To: House Committee on Natural Resources Republican Members **From:** Indian and Insular Affairs Subcommittee staff: Ken Degenfelder

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Date: Thursday, April 11, 2024

Subject: Oversight Hearing: "Energizing the Territories: Promoting Affordable and

Reliable Energy Sources for the U.S. Insular Areas"

The Subcommittee on Indian and Insular Affairs will hold an oversight hearing titled "Energizing the Territories: Promoting Affordable and Reliable Energy Sources for the U.S. Insular Areas" on Thursday, April 11, 2024, at 2:00 p.m. in 1324 Longworth House Office Building.

Member offices are requested to notify Ransom Fox (<u>Ransom.Fox@mail.house.gov</u>) by 4:30 p.m. (EST) on Wednesday, April 10, 2024, if their member intends to participate in the hearing.

I. KEY MESSAGES

- The Department of the Interior (DOI) continues to pick winners and losers by prioritizing and promoting the use of solar, wind, hydroelectric, geothermal, and ocean energy for the U.S. territories. They are ignoring the proven reliability of liquefied natural gas (LNG), nuclear, biomass, and other conventional and affordable energy options.
- Costly, duplicative, and burdensome climate policies will limit the availability of affordable and reliable energy options to the Insular areas and further erode selfdetermination.
- Global emissions reduction can be achieved more effectively through innovation and the free market.

II. WITNESSES

- **Mr. John Brewer**, Director, Office of Insular and International Affairs, U.S. Department of the Interior, Washington, D.C.
- Mr. Kyle Fleming, Chairman, U.S. Virgin Islands Water and Power Authority, St. Croix, U.S. Virgin Islands
- **Mr. Kenny Stein,** Vice President of Policy, Institute for Energy Research, Washington, D.C.

- **Mr. Travis Fisher,** Director of Energy and Environmental Policy Studies, CATO Institute, Washington, D.C.
- **Dr. Gregory Guannel,** Director, Caribbean Green Technology Center, St. Thomas, U.S. Virgin Islands [Minority Witness]

III. BACKGROUND

This hearing will focus on the impacts of the Biden administration's energy policies on the U.S. territories. The administration has pursued a policy of picking winners and losers with respect to energy sources by prioritizing and promoting renewable energy rather than pursuing an all-of-the-above energy approach that empowers territories to develop the mix of energy resources that best meets their needs. Access to reliable and cost-effective energy sources is critical for the U.S. territories due to their susceptibility to severe weather and limited energy production capabilities.

Concerns have been raised in the U.S. territories that prioritizing renewable energy limits their economic potential and increases the frequency and duration of power outages. There have been calls for the territories to be given more self-determination in the prioritization of their energy sources.

This hearing will specifically focus on the policies of the DOI's Office of Insular Affairs (OIA). The OIA helps coordinate federal policy for the U.S. territories, or Insular areas, which include American Samoa, Guam, the Commonwealth of the Northern Mariana Islands (CNMI), and the U.S. Virgin Islands (USVI). OIA does not administer programs or policies relating to Puerto Rico.¹

U.S. Territory Energy Profiles

American Samoa

American Samoa is an unincorporated territory of the U.S., comprising of islands in the eastern Samoan archipelago. American Samoa is in the Polynesian region of the south-central Pacific Ocean. It includes the six eastern Samoan islands of Tutuila, Tau, Olosega, Ofu, Aunuu, Swains Island, and the uninhabited Rose Atoll. The capital is Pago Pago, on Tutuila, which is the main port and commercial center of American Samoa. The elected and traditional leaders seek to preserve a customary way of life as "nationals but not citizens," based on allegiance to the U.S. and reflected in strong patriotism and a high rate of U.S. military service. In 2022, American Samoa's gross domestic product (GDP) per capita was approximately \$19,673, which is about one-fourth that of the United States GDP per capita estimate of \$76,329.

¹ Puerto Rico. https://www.doi.gov/oia/islands/puertorico.

² For more information on American Samoa see "American Samoa." Encyclopedia Britannica. https://www.britannica.com/place/American-Samoa.

³ The World Bank, GDP per capita, U.S. and American Samoa, 2022. https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?year_high=null&locations=AS-US.

Petroleum: According to the U.S. Energy Information Administration (EIA), "American Samoa does not produce or refine crude oil and depends on imported petroleum products." Primarily, American Samoa generates electricity through refined petroleum products such as diesel fuel to meet its energy needs. EIA has estimated that consumption of petroleum products rose to 2,600 barrels in 2021.

Electricity: "Because of its isolated geographic location, American Samoa must produce all the electricity it consumes." American Samoa has approximately 50 megawatts of total electricity generating capacity through its two generation facilities on Tutuila, which are managed by the American Samoa Power Authority (ASPA). Generators that primarily run on diesel provide over nine-tenths of American Samoa's electricity. 9

"In 2022, per capita electricity sales in American Samoa were about three-tenths that of the United States." Commercial use has been estimated to constitute approximately half of all electricity sales in the territory. The residential sector comprises approximately two-fifths of electricity demand, and the industrial sector accounts for approximately one-sixth of demand. Because of their geographic location and isolation in the Pacific, American Samoa and other U.S. territories have some of the highest electricity prices in the world. Prices for electricity in the territories are closely tied to fuel prices at world markets.

Renewables: "In 2021, solar power constituted 11% of American Samoa's electricity generating capacity and about 3% of its electricity generation." Ongoing challenges to onshore wind development in American Samoa include grid stability and tropical storms. ¹⁵

Natural Gas: "American Samoa has no known natural gas reserves and does not produce or consume natural gas." ¹⁶

CNMI

The CNMI is an unincorporated territory of the U.S. composed of 14 islands and islets in the western Pacific Ocean, 100 miles north of Guam. The Mariana Islands are a chain of volcanic mountain peaks and uplifted coral reefs. The principal inhabited islands in the CNMI are Saipan, Guguan, Tinian, and Rota. The northern, largely uninhabited islands include Farallon de Medinilla, Anatahan, Sariguan, Gudgeon, Alamagan, Pagan, Agrihan, Asuncion, Maug Islands,

⁴ U.S. Energy Information Administration, "American Samoa." https://www.eia.gov/state/analysis.php?sid=AQ.

⁵ Id.

⁶ Id.

⁷ Id

⁸ U.S. EIA, International, American Samoa, Electricity, Electricity capacity, Download Export CSV (table). https://www.eia.gov/state/data.php?sid=AQ.

⁹ U.S. Energy Information Administration, "American Samoa." https://www.eia.gov/state/analysis.php?sid=AQ. ¹⁰ Id.

¹¹ Id.

¹² Id

¹³ American Samoa Power Authority, About Us. https://www.aspower.com/aspa-about.html.

¹⁴ U.S. Energy Information Administration, "American Samoa." https://www.eia.gov/state/analysis.php?sid=AQ.

¹⁵ Id.

¹⁶ Id.

and Farallon de Pajaro. ¹⁷ In 2020, CNMI's gross domestic product (GDP) per capita was approximately \$17,302. ¹⁸ "The Northern Mariana Islands are vulnerable to tropical storms including powerful typhoons and typically hit by at least one typhoon each year." ¹⁹

Petroleum: According to the EIA, the "CNMI does not have any proved crude oil reserves, production, or petroleum refineries." Refined petroleum products were estimated to be the territory's largest import in 2021 and accounted for nearly one-fifth of CNMI's total import costs that year. ²¹

Electricity: CNMI's Commonwealth Utilities Corporation (CUC) provides electricity and drinking water on all three of the CNMI's three primary islands of Saipan, Tinian, and Rota. ²² "Five diesel-fueled power plants—three on Saipan and one each on Tinian and Rota—supply the territory with electricity." On the islands of Tinian and Rota, the CUC owns electricity plant sites, but independent power producers manage electricity generation. ²⁴ A significant portion of the territory's electricity generating capacity is located on Saipan, the CNMI's most populated island. ²⁵

Renewables: Due to the abundant sunshine in the Pacific, solar energy is the CNMI's primary available renewable energy resource. ²⁶ "CNMI also has installed several small-scale wind projects, and the islands of Saipan, Tinian, and Rota may have wind resources suitable for larger commercial turbines, but potential wind turbine sites are limited because the islands are mountainous and suitable land is scarce." ²⁷ Should the territory seek wind energy development, turbines must withstand storms, including typhoons. Additionally, wind development must take into account impacts on the operations of military installations in the region and on the island chain's bird species. ²⁸

Natural gas: CNMI does not currently have any natural gas reserves and does not import or consume natural gas. However, proposals have recently been made for the use of LNG as a generating fuel and for the construction of LNG storage tanks at CNMI power plants.²⁹

 $\frac{\text{https://www.coris.noaa.gov/portals/cnmi.html\#:}\sim:\text{text=The}\%\,20\text{principal}\%\,20\text{inhabited}\%\,20\text{islands}\%\,20\text{are,Islands}\%\,2C\%\,20\text{and}\%\,20\text{principal}\%\,20\text{inhabited}\%\,20\text{islands}\%\,20\text{are,Islands}\%\,2C\%\,20\text{and}\%\,20\text{principal}\%\,20\text{inhabited}\%\,20\text{islands}\%\,20\text{are,Islands}\%\,2C\%\,20\text{and}\%\,20\text{principal}\%\,20\text{inhabited}\%\,20\text{islands}\%\,20\text{are,Islands}\%\,2C\%\,20\text{and}\%\,20\text{principal}\%\,20\text{inhabited}\%\,20\text{islands}\%\,20\text{are,Islands}\%\,2C\%\,20\text{and}\%\,20\text{principal}\%\,20\text{inhabited}\%\,20\text{islands}\%\,20\text{are,Islands}\%\,2C\%\,20\text{and}\%\,20\text{principal}\%\,20\text{inhabited}\%\,20\text{in$

https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=MP.

¹⁷ For more information on the CNMI.

¹⁸ The World Bank, GDP per capita, Northern Mariana Islands.

¹⁹ U.S. Energy Information Administration, "Northern Mariana Islands." https://www.eia.gov/state/print.php?sid=CQ.

²⁰ Id.

²¹ Id.

²² Id.

²³ Id.

²⁴ Id.

²⁵ Commonwealth Utilities Corporation, Services, Electric Power Generation. https://www.cucgov.org/about-cuc/services/.

²⁶ U.S. Energy Information Administration, "Northern Mariana Islands." https://www.eia.gov/state/print.php?sid=CQ.

²⁷ Id.

²⁸ Id.

²⁹ Id.

Guam

Guam is an organized, unincorporated U.S. territory in the northwest Pacific Ocean. It is the largest, most populous, and southernmost island of the Mariana Archipelago. It is governed under the Organic Act of Guam, passed by the U.S. Congress and approved by President Truman on August 1, 1950.³⁰ The development of Guam into an important home for U.S. military bases has brought about profound changes in the island's agricultural patterns since World War II, and Guam now imports most of its food.³¹ Guam has a vibrant tourism sector, drawing visitors from many Asian nations, and a robust local and regionally interconnected economy, with commerce ties to the Philippines, South Korea, and Japan. Most of Guam's population of approximately 170,000 residents are of native Chamorro heritage.³² In 2021, Guam's GDP per capita was approximately \$35,904.³³

Petroleum: According to the EIA, "Guam has no crude oil reserves, petroleum production, or refineries. The island's only port, located at Apra, receives all of the territory's imported petroleum products, which come primarily from Asia."³⁴ Gasoline has been estimated to account for approximately two-fifths of petroleum sales in Guam. Diesel fuel, which is primarily used to generate electricity, contributes nearly two-fifths of the island's petroleum sales.³⁵

Electricity: The Guam Power Authority (GPA) provides all electricity to Guam's population.³⁶ "GPA owns and manages the island's electric grid, which is made up of about 1,800 miles of transmission and distribution lines."³⁷ GPA's capacity is estimated to be approximately 465 megawatts.³⁸ Diesel and residual fuel oil account for approximately four-fifths of GPA's electricity capacity.³⁹ "Guam's residential electricity costs, including fuel surcharges, are more than two times higher than the U.S. average, although Guam's residential electricity rates are typically the lowest among the nearby Pacific islands."⁴⁰

In 2022, it was estimated that Guam's commercial sector was the largest energy consumer, accounting for 36% of Guam's total electricity usage. Residential households made up 32% of electricity consumption. The U.S. military accounted for 20% of electricity use and the Government accounted for 12%."⁴¹

Renewables: It has been estimated that there is wind energy potential in Guam; however, there are unique issues with wind turbine siting. ⁴² Due to Guam's geographic location in the Pacific

³⁰ P.L. 81-630.

³¹ "Challenging Residents to Grow Produced, Reduce Imported Foods." The Guam Daily Post, January 5, 2022. https://www.postguam.com/news/local/challenging-residents-to-grow-produced-reduce-imported-foods/article b75ea9aa-6c63-11ec-89b4-e78919e1742d.html.

³² For more information on Guam see "Guam." Encyclopedia Britannica. https://www.britannica.com/place/Guam.

³³ The World Bank, GDP per capita, Guam. https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=GU

³⁴ U.S. Energy Information Administration, "Guam." https://www.eia.gov/state/analysis.php?sid=GQ.

³⁵ Id.

³⁶ Id.

³⁷ Id.

³⁸ Id.

³⁹ Id.

⁴⁰ Id.

⁴¹ Id.

⁴² Id.

Ocean, it regularly encounters seismic activity and is also susceptible to Pacific Typhoons. For wind energy development to be sustainable, it must be able to withstand both earthquakes and typhoon storms. ⁴³ Other challenges include the island's small electric grid and maintaining consistent, reliable energy. ⁴⁴ As a result, wind energy generation in Guam is an ongoing challenge.

Natural gas: "Guam has no natural gas reserves and does not produce or use natural gas." ⁴⁵ However, the GPA plans to construct a new 198-megawatt power plant by the end of 2025 that would use LNG or ultra-low-sulfur diesel fuel for electricity generation. ⁴⁶

USVI

The USVI is an organized unincorporated island territory of the U.S., situated at the eastern end of the Greater Antilles, about 40 miles east of Puerto Rico, in the northeastern Caribbean Sea. The territory is geographically part of the Virgin Islands group, which also contains its near neighbor, the British Virgin Islands. The territory is composed of three large islands—St. Croix, St. John, and St. Thomas—and about 50 small islets and cays. The capital is Charlotte Amalie, on St. Thomas. ⁴⁷ USVI is a large producer of rum, and it benefits greatly from a tax cover-over on rum where most of the tax on the production of rum is given back to the USVI if it's sold in the U.S. mainland. In 2021, USVI's gross domestic product (GDP) on a per capita basis was approximately \$41,976.

Petroleum: According to the EIA, the "USVI has no known crude oil reserves and does not produce crude oil, although a U.S. Geological Survey assessment in 2013 identified the potential for undiscovered crude oil resources in a subsea formation south of the islands." Located in St. Croix, the Hovensa refinery was once a significant component of the USVI's ability to refine petroleum until it was ordered to close in 2012. The refinery was sold in the fall of 2021 with the hopes it would reopen in subsequent years. In November 2022, the U.S. Environmental Protection Agency (EPA) ordered the refinery's owners to obtain a new air pollution permit before the facility could resume operations. In 2023, a federal court ultimately held that the EPA could not mandate that the Hovensa refinery owners obtain new pollution permits before

⁴³ Id.

⁴⁴ Id.

⁴⁵ Id.

⁴⁶ O'Connor, John, "GPA aims to extend operation of its aged Cabras plant in Piti," The Guam Daily Post. https://www.postguam.com/news/local/gpa-aims-to-extend-operation-of-its-aged-cabras-plant-in-piti/article_bdc12316-1ace-11ee-ac44-ef90de44223d.html. and O'Connor, John, "Cabras 2 offline for overhaul," The Guam Daily Post. https://www.postguam.com/news/local/cabras-2-offline-for-overhaul/article_9d2f5c26-9144-11ed-83ca-9ba66b324929.html.

⁴⁷ For more information on the U.S. Virgin Islands see "United States Virgin Islands." Encyclopedia Britannica. https://www.britannica.com/place/United-States-Virgin-Islands.

⁴⁸ The World Bank, GDP per capita (current US\$), United States, Virgin Islands. https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=US-VI.

⁴⁹ U.S. Energy Information Administration, "US Virgin Islands." https://www.eia.gov/state/analysis.php?sid=VQ.
⁵⁰ Id.

⁵¹ Sanicola, Laura, "Bankruptcy judge approves \$62 million Limetree Bay sale to Jamaican company," Reuters (December 22, 2021). https://www.reuters.com/business/energy/bankruptcy-judge-approve-62-million-limetree-bay-sale-jamaican-company-2021-12-21/.

⁵² U.S. Energy Information Administration, "US Virgin Islands." https://www.eia.gov/state/analysis.php?sid=VQ.

resuming operations.⁵³ As of early 2024, the refinery has not resumed its operations.⁵⁴

Electricity: The USVI has two separate electricity grids, both with their own generating facilities, located on the islands of St. Croix and St. Thomas.⁵⁵ "The generating units are managed by the USVI Water and Power Authority (WAPA), an independent governmental agency. Generating capacity includes combustion and steam turbines powered with fuel oil or propane, as well as some solar-powered facilities owned by independent power producers, houses, and businesses with customer-sited rooftop solar panels."⁵⁶ The USVI relies on imported petroleum products for nearly all of its utility electricity generation.⁵⁷ It is estimated that propane fuel supplies nearly 60% of electricity generation needs, while fuel oil accounts for approximately 40%, and solar power provides approximately 2% of electricity supply.⁵⁸

Renewables: "Less than 10% of the USVI's electricity generating capacity is fueled by renewable resources, all of it solar power." Many residents in the USVI have installed small-scale rooftop panel systems, which make up approximately four-fifths of the USVI's solar capacity. Utility-scale (1 megawatt or greater) solar energy generating facilities account for approximately one-fifth of renewable generation in the USVI. 60

Natural gas: "The USVI does not produce natural gas and has no known natural gas reserves." However, the U.S. Geological Survey has estimated that there is potential for untapped natural gas reserves in proximity to the USVI. 62

The Biden Administration's Energy Policy in the Territories

There are several federal grant and loan programs available to American Samoa, CNMI, Guam, and the USVI to address issues such as climate research, improving energy security, coral reef mitigation efforts, energy efficiency, energy conservation, and renewable energy resources, to name a few.

Among those programs are the Energizing Insular Communities (EIC) program through the OIA. According to the OIA's website, the EIC program "provides grant funding for energy strategies that reduce the cost of electricity and reduce dependence on foreign fuels." Adding that "this program is intended to support the Secretary's priority to utilize our natural resources by

⁵⁸ Virgin Islands Water and Power Authority, Megawatt hours Production Report. https://www.viwapa.vi/customer-service/megawatt-hours-production-report.

Mindock, Clark, "EPA can't force Virgin Islands refinery to obtain new permit, U.S. court says," Reuters.
 https://www.reuters.com/legal/litigation/epa-cant-force-virgin-islands-refinery-obtain-new-permit-us-court-says-2023-07-25/.
 EPA, Chemical Removal Status at the Refinery on St. Croix. https://www.epa.gov/system/files/documents/2023-11/st-croix-to-unit-says-2023-07-25/.

refinery-community-update-nov-2023 1.pdf. 55 U.S. Energy Information Administration, "US Virgin Islands." https://www.eia.gov/state/analysis.php?sid=VQ. 56 Id.

⁵⁷ Id.

⁵⁹ U.S. Energy Information Administration, "US Virgin Islands." https://www.eia.gov/state/analysis.php?sid=VQ.

⁶¹ Id

⁶² Schenk, Christopher J., et al., "Assessment of Undiscovered Technically Recoverable Oil and Gas Resources of Puerto Rico and the Puerto Rico-U.S. Virgin Islands Exclusive Economic Zone," U.S. Geological Survey, Fact Sheet 2013-3101. https://pubs.usgs.gov/publication/fs20133101.

⁶³ U.S. DOI Energizing Insular Communities (EIC). https://www.doi.gov/oia/energizing-Insular-communities.

ensuring American energy is available to meet security and economic needs."⁶⁴ The OIA selects and awards grants each year, with a preference for proposals that reduce a territory's electricity costs, are identified in the territory's strategic energy plan or energy action plan, and propose to expend the funds within a two to three-year time period.⁶⁵ Selected awards in FY2023 include:

- Funding for the American Samoa Power Authority to implement projects, including the installation of grid routers, the procurement of 20 electric pickup trucks, and the installation of electric vehicle chargers;
- Funding for the Guam 100 study, which will evaluate options to reach 100% renewable energy;
- Funding for several solar photovoltaic systems at public facilities in the CNMI and a
 residential rebate program for in-store rebate vouchers for energy-efficient or ENERGY
 STAR appliances and air conditioning systems; and
- Funding for the procurement of battery electric vehicles for the USVI government fleet, solar canopies co-located with fast chargers and battery energy storage, two all-electric marine vessels, and marine-based fast chargers.⁶⁶

The EIC program makes it clear that the Biden administration continues to prioritize "renewable energy and grid infrastructure." ⁶⁷

According to the OIA's FY 2024 Budget Justification, the EIC grant program will "adjust accordingly" to assist in the Biden administration's efforts to transition the territories to renewables, such as solar and battery power. 68 Unfortunately, this would force Insular areas to ignore energy sources including LNG, nuclear, biomass, and other options that are proven to be more reliable than intermittent renewable sources. 69

The OIA continues to overlook energy security and reliability from baseload sources for Insular areas that suffer from frequent outages. Addressing reliability is critical as the territories are prone to severe weather and unstable electricity transmission infrastructure. Instead of mandating EIC grant program dollars support renewable-only energy generation, OIA should support an all of the above approach for electricity generation, ultimately supporting Insular area self-determination.

The Need for Reliable Energy

Currently, all of the U.S. territories meet the majority of their energy needs through imported petroleum products. ⁷⁰ However, the territories have set aggressive goals for renewable energy. American Samoa adopted a goal to obtain 50% of its energy from renewable energy resources by

⁶⁴ Id.

⁶⁵ U.S. Department of the Interior, Office of Insular Affairs, FY 2025 Office of Insular Affairs Greenbook, p. 56-57, https://www.doi.gov/media/document/fy-2025-office-insular-affairs-greenbook.

⁶⁶ Id. p. 58.

⁶⁷ Office of Insular Affairs FY 2024 budget justification at 55. https://www.doi.gov/sites/doi.gov/files/fy2024-oia-greenbook.pdf-508.pdf.

⁶⁸ Id.

⁶⁹ Id.

⁷⁰ Such as, motor gasoline, jet fuel, diesel fuel, residual fuel, and propane.

2025 and 100% by 2040, primarily with solar energy. ⁷¹ The most recent data available from the EIA suggests that American Samoa is not on track to meet the goal of obtaining 50% of its energy from renewables by 2025. 72 Guam's legislature enacted a renewable energy portfolio standard (RPS) goal in 2008 "for renewable sources to generate 8% of the island's electricity by the end of 2020"⁷³ and increasing up to 10% of electricity sales by 2025, and 25% by 2035.⁷⁴ In 2019, "Guam's legislature updated the voluntary standard so renewables would provide 50% of the island's electricity sales by 2035 and 100% by 2045. In late 2023, the legislature accelerated the 100% target ahead five years to 2040."⁷⁵ Renewables accounted for 6% of Guam's electricity generation in 2021, according to the EIA, and it does not appear that Guam is on track to meet the renewable targets. ⁷⁶ In 2006, the CNMI set aggressive renewable energy targets of obtaining 10% of its electricity from renewables by 2008 and 80% by 2014, which were not met.⁷⁷ In 2014, the CNMI reduced the target to 20% by 2016, which also was not met. 78 The USVI has a goal for 25% of the islands' peak demand electricity generating capacity to be fueled by renewable energy sources by 2020 and 30% by 2025, and 50% by 2044. 79 Although the EIA states "less than 10% of the USVI's electricity generating capacity is fueled by renewable resources,"80 the Department of Energy has stated that the USVI is on track to meet the 2025 goal of 30% with the announcement of new solar-plus-storage systems. 81

There are several potential explanations for why the territories have been unsuccessful in meeting some or all their renewable goals, including the high costs of installing the infrastructure to support renewable energy grids, the lack of available workforce, and the difficulty in finding suitable sites with enough land mass needed to support solar grids and wind farms. 82

Furthermore, there are concerns regarding whether prioritizing renewable energy would cause energy reliability issues in the territories and increase the frequency and duration of outages.

Reliability is a major issue for solar and wind energy due to diurnal mismatch and fragility against severe weather. Diurnal mismatch describes the problem that solar generation's peak occurs four to six hours before demand peaks, and wind generates more at night when demand is low. 83 In other words, solar and wind produce more power when demand is low and not enough power when demand is high.

⁷¹ U.S. Energy Information Administration, "American Samoa", https://www.eia.gov/state/?sid=AQ.

⁷² Id.

⁷³ U.S. Energy Information Administration, "Guam." https://www.eia.gov/state/analysis.php?sid=GQ.

⁷⁴ Id.

⁷⁵ Id.

⁷⁶ Id.

 $^{^{77}}$ CNMI, House of Representatives, H. B. No. 18-165, SD1. $\underline{\text{https://cnmileg.net/documents/files/PL\%2018-62\%20(HB\%2018-165\%20SD1\%20Renewable\%20Energy\%20Portfolio\%20Amendment).pdf.}$

⁷⁸ Id

⁷⁹ U.S. Energy Information Administration, "U.S. Virgin Islands"., https://www.eia.gov/state/?sid=VQ.

⁸¹ Kamoji, Jerusha. "US Virgin Islands to Cover 30% of Power Needs with Solar-plus-Battery Systems." PR Magazine International, December 7, 2023. https://www.pv-magazine.com/2023/12/07/us-virgin-islands-to-cover-30-of-power-needs-with-solar-plus-battery-systems/.

⁸² Rising Costs' Impact On Renewable Power Generation. https://payneinstitute.mines.edu/pc-rising-costs-impact-on-renewable-power-generation/

⁸³ The Limits to Green Energy: A renewable grid faces severe obstacles. https://www.cato.org/regulation/winter-2022-2023/limits-green-energy#the-main-obstacles-to-a-nbsp-100-renewable-grid.

Furthermore, the territories are especially prone to severe weather incidents, which pose a significant threat to solar and wind energy infrastructure. According to the Federal Emergency Management Agency (FEMA), Hurricanes Irma and Maria in 2017 caused significant damage to large, ground-mounted solar panel systems. ⁸⁴ The damage was so severe that it hindered the full return of electrical utility service to the islands. In Guam, the 2023 Typhoon Malwar ripped off residential solar panels from rooftops, leaving thousands without power for over a week. ⁸⁵

The importance of reliability for energy sourcing cannot be overstated, particularly given the U.S. military bases in Guam and the planned re-opening of the U.S. Air Force's airfield in Tinian. ⁸⁶ The Guam Power Authority provides power to the U.S. military bases in Guam, and thus, disruptions affect U.S. military readiness capabilities. ⁸⁷

As Committee Republicans highlighted during previous hearings, the proven reliability of LNG, nuclear, biomass, and other options should not be ignored, especially when attempting to meet the energy needs of territories prone to severe weather and unstable electricity transmission infrastructure.⁸⁸

The Need for Energy Self-Determination and an All-of-the-above Energy Approach

The Biden administration's sole prioritization of renewable energy sources along with restrictions on LNG and other base-load source production have driven up utility costs for Americans across the states and territories. The residents of the territories, in particular, feel the effects of these high costs as they pay among the highest rates for utilities in the U.S. while having among the lowest income levels.

In contrast to the Democrats' strategy of increased spending and expansion of the federal bureaucracy, Republicans are focused on promoting territorial self-determination and decreasing duplicative and burdensome regulations. New federal spending will not be the cure-all for the energy challenges facing the Insular areas. Congress should instead work to improve existing programs and functions that support resiliency in each Insular territory, promote innovation in their energy sectors, and embrace an all-of-the-above approach to meeting their energy needs.

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⁸⁴ Hurricanes Irma and Maria in the U.S. Virgin Islands Building Performance Observations, Recommendations, and Technical Guidance. https://www.fema.gov/sites/default/files/2020-07/mat-report_hurricane-irma-maria_virgin-islands.pdf.

⁸⁵ Typhoon Mawar flips cars, cuts power on Guam as scope of damage emerges in US Pacific territory. https://apnews.com/article/super-typhoon-mawar-guam-pacific-fd49b810f85f69d1e86f9ee6b0cc3583.

⁸⁶ Air Force plans return to WWII-era Pacific airfield on Tinian. https://www.stripes.com/branches/air_force/2023-12-26/tinian-airfield-reclaimed-wwii-air-force-12473942.html.

⁸⁷ CRS. Guam: Defense Infrastructure and Readiness. https://crsreports.congress.gov/product/pdf/R/R47643.

⁸⁸ H.R. 2780 (117th Congress), https://www.congress.gov/117/bills/hr2780/BILLS-117hr2780ih.pdf.