility partners might articulate the value of proposed investments to the commission (Section 2.2).
- Explore the various docket pathways through which defense energy resilience projects might be considered by the commission, as well as any precedents that might have been set in previous consideration of military projects (Section 2.3)
- Review state laws before transmitting information to commissions to ensure that sensitive or classified national security information is not entered into the public record (Section 2.4).

2.1. Commission Oversight

Which Electric Utilities Does the Commission Regulate?

As discussed in Section 1, DoD installations are served by different types of utilities. Commissions generally have full jurisdiction over investor-owned electric utilities, but only fully regulate rural electric cooperatives in 16 states. Commissions do not fully regulate municipal utilities in any state. Commissions may have limited jurisdiction over specific issues related to cooperative and municipal utilities (e.g., safety), depending on the state.

Which Utilities Does the Commission Regulate?

DoD installations are vulnerable to cascading failures across interdependent utilities (OEA, 2020). Commissions in many states regulate multiple utility industries and can take interdependencies into account when considering energy resilience opportunities.

2.2. Regulatory Scope

Can the Commission Take Economic Development into Account?

Military installations contribute significantly to state economies. Many states have created agencies to strengthen and retain military installations (NCSL, 2023). Energy resilience has been a factor in DoD's previous base realignment and closure (BRAC) processes (Rickerson et al., 2018). Since the prior BRAC round, some states have supported energy resilience at installations to enhance military value and avoid closure.[7] Some state public utility commissions can, and do, take non-energy-related economic development into account in their decision-making process. In Alabama, for example, the public utility commission specifically considered DoD's economic contributions when evaluating utility ownership of solar photovoltaic (PV) plants on military

7 Military value is one of the criteria used in the previous BRAC process, and is defined in (DoD, 2005).

installations (Alabama PSC, 2015). NARUC reviewed the authority of each state commission to consider non-energy economic impacts in their decision making. The findings are contained in the report, *The Role of State Utility Regulators in a Just and Reasonable Energy Transition* (Zitelman & McAdams, 2021).

Can National Defense or National Security be Considered a Benefit by the Commission?

Most defense energy resilience projects considered by utility commissions have been evaluated based on the co-benefits created for ratepayers, such as cost savings, fuel diversification, frequency regulation, capacity, carbon emission reductions, etc. (Rickerson et al., 2022). Some commissions, however, have included national security as an explicit benefit in their decision making. In Arizona, for example, the commission cited enhancing DoD energy resilience as a benefit in approving a transmission expansion project (ACC, 2020). In October 2023, the Public Service Commission of the State of Missouri (2023) cited the national security benefits of the proposed Grain Belt Express transmission line in its order approving its construction.

2.3. Defense Considerations

Has the Commission Considered Defense-Relevant Projects in the Past?

A growing number of state commissions have considered on-site and regional projects that would support military installations. It is valuable for DoD stakeholders to understand the process, outcomes, and precedents of prior defense energy proceedings (Rickerson, 2021). In some states, generation projects, such as microgrids, have been considered as part of rate cases or as standalone projects (Hawaii PUC, 2018; Georgia PSC, 2015). In other states, power purchase agreements between utilities and military projects have been considered part of proposed adjustments to fuel and purchased power cost recovery charges (e.g., Florida and Mississippi) (Florida PSC, 2015; Mississippi PSC, 2015). Grid hardening and expansion projects that benefit DoD may require commissions to consider factors such as environmental compatibility (e.g., Arizona) (ACC, 2020). Some commissions may interact with DoD as part of their emergency management function (Text Box 1), but these interactions do not typically focus on defense energy resilience.

What are the Common Docket Pathways Through Which Commissions Might Consider Defense Energy Investments?

Regulators can provide updated guidance to DoD stakeholders related to the different types of available regulatory pathways, including details such as the eligible type and size of infrastructure, regulatory process timing and duration, information required by regulators, structure of the regulatory proceedings, and the decision-making criteria (Lazar, 2016).

2.4. Secure Communications

Do State Public Records Laws Provide Exemptions for DoD or Issues Relevant to National Security?

The Freedom of Information Act (FOIA) was enacted in 1967 and provided the public with the right to request access to federal agency records. FOIA exempts classified information for national defense from public information requests. Since FOIA was passed, each state has passed their own public records laws. Details of these laws vary from state to state. State laws also vary in their treatment of national defense information. DoD may face challenges in communicating energy resilience requirements to utility commissions in states that lack sufficient national defense exemptions.

Commissions and Emergency Management

Public utility commissions in many states play a key role in emergency preparedness, response, and recovery (Acho & Costantini, 2019). Some commissions, for example, are the designated lead for the statewide Emergency Support Function (ESF) related to energy.[8] The National Guard of each state plays a key role in emergency management and can be activated by the Governor in response to disasters. Depending on a disaster's severity, the federal government may also deploy active-duty military personnel to support response and recovery under the Defense Support of Civil Authorities process. Commissions may therefore engage with military partners in their respective disaster roles, but these interactions do not typically focus on defense energy resilience.

8 ESFs are defined in the U.S. Department of Homeland Security National Response Framework. ESFs delineate emergency response roles, responsibilities, and activities of different agencies and stakeholders. At the federal level, energy emergencies are addressed under ESF-12. See DHS (2019)

3. Applying the Framework: A Case Study of Florida

NARUC partnered with the Florida Public Service Commission (PSC) to pilot the use of the Framework. NARUC and the PSC worked with Eglin Air Force Base (AFB) to convene a stakeholder workshop focusing on defense energy initiatives that could serve the community as well as the base and could harden both against potential storms and disruptions. The Framework was used to identify stakeholders and characterize their energy resilience objectives, align workshop participants around resilience project priorities, chart potential pathways for project funding, and determine which projects might be evaluated in the future.

The purpose of the pilot was to evaluate the Framework, and to further refine its structure. A summary of the workshop, the facilitation methods employed, and lessons learned can be found in Appendix 1.

This Section provides high-level answers to each of the questions posed in Sections 1 and 2 that were gathered in advance of the workshop. Section 3 focuses primarily on Eglin AFB, while providing some statewide context related to Florida. The intent of this case study is to provide a resource for the Florida PSC, and an example for other state commissions to replicate. Section 3.1 provides information related to the defense energy landscape in Florida using the questions in Section 1. Section 3.2 provides information related to the Florida Public Service Commission using the questions in Section 2.

3.1. Florida Defense Energy Landscape

This section provides information related to the defense energy landscape in Florida using the questions in Section 1.

3.1.1 Military Installations and Missions

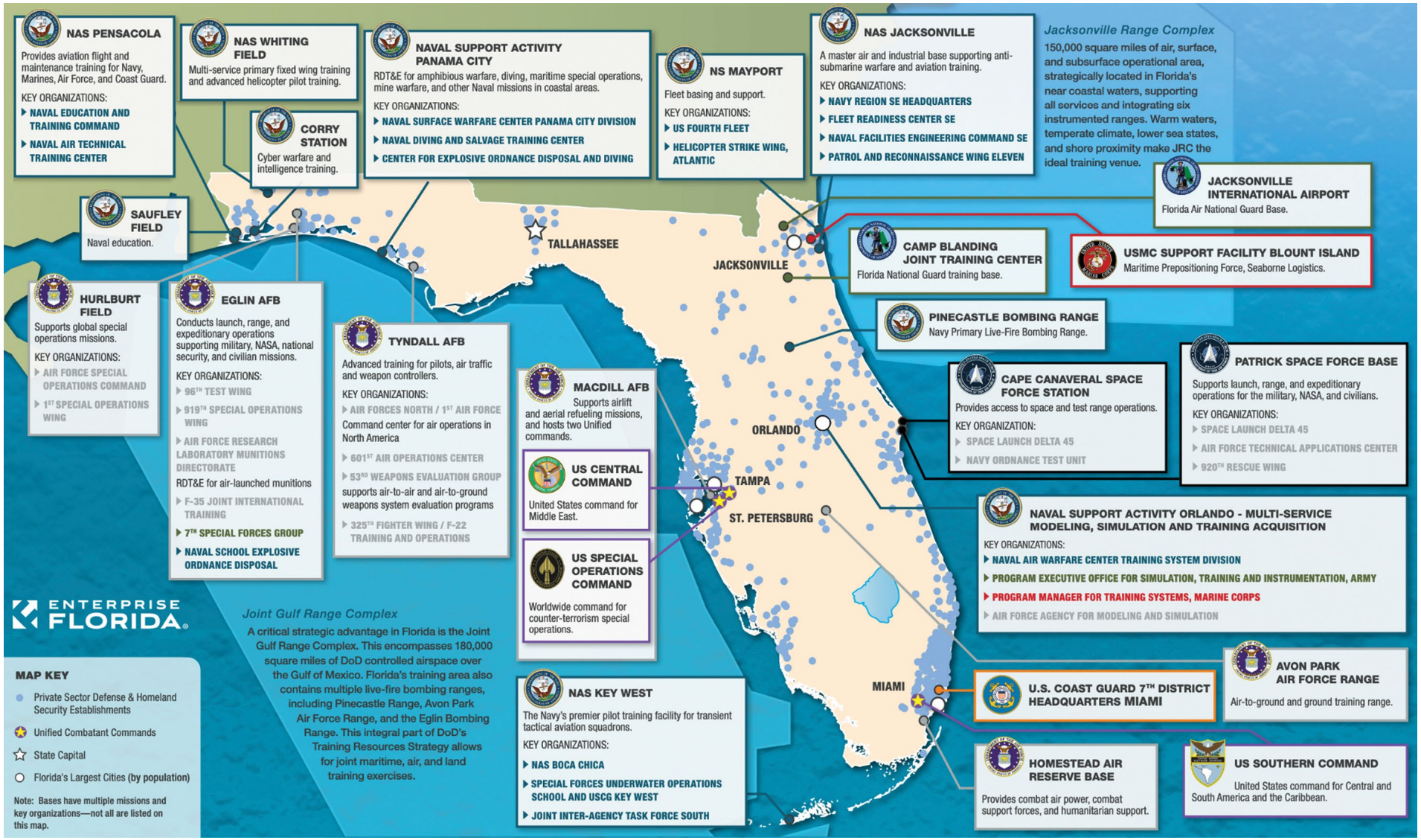
What are the Major In-State Military Installations?

- Florida is home to close to twenty major military installations (see **Figure 4**), which occupy 6,000 buildings, and close to 520,000 acres of land (Enterprise Florida, 2022b).
- Most DoD's Florida installations are either Air Force or Navy installations. The U.S. Space Force also has a significant presence in Florida, with Patrick Space Force Base, Eglin AFB Site C-6, and Cape Canaveral Space Force Station.
- Eglin AFB is located in the western Florida panhandle, near Valparaiso, FL. Eglin AFB is the largest Air Force base in the country, and consists of 724 square miles of land, and 120,000 miles of overwater air space.

What are the Primary Missions and Units at the Installations?

- Florida's military installations host a wide range of missions and units, including fighter squadrons, training units, armaments testing units, and many others.
- Florida installations also host the headquarters of three U.S. DoD unified combatant commands: Southern Command (SOUTHCOMM), Central Command (CENTCOMM), and Special Operations Command (SOCOM). The unified combatant commands provide command and control of all U.S. military forces.
- The host unit of Eglin AFB is the 96th Test Wing (Eglin AFB, 2022). The primary mission of the wing is the testing and evaluation of non-nuclear, air-delivered munitions. As the host unit of the base, the 96th Test Wing also provides essential services and operating support to more than 19,000 military, civilian, and contract personnel across several dozen tenant units.
- The tenant units at Eglin AFB include, for example, the 33rd Fighter Wing, the 6th Ranger Training Battalion, 20th Space Surveillance Squadron, and the 7th Special Forces Group.

Figure 4. Florida's Military Installations, Missions, and Key Organizations



Source: Enterprise Florida (2022c)

Is the Installation Actively Pursuing Onsite Energy Resilience Initiatives?

- Many Florida installations are concurrently pursuing energy resilience projects inside the fence line.
- Eglin AFB has successfully pursued federal funding, such as ERCIP and AFFECT, for energy projects and has made extensive use of acquisition authorities such as enhanced use leases and energy savings performance contracts to install energy generation and energy resilience projects.
- Eglin AFB staff currently participate in the DoD Military Energy Resilience Catalyst (MERC) program (see Appendix 1).

3.1.2. Installation Electricity System

Are the Installations' Electricity Systems, or Other Utilities, Privatized?

- Eglin AFB privatized its electricity transmission and distribution (T&D) system under a 50-year contract through the DoD's utility privatization (UP) authority in 2016.
- Choctawhatchee Electric Cooperative, Inc. (CHELCO) is the owner and operator of the base's T&D system, and serves as the civilian distribution utility (aka: commodity provider) for certain parts of the base (see Section 3.2).
- Eglin AFB signed a memorandum of agreement with the Okaloosa Gas District to install and maintain new gas lines in 1956. Okaloosa Gas is a local government entity, organized under Florida's special districts law (FASD, 2023).
- Eglin AFB also privatized its water and its wastewater systems, making it only the second Air Force installation to enter into agreements with other entities to operate all four of its utility systems (i.e., electricity, natural gas, water, and wastewater) (Dupree, 2016).

3.1.3. Utility Service

Which Utilities Serve the Installations?

- Eglin AFB is served by multiple utilities because of its size and location. As described in Appendix 1, NARUC and Eglin AFB convened utilities that the commission does and does not regulate for the workshop.
- FPL provides transmission, distribution, and generation service to parts of Eglin AFB. In 2021, FPL acquired Gulf Power, whose service territory included a portion of Eglin AFB.
- CHELCO provides distribution service to parts of Eglin AFB, in addition to owning and operating the on-base electricity T&D system.
- PowerSouth Energy Cooperative, a generation and transmission (G&T) electric cooperative, is one of the companies that provides electricity generation into the base in partnership with CHELCO.
- Okaloosa Gas District provides natural gas service to the base, in addition to operating the on-base natural gas assets. In 2018, Okaloosa Gas partnered on a $57.8 million energy savings performance contract at Eglin AFB (FEMP 2023). Okaloosa Gas locked in a long-term, fixed-price gas rate under the contract, which enabled the cost-effective installation of islandable combined heat-and-power microgrids, among other conservation and resilience measures (Energy Systems, 2023).

3.1.4. Grid Resilience

Are the Installations Critical Defense Facilities, and is the Electricity System that Serves the Base Considered Defense Critical Electric Infrastructure?

As discussed in Section 1.4, regulators can contact federal and utility partners about CDFs and DCEI within their states.

3.1.5. Military-Civilian Cooperation

How Much Does DoD Spending Contribute to the State Economy?

- DoD spent $30 billion on personnel and contracts in Florida in FY22 (OLDCC, 2023a).
- In Okaloosa County, where Eglin AFB is located, DoD spending totaled $3.5 billion, or close to 12% of the statewide total.
- The broader economic impact of defense spending is significant. Across Northwest Florida, defense-related activities accounted for 187,000 direct and indirect jobs and accounted for close to 30% of the region's total gross product. In Okaloosa County, the total estimated economic impact of defense-related activities was estimated to be $9.2 billion (EDC Okaloosa, 2023).

Does the state have a military advisory group?

- Florida has multiple state-level organizations focused on supporting military-civilian partnership.
- The Florida Defense Support Task Force (FDSTF) is a thirteen-member organization established by section 288.987, Florida Statutes, to preserve, protect, and enhance Florida's military missions and installations (SelectFlorida, 2023). FDSTF is charged with preventing encroachment and maintaining and expanding in-state military installations.
- The Task Force publishes the Florida Defense Community Resiliency, Sustainability, and Mission Assurance Project Inventory as a resource for joint military-civilian planning (SelectFlorida, 2022).
- The Florida Defense Alliance (FDA) is a statewide effort established by Florida Statute 288.980 to coordinate among military installations, industry, and government (SelectFlorida, 2023). Similar to the FDSTF, the FDA focuses on encroachment, supporting the federal military presence in Florida, and supporting local efforts to enhance the military value of installations.
- Florida also convenes the Base Commanders Meeting, under which the state's agencies and military installations meet to discuss primary areas of concern, such as land use, transportation and infrastructure, and energy consumption.
- The FDSTF and the FDA have each focused on supporting the ongoing OLDCC resilience projects as part of their work plans in 2022-2023.

Does the State Have a Defense Community Investment Program?

- The State of Florida has multiple defense community investment programs.
- The Florida Defense Support Task Force Grant Program's purpose is to promote, preserve, and enhance military missions and installations. The program has been used to support resilience planning, including a grant to support South Florida-focused resilience assessments in FY 2020-2021.
- FloridaCommerce administers the Defense Infrastructure Grant (DIG), designed to enhance the military value of installations, and the Defense Reinvestment Grant (DRG), whose purpose is to support community-based activities that support installations (FloridaCommerce, 2023b). These grants can support energy and

resilience activity. The DIG, for example, has been used to build a community resilience hub in Key West, and develop a long-term master plan for supplying liquified natural gas to Florida Space Coast launch pads.

Are There State Policies that Encourage Cooperation on Energy with DoD, or that Treat Military Installations Favorably?

- As discussed above, the FDSTF and FDA were created by state law to support military-civilian cooperation.
- There are no state policies or agreements in Florida that specifically focus on energy or energy resilience.

Are there Ongoing, or Recently Completed, Regional Military-Civilian Resilience Planning Efforts in the State?

- OLDCC has supported multiple regional resilience efforts across Florida that have worked with more than 15 different military installations.
- Eglin AFB is currently part of the OLDCC Military Installation Resilience Review (MIRR) in northwest Florida, which is managed by the Emerald Coast Regional Council. The MIRR is ongoing, and the Emerald Coast Regional Council participated in the workshop convened by Eglin AFB and NARUC (see Appendix 1).

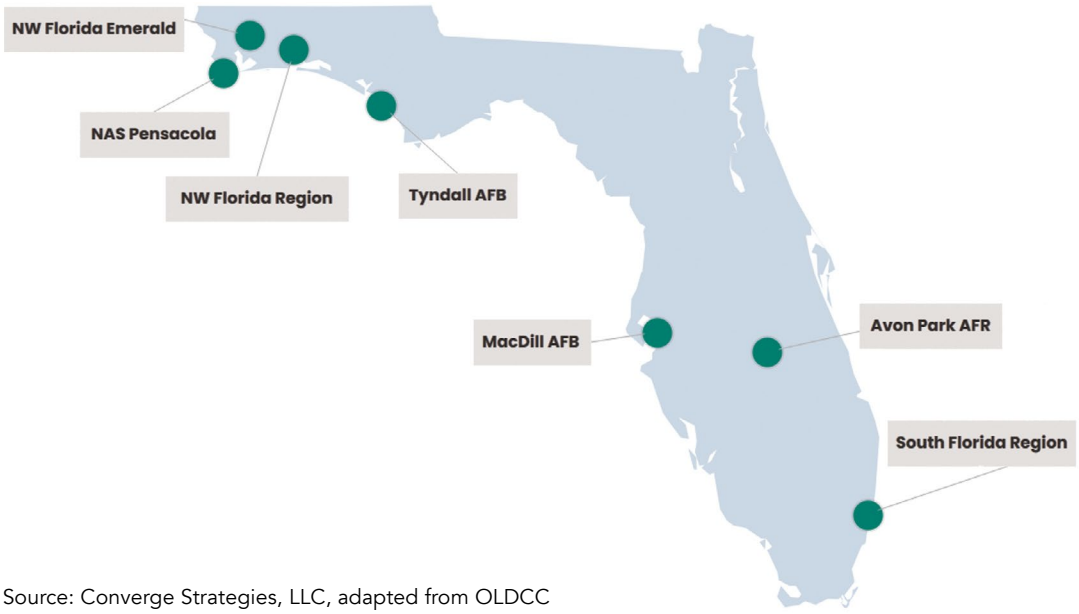
Which Military Installations Have Been Awarded OLDCC Defense Community Infrastructure Program (DCIP) Grants, and for What Purpose?

- Seven military installations in Florida have received OLDCC DCIP awards between FY21-23. These awards totaled just under $31 million and funded upgrades to critical facilities and infrastructure.
- None of the DCIP projects focused specifically on energy resilience.

What are the State Clean Energy and Climate Policies, and How do They Overlap with DoD?

- Florida does not have a statewide clean energy target, although the utilities outline planned solar PV and battery investments in their Ten-Year Site Plans (Florida PSC, 2023c).
- Florida utilities project that they will build close to 9.3 gigawatts (GW) of renewable energy by 2032, of which the majority will be solar PV (Florida PSC, 2023a).
- FPL plans to build close to 3.3 GW of solar PV by 2032, and 1.3 GW of battery storage (Whitley, 2023).

Figure 5. OLDCC Installation Resilience Program Projects in Florida



Source: Converge Strategies, LLC, adapted from OLDCC

- Florida has established an Office of Resilience and Coastal Protection (ORCP) and has also created a Resilient Florida grant program (DEP, 2023a; 2023b). These grants focus on resilience to sea level rise and flooding, and not on energy resilience. The ORCP declined to attend the Eglin AFB workshop, citing their statutory focus on sea level rise, rather than on energy.

Are there State or Local Policies Relating to Land Use Around Military Installations?

- Florida has enacted multiple laws relating to land use and encroachment around DoD installations (FloridaCommerce, 2023a).
- Local governments are required to address land compatibility with major military installations as part of their comprehensive plans, and military representatives are required to be included on local government land planning or zoning boards.
- There are no encroachment statutes that relate specifically to energy infrastructure.

3.2. Florida Public Service Commission Overview

This section provides information related to the Florida Public Service Commission using the questions in Section 2.

3.2.1. Commission Oversight

Which Electric Utilities Does the Commission Regulate?

The Florida PSC has regulatory authority over the rates and service of investor-owned electric utilities in the state. The PSC does not fully regulate municipal utilities or electric cooperatives, but has jurisdiction over service territory boundaries, bulk power supply operations and planning, rate structure, and safety (Florida PSC, 2023b). As of June 2023, the PSC also regulates the attachment of broadband service equipment to the utility poles of electric cooperatives (Shanedling & Thomas, 2023).

Which Utility Industries Does the Commission Regulate?

The Florida PSC has authority over the rates and service of investor-owned electric and natural gas utilities. Water and wastewater investor-owned utilities in counties that have relinquished jurisdiction are also subject to Florida PSC authority. The Florida PSC has authority over municipal or cooperative electric utilities with regard to safety, rate structure, territorial boundaries, and bulk power supply operations and planning. The Florida PSC has jurisdiction, with regard to territorial boundaries and safety, over municipally owned natural gas utilities and natural gas districts. The Florida PSC has authority over the telecommunications industry that is limited to the wholesale relationships of the state's various telecommunications companies, and over certain retail programs.

3.2.2. Regulatory Scope

Can the Commission Take Economic Development into Account?

The mission statements of some state commissions include consideration of economic development and impacts. As discussed above, some commissions evaluate military installations' contributions to the state economy when considering defense energy projects. The Florida PSC's mission statement does not explicitly include non-energy considerations in the commission's decision making, nor does state statute. However, Florida's statutory definition of the "public interest" is broad enough that the commission would not be precluded from considering factors such as job creation, tax revenues, investment activity, etc. (Zitelman & McAdams, 2021).

Has the Commission Considered Defense-Relevant Projects in the Past?

The Florida PSC considered a petition by Gulf Power Company (since acquired by FPL) for cost recovery related to power purchase agreements with solar PV projects at Florida military installations. The projects included a 30 MW PV project at Eglin AFB, a 40 MW project at Holley Field, and a 50 MW PV plant at Saufley Field.[9] The Commission approved the projects in Docket No. 2150035-EI, citing benefits including ratepayer savings, improved reliability through fuel diversity, fuel price volatility mitigation, and a reduction on the state's dependence on fossil fuel for electric production (Florida PSC, 2015).

Although the projects are located at military installations, they are not connected to microgrids and cannot operate when islanded.

The Florida PSC has not yet considered projects that would specifically support defense energy resilience.

3.2.3. Defense Considerations

Can National Defense or National Security be Considered as a Benefit by the Commission?

Florida statutes do not specifically enable or constrain consideration of national defense or national security by the commission.

What are the Common Docket Pathways Through Which Commissions Might Consider Defense Energy Investments?

During the workshop at Eglin AFB, stakeholders identified several potential high priority projects, such as grid hardening, microgrids, and energy storage. Stakeholders also discussed the types of regulatory dockets that might be appropriate for the priority projects.

Grid Hardening

In Florida, the utility Storm Protection Plans are a potential avenue for submitting grid-related defense energy resilience projects to the Florida PSC. The Florida Legislature enacted Section 366.96, Florida Statutes, in 2019, requiring utilities to file Storm Protection Plans (SPPs) for their transmission and distribution systems every three years. The SPPs outline each utility's proposed approach, over a 10-year period, to reduce outage times and restoration costs associated with extreme weather events. If the commission approves the SPP, then the utility can seek approval to recover the costs of the investments contained within the plan. Some common types of SPP projects include moving overhead distribution lines underground, hardening overhead lines, and managing vegetation around the transmission and distribution system. Grid hardening opportunities around military installations could potentially be included in the SPPs.

When reviewing SPP programs, the PSC considers the potential reduction in restoration costs and outage times, the feasibility and reasonableness of the proposed projects, the costs and benefits to the utility and its customers, and the estimated annual rate impact of the plan. It is important to note that the proposed SPP projects must relate to extreme weather.

Microgrids and Energy Storage

Microgrids and energy storage can provide back-up power for critical military and community missions. Some commissions have approved cost recovery for microgrids, whereas others have rejected them (Rickerson et al., 2018). Workshop participants discussed whether submitting a microgrid or battery storage project to the commission could be done as a pilot. Pilots allow the stakeholders the opportunity to learn about emerging technologies without posing the risk of substantial impact to ratepayers. Recent examples of pilots approved by the Florida PSC are included below. One of the pilots was approved as part of a standalone docket, while the other was approved as part of a larger rate proceeding.

9 Holley Field and Saufley Field are both former outlying landing fields associated with Naval Air Station Whiting Field and Naval Air Station Pensacola.

- **Microgrids.** In 2021, TECO Energy proposed to pilot a direct current (DC) microgrid at the Medley at Southshore Bay housing development. TECO proposed to own and operate a central power plant consisting of a natural gas generator and battery storage, as well as individual solar and storage systems on 37 homes. The Florida PSC (2021a) approved the pilot to demonstrate and study the function of a DC microgrid, and to test its capability to provide high levels of renewable energy, reliability and resilience.
- **Green hydrogen.** As part of the Settlement Agreement for FPL's 2021 rate case, the Florida PSC (2021b) authorized FPL to build a 25 MW hydrogen electrolyzer and storage facility as a pilot. The goal of the pilot is to produce hydrogen using electricity from a solar PV system, and then evaluate how FPL's combustion turbines would operate with a 5% blend of hydrogen in their fuel. As of October 2023, the project produced hydrogen for the first time (FPL, 2023).

3.2.4. Secure Communications

Do State Public Records Laws Provide Exemptions for DoD or Issues Relevant to National Security?

Florida's Government in the Sunshine Law provides a right to access to proceedings at the state and local levels, including at the Florida PSC (Florida AG, 2023). The law applies to any gathering of two or more members of the commission to discuss a matter that could foreseeably come before the commission for action. The law requires that meetings must be open to the public, that reasonable notice of the meetings be given, and that meeting minutes be taken and made available for public inspection. The law states that any information shared with the commission, regardless of form (e.g., documents, software, media, etc.), is part of the public record.

There are exemptions, however. Section 366.093, Florida Statutes, provides the Florida PSC with authority to classify records as confidential if certain criteria are met, and use such records in its regulatory proceedings. The Sunshine Law exempts information held by the Florida Department of Military Affairs that is stored in a DoD system of records or transmitted using a DoD network or communications device. Information pertaining to DoD military cyber operations is also exempt.[10]

3.3. Key Takeaways

The process of gathering Florida-specific answers to each of the questions in Section 1 and 2 laid the foundation for successful stakeholder engagement. Florida has a significant military presence, and the state has existing agencies and ongoing programs to engage with military installations. However, engagement specifically around DoD's energy resilience requirements remains in early stages. Utility planning and regulatory decision making do not take national defense considerations into account as standard practice, but stakeholders are open to learning more about each other's priorities and to exploring closer alignment. The information related to both the defense energy landscape in Florida and the Florida Commission was readily available but dispersed over a wide range of different sources and agencies. Compiling and synthesizing the information laid the foundation for streamlined conversations both with individual stakeholders and at the Eglin AFB workshop. As described in Appendix 1, stakeholders were able to engage in productive conversations about potential priority projects following an efficient exchange of information.

10 Section 119.0712, Florida Statutes, states that information pertaining to the DoD, pursuant to 10 U.S.C. § 394 is exempt from the Sunshine Law. 10 U.S.C. § 394 addresses Authorities concerning military cyber operations.

Appendix 1. Eglin AFB Workshop

NARUC and its partners ("the Project Team") convened a facilitated workshop at Eglin AFB in December 2023. The Project Team first used the Framework to identify statewide stakeholders and characterize their energy resilience objectives. Once a workshop location had been identified, the Project Team used the Framework as a reference while aligning workshop participants around resilience project priorities and charting potential pathways for project funding. The workshop's specific objectives were to:

- Develop a shared understanding of Eglin AFB's energy resilience-related requirements, opportunities, and challenges.
- Share information about the regulatory process in Florida and discuss how defense stakeholders can more actively communicate during, and contribute to, proceedings that focus on grid investments.
- Inform a process for state regulators, utilities, DoD, and local stakeholders to engage with one another to support mutually beneficial energy infrastructure projects.
- This section summarizes workshop preparation, attendees, facilitation processes, and key lessons learned.

A1. Preparation

Landscape Review

Leading up to the workshop, the Project Team conducted a military landscape analysis of the state of Florida. The Project Team reviewed variables, including the utilities that serve each installation, whether the utilities are regulated by the commission, the installations' primary missions, and whether the installations have ongoing military-civilian partnerships supported by DoD OLDCC or other organizations. The Project Team sought to identify major military installations that are served by regulated utilities and were actively participating in energy resilience projects both on and off base.

Preliminary Interviews

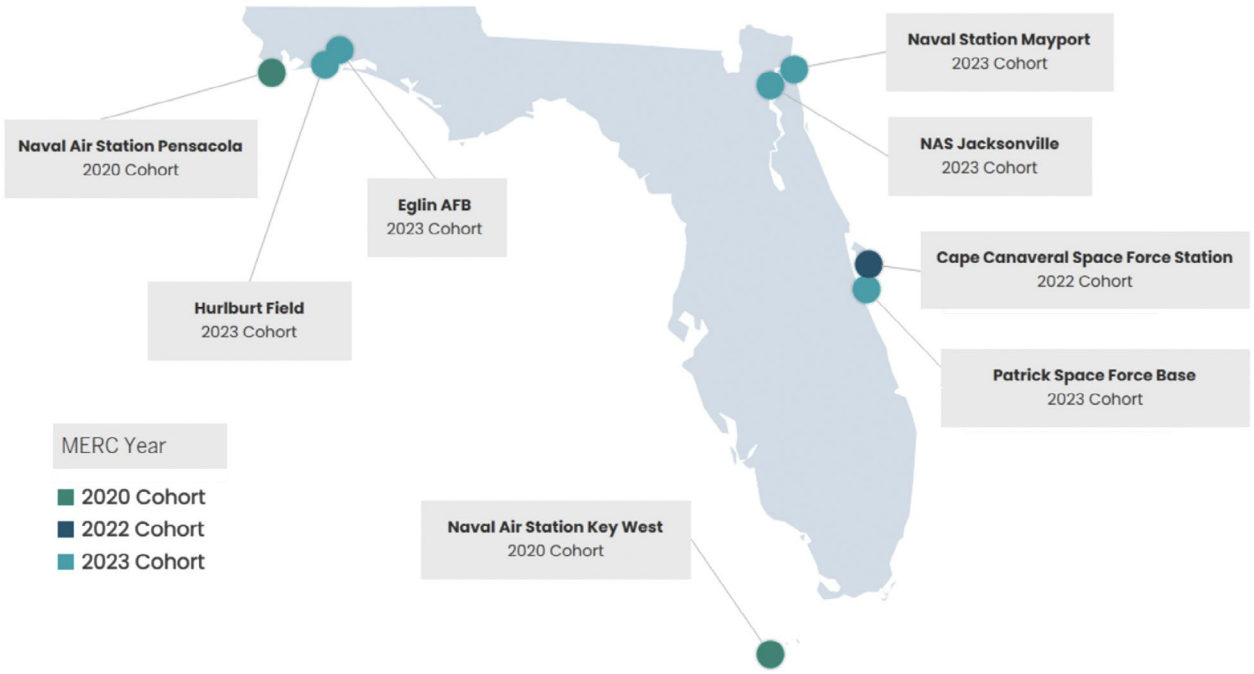
The Project Team conducted initial interviews with ongoing OLDCC Installation Resilience program projects across Florida to assess the status of discussions related to energy resilience. The Project Team conducted initial interviews with representatives from utilities and Florida PSC staff.

The Project Team also interviewed DoD Military Energy Resilience Catalyst (MERC) program staff, and installations that participate in MERC. MERC works directly with military installation staff to accelerate onsite resilience projects and build the practice of resilience across DoD. Each year more than a dozen military installations enroll in the MERC program as part of a cohort to advance specific resilience projects from concept to development. MERC also convenes a network of DoD energy resilience practitioners from across the national security enterprise, the national laboratories, and from installations that participated in prior years of MERC programming. Since 2020, eight of the installations in Florida have participated in the MERC program (**Figure A1**). The Project Team spoke with several MERC installations to gauge interest in the Framework pilot.

Installation Partnership

Based on the landscape analysis and preliminary interviews, the Project Team approached Eglin AFB about piloting the Framework. As discussed above, Eglin AFB is served by a utility that the commission regulates and participates in an ongoing Installation Resilience program project that is at a relatively early stage. Eglin AFB also has a robust energy resilience program inside the fence line, and its staff participate in the 2023 MERC Cohort. Eglin AFB agreed to partner with the Project Team to help pilot the Framework and host a workshop. The lead staff from Eglin AFB who worked with the Project Team on the workshop are part of the energy management office in the base's engineering flight.

Figure A1. MERC Cohort Members in Florida, by Installation



A2. Attendees

Based on the data collected, the Project Team and the base issued invitations to organizations with a stake in energy resilience on and off base. Each of the organizations listed below designated staff members to attend the workshop. In total, 22 people attended the workshop.

- Choctawhatchee Electric Cooperative
- Emerald Coast Regional Council
- Florida Power and Light
- Florida Public Service Commission
- Jacobs
- National Association of Regulatory Utility Commissioners
- Okaloosa Gas District
- PowerSouth Energy Cooperative

A3. Facilitation Process

Site Tour

The workshop started with a tour of key energy infrastructure that serves Eglin AFB. This included several substations and large onsite generation systems. At each infrastructure site, base staff described their prior and ongoing energy resilience efforts, as well as their upcoming energy resilience priorities. Although the workshop participants were each familiar with some of the base's infrastructure, the tour helped create a shared understanding of how the different infrastructure systems interact, and where there might be opportunities for additional collaboration across utility systems and system owners.

Infrastructure Presentations

Following the site tour, the Project Team delivered a presentation about DoD energy resilience policy and provided examples of DoD energy resilience projects that have been considered by state commissions. Each of the organizations then presented a single slide that included:

- An organization overview.
- Current resilience posture.

- Ongoing resilience infrastructure projects.
- Planned or "stretch goal" infrastructure projects.

The goal of the presentations was to deliver organizational information in a streamlined and standardized manner, and to identify project opportunities that would align the interests of Eglin AFB, the surrounding communities, and the utilities.

Regulatory Pathway and Funding Discussion

For infrastructure projects that might require commission consideration, the participants discussed potential docket pathways. The potential pathways included, for example, inclusion in utility Storm Protection Plans, or an application for a stand-alone demonstration project or pilot (depending on factors such as project type and size). The Florida PSC provided helpful insights into the common docket pathways, but did not make specific recommendations, or weigh in on the merits of specific project concepts. The workshop participants also discussed which organizations might be best positioned to serve as applicants to funding programs such as OLDCC's Defense Community Infrastructure Program (DCIP).

Facilitated Exercises

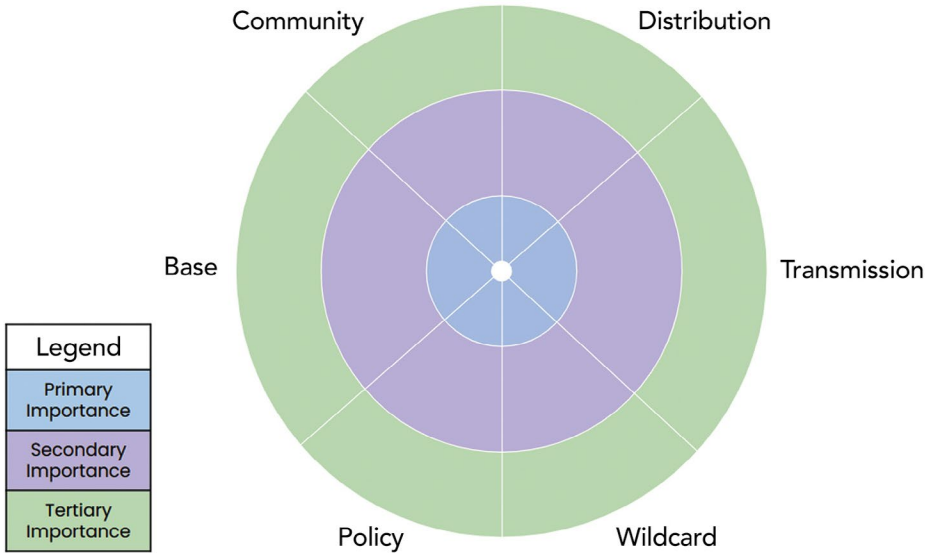
To identify promising resilience project concepts, the Project Team asked the participants to divide into small groups with representatives from across each organization. The participants were then asked to write down the top three most promising energy resilience opportunities that could be worked on collaboratively, and group the opportunities according to:

a. Whether they relate to on-base, community, distribution, or transmission infrastructure.

b. Whether they were possible to realize in the near-term, the mid-term, or the long-term.

The Project Team asked participants to populate a chart similar to the template below, which is adapted from the "What's on your Radar" exercise from the LUMA Institute (**Figure A2**).

Figure A2. Example "What's on your Radar" Template



The Project Team then asked each group to complete an exercise based on the LUMA Institute "Importance/Difficulty Matrix" (**Figure A3**). Each group selected 5-10 ideas from the first exercise and arranged them from least impactful to most impactful along an x-axis. The groups then arranged them according to how difficult it would be to accomplish them on a y-axis. This exercise resulted in a quad chart that helped spotlight strategic projects that are both impactful and difficult, as well as "low-hanging fruit" projects that are impactful and easier to accomplish.

Figure A3. Example "Importance/Difficulty Matrix" Template

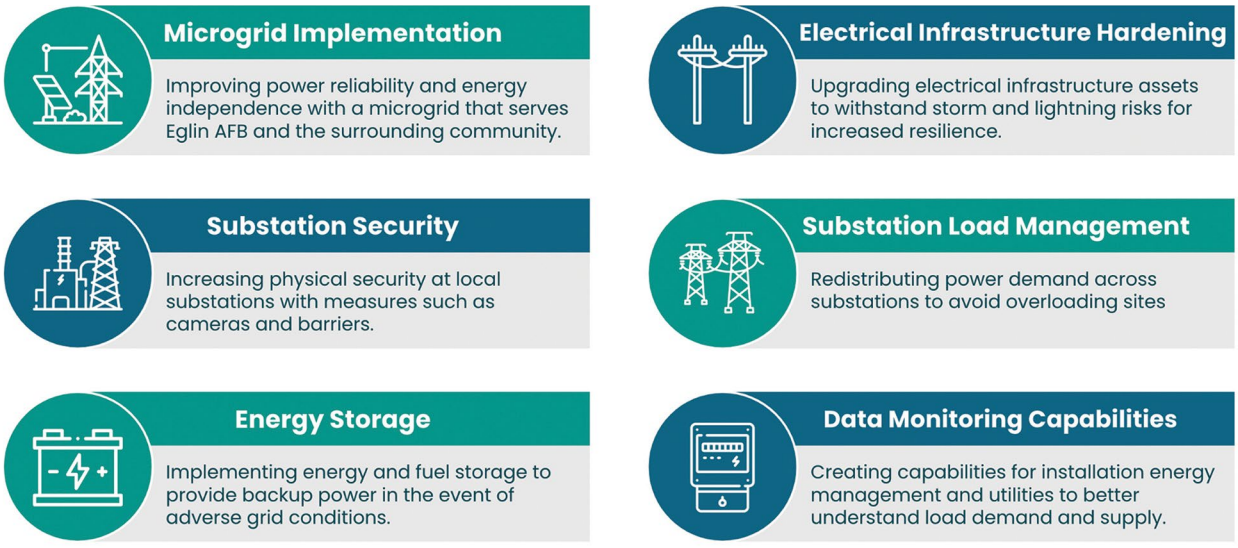
Facilitated Discussion

Following the exercises, the Project Team facilitated a discussion among the participants about their observations from the day, and on their priorities moving forward.

A4. Priority Projects

Workshop participants identified several dozen potential project concepts during the exercises. **Figure A4** presents several of the concepts that several of the groups identified as high priorities for collaboration.

Figure A4. High Priority Projects Identified during the Eglin AFB Workshop



Source: Converge Strategies, LLC

A5. Lessons Learned

The Project Team captured lessons learned from the workshop about the Framework, and about defense energy resilience more broadly:

- **The Framework is useful.** Defense energy resilience is complex, involving multiple stakeholders, levels of government, and infrastructure systems. The Framework provided a common structure for mapping the military and utility landscapes, and then served as a shared reference once the data gathering was complete.
- **External facilitation can support progress.** Workshop participants confirmed that the meeting achieved its stated objectives and advanced the energy resilience discussion at Eglin AFB. Stakeholders at the workshop also stated that previous efforts to convene the utility partners that serve Eglin AFB had not been successful because of the lack of external facilitation. It can be difficult for stakeholders to facilitate a process themselves, when they have a vested interest in the outcomes. Working with external facilitators allows stakeholders to contribute as participants and represent their interests

DoD stakeholders lack awareness of the utility regulatory process. Even though a solar PV project at Eglin AFB was previously approved by the Florida PSC, military stakeholders confirmed that they had little connection to the commission and did not have a working understanding of how defense energy resilience projects might connect to commission processes in the future. Stakeholders confirmed that it was helpful to learn about the Florida commission and about different docket pathways in the early stages of energy resilience planning.

- **Defense energy resilience requires consideration of interdependencies.** Only one of the organizations at the workshop (FPL) is regulated by the Florida PSC. Although the other utilities at the workshop are not regulated by the PSC, their participation was critical to the success of the conversation, given the interdependencies between their systems and FPL's.
- **DoD needs to more clearly articulate its energy requirements.** In addition to commissions communicating more actively with DoD about the regulatory process, stakeholders emphasized the need for clearer communication from DoD about its mission energy requirements, and these requirements' implications for outside the fence line infrastructure. The Project Team conducted interviews with national security and utility experts to get more concrete ideas for how such communication might occur and what information could be provided. **Text Box A1** below contains examples of some of these concepts.

Critical Mission Assurance

DoD's energy resilience objective is to ensure that its critical missions can operate. DoD approaches mission assurance by installing onsite back-up power systems, and/or by being able to move its missions to other locations.

As discussed in this and other reports, DoD is increasingly extending its mission assurance and energy resilience planning efforts to include civilian utility and government partners. During the NARUC Framework process, stakeholders noted that DoD could directly support outside the fence line resilience by communicating its energy requirements to civilian partners in a more structured and accessible manner (i.e., not requiring classified mission briefings). Two examples of how utility partners might translate DoD requirements into infrastructure planning are provided below. Stakeholders provided these concepts to the Project Team during the interview process, and these concepts do not reflect current DoD or utility practice.

Transmission and Distribution. As discussed at the Eglin AFB workshop, there are opportunities to harden the transmission and distribution systems in ways that might also benefit the community and serve national defense. However, there are no DoD standards or guidance related to hardening utility infrastructure outside the installation boundary that utility partners can reference. There is an opportunity for national defense and utility partners to develop standards for DCEI infrastructure that could take into consideration

factors such as wind ratings for power lines, physical protection standards for substations, redundant utility feeds to military installations, and an assessment of the number of substations that might serve as "choke points" between installations and the bulk electricity generation that serves them.

Generation. Specific information about the nature and timing of many DoD missions is classified. There is an opportunity, however, for DoD to communicate the energy requirements of different mission types in a generic, unclassified manner. This might allow utility partners to plan bulk electricity investments that can more intentionally accommodate critical mission types. Flying missions, for example, may have fast ramping energy loads that must be sustained for short periods of time. Quick reaction force missions, by contrast, may have a steadily ramping load that cannot be interrupted for multiple days. For the utility, these requirements might dictate generation characteristics such as grid-scale storage, fast ramping generators, and/or dual fuel generation plants.

To communicate the generation requirements of specific missions, DoD could analyze energy demand across multiple, similar mission types and aggregate the results to create an approximate mission energy profile. DoD could then provide a combination of mission energy profiles to create an "installation energy profile," or estimate of aggregated energy requirements to execute the installation's critical missions, to utility partners. These installation energy profiles could generalize the amount of power demand, how that demand changes over time, and the duration of time that the power is needed. The component mission energy profiles would be applicable to similar missions, regardless of location, and would serve as the unclassified building blocks that enable unclassified information sharing with utility partners.

References

10 U.S.C. § 394. Authorities concerning military cyber operations

10 U.S.C. § 2801. Scope of Chapters; Definitions.

10 U.S.C. 2920. Energy Resilience and Energy Security Measures on Military Installations

Acho, M. & Costantini, L.P. (2019). State Agency Coordination During Energy-Related Emergencies. (National Council on Electricity Policy Mini Guide). National Association of Regulatory Utility Commissioners Center for Partnerships & Innovation.

Alabama Public Service Commission. (2015a). Order (Docket No. 32382). Montgomery, AL

Arizona Corporation Commission (ACC). (2020). Order (Decision No. 77601). Phoenix, AZ.

Association of Defense Communities (ADC). (2023). Who We Are.

California Energy Commission. (2016, October 13). Navy and Energy Commission Formalize Energy Partnership. Sacramento, CA.

Clean Energy States Alliance (CESA). (2023) Table of 100% Clean Energy States. Montpelier, VT.

Connecticut Office of Military Affairs. (2022). Annual Report Fiscal Year 2021–2022. Rocky Hill, CT

Dupree, J. (2016). Eglin privatizes fourth utility system. Energy Express.

Edison Electric Institute & U.S. Army Office of Energy Initiatives. (2022). Edison Electric Institute / Army Joint Resilience Planning. Washington, DC.

Eglin Air Force Base (AFB). (2022). 96th Test Wing.

Eglin Air Force Base (AFB). (2023). About Us - Fact Sheets.

Energy Systems Group. (2023). Eglin Air Force Base. Newburgh, IN.

Enterprise Florida. (2022). Florida Defense Community Resiliency, Sustainability and Mission Assurance Project Inventory. Orlando, FL.

Enterprise Florida. (2022c). Florida's Military Profile. Tallahassee, FL.

Executive Order No. 14057. 86 Fed. Reg. 236 (2021)

FPL. (2023). Florida's first-of-its-kind clean hydrogen project reaches historic milestone. Juno Beach, FL.

Florida Association of Special Districts (FASD). (2023). What is a Special District?

FloridaCommerce. (2023a). Military Bases - Military Base Encroachment.

FloridaCommerce. (2023b). Military Community Programs.

Florida Department of Environmental Protection (DEP). (2023a). Office of Resilience and Coastal Protection.

Florida Department of Environmental Protection (DEP). (2023b). Resilient Florida Grants.

Florida Office of the Attorney General (AG). (2023). Government-in-the-Sunshine Manual: A Reference for Compliance with Florida's Public Records and Open Meetings Law (Volume 45). Tallahassee, FL.

Florida Public Service Commission (PSC). (2015). Order No. PSC-15-0155-PAA-EI. (Docket No. 150035-EI). Tallahassee, FL.

Florida Public Service Commission (PSC). (2021a). Order No. PSC-2021-0237-PAA-EI . (Docket No. 20200234-EI). Tallahassee, FL.

Florida Public Service Commission (PSC). (2021b). Order No. PSC-2021-0446-S-EI. (Docket No. 20210015-EI). Tallahassee, FL.

Florida Public Service Commission (PSC). (2022). Order No. PSC-2023-0281-PHO-EI. (Docket No. 20230010-EI). Tallahassee, FL.

Florida Public Service Commission (PSC). (2023a). Review of the 2023 Ten-Year Site Plans of Florida's Electric Utilities. Tallahassee, FL.

Florida Public Service Commission (PSC). (2023b). Overview and Key Facts.

Florida Public Service Commission (PSC). (2023c). Ten Year Site Plans.

Florida Statutes § 119.0712. Executive branch agency-specific exemptions from inspection or copying of public records.

Florida Statutes § 288.980. Military base retention; legislative intent; grants program.

Florida Statutes § 288.987. Florida Defense Support Task Force.

Florida Statutes § 366.96. Storm Protection Plan Cost Recovery.

Georgetown University Climate Center. (2023). State Adaptation Progress Tracker. Washington, DC

Georgia Public Service Commission (PSC). (2015). Order Approving Solar Project at the Marine Corps Logistics Base. (Docket No. 39028). Atlanta, GA.

Hawaii Public Utilities Commission. (2018). Decision and Order No. 35538. (Docket No. 2017-0443). Honolulu, HI.

H.R.6395 - 116th Congress (2019-2020): National Defense Authorization Act for Fiscal Year 2021 (2021, January 1). Washington, DC

H.B. 589 - General Assembly of North Carolina. (2017). Act to Reform North Carolina's Approach to Integration of Renewable Electricity Generation Through Amendment of Laws Related to Energy Policy and to Enact the Distributed Resources Access Act. Raleigh, NC.

Lazar, J. (2016). Electricity Regulation in the US: A Guide. (2nd ed.) Montpelier, VT: Regulatory Assistance Project.

Mississippi Public Service Commission. (2015). Final Order (Docket No. 2015-UA-65). Jackson, MS

Morehouse, C. (2022). Physical attacks on power grid surge to new peak. Politico.

Narayanan, A., Knopman, D., Powers, J.D., Boling, B., Miller, B.M., Mills, P., Van Abel, K., Anania, K., Cignarella, B., & Jackson, C.P. (2017). Air Force Installation Energy Assurance: An Assessment Framework. Santa Monica, CA: RAND Corporation.

National Association or Regulatory Utility Commissioners (NARUC). (October 2022). Defense Energy Resilience Key Resources Guide. Washington, DC.

National Association or Regulatory Utility Commissioners (NARUC). (2023). Critical Infrastructure Resilience, Emergency Preparedness, and Cybersecurity: Defense Community Partnerships. Washington, DC.

National Conference of State Legislatures (NCSL). (2006). Working with State Legislatures: A Guide for Military Installations and State Legislatures. (Denver, CO)

National Conference of State Legislatures. (2023). State Resilience Offices. Washington, DC.

National Conference of State Legislatures (NCSL). (2023). Mission Ready: State Policy Options to Sustain Military Installations. Washington, DC.

Office of the Director of National Intelligence (ODNI). 2024. Annual Threat Assessment of the U.S. Intelligence Community. Washington, DC.

Office of the Governor of Texas. (2023). Defense Economic Adjustment Assistance Grant. Austin, TX.

Pina, A., Graul, J., Rickerson, W., Pringle, M., Kwartin, R., & T. McDonald. (2021). Considerations for Retrofitting Existing Solar with Emerging Technologies (RESET). Boston, MA. Converge Strategies, LLC. Prepared for the U.S Department of Defense, Environmental Security Technology Certification Program (ESTCP).

PowerSouth Energy Cooperative. (2023). PowerSouth & Our Members.

Public Service Commission of the State of Missouri (MO PSC). (2023). Report and Order. (File No. EA-2023-0017). Jefferson City, MO.

Rickerson, W., M. Wu, and M. Pringle. (2018). Beyond the Fence Line: Strengthening Military Capabilities Through Energy Resilience Partnerships. Washington, DC: Association of Defense Communities

Rickerson, W., W. Gillis, and M. Bulkeley. (2019). The Value of Resilience for Distributed Energy Resources: An Overview of Current Analytical Practices. Washington, DC. National Association of Regulatory Utility Commissioners. Washington DC: Converge Strategies.

Rickerson, W., Brousseau, E., Pringle, M., Monken, J., Graul, J., Calvert-Rosenberger, T. & Barker, J. (2021). Regulatory Considerations for Utility Investments in Defense Energy Resilience. Washington, DC: National Association of Regulatory Utility Commissioners.

Rickerson, W., Zitelman, K., & Jones, K. (2022). Valuing Resilience for Microgrids: Challenges, Innovative Approaches, and State Needs. Washington, DC: National Association of Regulatory Utility Commissioners and National Association of State Energy Officials.

S.B. 1409 California General Assembly (2011-2012). Office of Planning and Research: Energy Security. (2012). Sacramento, CA.

SelectFlorida. (2023). Florida Defense Alliance.

SelectFlorida. (2022). Florida Defense Community Resiliency, Sustainability, and Mission Assurance Project Inventory. Coral Gables, FL

Shanedling, A. & D. Thomas. (2023, June 6). Florida Enacts Pole Attachment Regulations for Electric Cooperatives. JD Supra

Stockton, P. N., and J. P. Paczkowski. (2019). Strengthening Mission Assurance Against Emerging Threats: Critical Gaps and Opportunities for Progress. Joint Forces Quarterly 95: 22–31.

The Economic Development Council of Okaloosa County (EDC Okaloosa). (2023). Economic Impact of the Military. Okaloosa County, FL.

U.S. Department of Agriculture (USDA). (2023). The Sentinel Landscapes Partnership. Washington, DC.

U.S. Department of the Air Force, Office of Energy Assurance (OEA). (2020). Anchorage Bowl Infrastructure Resilience Project Concepts. Washington, DC.

U.S. Department of the Army, Office of the Assistant Secretary of the Army for Installations, Energy and Environment (ASA(IE&E)). (2023). Army Climate Strategy Implementation Plan: Fiscal Years 2023-2027. Washington, DC.

U.S. Department of Defense (DoD). (2005). Base Closure and Realignment Report Volume I, Part 1 of 2: Results and Process. Washington, DC.

U.S. Department of Defense. (2022). 2022 National Defense Strategy of the United States of America. Washington, DC.

U.S. Department of Defense, Office of the Assistant Secretary of Defense for Sustainment (ASD(S)). (2022). Annual Energy Management and Resilience Report, Fiscal Year 2021. Washington, DC.

U.S. Department of Defense, Office of the Deputy Assistant Secretary of Defense for Environment and Energy Resilience (DASD(E&ER)). (2023). Installation Energy: Energy Resilience and Conservation Investment Program.

U.S. Department of Defense, Office of Local Defense Community Cooperation (OLDCC). (2021). Military Installation Sustainability Repository.

U.S. Department of Defense, Office of Local Defense Community Cooperation (OLDCC). (2023a). Defense Spending by State: Fiscal Year 2023. (Revised Version). Washington, DC.

U.S. Department of Defense, Office of Local Defense Community Cooperation (OLDCC). (2023b). DCIP Fact Sheet. Washington, DC.

U.S. Department of Defense, Office of Local Defense Community Cooperation (OLDCC). (2023c). Installation Resilience: A Tool to Support Military Mission Sustainment. Washington, DC.

U.S. Department of Defense, Office of Local Defense Community Cooperation (OLDCC). (2023d). Installation Resilience: Overview.

U.S. Department of Defense, Office of the Under Secretary of Defense for Acquisition and Sustainment (USD(A&S). (2016). Climate Change Adaptation and Resilience. Washington, DC.

U.S. Department of Defense, Office of the Under Secretary of Defense for Acquisition and Sustainment (USD(A&S). (2020). DoD Instruction 4000.19 Support Agreements. Washington, DC.

U.S. Department of Defense, Office of the Under Secretary of Defense for Acquisition and Sustainment (USD(A&S). (2021). Metrics and Standards for Energy Resilience at Military Installations. Washington, DC.

U.S. Department of Defense, Office of the Under Secretary of Defense for Research and Engineering (USD(R&E). (2020b). Mission Engineering Guide. Washington, DC.

U.S. Department of Defense, Military Aviation and Installation Assurance Siting Clearinghouse (DoD, Clearinghouse). (2023) The Clearinghouse. Washington, DC.

U.S. Department of Defense, Readiness and Environmental Protection Integration Program (DoD REPI). (2023). REPI. Washington, DC

U.S. Department of Defense, Office of the Assistant Secretary of Defense for Sustainment, and U.S. Department of Energy, Assistant Secretary for the Office of Electricity (ASD(S) & DOE/OE). (2020). Memorandum of Understanding Between U.S. Department of Defense, Office of the Assistant Secretary of Defense for Sustainment and U.S. Department of Energy, Office of Assistant Secretary for the Office of Electricity Concerning a Collaboration to Enhance Energy Resilience. Washington, DC.

U.S. Department of Energy, Electricity Advisory Committee (DOE EAC). (2022). Strengthening the Resilience of Defense Critical Electric Infrastructure: Recommendations for the U.S. Department of Energy. Washington, DC.

U.S. Department of Energy, Federal Energy Management Program (FEMP). (2023). Federal Energy Management Program Funding Opportunities.

U.S. Department of Energy, Federal Energy Management Program (FEMP). (2023). Eglin Air Force Base Comprehensive Energy Assurance Project Wins FEMP Contracting Award. Washington, D.C.

U.S. Department of Homeland Security (DHS). (2019). National Response Framework (4th ed.). Washington, DC.

U.S. Department of the Navy. (2020). Installation Energy Resilience Strategy. Washington, DC

U.S. Government Accountability Office (GAO). (2020). DOD Utilities Privatization: Improved Data Collection and Lessons Learned Archive Could Help Reduce Time to Award Contracts. (GAO-20-104). Washington, DC.

U.S. General Accounting Office (GAO). (1999). Defense Reform Initiative: Organization, Status, and Challenges. Washington, DC.

U.S. Secretary of the Air Force. (2020). Air Force Policy Directive 90-17. Washington, DC.

U.S. Secretary of the Army. (2020). Army Directive 2020–03 (Installation Energy and Water Resilience Policy). Washington, DC.

Whitley, A. (2023, September 12). FPL TYSP Comparison. FPSC Ten-Year Site Plan Workshop, Tallahassee, FL.

Zitelman, K., and J. McAdams. (2021). The Role of State Regulators in a Just and Reasonable Energy Transition: Examining Regulatory Approaches to the Economic Impacts of Coal Retirements. Washington, DC: National Association of Regulatory Utility Commissioners.

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