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THE HIDDEN SECURITY CHALLENGE

Responding to Grid Capacity Constraints and Their Impacts on Military Installations

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About the Client

Converge Strategies is a veteran-owned small business that provides consulting services focused on the intersection of energy resilience and national security. Converge Strategies' mission is to connect and align the people and organizations required to strengthen the resilience of our communities and infrastructure. Converge Strategies partners with all levels of government, military, and industry.



Table of Contents

Executive Summary	4
Introduction	7
Background	10
Methodology.....	20
Findings	21
Recommendations	38
Conclusion and Next Steps	44
Appendices	45
Appendix A. Current State of the MISO Grid	45
Appendix B. List of Organizations Interviewed.....	48
Appendix C. Sample List of Interview Questions	49
Appendix D. Methodology: Limitations and Qualitative Codebook Results	52
Appendix E. Bibliography	57

Executive Summary

Across the United States, military installations, the defense industrial base, and surrounding defense communities place large energy demands. These demands are almost exclusively reliant on the commercial power grid, which is responsible for servicing, both through the generation of power and its distribution, electricity to consumers across the country. Today, the electric power grid is facing increasing strains on both generation and distribution, with historic levels of demand driven by large load customers, the recent push to onshore manufacturing, and the clean energy transition, alongside persistent underinvestment in the nation's infrastructure.

Despite these grid constraints, military installations must maintain sufficient energy security and resilience to remain “mission-ready” and execute their service objectives. While military installations are required to be sufficiently powered under national security objectives, there are numerous stakeholders in energy policy, making it unclear who has the authority and responsibility for ensuring security and resilience for critical infrastructure. As a result, military installations currently face a governance gap, as defense energy needs are not systematically incorporated into state energy policy despite states having an increasingly important role in the shaping of grid conditions for which installations depend.

This report, in partnership with Converge Strategies, LLC, seeks to understand what state policymakers and the Department of Defense **could** and **should** do to increase energy security and resilience for military installations. Using mixed methodology, this report highlights how state policymakers understand current grid challenges and their impact on defense infrastructure, barriers that the Department faces when engaging in state policymaking processes, and how stakeholders should coordinate in the future to ensure that military installations have sufficient energy security and resilience. Using the state of Michigan (MI) as a case study, this report hopes that findings and recommendations can be extrapolated across the country, where energy security concerns are increasingly becoming a challenge for military installations.

Findings

- Rising electricity demand is intensifying competition for power and emerging as the primary threat to energy security for military installations
- Reliability concerns are most acute at the distribution level, where aging infrastructure, extreme weather, and slow restoration undermine resilience
- DoD energy resilience requirements are not well understood outside the Department, limiting effective state response
- Installations often lack the personnel, expertise, and institutional continuity needed to advocate for their energy needs
- State emergency coordination is relatively strong, but long-term planning processes do not consistently account for defense-critical loads
- Military energy needs are elevated inconsistently and too often depend on informal relationships rather than formal planning mechanisms
- Political volatility, regulatory constraints, cost barriers, and limited public funding inhibit long-term resilience investments
- Economic-development arguments remain the strongest lever for elevating defense energy issues in state policymaking
- States are best positioned to convene, coordinate, and elevate defense needs, but not to bear sole responsibility for meeting national security objectives
- Cyber threats, severe weather, grid infrastructure weaknesses, and supply-chain fragility represent the most significant risks to defense energy resilience

Recommendations

- Establish a state-led working group to identify military energy vulnerabilities and coordinate action until formal planning pathways are in place
- Require state energy planning processes to explicitly incorporate military installation needs, critical loads, and restoration priorities

- Reform regulatory and funding frameworks to better support resilience investments in defense-critical infrastructure
- Improve DoD outreach to state policymakers through clearer communication of installation needs, missions, and resilience requirements
- Create a shared vocabulary and more actionable planning inputs across DoD, utilities, and state actors
- Build installation-level capacity to engage in state energy and regulatory processes through dedicated, knowledgeable staff
- Continue using economic-development framing to strengthen political support for resilience investments
- Advance strategies that align defense resilience needs with state clean-energy goals, rather than treating them as competing objectives

Introduction

In the United States, the Department of Defense (DoD), its military installations, the interlinked defense industrial base (DIB), and surrounding defense communities rely almost exclusively on the civilian electricity grid, powering everyday operations, training, critical missions, and emergency response. As a result, any strain on the nation’s grid can pose significant energy security concerns, with fluctuations in power supply threatening a site’s “mission readiness” and potentially undermining overall national defense capabilities.¹

Today, the energy landscape across the country is being reshaped by a convergence of forces, including rapidly increasing demand growth, frequency of extreme weather events, and shifts in the generation mix, all alongside evolving energy policies at the state and federal levels. Over the past few years, the grid has seen a spike in overall energy demand, bucking previous trends over the past few decades that show stagnant or moderately increasing demand.² These dynamics are currently straining the grid at a time when electricity has never been more critical to the nation’s economy and security.

For military installations, these pressures create distinct and major challenges as installations rely on the commercial power system for generation and delivery. Unlike most customers, power disruptions can impact mission assurance, force readiness, and the ability of the Department to carry out national security objectives. Yet, while military installations are not “traditional” consumers, they remain fully dependent on the commercial system, governed by a fragmented set of institutions, incentives, and jurisdictions.

In the United States, there are a wide number of stakeholders who have authority and purview over energy policy and grid infrastructure. At the state level, this includes:

¹ Association for Defense Communities and Converge Strategies, LLC, “Unleashing the Grid: Energy Dominance for National Defense,” March 2025, <https://static1.squarespace.com/static/67b4d86aa4c21865569eaf73/t/67e4a9b487b07e159aee1b54/1743038913867/Unleashing+The+Grid+-+Energy+Dominance+for+National+Defense.pdf>.

² John D. Wilson et al., *Strategic Industries Surging: Driving US Power Demand* (2024), <https://gridstrategiesllc.com/wp-content/uploads/National-Load-Growth-Report-2024.pdf>.

- Customers (ratepayers), who are buying power from the commercial grid, including military installations and the surrounding DIB;
- Utilities generally manage power, transmission, and distribution across the region;
- Regional transmission organizations (RTOs/ISOs), nonprofits that administer and regulate the transmission grid on a regional basis;³ and,
- States, which often act through their Public Service Commissions, are primarily tasked with regulatory authority over retail sales, generation facilities, local distribution, and intrastate transmission. States may also have executive agencies that can shape and influence energy policy and programs.⁴

This mix of actors has historically made it difficult to address energy policy challenges, with stakeholders navigating increasingly complex local, state, regional, and federal processes. This report finds that the central challenge facing military installation energy security and resilience is a governance gap, in which no single actor has clear authority or responsibility to ensure that installations receive the resources their missions require. This governance gap arises when state policymakers treat military installations as standard customers despite their defense-critical functions, and installations are unable to effectively communicate their needs to the state in an actionable way. While states continue to have an increasing influence in shaping the policy conditions in which installations depend, they are not solely responsible for national security objectives and must now balance defense concerns amongst other public priorities.

Research Question

This report seeks to address this tension and answer the following question: **What could and should state policymakers and the Department of Defense do to ensure that military installations achieve energy security and resilience, allowing them to stay “mission-ready”?**

This report addresses the following research objectives:

³ Federal Energy Regulatory Commission, “RTOs and ISOs | Federal Energy Regulatory Commission,” accessed February 23, 2026, <https://www.ferc.gov/power-sales-and-markets/rtos-and-isos>.

⁴ “Federal Power Act,” accessed February 23, 2026, https://www.ferc.gov/sites/default/files/2021-04/federal_power_act.pdf.

- Understand current state policymakers’ actions and abilities to address grid capacity constraints;
- Highlight current Department of Defense challenges to state policy and regulatory engagement; and,
- Explore potential opportunities for coordination and collaboration amongst state policymakers and the Department to ensure military installations achieve energy security and resilience.

This report examines these research objectives through a case study of Michigan, which predominantly utilizes power from the Midcontinent Independent System Operator (MISO). Michigan offers a useful test case because it combines several conditions that are increasingly relevant across the country:

- Located in a region facing increasing energy demand and rising competition for electricity supply;
- 100% clean energy goals written into statute;⁵
- A prominent “battleground” state for presidential and state gubernatorial and legislative elections,⁶ signaling the need for strong bipartisan support to pass policies; and
- An active defense presence in the state, with the third-largest DoD spend in the region, despite having a limited number of active bases. Unlike states with a large proportion of active military bases, Michigan will need to find additional pathways to coordinate state policymakers, build political capital, and secure resources for its defense industrial base.

The hope is that findings and subsequent recommendations can apply to other states across the country that are experiencing capacity constraints on their grid, potentially impacting their military installations.

⁵ Clean Energy States Alliance, *Table of 100% Clean Energy States*, n.d., accessed November 23, 2025, <https://www.cesa.org/projects/100-clean-energy-collaborative/guide/table-of-100-clean-energy-states/>.

⁶ “Party Control of Michigan State Government,” Ballotpedia, accessed November 23, 2025, https://ballotpedia.org/Party_control_of_Michigan_state_government.

Background

Previous Analysis

Energy security and resilience for military installations and other defense infrastructure have been studied sparingly over the past few decades. Because energy demand has remained relatively flat, there have been limited concerns by defense stakeholders about obtaining these resources, with more focus on “traditional” threats to grid reliability and resilience, including determined adversaries and increased extreme weather events. However, as energy demand has slowly crept up and put strains on the nation’s grid, primarily in the realms of grid modernization and transmission buildout, there is now a focus on understanding the liability that the energy system could play in national defense capabilities.

In a 2024 report released by The Association of Defense Communities and Converge Strategies, LLC, the authors make the case that transmission grid investments are critical for national security and overall mission assurance, arguing that the “grid should be viewed as an extension of military missions and weapons platforms,” given the Department’s almost entire reliance on the civilian power grid.⁷ The report provides steps for how utility planners should engage military stakeholders in power reliability challenges and how to align transmission investments to meet national defense objectives, with recommendations focused on how to accelerate transmission expansion, strengthen the grid for critical defense facilities, and empower DoD as a transmission proponent.⁸

This conversation was expanded on in a 2025 report titled “Unleashing the Grid: Energy Dominance for National Defense,” where the authors highlight how growing competition for electricity supply is posing challenges for DoD and its ability to stay “mission ready.” As explained in the report, “DoD has been the largest electricity customer in the U.S. for decades and consumes close to 1% of the

⁷ Association of Defense Communities and Converge Strategies, LLC, *Transmission Expansion for National Defense* (2024), https://convergestrategies.com/wp-content/uploads/2024/05/TransmissionExpansionForNationalDefenseTREND_April2024_CSL_ADC.pdf.

⁸ Association of Defense Strategies and Converge Strategies, LLC, *Transmission Expansion for National Defense* (2024).

country’s kilowatt hours.”⁹ However, projected load growth can lead to challenges for DoD, including grid reliability issues that may pose mission assurance challenges, being displaced by other large industrial customers, and being unable to compete with private sector entities that are willing to pay a premium for enhanced reliability services.¹⁰ As one expert questions, “without a commensurate increase in the generation needed to serve the load, are we going to put ourselves in a position where utilities and grid operators are going to be forced to choose who gets served first? Is the Department willing to pay a premium for electricity, and will the government be able to afford it?”¹¹

To begin addressing these concerns, the report highlights that DoD can influence grid resilience by “increasingly engaging with utility and community partners on readiness strategies” and that there are “significant opportunities for increased cooperation on defense critical electric infrastructure and bulk power system resilience.” This includes engaging “outside-the-fenceline,” on generation, transformers, and the distribution and transmission grid discussions, and processes to improve overall resilience.¹²

Recognizing the importance of engaging in conversations “outside-the-fenceline,” the Atlantic Council’s Global Energy Center released recommendations for how the Department can enhance its regulated utility engagement, which include reclassifying DoD as a different class of customer and allowing commissions to recognize the unique value and requirements of defense installations. Recommendations also include better engaging utilities in regulatory dockets and

⁹ Association of Defense Communities and Converge Strategies, LLC, *Unleashing the Grid: Energy Dominance for National Defense* (2025), <https://static1.squarespace.com/static/67b4d86aa4c21865569eaf73/t/67e4a9b487b07e159aee1b54/1743038913867/Unleashing+The+Grid+-+Energy+Dominance+for+National+Defense.pdf>.

¹⁰ Association of Defense Communities and Converge Strategies, LLC, *Unleashing the Grid: Energy Dominance for National Defense*.

¹¹ National security and energy expert in discussion with the author, February 2026.

¹² Association of Defense Communities and Converge Strategies, LLC, *Unleashing the Grid: Energy Dominance for National Defense*.

pursuing cost allocation for resiliency initiatives.¹³ These strategies can enhance DoD’s partnership with its regulated utilities and lead to reforms that better support installation resilience.

To continue these discussions, this report seeks to understand whether state policymakers think they can and should address energy security and grid challenges on behalf of military infrastructure and the challenges that the Department of Defense faces when engaging in state policy and regulatory processes.

Military Installation Energy Challenges

Every military installation must follow Department of Defense requirements on energy security and resilience. Under 10 U.S. Code Section 101, the term energy security means “having assured access to reliable supplies of energy and the ability to protect and deliver sufficient energy to meet mission essential requirements” and energy resilience is defined as “the ability to avoid, prepare for, minimize, adapt to, and recover from anticipated and unanticipated energy disruptions to ensure energy availability and reliability sufficient to provide for mission assurance and readiness.”¹⁴

Under Sections 2911 and 2920 of Title 10, DoD must ensure that military installation resilience plans “promote the use of multiple and diverse sources of energy and storage resources.”¹⁵ According to the statute, by the end of 2030, “100 percent of the energy load required to maintain the critical missions of each installation has a minimum level of availability of 99.9%.”¹⁶ This mandate also requires the Department to promote the use of multiple and diverse sources of energy, install microgrids to ensure the energy security and resilience of critical missions, and to

¹³ Benjamin Byboth et al., *Dissolving the Fence: Improving Utility Privatization for Defense Installations* (Atlantic Council Global Energy Center, 2025), <https://www.atlanticcouncil.org/wp-content/uploads/2025/10/dissolving-the-fence-improving-utility-privatization-defense-installations-resiliency.pdf>.

¹⁴ “10 U.S. Code § 2920 - Energy Resilience and Energy Security Measures on Military Installations,” LII / Legal Information Institute, accessed February 13, 2026, <https://www.law.cornell.edu/uscode/text/10/2920>.

¹⁵ Office of the Under Secretary of Defense for Acquisition and Sustainment, “DoD Instruction 4715.28 Military Installation Resilience,” August 4, 2025, <https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/DoDi/471528p.PDF>.

¹⁶ “Section 2920. Energy Resilience and Energy Security Measures on Military Installations,” <https://law.justia.com/codes/us/title-10/subtitle-a/part-iv/chapter-173/subchapter-i/sec-2920>.

give priority to the use of “full-time, installed energy sources rather than emergency generation.”¹⁷ However, according to a July 2025 Department of Energy grid reliability report,¹⁸ there is not a single region across the U.S. “able to achieve this reliability standard for select critical missions.”¹⁹

There are many challenges that both active duty, reserve, and national guard installations face when attempting to achieve these objectives, as further highlighted by experts and installation personnel for this report. First, reliable energy is not a top priority for military installations and their operational needs. When carrying out vital missions, checking whether there is sufficient power falls to the bottom of the list of priorities, often because of assumptions that energy has been, and always will be, available. While each military installation has an energy manager, oftentimes this person is “dual-hatted” or a civilian with other responsibilities, making energy security only a portion of a person’s job. If a civilian, the energy managers often have limited authority to make installation-wide decisions, which are then left to senior leadership.

Second, it is presumed that every installation has sufficient backup generation. However, these backup stores are not frequently checked for readiness or operability, posing a large uncertainty for their ability to perform under real emergencies. As one energy security expert described, missions “don’t have backup generation that works or is even available. And often, installations are not aware of what to do if there are outages.”²⁰

Third, if installations were looking to increase their energy resources, there are often insufficient funds to do so. According to a national security expert, “in the budget world, installations eat last and get underfunded.”²¹ This same expression was repeated by a former DoD personnel member, who added that “it’s generally true even though [installations] are arguably one of the most

¹⁷ “10 USC 2920: Energy Resilience and Energy Security Measures on Military Installations,” accessed April 4, 2026, <https://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title10-section2920&num=0&edition=prelim>.

¹⁸ U.S. Department of Energy, *Resource Adequacy Report: Evaluating the Reliability and Security of the United States Electric Grid* (2025), <https://www.energy.gov/sites/default/files/2025-07/DOE%20Final%20EO%20Report%20%28FINAL%20JULY%207%29.pdf>.

¹⁹ Converge Strategies, LLC, *Accelerating Speed to Power/Winning the Artificial Intelligence Race: Federal Action to Rapidly Expand Grid Capacity and Enable Electricity Demand Growth*, (2025), https://convergestrategies.com/wp-content/uploads/2025/12/Converge-Strategies-Comments_Speed-to-Power-DOE-RFI_November-2025.pdf.

²⁰ Energy security expert in discussion with the author, January 2026.

²¹ National security expert in discussion with the author, February 2026.

important places to fund first, since they train everyone, they house everyone.” The interviewee goes on to explain that “electricity accounts are must-pay bills, and so every time electricity rates go up in a community, that is a bill that must get paid. And if they are strained, they must take from different accounts,” demonstrating the constraints that individual installations regularly manage when it comes to current supplies, and implications for new sources.²² As a retired general explained, “we didn’t have enough money for our utility bills. I had to beg for money in the federal process, and every year in the fourth quarter of the fiscal year, we didn’t know whether the government was going to pay our energy bills or not.”²³

Lastly, it is very uncommon for installations and the Department of Defense itself to communicate when there are resource challenges because of the national security concerns that naming the issue could potentially expose. Within DoD, there is a culture not to share gaps in operations, and as a result, this often leads installations to not admit when there is a problem because of the risks that it may expose to the base or larger operations. As one national security expert explains, it is “not in the nature of the Department to say that we are on shaky ground. They don’t want to show gaps and [it is] not in the nature of the culture of the Department to talk about their needs and where they need help.”²⁴ So, even being able to name that there is a problem poses a challenge.

²² Former Department of Defense personnel in discussion with the author, January 2026.

²³ Former Department of Defense personnel in discussion with the author, February 2026.

²⁴ National security and energy expert in discussion with the author, January 2026.

Michigan as a Case Study

Across the Midwest, there are 46 major military installations, with Michigan hosting 1 Army active duty and several national guard installations. A combat mission is one that “involves direct engagement in armed conflict and is subject to military discipline”.²⁵ A map of their locations can be found in Figure 1.²⁶ In FY2024, Michigan had 23,669 DoD personnel, with 854 active duty, 9,953 civilian, 9,028 national guard, and 3,834 on reserve. A full breakdown of Michigan’s military installations and their key characteristics can be found in Table 1.



Figure 1. Locations of military installations and their respective host missions across the Midwest.

Table 1. Michigan military installation demographics, including location by county, service type, host unit mission, electric utility provider, and energy delivered in Fiscal Year 2021.

Installation	County	Service	Example Mission	Serving Electric Utility	Energy Delivered (FY21)
Detroit Arsenal	Macomb	Army	Provides ground vehicle research, development, and acquisition.	DTE Energy	221 Bbtu
Selfridge ANGB	Macomb	Air National Guard	Operates KC-135 Stratotankers and provides global aerial refueling capability.	DTE Energy	198 Bbtu

²⁵ “Noncombatant Service: Understanding Its Legal Definition | US Legal Forms,” accessed March 6, 2026, <https://legal-resources.uslegalforms.com/n/noncombatant-service>.

²⁶ Screenshot of map developed by Horizon Energy Systems, with funding from the Clean Grid Initiative.

Alpena Combat Readiness Training Center	Alpena	Air National Guard	Provides air-to-ground and joint combat training.	Presque Isle Electric and Gas Co-Op	47 Bbtu
Fort Custer Training Center	Calhoun	Army National Guard	Small arms range and maneuver training for National Guard.	Consumers Energy	N/A
Camp Grayling Joint Maneuver Training Center	Crawford	Army National Guard	Provides joint, all- domain military missions, including large-scale maneuver and live-fire training.	Consumers Energy	N/A
Battle Creek Air National Guard Base	Calhoun	Air National Guard	Operates MQ-1 Predator and MQ-9 Reaper aircraft	Consumers Energy	47 Bbtu

The state of Michigan is currently reliant on the Midcontinent Independent System Operator (MISO), an ISO that is responsible for the region’s grid infrastructure. To understand the implications that the grid has on defense installations, it is imperative that policymakers and defense stakeholders understand the risks they face when it comes to transmission and distribution infrastructure. The North American Electric Reliability Corporation (NERC) currently rates the MISO region as “high risk” for 2028–2031, warning that power demand driven by data centers, manufacturing, and seasonal residential use is outpacing new generation and retiring capacity.²⁷ In Michigan and across the Midwest, rising natural gas dependence, delayed clean energy interconnections, and major transmission constraints are making it harder to add new

²⁷ North American Electric Reliability Corporation, *Long Term Reliability Assessment*, January 2026, https://www.nerc.com/globalassets/our-work/assessments/nerc_ltra_2025.pdf.

supply, raising long-term reliability and energy security concerns. More information about the current state of the MISO grid can be found in Appendix A.

As such, state governments are generally motivated to ensure their customers have adequate energy resources, but providing power to defense stakeholders is especially important given their role as an economic driver in the region. Studies show that military installations and the surrounding DIB can bring investments, jobs, and economic activity to the areas in which they are located. In fiscal year (FY) 2023, the DIB “spent \$430 billion on defense contracts, accounting for 1.6% of U.S. gross domestic product,” demonstrating that it is often in policymakers' best interest to prioritize the needs and concerns of defense stakeholders as they can generate significant regional investments. If there is not enough power for these installations, there is a risk of failing to achieve “mission-readiness,” which could force bases to relocate or shut down, causing severe economic threats to nearby communities.

As described by a retired DoD leader, addressing challenges at the intersection of energy security and economic growth is vital for state policymakers:

“For the state, you could impact employment; it could impact the base's decision to expand or to retain missions... If you can't secure power to an installation, then you're going to be challenged to retain those missions. If defense industrial base companies are going to be increasingly operating in a constrained transmission and generation environment, it's going to be hard to grow because power is going to be the limiting factor. So, states and locals should be worried about that.”²⁸

Amongst military installations in the Midwest, the DoD spent \$47.40 billion in FY2024, with \$7.24 billion in Michigan specifically, approximately 1% of the state's GDP or around \$714.70 per resident of the state.²⁹ Of this amount, \$5.03 billion came directly from DoD contracts.³⁰ However, this contract spending is not distributed equally across the state's 83 counties and is largely correlated

²⁸ Former Department of Defense personnel in discussion with the author, February 2026.

²⁹ Office of Local Defense Community Cooperation, *Defense Spending by State, FY 2024: Michigan*.

³⁰ Office of Local Defense Community Cooperation, *Defense Spending by State, FY 2024: Michigan*.

with base locations, as seen in Figure 2.³¹ This is especially true for contract spending, with 90.8% of DoD contract investments going to just 10 counties across Michigan. The top 3 counties in FY2024 included \$2,876,401,287 for Macomb County, \$408,976,100 for Oakland County, and \$341,043,427 for Wayne County.³²

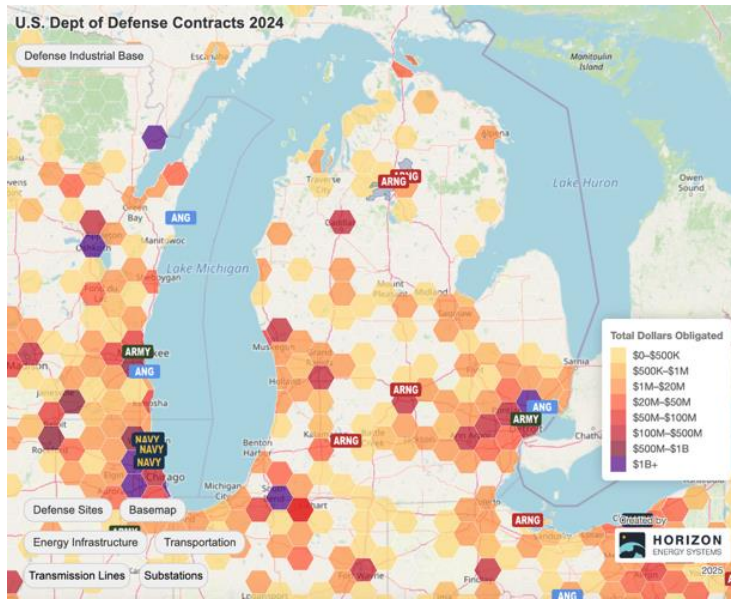


Figure 2. The concentration of Department of Defense contract spending across the state of Michigan in FY2024.

Recognizing the importance of defense investments for economic growth in the state, in 2015, Governor Rick Snyder directed the Michigan Economic Development Corporation (MEDC) and the Department of Military and Veterans’ Affairs to support the Michigan Defense Center to protect and grow “military missions and the economy that supports those important national security recommendations.”³³ The result was a

strategic plan to protect current assets and missions, with 17 recommendations to grow existing operations and pursue new opportunities.

These efforts have since been expanded on under Governor Gretchen Whitmer, who, in partnership with the MEDC, announced the opening of the Office of Defense and Aerospace Innovation in April 2024 to help grow the state’s defense industry by “supporting attraction and expansion of businesses that champion Department of Defense-related activities, and enhancing commercial and defense-related aerospace segments poised for growth.”³⁴ In ODAI’s 2026-2031 strategic plan,

³¹ Screenshot of map developed by Horizon Energy Systems, with funding from the Clean Grid Initiative.

³² Office of Local Defense Community Cooperation, *Defense Spending by State, FY 2024: Michigan*.

³³ The Michigan Defense Center, *Protect and Grow: A Strategic Plan for Michigan’s Defense and Homeland Security Economy* (2016), https://www.michigan.gov/-/media/Project/Websites/formergovernors/Folder9/Michigan_Protect_and_Grow_Public_Report_2016.pdf.

³⁴ Executive Office of the Governor, “Gov. Whitmer Announces New Office of Defense and Aerospace Innovation, Enhancing State’s Defense and Aerospace Ecosystem,” State of Michigan Office of the Governor, April 22, 2024,

the Office notes that its strategy and focus are “purpose-built” to grow Michigan defense sectors, create more high-paying jobs, attract further federal investments, and support the warfighter.” According to the report, Michigan currently has “over 4,000 defense and 900 aerospace suppliers, 17 military commands and installations, and a \$30 billion defense economy employing 166,000+ Michiganders statewide.”³⁵

<https://www.michigan.gov/whitmer/news/press-releases/2024/04/22/whitmer-announces-office-of-defense-and-aerospace-innovation-enhancing-defense-ecosystem>.

³⁵ Michigan Office of Defense and Aerospace Innovation, *Michigan Office of Defense and Aerospace Innovation Strategic Plan 2026-2031* (2026), <https://www.michiganbusiness.org/globalassets/documents/defense/odai-strategic-plan-2026.pdf>.

Methodology

This report utilizes mixed methodology, including a literature review and findings from 26 semi-structured interviews. A full list of organizations interviewed can be found in Appendix B, and a breakdown of interviewees by industry type includes:

- 1 interviewee from academia
- 4 interviewees from the Department of Defense (all levels)
- 5 interviewees with national security or energy security expertise
- 4 interviewees from regional or state-based nonprofits
- 9 interviewees from the state or local government
- 3 interviewees from private utility or transmission distribution organizations

The interviews took place via Zoom in January and February 2026. Given the national security sensitivity associated with this subject, all interviews and associated findings were anonymized and de-identified. The interview questions (found in Appendix C) and findings were developed using a Strengths, Weaknesses, Opportunities, and Threats (SWOT) framework, with strengths and weaknesses focused on the current system, and the opportunities and threats addressing future considerations. All interviews were transcribed using OpenAI Whisper via Mac, qualitatively coded in Microsoft Excel, and then analyzed to identify repeated patterns across interviewees. Trends were analyzed across the interviewee list, and distinctions between national security or energy security experts and state and regional stakeholders were underscored. More information about the methodology, limitations, and summary results can be found in Appendix D.

Findings: Challenges and Opportunities to Support Energy Security and Resilience for Military Installations

The State-Of-Play

1) Rising energy demand is the dominant stressor among all stakeholders

Of the 26 people interviewed, 19, representing every stakeholder group type, cited rising energy demand as a core concern when asked about the current state of the grid. As one regional energy nonprofit notes, the region is seeing an “increasing risk with regard to that delicate balance of supply and demand that needs to always be balanced at all hours of every day. We’re seeing risks that we might not have enough supply.”³⁶ When asked about current capacity constraints, a transmission developer recounts that during the January 2026 cold-snap,³⁷ “MISO had to call on load-modifying resources for both the DTE system and the Consumer [Resources] system,” demonstrating tight capacity in Michigan.³⁸

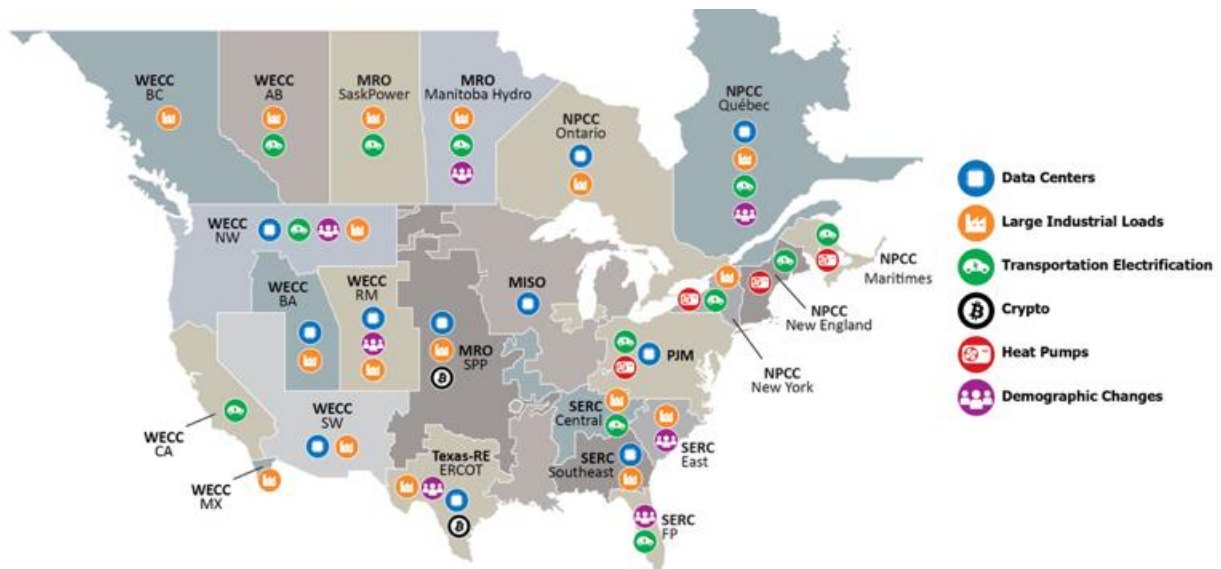


Figure 4. Main source of rising energy demand on the electricity grid across each region.

³⁶ Regional energy nonprofit in discussion with the author, February 2026.

³⁷ Debbie Elliott, “Hundreds of Thousands without Power in the U.S. after a Powerful Winter Storm,” Michigan Public, January 26, 2026, <https://www.michiganpublic.org/2026-01-26/hundreds-of-thousands-without-power-in-the-u-s-after-a-powerful-winter-storm>.

³⁸ Transmission developer in discussion with the author, February 2026.

Across the interviews, causes for rising demand included the recent buildout of data centers and additional computing infrastructure (14); the push towards electrification and shift away from traditional energy sources, such as oil and gas (8); and new industrial growth and the onshoring of manufacturing (2). Rising demand can contribute to delays, cost increases, or reliability tradeoffs. These findings are consistent with those of NERC, which has classified data centers as the primary demand driver for the MISO region (see Figure 4),³⁹ highlighting that there is both an acknowledgement and awareness of the problem as it currently stands amongst both experts and key policy stakeholders. As previously noted, this concern is critical as current demand growth could outpace generation supply and transmission upgrades, putting military installations and other critical infrastructure in direct competition with other large customers for power.

2) Concerns about grid reliability are split between bulk system confidence and transmission and distribution challenges

While interviewees expressed general confidence in the large-scale transmission system, most were concerned about the distribution system's reliability, citing extreme weather events that damage infrastructure, insufficient investment, and long restoration times. Of the 17 state and regional stakeholders interviewed, 8 identified bulk system reliability as being a strength of the current grid, and 6 attributed this to a high level of coordination amongst stakeholders addressing large-scale reliability and responding in cases of emergency management. One regional nonprofit reflected on its previous work with the Michigan Public Service on resource adequacy goals for the bulk system and highlighted that the state “has enough essential reliability services in its resource mix,” because of previous action to increase overall reliability.⁴⁰

This confidence was echoed amongst state officials, who noted that the PSC and utilities are working together, with one stating that “when you talk to the regulators and the utilities, they are saying we are doing okay right now. They are also paying attention to demand and concerns that are coming in right now.”⁴¹ Private developers stated that they have “been actively investing in those

³⁹ North American Electric Reliability Corporation, *Long Term Reliability Assessment*.

⁴⁰ Regional nonprofit in discussion with the author, February 2026.

⁴¹ State official in discussion with the author, January 2026.

grids over the last two decades, and we have seen significant improvement in the reliability and resiliency of the grid.”⁴²

On the other hand, distribution resilience and restoration practices are seen as weak amongst state and regional stakeholders, with aging infrastructure and extreme weather events cited as the most common cause for concern, despite the U.S. Congress requiring DoD to only monitor and respond to its bulk system vulnerabilities.⁴³ One state official stated that “Michigan is one of the worst states” in terms of restoring power after an outage, primarily due to the infrastructure being old.⁴⁴ A regional nonprofit notes that when the state experiences extreme weather, “the areas most impacted are the distribution system,” and it is becoming the weakest point in the grid. And this is proving to be a challenge for defense infrastructure. A State Senate staffer recalled a large storm last year in Northern Michigan that “knocked out a bunch of power lines and did a bunch of damage to Camp Grayling,” highlighting the need to invest in resilient distribution infrastructure, especially in rural areas.⁴⁵

3) DoD resilience goals are unevenly understood outside of the Department

Across all stakeholders, understanding of DoD energy security and resiliency objectives is uneven and low, posing a significant challenge for achieving goals over the long term. Of the 17 state and regional stakeholders interviewed, only 7 had prior experience with DoD personnel, primarily utilities and private transmission distribution organizations. Most other state actors have had no or limited experience with defense stakeholders. On a positive note, one private utility company said:

“We have good communication with military installations. As an energy provider, we always approach them as the customer at the center. We don't push agendas and

⁴² Transmission developer in discussion with the author, February 2026.

⁴³ Association of Defense Communities and Converge Strategies, LLC, *Unleashing the Grid: Energy Dominance for National Defense* (2025), <https://static1.squarespace.com/static/67b4d86aa4c21865569eaf73/t/67e4a9b487b07e159aee1b54/1743038913867/Unleashing+The+Grid+-+Energy+Dominance+for+National+Defense.pdf>.

⁴⁴ State official in discussion with the author, January 2026.

⁴⁵ State Senate staffer in discussion with the author, January 2026.

want them to achieve their goals. They come to utilities to engage us and are very interested in energy security.”⁴⁶

However, when stakeholders were asked about their understanding of current DoD requirements around energy security and resilience, only 4 state and regional actors said they understood current objectives, with the rest saying that they are unaware or have limited awareness. Common responses include “not understanding” what the requirements are or having “general awareness but nothing specific.”⁴⁷ One county policymaker noted that while they don’t understand requirements, “it should be something we are aware of. It should be built into our approvals and communications with critical infrastructure. From my knowledge, there is no knowledge.”⁴⁸ This knowledge gap can prevent requirements from being integrated into energy policy and planning, and can prevent stakeholders, both outside DoD and within, from understanding the Department’s priorities and assessing achievement.

When there was knowledge of DoD objectives, these were often perceived as “top-down” from the federal government, unrealistic, or not translated into enforceable planning mechanisms. As one previous DoD official notes, “I think the energy resilience goals are very lofty and not really achievable,”⁴⁹ and another state official notes that they have heard about these objectives, but [they] didn’t come with enough priority to address them,” highlighting a gap in either resources, authority, or communication of the importance of the issue.⁵⁰ There were also mentions that concrete “not achieved” signals were being received at the operational level, but were also not elevated due to cultural barriers around disclosure.

4) Military installation capacity continues to be a challenge, primarily due to a lack of personnel, conflicting priorities amongst them, and energy knowledge gaps

⁴⁶ Private utility in discussion with the author, February 2026.

⁴⁷ State policymaker in discussion with the author, February 2026.

⁴⁸ County policymaker in discussion with the author, January 2026.

⁴⁹ Former Department of Defense personnel in discussion with the author, February 2026.

⁵⁰ State policymaker in discussion with the author, January 2026.

Some interviewees emphasized that DoD's own internal capacity to engage in state policy is itself a roadblock to effective energy planning and in advocating for increased energy security and resilience. Throughout interviews, this was attributed to either a lack of personnel within military bases themselves, conflicting priorities amongst installation staff, or knowledge gaps.

Most installations have energy managers who are tasked with ensuring facilities have sufficient resources to maintain operations, both during regular and emergency operations. However, one national security expert noted that "energy managers change every year and don't have access to the information that they need."⁵¹ These energy managers may also not have the proper communication channels to elevate needs or the authority internally to make informed decisions. This was echoed by a retired DoD general who explained that senior leaders "rotate every two to three years, so there's no continuity. And if you are new, you are overwhelmed and busy with running the installation and managing soldiers, so you're not listening to your energy managers."⁵²

When there are sufficient personnel, there are often conflicting priorities and interests amongst staff about what concerns to address. As one employee at a Michigan installation states, "there is real struggle between the chain of command, and whose responsibility it is to tell people things."⁵³ However, as a member of the Michigan National Guard notes, choosing what challenge to address often "comes down to senior leadership and what their priorities are when it comes to pursuing specific goals and policies."⁵⁴ So if long-term energy security and resilience are not a concern of senior leadership, these needs will not be sufficiently elevated or addressed to develop a comprehensive, long-term solution.

Also, there is a general lack of understanding about energy issues within bases, with most DoD personnel lacking the technical expertise to engage in energy policy and official regulatory proceedings, thus being unable to contribute to discussions and effectively communicate the Department's needs. A regional advocate noted that the barrier to entry to engage in energy policy

⁵¹ National security expert in discussion with the author, January 2026.

⁵² Former Department of Defense personnel in discussion with the author, February 2026.

⁵³ Military installation staff in discussion with the author, January 2026.

⁵⁴ Michigan National Guard member in discussion with the author, January 2026.

is “quite high” and that if military installations want greater say, “they either need support, or they need to build new capacity with people who have skills and expertise to navigate the system.”⁵⁵

As one previous DoD official notes, installations historically align with other large customers who ask for lower rates. However, the official notes that “sometimes we don’t even know what it is that would be in our interest. We typically intervene to ask for lower rates and not to talk about reliability. So, I think DoD is not part of the conversation, and when they are, they’re probably not sophisticated enough to be arguing for what their highest value might be.”⁵⁶ To address these challenges, the Department should invest in additional personnel with clear authority and expertise to intervene in energy rate cases and planning, with environmental advocacy groups cited as effective models for both engagement tactics and expertise.

Strengths

1) Strong support for emergency coordination and recognition that there are active steps to improve current state policy

Across interviews, the partnership between emergency management personnel and critical infrastructure stakeholders was cited as being notable, with issues being elevated and addressed promptly. A member of the Michigan State Policy reflected that there is “strong coordination with the Governor’s team when it comes to emergency management,” and active collaboration and resource sharing during the last two state disasters.⁵⁷

Interviewees also noticed an increase in engagement from state policymakers, primarily the Public Service Commission, when it comes to long-term energy planning. A regional advocate highlights that the “role of the state utilities commission in transmission planning cannot be overstated,”⁵⁸ and a private transmission developer praised current Michigan Commissioner Dan Scripps, saying that he “has been a champion of transmission investment. He really spearheaded some of this

⁵⁵ Regional advocate in discussion with the author, February 2026.

⁵⁶ Former Department of Defense official in discussion with the author, February 2026.

⁵⁷ Michigan State Police personnel in discussion with the author, January 2026.

⁵⁸ Regional advocate in discussion with the author, February 2026.

long-range transmission planning.”⁵⁹ When interviewing with the Commission, they noted their increasing focus on resilience, and “try[ing] to understand what the critical facilities in communities around the state are and then try[ing] to understand what the expectations of those facilities are in grid situations. And then how do we match them up.”⁶⁰

2) Defense policies, when framed with economic development benefits, are effective at elevating military installation concerns

Currently, economic development and defense industrial base coalitions are seen as a strong coalition amongst the state, consisting of effective messengers and key political constituencies. As one retired DoD official explained, “states think of military installations as economic drivers and bring with them a lot of potential economic value, employment, and growth. I think day-to-day, the base is really about the economics. From my understanding, the states want to grow the missions, and they want to grow the businesses associated with missions and bring support to local communities.”⁶¹ Thus, signifying an opportunity to continue leveraging economic benefits alongside active installations. Moving forward, defense stakeholders should continue to use economic development framing to align resilience with jobs and industrial competitiveness, underscoring the benefits associated with actions.

Weaknesses

1) Military installation needs are not systematically included in state energy planning processes, and successful elevation is primarily relationship-driven

Many interviewees have acknowledged that military installation needs have not been successfully elevated into state energy planning processes, often because of the misaligned goals of utilities, Public Service Commissions, and military installations. As one energy security expert explains, “the regulatory framework for the commercial grid prides itself on keeping costs low for ratepayers. Whereas the Department of Defense's mission prides itself on having high reliability standards,

⁵⁹ Private transmission developer in discussion with the author, February 2026.

⁶⁰ Michigan Public Service Commission personnel in discussion with the author, February 2026.

⁶¹ Former Department of Defense personnel in discussion with the author, February 2026.

and those two sort of intersect at a weird point.”⁶² Because high resilience is not built into the structure of traditional regulatory goals, there is often a mismatch when it comes to state planning and what goals are being prioritized.

When asked about the barriers that military installations face in energy planning, appropriate mechanisms for engagement are cited as being the primary challenge. As a regional advocate notes, “there's also the fragmentation just around how choices and decisions around grid planning are made,” and that utilities and state actors are working in “different venues” which are “approved at different timescales” when it comes to energy and transmission planning and deployment, making it extremely difficult for installations to know where and when to engage.⁶³

If needs are successfully elevated, interviewees cite that it is often dependent on ad hoc or preexisting relationships between installations and policymakers and/or utilities. However, when installations are considered in the planning process, their needs are equated to those of other “large customers,” without additional consideration for national security objectives that the missions would carry out. As a former Michigan Public Service Commissioner notes, “there is no distinction in the planning processes on what is a military installation or not. Even critical infrastructure doesn't get treated differently. Ultimately, they are customers of the utilities.”⁶⁴ This suggests how military installations are deprioritized and included in planning processes as regular customers, despite requiring a different threshold for security and resilience.

2) Policy barriers to long-term investments in energy security and resilience revolve around political volatility, but costs and authority constraints are also mentioned

When discussing investments in infrastructure, political volatility at the federal and state levels proved to be the largest challenge. As one county official notes, “oftentimes we are missing the DoD target, and it depends on whichever Administration is in power at the time. The focus changes because of the ebbs and flows; you don't get to address the energy resiliency needs.”⁶⁵ A retired

⁶² Energy security expert in discussion with the author, February 2026.

⁶³ Regional advocate in discussion with the author, February 2026.

⁶⁴ Former Michigan Public Service Commissioner in discussion with the author, February 2026.

⁶⁵ County official in discussion with the author, January 2026.

general expanded on this point, providing an example where they worked with DTE Energy to put solar at Selfridge Air National Guard Base. He noted that “that deal fell through because of a change of administrations and momentum,”⁶⁶ highlighting the importance of political stability for goal identification and execution as stakeholders can determine priorities and then initiate long-term solutions.

Reflecting on the process, a private utility interviewee notes that the swings in the political landscape are “very disruptive to long-term capital-intensive business because we plan in decades and we don't plan in four-year increments,” highlighting their challenges to overall business stability and investments in resilience infrastructure.⁶⁷ Another utility noted that they are “making decisions in 40-year increments and you have all this political back and forth as energy has become more and more politicized... trying to navigate the political landscape while having a long-term vision...is probably one of the biggest challenges.”⁶⁸

Interviewees also lamented the cost of resilience infrastructure and the limited authority for the military to determine which types of energy supplies get built and where.

3) A multitude of barriers were listed when asked about existing state government action

A large variety of challenges were listed when asked about the biggest policy and regulatory challenges that military installations in the state face, as they pertain to current government action. The most common weaknesses included coordination and engagement (11), ineffective or missing policies (10), bureaucratic processes and red tape (9), and insufficient funding of government programs (7). A full breakdown of stakeholder results, separated by weakness and stakeholder type, can be found in Chart 1.

One primary challenge includes ineffective or missing programs at the state level to support military installations in achieving their energy security and resilience goals. As described by one

⁶⁶ Former Department of Defense personnel in discussion with the author, February 2026.

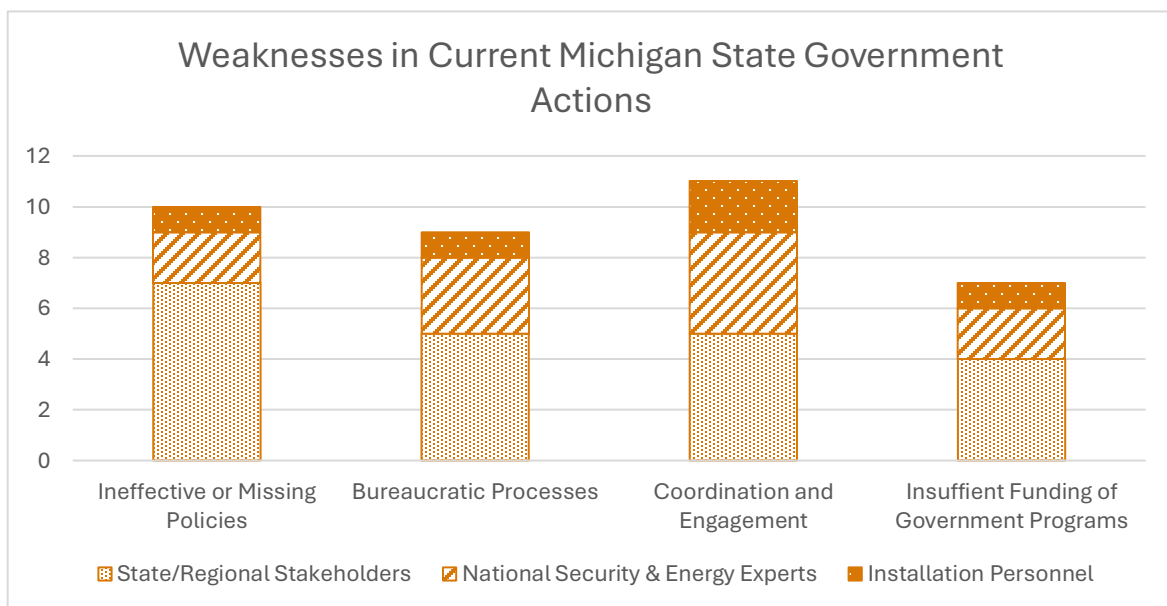
⁶⁷ Private utility in discussion with the author, February 2026.

⁶⁸ Private utility in discussion with the author, February 2026.

nonprofit group in the region, policies often “prioritize either costs, affordability, or environmental stability,” and either these policies fail to address energy resilience, or they can have adverse impacts on grid reliability.⁶⁹ When asked about the current regulatory system, one energy security expert acknowledged how state regulations and rate-setting mechanisms “allow consideration for impacts on climate change, but nothing that articulates anything related to national defense,” highlighting a gap in the current system and a potential pathway to integrate resilience investments in the future.⁷⁰

Given the gap in the policy landscape, there is very little incentive to invest in infrastructure. As a private utility notes, the state does not “have any laws or policy that requires us as an energy provider to do any of these things. It's all based on a voluntary basis for customers and costs. We'll do anything the customer wants us to do, but the customer must pay the premium for that,” signaling both the need for funds and active communication for these types of investments.

Chart 1. Weaknesses in the current state government’s action to address energy security and resilience challenges in Michigan



Another challenge includes government bureaucracy and military installations being unable to navigate current procedures and policymaking. When asked about navigating government, a

⁶⁹ Regional nonprofit in discussion with the author, February 2026.

⁷⁰ Energy security expert in discussion with the author, February 2026.

military installation staffer said, “I am tired of twisting myself into a pretzel,” regarding the amount of money and time spent on paperwork.⁷¹ This challenge is only exacerbated because often there is a “lack of coordination amongst the different utility providers stakeholders, and they don't talk to each other unless there is an absolute need and an emergency, and if state policymakers force them to,” highlighting the need for cooperation and collaboration amongst government, notes one county official.⁷²

And a private utility noted the role that government funding can play in supporting resilience projects. Because of current regulations, oftentimes investments in resiliency cannot be placed on ratepayers, and if there is a government interest to provide this backstop, “specific funding to accomplish resiliency and redundancy goals” will be needed.⁷³

Opportunities

1) States are seen as convenors and coordinators, not responsible parties

When asked about the role that the state should play in enabling security and resilience investments at military installations versus the role that should be left to other key stakeholders, there were mixed views. The state’s role was often framed as being a convenor, coordinator, and conduit for defense needs in overall energy and emergency management planning.

When discussing the role of a convenor, many noted the historic position and ability that state governments have in bringing together all stakeholders and encouraging them to coordinate. Beyond convenings, states can set state agendas and elevate issues, which can help overcome gaps in existing government processes. As one National Guard member suggests, “there should be some sort of state government-led initiative to initially explore the vulnerabilities that we have and work on joint solutions to identify, prioritize, and attack these problems.”⁷⁴

⁷¹ Military installation personnel in discussion with the author, January 2026.

⁷² County official in discussion with the author, January 2026.

⁷³ Private utility personnel in discussion with the author, February 2026.

⁷⁴ National Guard personnel in discussion with the author, January 2026.

There was also common recognition amongst stakeholders that states can facilitate relationships amongst stakeholders and highlight current gaps, such as the need for defense perspectives in energy planning. As such, the state can leverage this role to elevate an issue area, mobilize political support, gain critical information, and bring about a forum to develop solutions with key stakeholders.

Amongst interviewees, there was also widespread recognition that states cannot be expected to enforce and ensure national security objectives are met, especially without being given authority and sufficient funding. As one energy security expert notes, it is not the role of the state to be worried about national security practices, and the federal government, thus far, hasn't provided the state with "great cover to be ambitious" and how to lay out plans to do so. The interviewee goes on to say that energy security and resilience need to be "federally led" because it is "not a state's job to place national security before state needs," and the role of state leadership is to look out for state interests.⁷⁵ This was echoed by state officials, who noted that while the state would like to make energy systems resilient, federal government support, either through policies or funding, would make changes easier to implement.⁷⁶ Because of this inherent disconnect in responsibilities and expectations, concerns like energy security and resilience can quickly fall outside of the purview of state governments. Considering this, a potential solution could be for the state to serve as a conduit to the federal government and to raise critical issues for national attention.

2) To better support energy security and resilience objectives, state policymakers need additional support from DoD and military installations

There were strong demands amongst state and regional interviewees for additional information and support from DoD to better respond to their energy security and resilience needs. Specific items include:

- Technical inputs, including future load projections and modeling

⁷⁵ Energy security in discussion with the author, January 2026.

⁷⁶ State official in discussion with the author, January 2026.

- Use cases to demonstrate threat vulnerability indexes, and where installations are unable to meet current resource needs without the help of the state or federal government⁷⁷
- Regular briefs about the defense footprint in the state⁷⁸
- Long-term plans about missions and subsequent priorities for their energy needs⁷⁹
- Clear timelines and points of contact within military installations

Amongst stakeholders interviewed, there was also widespread support for better communication from the Department about their current concerns and long-term goals, preferably in ways that ensure that both sides are speaking in one common language. This can include 101 briefs on state missions and the role of the defense industrial base, developing a shared vocabulary, and providing real use cases to help translate the challenges that installations are facing into terms that policymakers and planners can understand. There were also comments about the importance of repetition and storytelling and sharing the challenges that military installations are facing when it comes to their energy concerns, as policymakers can only be responsive if they hear from constituents about what their needs are.

In addition to generally improving communication, there is also a desire for the Department to move beyond its reticence in sharing information⁸⁰ so that policymakers and utilities are informed enough to support their needs. One potential suggestion was to provide policymakers with a “field operator” that can bridge the gaps between policy and implementation within installations.⁸¹ Because of the state’s legislator term limits and the frequent personnel changes at military bases, a field operator can help exchange knowledge and translate energy problems and solutions into terms that policymakers understand and vice versa, while serving as a long-term fixture holding institutional knowledge over time.

⁷⁷ State official in discussion with the author, January 2026.

⁷⁸ National security expert in discussion with the author, February 2026.

⁷⁹ Private utility in discussion with the author, February 2026.

⁸⁰ National security expert in discussion with the author, February 2026.

⁸¹ Former Department of Defense personnel in discussion with the author, February 2026.

And lastly, consistency with plans and energy requests was emphasized amongst utility providers, to help with long-term planning and better servicing of requests.⁸²

3) DoD can become a better advocate for itself and leverage partnerships across the state

Throughout interviews, there were frequent suggestions that the Department increase its advocacy and engagement in the policymaking process, because it is often the best messenger of its own energy security and resilience concerns. Interviewees noted that DoD is not a strong advocate for itself, but when incorporated and paired with strong partnerships, this could be an effective catalyst for energy security and resilience improvements, and that DoD should do more direct outreach with state policymakers. As a previous DoD official notes:

“I think utilities lack education on what the military customer needs because DoD has done a poor job of articulating it. I don’t think regulators typically do a good job of understanding things like location-based assets, and how they can add to grid resilience over time... I think you have regulators who just don't know because you have an unsophisticated counterparty who doesn't understand what the need is that well.”⁸³

A private utility provider explained that when it comes to national security, there is often a perceived bias in their messages.⁸⁴ However, this can be overcome if you have current or former Department officials who are spreading the message, as policymakers are more responsive to those in uniform. This sentiment was shared by a State Senate staffer, who noted that the defense industry itself is “disjointed in fiefdoms,” which also requires its own coordination and unification to be a better advocate for itself.⁸⁵

Only when the Department speaks for itself can it also benefit from external validation from various other community groups, elevating energy security and resilience concerns. Personnel at the

⁸² Private utility in discussion with the author, February 2026.

⁸³ Former Department of Defense personnel in discussion with the author, February 2026.

⁸⁴ Private utility personnel in discussion with the author, February 2026.

⁸⁵ State Senate staffer in discussion with the author, January 2026.

Department of Environment, Great Lakes, and Energy noted that when there is an issue that is raised, they often look to local advocates to see if these are persistent and common issues.⁸⁶ Hence, the importance of making sure DoD has partnerships with local community organizations, nonprofits, and advocacy groups to ensure that their messages about national security and grid resilience are being validated.

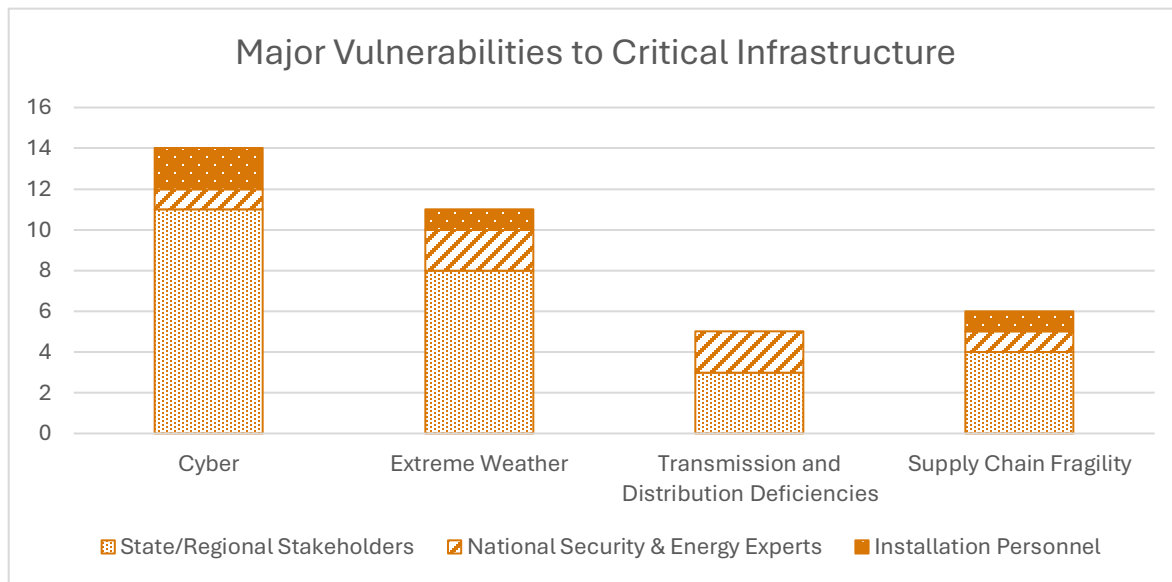
Threats

1) Most repeated vulnerability categories are cyber, severe weather, transmission and distribution, and supply-chain fragility

When asked about major vulnerabilities in the state energy system that could most threaten critical infrastructure like military bases, the most common concerns included cyber threats, extreme weather, challenges to energy generation and distribution, and supply chain fragility. This can also be framed as cyber threats and supply chain management creating systemic risk with physical threats and extreme weather events compounding restoration challenges. Often framed as the “what keeps you up at night?” question for stakeholders, 14 interviewees across stakeholder types listed cyber as a threat, with 11 listing extreme weather, 6 listing supply chain fragility, and 5 listing transmission and distribution deficiencies, as demonstrated in Chart 2. However, these findings were split amongst state and regional stakeholders and national security and energy experts, with a majority of state and regional stakeholders focused on cyber and extreme weather events.

⁸⁶ State policymaker in discussion with the author, February 2026.

Chart 2. Major vulnerabilities and risks to the energy system that would most threaten critical infrastructure



2) Mixed views on how state energy policies and DoD energy security and resilience objectives relate to one another

When asked about how state energy policies and DoD energy security and resilience objectives relate to one another, there were mixed views amongst stakeholders. Of the 22 interviewees, 10 highlighted a level of misalignment in these policy priorities and understanding. While 3 explicitly stated that the state’s clean energy goals were not in alignment with DoD objectives, most state policymakers and energy security experts stated that policies to support a clean energy transition will help with overall energy security and resilience in the state and should make military installations on net better off.

Some stakeholders say clean energy goals and DoD objectives can be pursued in tandem and leveraged together. As one regional advocate explained, “true decarbonization has two conditions required to get there: reliability and affordability...We need a resilient system to have a reliable system. And so, the military installations are asking for the same things that the goals that the states have demanded.”⁸⁷ This sentiment was echoed by the MI Public Service, who noted that DoD objectives “can absolutely be constructive and additive to state policy as we’re skating toward the

⁸⁷ Regional advocate in discussion with the author, February 2026.

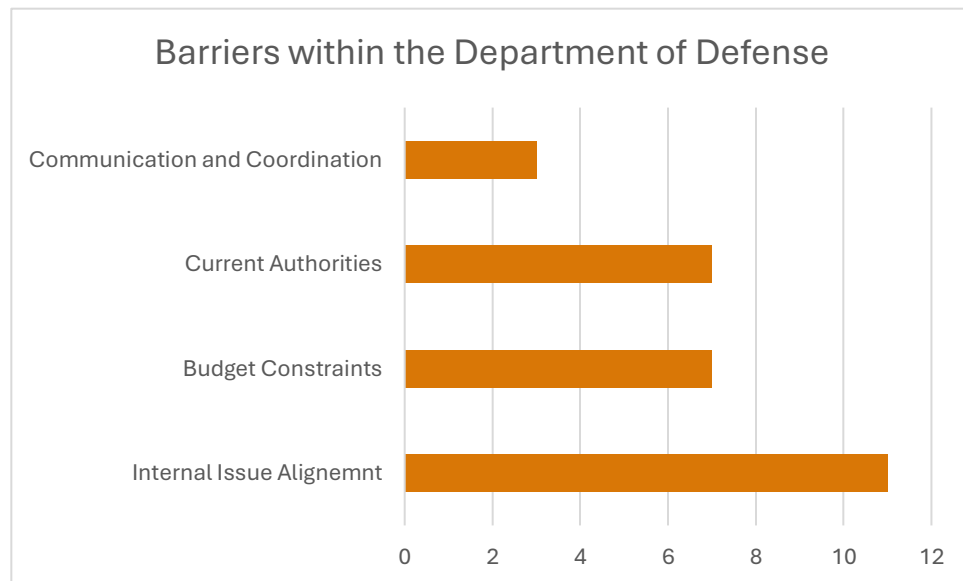
same puck.”⁸⁸ As such, stakeholders could continue making the connection between the clean energy transition and DoD objectives, aligning and reinforcing goals.

3) DoD needs to overcome its own barriers to better advance energy security and resilience objectives

When stakeholders were asked about barriers that the Department faces when engaging with current state policies or programs, interviewees cited communication and coordination, current authorities, budget constraints, and internal issue alignment, as seen in Chart 3.

During discussions around internal issue alignment, there were comments made about personnel, especially from opposing political parties, needing to “come together and realize there's a middle ground where we need to have certain missions in the military that require guaranteed power.”⁸⁹ There was also acknowledgement of “ingrained animosity built between the National Guard and the professional military,” which has strained collaboration and cooperation when it comes to aligning on long-term energy planning and priorities.⁹⁰

Chart 3. Barriers for the Department of Defense when addressing energy security and resilience challenges



⁸⁸ Michigan Public Service Commission personnel in discussion with the author, February 2026.

⁸⁹ Former Department of Defense personnel in discussion with the author, February 2026.

⁹⁰ Private utility personnel in discussion with the author, February 2026.

Recommendations

Recommendations are divided into two categories: those for state policymakers to address energy security and resilience needs of military installations, and those for DoD and adjacent defense partners to support more meaningful state energy policymaking.

For State Policymakers

1) Establish a temporary working group to identify installation vulnerabilities and create formal coordination pathways

Given that installation needs are not systematically incorporated into state planning and that successful issue elevation is often dependent on informal or pre-existing relationships, Michigan should establish a temporary, cross-sector working group focused on installation energy security and resilience, led by the Governor's Office in partnership with organizations such as the MI Public Service Commission, the Michigan State Police, the National Guard, emergency management, and military installation leadership. Its purpose should be to identify current vulnerabilities, improve coordination among key stakeholders, and recommend more formal mechanisms for sustained engagement over time.

Findings and recommendations found in this report can serve as a starting point for discussions, but the first phase should focus on assessing critical-load needs, reviewing current restoration and emergency practices, identifying infrastructure bottlenecks, and clarifying where federal, state, and private-sector responsibilities begin and end. Because interviewees consistently described the state's role as a convenor and coordinator, establishing a working group can serve as a first step to encourage cross-sector problem-solving and partnership development, without assuming that the state alone is responsible for meeting federal national security objectives.

The working group should be time-bound and charged with producing concrete outputs, including a vulnerability assessment, a set of priority near-term actions, and proposals for how the state

should institutionalize ongoing defense-energy coordination. If concerns extend beyond the state, the Governor’s Office should use findings to elevate issues to regional and national actors.

2) Encourage the MI Public Service Commission to incorporate military installation needs into routine planning

Military installations should not be treated as generic “large-load customers” in energy planning. While they are customers of regulated utilities, they play a critical function in the national-security apparatus, requiring a higher degree of resilience, restoration priority, and planning than the current system typically considers.⁹¹ The PSC should develop formal pathways for incorporating installation needs into routine planning processes, including long-term resource planning and emergency coordination.

At a minimum, the PSC should work with installations to identify defense-critical loads, establish emergency contacts and restoration priorities, and better understand how DoD requirements differ from standard commercial reliability expectations. The Commission should also create regular opportunities for installations to engage in relevant proceedings, either through formal consultation channels or recurring stakeholder meetings, to help overcome the fragmentation that interviewees described about policymaking happening in different venues, on different timelines, and with little about how and when military concerns should be raised. This will provide a formal mechanism for establishing relationships and elevating installation-specific concerns.

This recommendation does not require the PSC to abandon responsibilities to protect ratepayers or grant blanket preferential treatment to installations. Instead, this calls for a more deliberate process for identifying which loads are truly mission-critical, where resilience needs differ from those of other customers, and how those differences should be reflected in planning and restoration practices.

⁹¹ Converge Strategies, LLC, *Regulatory Considerations for Utility Investments in Defense Energy Resilience* (National Association of Regulatory Utility Commissioners, 2021), <https://pubs.naruc.org/pub/9931AF59-1866-DAAC-99FB-17BF932AECF5>.

3) Improve regulatory and public funding frameworks for resilience investments in critical infrastructure

A recurring comment amongst interviewees was the acknowledgement that resilience investments are important but difficult to finance under current policy and regulatory arrangements. As such, state policymakers should pursue reforms that better recognize, finance, and prioritize resilience investments. Pathways can include:

- Legislative, through the authorization and appropriation of funding for resilience projects;
- Regulatory, where the PSC, in collaboration with utilities, could explore whether and when certain resilience investments are justified for cost recovery and can be accounted for in future rate structures; and
- Targeted public grant or pilot programs that support resilience investments.

While these tools may not always be politically feasible, they provide pathways for investment that go beyond the current system, which often relies on voluntary contributions and doesn't consider national defense-related benefits. State policymakers should place particular emphasis on the distribution system, which was highlighted as a current weak point, and whose improvements would support installations as well as surrounding communities to withstand current challenges and future threats. Framing investments as benefiting a wider set of users can help make investments more politically durable.

For the Department of Defense and Partners

4) Provide state policymakers with actionable information, regular engagement, and a shared vocabulary

The Department should develop a more proactive and structured education and outreach strategy targeted at state energy policy stakeholders. This effort should go beyond general awareness-building and include state policymakers and utilities with specific inputs needed to respond effectively. Information should be paired with regular installation briefings, standardized

information packets, and recurring engagement with the PSC, utilities, and relevant state agencies, which would help military needs become integrated within existing state planning systems. To improve communication and collaboration, DoD should work with state policymakers to co-develop a common, shared vocabulary around resilience, critical loads, and mission assurance so that both sides can communicate more clearly and avoid information asymmetries that are currently cited as being a barrier to progress. It is important to consider that improving communication does not require DoD to disclose confidential information, but rather identify what is nonclassified and can be shared regularly enough to support planning, investment, and emergency coordination.

5) Strengthen installation-level capacity to participate in state policymaking and utility processes

The Department cannot be an effective advocate for itself if installations lack the personnel, continuity, authority, and technical fluency needed to participate in energy policy discussions. As such, DoD should invest in stronger installation-level capacity for external policy engagement. This can include assigning dedicated staff with the expertise to engage in regulatory and utility processes and providing staff with clear authority to coordinate across installation leadership, community, and external stakeholders, and elevate emergency energy concerns before they become acute. The Department should also consider regional liaisons or “field operators” who can bridge the gap between state policymakers and military installations, maintain institutional knowledge across leadership changes, and translate technical energy issues into policy terms. In addition, the Department should also create more formal channels for peer learning across installations, allowing energy personnel to share lessons learned, best practices, and effective engagement strategies. While these recommendations don’t directly solve for the historical lack of funding allocated to military installations themselves, these targeted investments can be a strong starting point to begin building out DoD’s state-level engagement capabilities.

6) Continue using economic-development framing to build durable political support

As demonstrated in previous reports and current findings, defense issues are relevant for state and local policymakers when they are framed in terms of economic development, jobs, industrial competitiveness, and mission retention. Given the contribution of DoD to the state economy, DoD and partners should continue to frame installation resilience in national security terms alongside economic and regional development.

In practice, policy solutions should be paired with clear evidence around the local economic value of installations and the risks that unreliable power poses to mission continuity, employment, and future investment. Installations and defense partners should also deepen cross-sectoral partnerships (i.e., with the Michigan Economic Development Corporation, Office of Defense and Aerospace Innovation, Chambers of Commerce, local governments, and private defense companies) that can validate concerns and reinforce them politically. This can also help enhance the reputation of military bases in the community, encouraging support and awareness of installation missions, needs, and plans. Connecting the military base to jobs and economic investments in the region will increase installations' support amongst community members and make a more convincing case as to why state policymakers should act and care.

7) Develop clearer strategies that align defense resilience objectives with state clean energy goals

Rather than allowing defense resilience objectives and state clean energy goals to be framed as competing priorities, DoD and partners should be actively developing and communicating how resilience, reliability, and decarbonization priorities can reinforce and support one another. Research, as well as clear messages, examples, analytical research and evidence, and policies that demonstrate overlapping goals, can help DoD, state policymakers, and advocates demonstrate how these objectives can work together. As an example, as the Department continues exploring microgrids or distributed storage at installations, both decarbonization and resilience goals should be simultaneously stressed. Proactive narratives that advance both state and defense interests should be actively invested in and shared broadly, while also pushing back on the claim that clean-energy goals can undermine reliability or mission readiness. A more affirmative narrative

would help reduce political friction and support the development of coalitions around shared resilience objectives.

Conclusion and Next Steps

Today, the U.S. electric grid is facing intensifying capacity constraints, and will continue to do so given rising demand, challenges to modernize our transmission and grid infrastructure, and increasing extreme weather events. While these challenges will create significant barriers for all consumers, they will pose consequential risks for military installations, raising questions around whether the civilian grid can continue to support the energy security and resilience required to maintain “mission-readiness.”

This report finds that the central challenge is not simply one of inadequate supply nor one of insufficient attention from state policymakers. Instead, there is a structural governance gap, with state policymakers translating installation needs into ordinary customer demands, and the Department lacking the capacity to effectively advocate for itself in state policies and planning processes. The result is that energy security and resilience for military installations no longer becomes a shared priority across all stakeholders involved.

Ultimately, energy resilience for military installations sits at the intersection of national security, economic development, and the clean energy transition. Michigan demonstrates the seriousness of the challenge and an opportunity to respond more effectively. As this report demonstrated, progress will require engagement from state policymakers and the Department and its partners to act in parallel, with states being well-positioned to convene, coordinate, and secure more paths for engagement, and the Department strengthening its own ability to provide the information, continuity, and advocacy needed to be an active voice in solution-making. While more work needs to be done to properly understand current challenges, this report can serve as a starting point to address energy security and resilience for military installations across the country. If left unaddressed, this governance gap will continue to grow, but stakeholders should use this opportunity to build more resilient systems to better protect critical infrastructure and mission-readiness.

Appendices

Appendix A. Current State of the MISO Grid

In their January 2026 Long-Term Reliability Assessment, the North American Electric Reliability Corporation (NERC) classified MISO as a “high risk area,” as “projected resource additions do not keep pace with escalating demand forecasts and announced generator retirements.”⁹² This classification was elevated since their August 2025 report, where NERC determined that the reliability of MISO was at an “elevated risk” in the 2027 timeframe. In this study, NERC highlighted that MISO would move to high risk in the 2028-2031 timeframe if it continued with this pace of growth, as depicted in Figure 3.⁹³

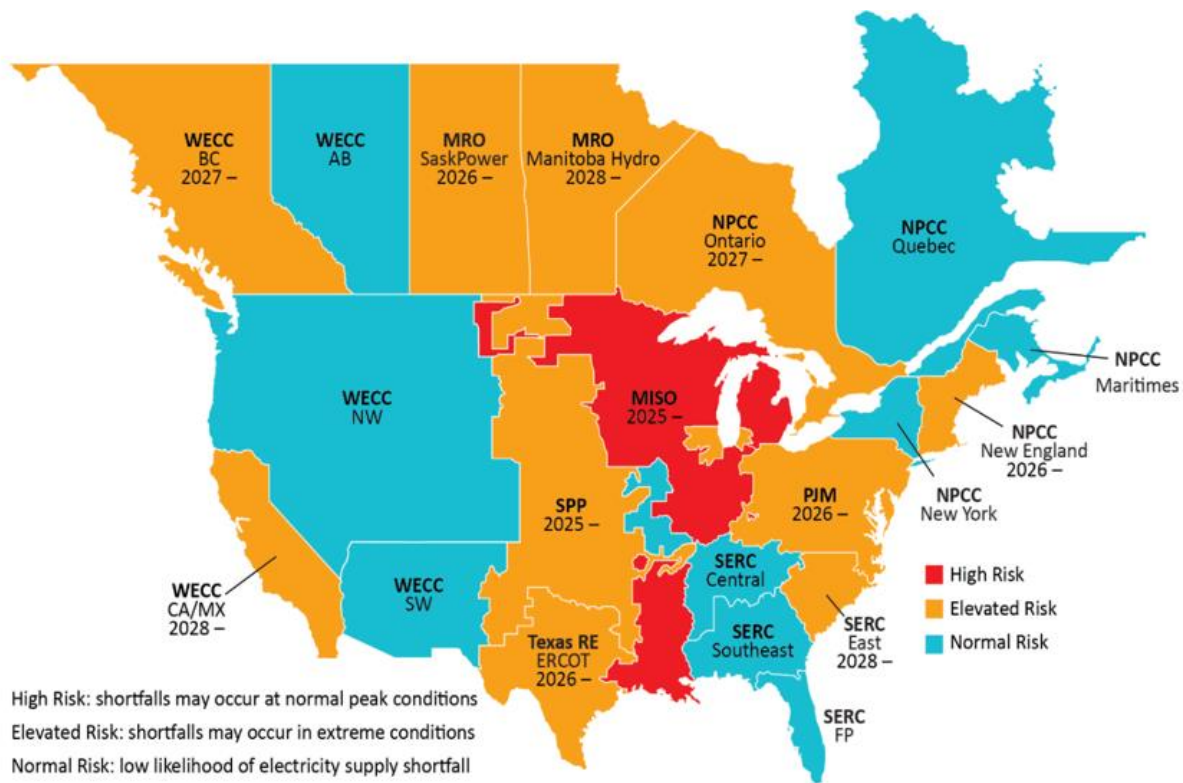


Figure 3. The North American Electric Reliability Corporation has categorized the MISO grid as “high risk” for reliability in the 2028-2031 timeframe.

⁹² North American Electric Reliability Corporation, *Long Term Reliability Assessment*.

⁹³ Walton, Robert, “NERC Upgrades MISO Reliability Risk After ‘Data Mismatch’ Discovered,” *Utility Dive*, June 18, 2025, <https://www.utilitydive.com/news/nerc-reclassifies-miso-reliability-risk-data-error/751015/>.

A major contributor to this classification is driven by the region's exponential growth in electricity demand, primarily driven by the new data centers and increased manufacturing. Studies show that 120 gigawatts (GW) of demand growth is projected over the next five years⁹⁴ and that the country will face a 25% increase in load by 2030.⁹⁵ According to Grid Strategies, the national 5-year load growth forecast has increased from 23 GW to 128 GW,⁹⁶ with the official forecast of electricity demand up from 2.8% to 8.2%. Of this growth, MISO is expected to see 9.1 GW of growth by 2029.⁹⁷

Today, the state relies on a diversity of electricity generation sources. The share of Michigan's total electricity generation from natural gas-fired plants increased from 12% in 2013 to 46% in 2023, and renewables only provided 11% of Michigan's electricity net generation in 2023, with wind energy providing 64% of that power.⁹⁸ Over the next few years, the electricity demand in Michigan is forecast to increase, primarily driven by the residential sector, despite decreases in overall electricity use amongst traditional industrial and commercial sectors.⁹⁹ Meeting this need will be critical, and filling this gap with conventional energy sources (i.e., oil, natural gas, coal) will be challenging as costs continue to rise and construction times lengthen.

Without new energy sources, it is unclear how the grid will maintain reliability in the future. Many Midwest states are currently exploring expanding their nuclear power plant sources, but it is unlikely that these new plants will be online before 2030.¹⁰⁰ Natural gas turbines are also currently oversubscribed, and costs for new power plants have increased exponentially.¹⁰¹ In addition,

⁹⁴ Grid Strategies, "The Era of Flat Demand is Over," April 2025, <https://gridstrategiesllc.com/wp-content/uploads/National-Load-Growth-Report-2024-April-Update-Presentation.pdf>.

⁹⁵ ICF, "Fast Forward: Electricity Demand Expected to Grow 25% by 2030," June 9, 2025, <https://www.icf.com/insights/energy/electricity-demand-expected-to-grow>.

⁹⁶ Wilson et al., *Strategic Industries Surging: Driving US Power Demand*.

⁹⁷ Wilson et al., *Strategic Industries Surging: Driving US Power Demand*.

⁹⁸ U.S. Energy Information Administration, *Michigan End-Use Energy Consumption 2023, Estimates* (n.d.), <https://www.eia.gov/beta/states/states/mi/overview>.

⁹⁹ Dan Scripps et al., *Michigan Energy Appraisal Summer Outlook 2025* (Michigan Public Service Commission, 2025), https://www.michigan.gov/mpsc/-/media/Project/Websites/mpsc/regulatory/reports/energy-appraisal/2025_Summer_Energy_Appraisal.pdf.

¹⁰⁰ David, Jon, "Next-Generation Nuclear? States Explore Potential of Small Modular Reactors Being Added to Future Electricity Mix," CSG Midwest, February 26, 2024, <https://csgmidwest.org/2024/02/26/next-generation-nuclear/>.

¹⁰¹ Anderson, Jared, "US Gas-Fired Turbine Wait Times as Much as Seven Years; Costs Up Sharply," *S&P Global*, May 20, 2025, <https://www.spglobal.com/commodity-insights/en/news-research/latest-news/electric-power/052025-us-gas-fired-turbine-wait-times-as-much-as-seven-years-costs-up-sharply>.

renewable energy developers often point to the transmission interconnection queue as being a bottleneck for new sources of electricity. As of last year, MISO had 1,603 active interconnection requests,”¹⁰² with reports stating that this includes over 170 GW of solar, wind, and storage, with many projects now facing delays of 4+ years.¹⁰³ And according to the North American Electric Reliability Corporation’s Interregional Transfer Capability Study, the Midwest region will also need an anticipated 10 to 14.9 terawatt miles of additional within-regional transmission in 2035 to meet moderate load and high clean energy growth scenarios.¹⁰⁴

As demand continues to increase, this will become a larger energy security and resilience concern for military installations, which must compete for a shrinking pool of resources to maintain their operations.

¹⁰² Mia Beams, “The U.S. Interconnection Challenge: Why Renewables Are Stuck in Line,” October 2, 2025, <https://www.cfr.org/articles/us-interconnection-challenge-why-renewables-are-stuck-line>.

¹⁰³ Zero Emission Grid Editorial Staff, *Interconnection Queues: The Obstacle in Renewable Projects*, ZEG Blog, October 3, 2025, <https://www.zeroemissiongrid.com/insights-press-zeg-blog/queue-backlog/>.

¹⁰⁴ “ITCS Report Summary Final,” n.d., accessed November 17, 2025, https://www.nerc.com/globalassets/initiatives/itcs/itcs_report_summary_final.pdf.

Appendix B. List of Organizations Interviewed

- Center for Grid Security at Securing America’s Future Energy (SAFE)
- Consumers Energy Company
- Converge Strategies, LLC
- Department of Planning and Economic Development, Macomb County
- DTE Energy
- Global Energy Center, The Atlantic Council
- Great Plains Institute
- ITC Holdings Corp.
- Michigan Army National Guard
- Michigan Department of Environment, Great Lakes, and Energy (EGLE)
- Michigan Public Service Commission (PSC)
- Michigan State Police
- Michigan State Senate
- Midcontinent Independent System Operator, Inc. (MISO)
- Muswell Orange, LLC
- ReliabilityFirst
- Office of Future Mobility and Electrification, Michigan Department of Labor and Economic Opportunity
- The Center for Climate and Security
- United States Army Garrison Detroit Arsenal
- University of Michigan
- Warner Norcross + Judd LLP

Appendix C. Sample List of Interview Questions

Background

- How are current grid capacity constraints impacting energy security and resilience in the state?
- How are military installation needs currently being elevated to policymakers? How are these needs being integrated into the state’s overall energy resilience and energy security strategy?
- DoD has outlined clear objectives around energy security and resilience. How do policymakers understand these rules? And are they currently being achieved?
- How do current state regulations define and incorporate “resilience” and “security” into grid planning?
- To what extent are military energy requirements considered within regulatory processes?
- What needs do military installations pose for the state’s overall energy resilience and energy security strategy? How well do you understand military installations? What about the challenges that military installations are facing?
- Have you previously communicated or collaborated with defense stakeholders to advance energy policies across the state? How do you currently coordinate, and what barriers and opportunities have emerged?

Strengths

- What current existing state programs or policies support energy security and resilience measures for critical infrastructure in general?
- What are state policymakers doing to increase energy security and resilience to support military installations? And how effective are they at helping to achieve DoD requirements?
- Do you think current state policies sufficiently prioritize resilience for critical loads?
- Are there any other policies or programs that military installations can or have used to secure additional resources or support for energy resilience?

Weaknesses

- What major vulnerabilities in the state energy system most threaten critical infrastructure like military bases?
- What are the biggest policy and/or regulatory challenges that military installations in the state currently face as it pertains to energy security and resilience?
- What policy and/or regulatory barriers prevent installations from accessing or benefiting from state energy programs?
- How have you been able to support installations and their current concerns? What are the primary technical or operational challenges in serving military installations?

Opportunities

- What role should the state play in enabling security and resilience investments at installations, and what role should be left to other stakeholders? How should responsibility for resilience and security investments be shared between utilities, ratepayers, and DoD?
- What specific policy levers do you think could help installations meet DoD resilience goals? What types of regulatory reforms could help align state rules with federal DoD resilience goals?
- What would you need from the DoD or installations to strengthen state support (data, coordination, long-term planning clarity)?
- Where do you see opportunities for cross-sectoral partnerships to improve energy security and resilience?
- What would you need from the DoD or installations to strengthen state support? Are there specific knowledge gaps? What questions would you need answered to be informed enough to engage or act?

Threats

- Where do you see the biggest gap between state energy policy and DoD energy resilience goals?

- If DoD is to achieve and enforce its energy security and resilience objectives, what are the three biggest barriers to achieving this? And how should they be overcome?

Appendix D. Methodology: Limitations and Qualitative Codebook Results

Several limitations should be noted about the methodology and when interpreting these findings. First, this report relies on Michigan as a single case study, which cannot fully capture the variation in grid conditions, regulatory structures, and political environments across the country. Second, the interview sample of 26 participants, while spanning multiple stakeholder types, is small and was shaped by access and time constraints to interview with appropriate stakeholders. As such, some perspectives may be underrepresented and not fully encompass all expertise and viewpoints. Third, because all interviews were anonymized, findings cannot be independently verified or attributed, which is a necessary tradeoff given the national security sensitivities of the subject matter. Finally, interviewees from utilities, state government, and the defense community each bring institutional interests that may shape their characterization of current challenges and opportunities.

All 26 interview transcripts were “qualitatively coded” to identify themes and patterns across gathered text. The following “codes” were first derived based on existing findings, and then evidence was manually assigned a code attribute. Each section consisted of categories of questions with codes and subcodes corresponding to relevant interviewee answers. The following qualitative codebook counts include:

State-of-Play

Code Categories	State / Regional Stakeholder Count	National / Energy Security Expert Count	Installation Personnel Count
Current State of the Grid			
Rising Demands	10	5	2
Caused By Data Centers	7	3	3

Caused By Electrification	6	2	0
Caused By Industrial Growth / Onshoring of Manufacturing	0	1	0
DoD Energy Security and Resilience Objectives			
Not Understood	8	1	0
Noted Barriers	5	2	0
Backup Generation on Installation Sites			
In Favor	7	0	1
Not In Favor	1	1	0
Experience with Department of Defense Personnel			
Yes	7	4	N/A
No	7	0	N/A
Relationship Between State Energy Policy and DoD Objectives			
Misaligned	5	3	2
Reinforcing Interests	2	0	1
Information that DoD Should Provide to State Policymakers			
Communication	3	2	0
Data / Modeling / Other Inputs	3	2	0

Strengths

Code Categories	State / Regional	National / Energy Security	Installation Personnel Count
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	Stakeholder Count	Expert Count	
Bulk System Reliability	8	0	1
Coordination Amongst Stakeholders	6	0	0
Defense Networks	0	1	0
State and Local Government Policy	8	0	1

Weaknesses

Code Categories	State / Regional Stakeholder Count	National / Energy Security Expert Count	Installation Personnel Count
Distribution Resilience	6	0	0
Planning			
Energy Resource Planning Integration	1	2	0
Long Term Planning	6	3	2
Long-term Investments			
Lack of Funds / Affordability	3	1	0
Lack of Authority	1	2	1
Political Volatility	4	0	1
Installation Challenges			
Mechanisms / Process for Engagement	5	1	1
Relationships	2	1	0

Personnel	1	4	2
Knowledge Gaps	1	4	0
Largest Barriers for DoD in State Policy Engagement			
Issue Alignment	5	4	1
Financing	1	4	2
Authority	2	3	1
Communication and Coordination	1	0	1

Opportunities

Code Categories	State / Regional Stakeholder Count	National / Energy Security Expert Count	Installation Personnel Count
Planning	4	2	1
Finance / Funding	2	2	0
Technology	1	0	1
Authority to Act	2	3	0

Threats

Code Categories	State / Regional Stakeholder Count	National / Energy Security Expert Count	Installation Personnel Count
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Future Vulnerability Types			
Cyber Attacks	11	1	2
Extreme Weather	8	2	1
Transmission, Distribution, or Power Generation	3	2	0
Supply Chain Fragility	4	1	1

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