



Federated States of Micronesia National Energy Policy 2024–2050





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We extend our heartfelt gratitude to all who contributed to this policy development, particularly the National and States Energy Workgroups. Special thanks to the stakeholders who actively participated at the 2024 National Energy Forum, providing valuable insights and contributions to the final policy review.

Our sincere appreciation goes to the esteemed members of the 13th State and National Leadership Conference (13th SNLC) for their guidance and endorsement of the 2024–2050 National Energy Policy. Their support for both the short – term and long-term goals, and the FSM SDG 7 Roadmap has been invaluable. The SDG7 Roadmap for FSM has been developed in collaboration with the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP). The Energy Division sincerely appreciates ESCAP’s support in the development of this roadmap

Through the collaboration endeavors of our Energy Division and support from our development partners, significant strides have been made towards establishing a more sustainable and effective energy policy framework. The success of this policy relies on continued support and collaboration among all stakeholders. Developing a comprehensive implementation plan is essential, and we encourage continued dialogue and partnerships to transform this policy into actionable outcomes.

Furthermore, we emphasize the urgent necessity of formulating an Energy Act to provide robust support and regulation within the energy sector. As this sector evolves, it presents opportunities and challenges that demand a proactive and integrated approach. The proposed Energy Act will be vital in fostering innovation, enhancing sustainability, and ensuring equitable access to energy resources.

Thank you to all our esteemed stakeholders for your steadfast commitment to advancing our shared goals. Together, we can forge a resilient energy future that meets the needs of both our communities and the environment.

We look forward to continuing this collaborative journey in the coming years.



Hon. Elina P Akinaga
SECRETARY
DEPARTMENT OF RESOURCES AND DEVELOPMENT



The President
Palikir, Pohnpei
Federated States of Micronesia

Foreword



As of 2024, the Federated States of Micronesia (FSM) faces significant energy challenges, primarily due to its heavy reliance on imported petroleum fuels. Currently, these fuels account for about 92% of our national energy consumption, being used almost equally for electricity generation and transportation. This dependency has resulted in high energy costs, making the FSM one of the costliest energy markets in the Pacific. The recent surge in global fuel prices has exacerbated the situation, leading to increased prices for basic goods and services and imposing a substantial economic burden on our nation.

Currently, the FSM spends approximately USD 50 million annually on fuel imports, which constitutes nearly 15% of our GDP. This financial strain is compounded by concerns about energy security, largely due to our geographical nature, spreading over 65 inhabited islands across 1.5 million square miles. This situation complicates energy infrastructure development and creates marked disparities in energy access between urban main islands and the more remote, inhabited outer islands—leading to approximately 25% of our population still lacking access to electricity. Extending energy services to these remote islands is increasingly complex and costly.

Despite these challenges, the FSM is resolutely committed to reducing its carbon footprint, aligning ourselves with global endeavors to combat climate change. While our nation contributes minimally to global emissions, we recognize the importance of sustainable development and the need for energy resilience.

These domestic and global challenges underscore the urgency for a comprehensive energy policy that ensures universal energy access, while promoting sustainability, resilience, and affordability. Recognizing the invaluable support of our development partners, we have shaped this Energy Policy to guide our priorities through 2050. This new policy replaces the 2012 framework with enhanced strategies for delivering energy services more effectively to the citizens of FSM.

I would like to extend my heartfelt gratitude to everyone involved in this visionary undertaking. My special thanks to the Pacific Community for spearheading the policy development, with generous support from the European Union.

A handwritten signature in brown ink, reading "Wesley Simina".

H.E. Wesley Simina
PRESIDENT
FEDERATED STATES OF MICRONESIA

Executive Summary

This FSM National Energy Policy 2024–2050 sets out a strategic framework focusing on energy access and affordability for all citizens of the Federated States of Micronesia (FSM). It aims to address the nation’s energy challenges and secure reliable, sustainable, and cost-effective energy services for its residents. The policy outlines the national energy landscape, current priorities, and specific targets. It provides guiding principles to help decision-makers allocate resources effectively, ensuring that through extensive consultations, the populace’s desires for access to affordable and reliable energy is met.

The guiding principles form the foundation of FSM’s commitment to a sustainable and inclusive energy future. Providing reliable and affordable energy services for all citizens is paramount, ensuring no-one is left behind in the transition to sustainable energy systems. By emphasizing accessibility, the policy aims to bridge the energy divide and empower remote outer island communities and households isolated from the main grid with crucial infrastructure services needed for growth. Ensuring energy affordability across the four states is a top priority, given that FSM residents currently face one of the world’s highest electricity tariffs, with a weighted average of USD 0.52 per kilowatt-hour (kWh). In some island communities, the cost exceeds one dollar per kWh. The policy promotes affordability and renewable energy concurrently. Recognizing these challenges, the policy strives to implement measures that promote cost-effective energy solutions while enhancing energy efficiency and sustainability. By prioritizing affordability, the policy aims to reduce the financial burden on households and businesses, while promoting economic growth and development.



Capacity building is essential for advancing the energy transition and strengthening the sector. By investing in human capital, the policy aims to develop the skills and expertise necessary for transitioning to cleaner, more sustainable energy sources. Through targeted capacity-building initiatives, the policy empowers local communities and stakeholders to actively shape the energy sector's future.

An independent energy regulator can play a crucial role in ensuring the energy market in FSM is transparent, fair, and efficient. Establishing such a regulatory body will promote accountability, prevents market monopolistic behavior, and safeguards consumer interests. By overseeing and enforcing regulations, an independent regulator can create a level playing field for energy providers, fostering competition and innovation within the sector. This policy advocates for the establishment of an independent energy regulator to enhance governance, building trust and transparency in the market, contributing to the energy sector's stability and sustainability.

Due to its status as a small island developing state with limited economies of scale, it is crucial for FSM to explore suitable funding and financing mechanisms for its energy transition. FSM can tap into significant grant funding from development partners, establish public-private partnerships, and engage Independent Power Producers (IPPs). Collaborating with IPPs can provide substantial benefits during the energy transition, as they can introduce new technologies, innovative business models, and investment opportunities. This diversification of the energy mix will enhance energy security and reduce consumer costs. Local governments and utilities have shown interest in working with IPPs through various forums. This policy aims to leverage the most beneficial expertise and resources from the private sector, enabling FSM to accelerate renewable energy projects and enhance local capacity.

To ensure accountability and track progress, the policy includes robust reporting and monitoring mechanisms to measure the implementation of objectives and assess the impact of policy interventions.

This policy embodies the nation's commitment to a sustainable energy future through an appropriate and dynamic energy transition roadmap. By fostering capacity building, establishing an independent regulatory framework, and exploring suitable funding and financing mechanisms for its energy transition (Grant Funding, PPPs, IPPs) through this Energy Policy, the Government of FSM is actively shaping a resilient and low-carbon economy. The policy is designed to facilitate a meaningful energy transition, benefiting both present and future generations of Micronesians, while contributing to global climate and development goals.



Acronyms

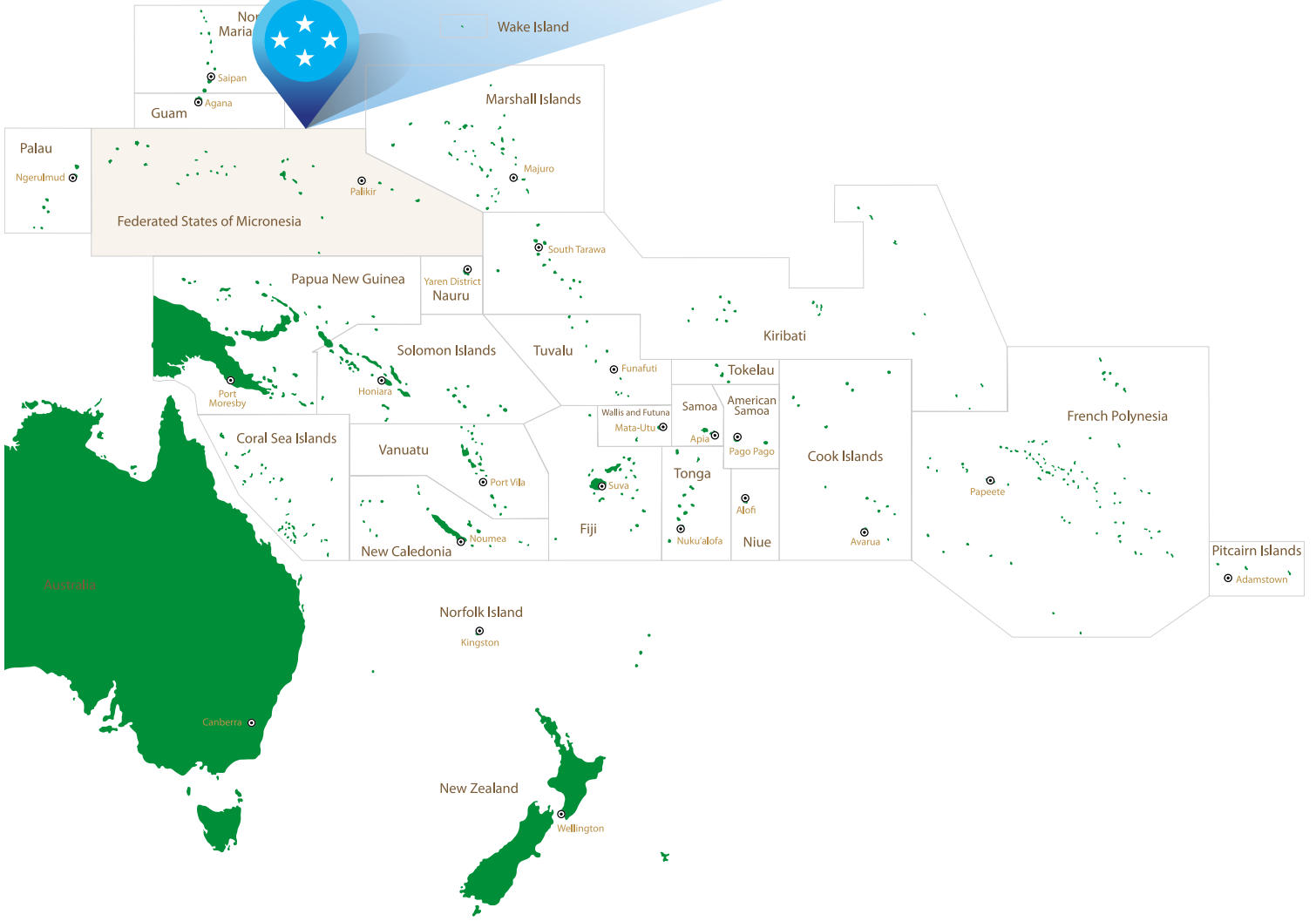
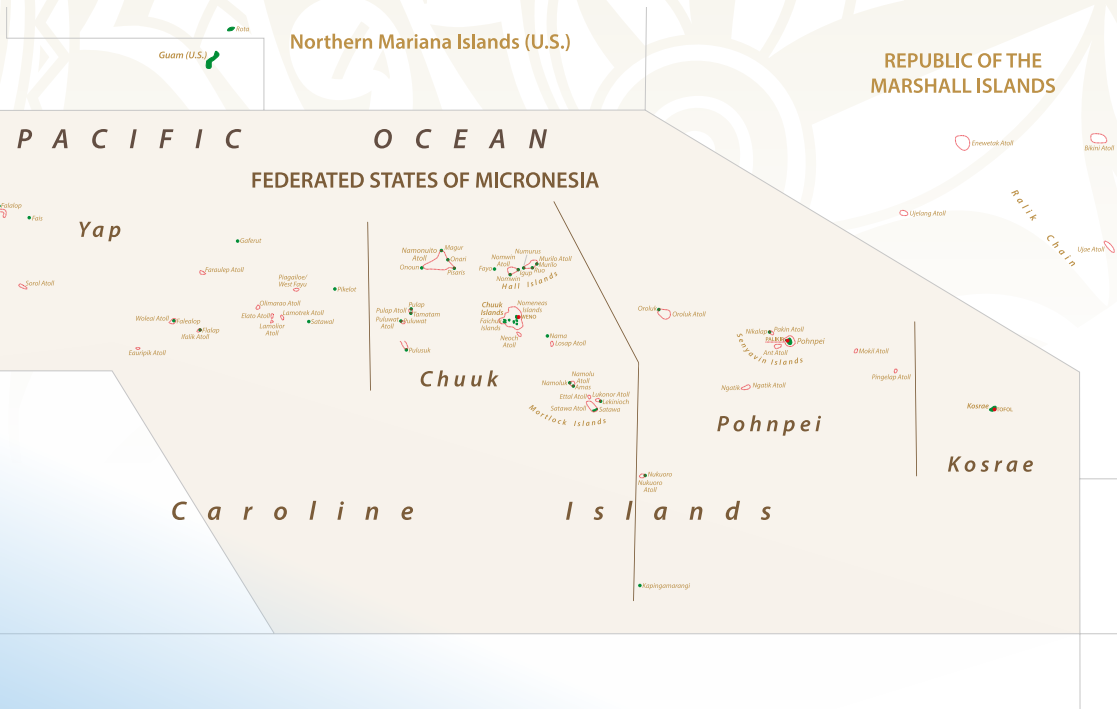
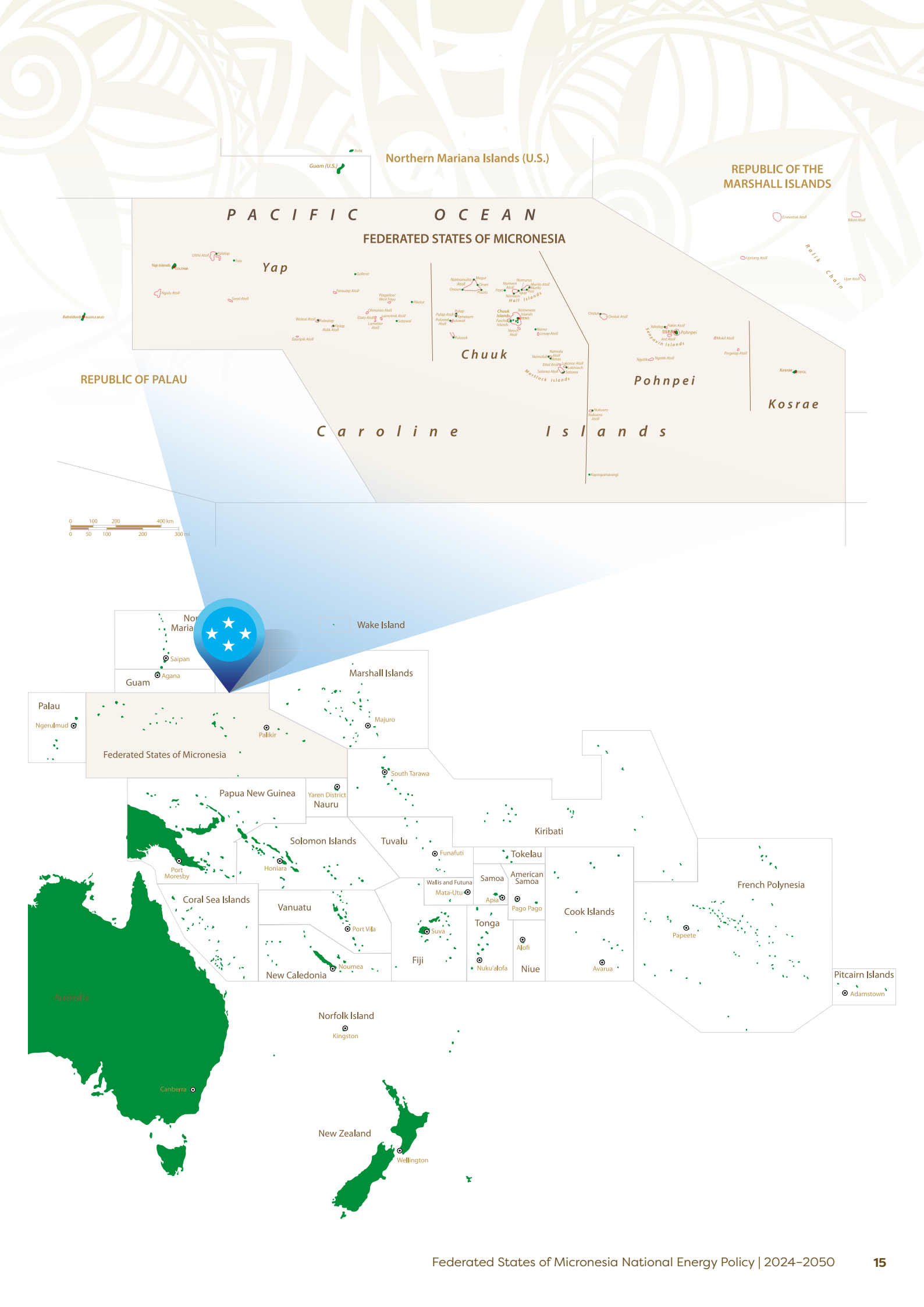
ADB	Asian Development Bank
AMU	Association of Micronesian Utilities
BESS	Battery energy storage system
CEO	Chief Executive Officer
COM-FSM	College of Micronesia
CPUC	Chuuk Public Utilities Corporation
CSO	Civil Society Organization
ED	Energy Division, Department of Resources and Development
DTC&I	The Department of Transport, Communication, and Infrastructure (FSM National)
DECEM	Department of Environment, Climate Change, and Emergency Management
DOFA	Department of Finance and Administration
DoRD	Department of Resources and Development
EE	Energy Efficiency
EC	Energy Conservation
EMP	Energy Master Plan
EPA	Environmental Protection Agency
EU	European Union
EV	Electric Vehicle
FESRIP	Framework for Energy Security and Resilience in the Pacific
FITs	Feed-In Tariffs
FSM	Federated States of Micronesia
FSM.SE	FSM Sustainable Energy Project
Gensets	Generator sets
GDP	Gross Domestic Product
IDP	Infrastructure Development Plan
IPP	Independent power producer
KFA	Key Focus Area
KPI	Key Performance Indicators
MPSBEE	Micronesia Public Sector Buildings Energy Efficiency
NDC	Nationally Determined Contribution

NEP	National Energy Policy
NEWG	National Energy Work Group
NGO	Non-Governmental Organization
NGP	National Gender Policy
PIC	Pacific Island Countries
PPA	Pacific Power Association
PPP	Public Private Partnerships
PUC	Pohnpei Utilities Corporation
PV	Photovoltaic
RE	Renewable Energy
REP	Regional Energy Program
RET	Renewable Energy Technologies
SDG	Sustainable Development Goals
SEDAP	Sustainable Energy Development Access Program
SEIAPI	Sustainable Energy Industry Association of the Pacific Islands
SEWG	State Energy Work Group
S&L	Standard and Labelling
SPC	Pacific Community
TVET	Technical and Vocational Education and Training
UN	United Nations
US	United States
UNDP	United Nations Development Program
WB	World Bank

Energy Terminology

Affordability	The extent to which energy prices and services are priced reasonably so that all citizens, including those in remote or economically disadvantaged areas, can access them without financial hardship.
Battery Energy Storage System (BESS)	A technology that stores electrical energy in batteries for later use, enhancing grid stability and enabling greater integration of renewable energy sources.
Biodiesel	A renewable energy source produced from biological materials such as vegetable oils or animal fats, used as an alternative to traditional fossil diesel fuel.
Capacity Building	The process of developing and strengthening the skills, abilities, and expertise of individuals and organizations to effectively support and manage energy sector initiatives and transitions.
Carbon Footprint	The total amount of greenhouse gases (GHGs) emitted into the atmosphere as a result of human activities, typically measured in equivalent tons of CO ₂ .
Disaster Risk Reduction (DRR)	Aims to prevent new and reduce existing disaster risks, manage residual risks, and strengthen resilience to achieve sustainable development.
Energy Conservation (EC)	Efforts and practices aimed at reducing energy use, typically through changes in behavior, technology, or operations.
Energy Efficiency (EE)	The practice of using less energy to perform the same function or provide the same service, thus reducing overall energy consumption.
Energy Security	The uninterrupted availability of energy sources at an affordable price, crucial for maintaining economic stability and national security.
Energy Transition	The process of shifting from traditional fossil fuel-based energy systems to renewable and sustainable energy sources.
Electric vehicle (EV)	A vehicle powered by electricity, either partially or fully, designed to reduce reliance on fossil fuels and lower emissions.
Feed-in Tariffs (FITs)	Policy mechanisms that guarantee fixed payments to energy producers for generating electricity from renewable sources, encouraging investment in renewable energy technologies.
Fuel Price Fluctuations	Variations in the cost of fuels due to changes in market conditions, geopolitical events, or other factors that affect supply and demand.
Generator Sets (gensets)	Devices that generate electricity, typically powered by diesel or gasoline, used as backup or primary power sources.
Gross Domestic Product (GDP)	A measure of a country's economic performance, representing the total value of all goods and services produced within its borders.
Independent Power Producer (IPP)	A private entity that generates electricity for sale to utilities or other customers, contributing to the diversification of energy sources and supply.

Just and Orderly Transition	The process of shifting towards a more sustainable and equitable economic or social system in a way that is fair, inclusive, and well-managed. It ensures that vulnerable populations, such as workers and communities reliant on traditional industries, are supported, and that the transition occurs in a structured and planned manner to avoid social and economic disruptions. This concept is often applied in contexts like climate action, where moving from fossil fuels to renewable energy must balance environmental goals with social justice and economic stability.
Key Performance Indicators (KPI)	Metrics used to evaluate and measure the success and effectiveness of various activities or projects.
Petroleum Fuels	Fuels derived from crude oil, including gasoline, diesel, and jet fuel, used in electricity generation and transportation.
Public Private Partnerships (PPP)	Collaborative agreements between government entities and private sector companies to undertake projects or provide services.
Photovoltaic (PV)	A technology that converts sunlight directly into electricity using solar panels.
Renewable Energy (RE)	Energy derived from natural resources that are replenished continuously, such as solar, wind, hydro, and geothermal power.
Renewable Energy Technologies (RETs)	Technologies used to harness and convert renewable energy sources into usable power, including solar panels and wind turbines.
Sustainable Development Goals (SDGs)	A set of 17 global goals established by the United Nations to address key global challenges and promote sustainable development.
Sustainability	The ability to meet current energy needs while preserving ecological balance, utilizing renewable resources responsibly, minimizing environmental impacts, and ensuring future generations can meet their own energy demands.
Minimum Energy Performance Standards and Labelling (MEPSL)	Systems and regulations for setting energy performance standards and labeling products to inform consumers and promote energy efficiency.
Tariffs	The rates or prices charged for energy services, such as electricity or fuel, which can impact affordability and economic viability for consumers.
Transparency	Openness in governance and decision-making processes, ensuring that actions and policies are conducted in a clear and accountable manner.
Transition to clean cooking	The shift from traditional open fire cooking methods that rely on biomass fuels to more efficient cooking technologies such as improved biomass cook stoves and cleaner fuels (LPG, electricity, etc.).
Voltage Regulation	The process of maintaining the voltage levels within an electrical system to ensure stable and reliable power delivery.
Vulnerability	The susceptibility of a nation or region to adverse effects due to factors like climate change, economic dependence on fossil fuels, or geographic isolation.



1. Introduction

The Federated States of Micronesia (FSM) has embarked on a transformative journey towards sustainable energy development, making a pivotal moment in the nation’s energy landscape. With a unique political structure comprising a National Government and four autonomous State Governments—Pohnpei, Chuuk, Yap, and Kosrae—each with its own distinct authority and priorities, this decentralized form of governance necessitated collaborative efforts to harmonize national policies with state-level implementation. The National Energy Policy (NEP), initially launched in 1999, laid the foundation for an energy framework that was revised in 2012 to address the country’s evolving energy needs in FSM. This revision prioritized policy and planning, conventional energy, energy efficiency (EE) and energy conservation (EC), and renewable energy (RE), underscoring the nation’s commitment to sustainable energy initiatives. Building on this groundwork, the 2018 Energy Master Plan (EMP) detailed a comprehensive roadmap aimed at expanding access to clean and reliable electricity across states while meeting emission reduction targets aligned with global agreements like the Paris Agreement.

The 2022 update of FSM’s Nationally Determined Contribution (NDC), alongside the development of the FSM Sustainable Development Goal 7 (SDG 7) Roadmap, underscores the nation’s dedication towards advancing sustainable energy goals. With these initiatives gaining traction at the national level, FSM is poised to embrace a future powered by renewable resources, enhanced EE measures, and improved policy frameworks designed to foster a sustainable and resilient energy sector. Achieving self-sufficiency in clean and affordable energy remains a central element of FSM’s national vision, reflecting a forward-looking approach to environmental stewardship and economic prosperity.

The updated NEP for the period 2024 to 2050 outlines a comprehensive framework to steer FSM towards its ambitious energy targets: (i) achieving 70% electricity generation from renewable energy technologies (RETs) by 2030 and 100% by 2050; (ii) advancing EE and energy conservation (EE&EC) practices; (iii) transitioning to 100% electricity-based clean cooking and phasing out inefficient biomass use for cooking by 2030; and, (iv) gradually phasing out fossil fuels, promoting efficient electric transportation system, and exploring alternative fuels beyond 2030.

FSM's commitment to transitioning from conventional diesel power to sustainable renewable sources highlights its dedication to a greener future. However, significant challenges remain. The implementation costs of RETs have yet to offer significant cost advantages over diesel power, and the region struggles to attract private sector investments on par with larger markets.

While transitioning to RETs is a crucial step towards sustainability, the role of diesel generator sets (gensets) in ensuring energy security must not be overlooked. Diesel gensets provide fast, dispatchable responses during emergencies, such as hurricanes or natural disasters, that could disrupt RET-based infrastructure operation. Considering the potential of battery energy storage systems (BESS) as alternatives is worth considering. While BESS technology offers energy storage benefits, its current cost may be prohibitive for widespread implementation in FSM. As BESS technology becomes more affordable, FSM can reassess its reliance on diesel gensets, though diesel gensets may remain necessary for functionality like frequency and voltage regulation within the energy system. Moreover, connectivity and improved transportation services to remote outer islands via sea and air continue to be urgent developmental priorities. As the energy sector evolves, factors such as oil price fluctuations, advancements in transport technologies, investments in carbon emissions reduction, changing weather patterns, and the growing affordability of locally deployable renewable electricity are anticipated to reshape the energy landscape significantly.

This transformative journey is vital for FSM's economic and social progress as well as for driving global impact. Success relies on effective public policy, the operational capacity of local agencies, and the attraction of diverse forms of private sector investment to ensure equitable and accessible energy services for all residents. Navigating these complexities, FSM seeks collaboration and support from its development partners and international peers, rooted not in entitlement but in a shared responsibility to protect our environment and advance sustainable development in alignment with global trends.



2. Policy structure

The NEP 2024–2050 aligns with the targets and commitments established by the FSM Government, which are also consistent with Goal 7 of the United Nation’s Sustainable Development Goals (SDGs). Goal 7 aims to ensure access to affordable, reliable, sustainable, and modern energy for all by 2030, with special consideration for needs of small island developing states (SIDS). The policy aims to achieve 100% access to clean electricity, promote renewable energy, energy efficiency and energy conservation. It also encourages a shift to electricity-based clean cooking to attract investments in the energy sector. Transitioning away from fossil fuels requires increased commitment and effort. This policy will facilitate such change through enhanced coordination and collaboration, along with necessary policy and regulatory reforms.

Table 1. Policy structure of the NEP 2024–2050.

KEY AREAS	DETAILS
Beneficiaries	Citizens of FSM
Mission	To advance the sustainable socio-economic development of FSM through a climate-resilient and affordable energy services
Vision	FSM achieves universal access to affordable, reliable, and sustainable energy, by fully transitioning to a 100% renewable-energy based system. This transition will drive economic growth, environmental sustainability, and resilience across all states
National energy objective	To support the sustainable social and economic development of FSM by transitioning to sustainable energy sources. This includes increasing the use of RE sources, efficient energy services, reducing fossil fuel dependency, and enhancing the resilience of energy infrastructure.
Guiding principles (in general order of priority)	<ol style="list-style-type: none"> 1. Access 2. Affordability 3. Capacity 4. Security 5. Sustainability 6. Efficiency 7. Gender Equality and Social Inclusion 8. Innovation 9. Environmental responsibility

KEY AREAS	DETAILS
Goals	<p>Short-term goals to achieve by 2030:</p> <ul style="list-style-type: none"> i) Electrify the nation to 100% ii) Achieve 70% of electricity generated from RE resources iii) Attain 100% clean cooking iv) Reduce greenhouse gas emissions from electricity generation by more than 65% below 2000 level. <p>Long-term goals to maintain towards 2050:</p> <ul style="list-style-type: none"> i) Achieve 100% of electricity generated from RE resources ii) Phase down fossil fuels use in the land and marine transportation sectors iii) Promote the use of alternative fuels iv) Attain net-zero carbon emissions by 2050.
Key focused areas and areas of interventions	<ul style="list-style-type: none"> 1. Energy access and equity <ul style="list-style-type: none"> i) Reliable and affordable electricity ii) Clean cooking. 2. Just and orderly transition <ul style="list-style-type: none"> iii) Conventional energy iv) RE development v) Energy efficiency and energy conservation vi) Transportation sector transformation vii) Security and climate resilience 3. Energy governance <ul style="list-style-type: none"> viii) Policy and regulatory reform ix) Enhancing access to resources x) Institutional covordination
Implementation level	Energy Sub-sector policies, roadmaps, and action plans such as the 2018 Energy Master Plan that will guide national and state-level activity implementation, ensuring alignment with broader energy goals and strategic priorities.
Facilitating mechanism	National Energy Workgroup (NEWG) State Energy Workgroup (SEWG)

Figure 1. National Energy Policy reporting structure and linkages at all levels of governance



3. FSM National Energy Context

FSM relies heavily on imported petroleum fuels, particularly diesel fuel, which supply approximately 92% of its energy needs. This dependence constitutes a significant financial burden, with expenditures on imported fuel reaching roughly USD 50 million annually, representing about 15% of the nation's GDP. The trajectory of rising fuel prices has increased the cost of goods and services, making energy a pivotal concern and a considerable expenditure for the fragile FSM economy. This dependence not only strains FSM's economy, known for the highest energy costs in the Pacific region, but also makes it vulnerable to global oil price fluctuations.

ENERGY SECTOR OVERVIEW

A comprehensive overview of FSM's energy sector is available in the FSM SDG 7 Roadmap, developed concurrently with updates to the National Energy Policy. A copy of the report can be accessed at the Department of Resources and Development website - <https://rd.gov.fm/> or UNESCAP Library - <https://unescap.org/library>

The Key Focus Areas (KFA) including the areas of intervention that this policy aims to address and significantly improve is outlined below.

ENERGY ACCESS AND EQUITY

Reliable and affordable electricity

In 2019, 81.3% of households in FSM had access to electricity. However, electrification varies notably across states, with Chuuk having the lowest electrification rate at 42.8%, while Pohnpei, Kosrae, and Yap exhibit rates of 96.7%, 96%, and 85%, respectively. A significant social and economic disparity is evident, as residents on the four main islands enjoy wide access to grid electricity, whereas those on remote outer islands face limited or no access. Investment plans from development partners aim to electrify these isolated areas targeting, households, government buildings, schools, clinics, as well as improving access to water. These systems must be sustainable, necessitating the establishment of user-pay tariffs to ensure reliable operation and maintenance.

Past projects in Yap and Chuuk States included stand-alone systems or mini-grids for schools and dispensaries, funded by the European Union's (EU)-funded Regional Energy Program (REP-5) project and the North REP, concluded in 2007 and 2015, respectively. The 2018 FSM Energy Master Plan (EMP) outlines investments, focused on households and government education and health facilities.

Energy use for productive purposes shows variability across the FSM islands, with challenges in accessibility and reliability impeding its full potential, particularly in the outer islands. The limited access to dependable electricity means that women predominantly rely on small gensets, which restrict the hours available for productive activities, such as sewing and packaging of local foods. Enhancing productivity might involve strategies like establishing ice-making plants and refrigeration facilities for supporting fishing enterprises. Integrating productive energy use assessments into the islands' grid energy plans on these islands could effectively address such demands.

On the other hand, the main islands of the four states benefit from existing community-owned productive centers that are powered by reliable electricity. Noteworthy entities include the Island Food Community (Pohnpei), the Chuuk Women’s Council Center (Chuuk), alongside Yap Women’s Association Center (Yap) are amongst various private markets contributing to economic activities across all the four States. Leveraging RE sources on remote islands can broaden income-generation avenues, empowering women, enhancing local expertise, and promoting overall community welfare.

Clean cooking

The SDG 7 targets commit to universal (100%) access to electricity and clean cooking fuel, significantly, increasing the renewable energy share and doubling energy efficiency improvement rates. Different technologies for clean cooking – such as electric cooking stoves, LPG cooking stoves, and improved traditional cooking stoves have been analyzed, with suggestions made for adopting the most suitable options. *More details can be found in the document available for download from the provided link (link to be provided).*

JUST AND ORDERLY TRANSITION

Conventional energy

In 2019, the total installed power generation capacity was 38.1 MW, with diesel comprising 84.7% of this capacity. Renewables sources accounted for 15.3%, broken down as 11.2% solar, 2.2% wind, and 1.9% hydropower. Total electricity generation in 2019 was 80.1 GWh, with thermal power plants providing 94.6% of power generation, while renewables contributed the remaining 5.4%. *Further details can be found in the document available for download from the following link (link to be provided).*

Renewable energy development

While transitioning to RE technologies might incur initial costs exceeding those of fossil-fuel systems, continuous advancements in RE production and energy storage technologies are driving down costs globally, including in the Pacific region. The adoption of renewable electricity in FSM requires context-appropriate strategies, prioritizing resilience to extreme weather conditions, and must involve collaboration among all pertinent energy sector stakeholders.

Efforts towards establishing RE technology standards have primarily focused on EE and solar photovoltaic (PV) systems, made possible through information exchange with neighboring Pacific Island countries (PICs) via organizations such as Sustainable Energy Industry Association of the Pacific Islands (SEIAPI) and Global Sustainable Energy Solutions. While existing guidelines align with Australian and New Zealand standards, aligning them with US standards is crucial for FSM’s implementation. It is vital to address gaps in standards and future RE sources like floating solar PV, wind and hydropower to meet present and future RE targets. Updated Pacific Islands RE standards and guidelines were released between 2018–2020 (SEIAPI, 2022, <https://www.seiapi.com/guidelines/>).

Energy efficiency and energy conservation

Promoting energy efficiency through the utilization of high-efficiency appliances is a promising path for considerable energy and economic savings. Projects like the UNDP Micronesia Public Sector Buildings Energy Efficiency (MPSBEE) initiative have demonstrated the potential for savings, advocating for the expansion of similar efforts. The regional project targeting Minimum Energy Performance Standards and Energy Labelling across selected PICs effectively curtails importation of inefficient appliances, thereby reducing energy costs, avoiding added infrastructure expenses, and achieving emission reductions through improved energy efficiency practices. By adopting up to date US energy efficiency standards, FSM can

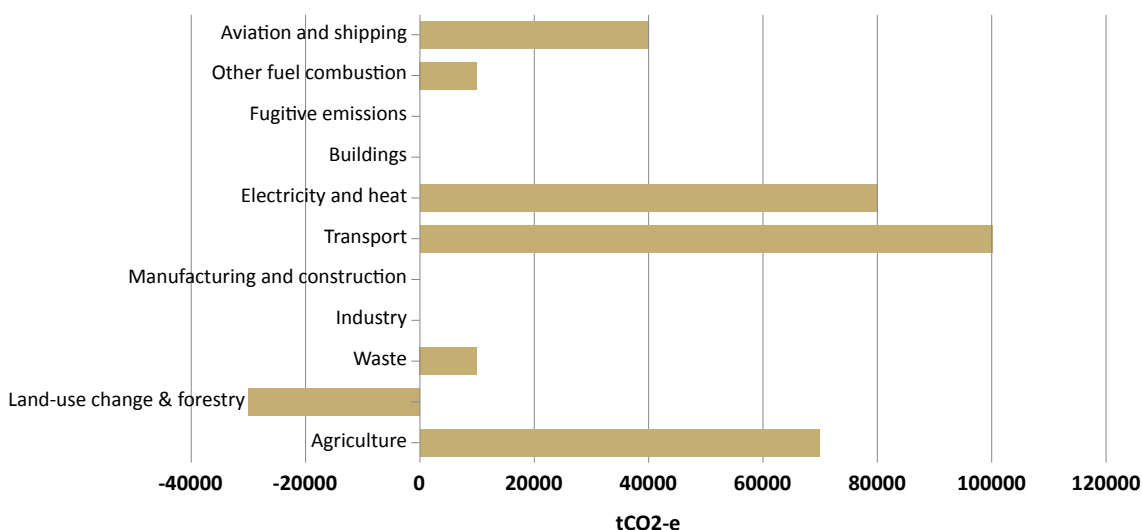
implement robust energy-efficient practices and technologies. Formulating regulations and policies that prioritize energy efficiency and renewable energy utilization will be crucial for promoting sustainable and resilient energy prospects in the long-term.

Transportation sector transformation

The 2022 Updated NDC emphasizes key strategies for reducing greenhouse gas (GHG) emissions in FSM, spotlighting augmented renewable energy generation and carrying out energy efficiency measures across sectors. While efforts have been made to address emissions related to power generation, household appliances, and building design, notably, strategies for curtailing transportation related emissions have been less explored.

In FSM, transportation substantially contributes to GHG emissions, accounting for approximately 32% of total emissions (excluding aviation and shipping) as of 2018. Electricity emissions remain at about 80,000 tCO₂-e, refer to Figure 2. The dominance of petroleum fuels within the transportation sector, highlights the necessity for targeted emission reducing strategies.

Figure 2. Detailed sectoral CO₂-e emissions breakdown for FSM in 2018



Source: CAIT Climate Data Explorer via Climate Watch, cited in 2022 UNSW report, "Review of Energy Performance Standards for Vehicles in FSM".

Responsibilities for transportation management in the FSM is overseen by multiple departments, including the Department of Transport, Communication, and Infrastructure (DTC&I), and the Department of Public Safety. However, there are notable challenges concerning awareness and compliance with regulations, particularly unregistered small boats that operate outside lagoons or travel to outer islands, especially in the Chuuk lagoon. Sustainable Sea Transport (SST) initiatives could play a vital role in addressing these challenges by promoting fuel-efficient and environmentally friendly maritime solutions. Establishing a national framework for vehicle efficiency standards, crafted with stakeholder input, is essential for fuel efficiency and reducing transportation sector emissions.

The introduction of electric vehicles (EV), starting with public vehicles such as school buses and government vehicles, offers a significant opportunity to advance decarbonization efforts and enhance fuel independence in land transportation sector. Additionally, the implementation of State Utilities' Energy Management Programs, aimed at integrating renewable energy systems on main and outer islands, will decrease reliance on fossil fuels and lower carbon emissions across the FSM. Achieving climate change mitigation goals in the FSM requires a holistic approach that incorporates renewable energy deployment, improved vehicle efficiency standards, and the transition to electric transportation. Collaboration among government agencies, stakeholders, and communities is crucial to fostering sustainable practices and achieving long-term emissions reduction targets.

Security and climate resilience

The FSM faces significant challenges in securing its energy infrastructure due to climate change impacts, particularly following destructive events such as Typhoon Maysak in 2015, which severely affected energy systems in the Chuuk and Yap outer islands. Prioritizing the design and development of resilient energy systems capable of withstanding floods, storm surges, increasing cyclone frequency, and rising sea levels is crucial. Energy policies should proactively address uncertain and evolving risks, including strategies insuring energy infrastructure against damage.

ENERGY GOVERNANCE

Policy and regulatory reform

Establishing a new robust energy policy framework to guide and advance the energy sector in addressing goals and targets and at same time address relevant risk and uncertainty in the FSM economy and energy supply. Central to this effort are the development of a monitoring and evaluation framework and the creation of an independent energy regulatory body. The regulatory body initially housed within the Department of Resource and Development (DoRD) Energy Division, tasked with developing and enforcing regulations, to encourage private sector participation and investment in renewable energy projects. Legal reforms will introduce standards for Public Private Partnerships (PPP), market engagement, licensing, and operational compliance. A proposed Energy Act will provide a comprehensive framework for roles, coordination, and standards, fostering private sector involvement through fiscal and regulatory incentives such as feed-in tariffs, net metering, and streamlined licensing.

Improved data management is a cornerstone of the reform, with plans to establish a central repository and collaborate with academic and international partners for data collection, analysis, reporting and dissemination, particularly in energy consumption across sectors like electricity and transport.

Enhancing access to resources

From 2012 to 2024, FSM documented a total USD103.68 million in project financing towards the energy sector. Improving transparency and accountability requires augmenting monitoring and evaluation mechanisms to track the implementation of the national energy policy and related targets. Under the oversight of the Energy Division, ongoing projects include the EU FSM Sustainable Energy Project (FSM. SE); Asian Development Bank's (ADB) Renewable Energy Development Project (REDP), Project Readiness Financing (PRF), and the forthcoming Climate Resilience Energy & Water Sector (CREWS); World Bank (WB) – Sustainable Energy Development Access Project (SEDAP) and the forthcoming Access and Renewable Increase for Sustainable Energy (ARISE); UNDP's MPSBEE (completed in December 2023). The key implementation partners are the four State Utilities.

FSM aims to expand energy access by maximizing funding and fostering private sector participation through Public-Private Partnerships (PPPs) and Independent Power Producers (IPPs). These efforts focus on renewable energy adoption, grid upgrades, and energy efficiency. A regulatory framework ensures transparency, prioritizes socio-economic and environmental impacts, and supports unsolicited project proposals. Resource mobilization blends grants, concessional loans, and private financing to attract investments and meet energy targets, including a 70% renewable energy share by 2030. Coordination with development partners and multilateral agencies ensures financial, technical, and human resource support for sustainable energy initiatives.

Institutional coordination

Enhanced stakeholder collaboration is pivotal, with DoRD leading partnerships across government entities, private sectors, and communities to align energy initiatives and efforts with socio-economic priorities, the FSM Sustainable Development Goals (SDG 7), and national electrification objectives. Public awareness campaigns, education initiatives, and gender equity promotion will create an informed and inclusive workforce. DoRD also prioritizes capacity building through workforce expansion, embedding expertise, and engaging international support for renewable energy and electrification projects. Regular reporting on the monitoring and evaluation framework aims to strengthen the implementation of the National Energy Policy and ensure progress toward a sustainable social economic development of FSM.

The National Energy Workgroup

The National Energy Workgroup (NEWG) is integral to the coordinated approach led by the Energy Division), housed within the Department of Resources and Development (DoRD), in planning and managing the national energy sector. Close collaboration with relevant stakeholders is essential for resource management and policy implementation across FSM. The NEWG's members include Chairs of State Energy Workgroups, Chief Executive Officers (CEOs) or nominees of state public utilities companies such as Pohnpei Utilities Corporation, Yap State Public Service Corporation, Chuuk Public Utility Corporation, and Kosrae Utilities Authority. Regular NEWG meetings offer a vital platform for tracking progress, tackling challenges, and updating all members on the status of energy projects within the FSM.

Association of Micronesian Utilities

Established in 2020, the Association of Micronesian Utilities (AMU) serves as critical forum for the coordination of FSM utilities. By standardizing technical designs and specifications, facilitating joint equipment procurement, maintaining spare equipment parts, and executing specialized projects like geographic information systems (GIS) and information technology (IT). The AMU's board, composed of CEOs from all FSM utilities, guides the organization's policies and operation.

FSM Department of Environment, Climate Change and Emergency Management (DECEM)

Acting under the 2013 Climate Change Act as the pivotal coordination agency for all climate change issues, the FSM Department of Environment, Climate Change, and Emergency Management (DECEM) plays a key role in supporting initiatives that align with the nation's climate mitigation commitments. Collaborative efforts between the Energy Division and DECEM can optimize resources and expertise to advance sustainable energy projects and environmental objectives.

Overseas Development Assistance (ODA) Unit

The Overseas Development Assistance (ODA) Unit, under the Office of the President, functions as a crucial gateway for obtaining external grants and development assistance for energy initiatives and projects. Effective coordination between the Energy Division and the ODA Unit is vital for maximizing funding opportunities and harnessing international support for sustainable energy development.

National Department of Transportation, Communications & Infrastructure (DTC&I)

Acknowledging the interconnectedness between energy usage and transportation infrastructure, effective collaboration between the Energy Division and DTC&I is paramount. Aligning efforts and sharing resources enable both departments to pursue mutual goals associated with energy efficiency, sustainable transportation, and infrastructure development pertaining to land and sea transport. In this light, it would be fitting for DTC&I to participate in the NEWG.



State Energy Workgroup (SEWG)

State Energy Workgroups (SEWG) are crucial in overseeing and implementing state-level energy initiatives. By incorporating diverse stakeholders – including utilities, government agencies, and local communities – the SEWGs can promote the adoption of energy efficiency measures and renewable energy technologies tailored to each state’s specific needs. Each SEWG’s secretariat, represented by State Energy Officers in DoRD, supports these efforts. The Governor or the Lt. Governor chairs SEWG, with other members representing State Utility, Vital Group, and State Chambers of Commerce, outer island communities, municipalities, non-governmental organizations (NGOs) and other chair invited guests.

Independent regulator

Establishing a robust regulatory framework and an Independent Energy Regulator is indispensable for accelerating private investment in renewable energy and energy efficiency. Creating an Energy Act and regulatory standards can provide clarity for investors, stimulate technological advancements, and ensure compliance with energy efficiency requirements. Continuous reviews and updates of the National Energy Policy are necessary to address evolving energy challenges and opportunities effectively. Strengthening the Energy Division’s capabilities and involving stakeholders in the regulatory process are critical measures for nurturing an environment conducive to sustainable energy development in the FSM.

4. Existing policy priorities and targets

This policy supports the achievement of the following existing national policy commitments (non-exhaustive, key alignment points only) including their subsequent versions.

KEY NATIONAL POLICIES, PLANS, STRATEGIES, LEGISLATION	OBJECTIVES
The Chuuk Public Utility Corporation Act of 1996	Establishes Chuuk Public Utility Corporation (CPUC) to be responsible for providing reliable electricity and water at reasonable cost to its customers and the public corporation shall be responsive to the needs and concerns of the people of Chuuk.
The Yap State Public Service Corporation Act	Defines the Yap State Public Service Corporation (YSPSC), which is responsible for managing electricity, water, sewer, and waste services in Yap State, focusing on efficient, sustainable delivery and adherence to legal standards.
The Kosrae Utilities Authority Act	This document establishes the Kosrae Utilities Authority (KUA), which oversees electric power services in Kosrae, managing operations, setting rates, expanding services, and ensuring efficiency. It is empowered to acquire property, borrow funds, and implement regulations to support sustainable and equitable utility management.
The Pohnpei Utilities Corporation Act	This document establishes the Pohnpei Utilities Corporation (PUC), its role in providing electricity, water, and sewage services, governance structure, financial management, and collaboration with the government to support operations and expansion within Pohnpei State.
FSM Strategic Development Plan (2004-2023)	Energy is included in the Environment focus area under Strategic Goal 3; Reduce energy use and convert to RE sources and minimise emission of greenhouse gases. The SDP is currently being reviewed and will be updated to cover the period 2025–2045.
National Energy Office Act 2010	Amends the nation’s code to establish the National Energy Office as an official executive office. This office is responsible for managing and implementing national energy policies, coordinating energy-related programs, and supporting sustainable energy initiatives to address the country’s energy needs and development goals. It operates alongside other executive offices to promote efficient and sustainable energy management nationwide.
FSM Climate Change Act 2013	Provides legal obligations for government offices and departments of the national government to prepare plans and policies consistent with the Climate Change Policy.

KEY NATIONAL POLICIES, PLANS, STRATEGIES, LEGISLATION	OBJECTIVES
2013 Nationwide Integrated Disaster Risk Management and Climate Change Policy	Energy objectives of reducing dependence on fossil fuels, increasing investment in the development of RE sources, conserving energy consumption, and improving EE across all sectors of society. Joint State Action Plans (JSAPs) for disaster risk management and climate change adaptation addressed at state levels.
Updated Nationally Determined Contribution for FSM (2022)	To unconditionally reduce FSM GHG emissions by 28% by 2025, compared to 2000. It also has a conditional target to reduce emissions by up to 35% in 2025, compared to 2000 (subject to the availability of additional financial, technical, and capacity building support from the international community).
FSM National Infrastructure Development Plan (IDP) (2016–2025)	Reflect emphasis on costed climate-proofed infrastructure, alignment to bilateral and multilateral partnerships and sustainable development. This plan is under review and will be updated to cover the period 2025–2040.
2018 National Gender Policy (NGP)	Promotes gender equality and women’s rights. The NGP is part of the FSM’s commitment to gender parity, which also includes the Pacific Leaders Gender Equality Declaration in 2012 and the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) in 2004.
2018 Energy Master Plans for the FSM	By 2037, the EMP seeks to achieve (i) an electrification rate approaching 100%, (ii) 84% of electricity generated from RE sources, (iii) diesel consumption decreasing from 4.2 million gallons in 2018 to 1.5 million gallons, and (iv) greenhouse gas emissions from electricity generation reducing from 43,000 tons in 2018 to 16,000 tons.
SDG 7 Roadmap for the FSM	The overall objective of the SDG 7 Roadmap is to assist the Government of FSM in assessing whether the existing policies and strategies are well aligned to achieving the SDG 7 and NDC targets by 2030 and to present a series of options to bridge these gaps.
Disaster Risk Reduction (DRR) Policy Framework for Electric Utilities	A policy that defines the overall objectives, nature of support, and priorities for the (electric) utilities during natural disasters; adopt sector approach including coordination with state and national authorities and harmonization with other policies: decide on lead agency for implementing the policy and define the role of each key stakeholder; and develop protocol for communication and coordination.
Some relevant regional and international frameworks, declarations, and goals	
2015 Paris Agreement on Climate Change	A binding agreement that brings all nations together to combat climate change and adapt to its effects.

KEY NATIONAL POLICIES, PLANS, STRATEGIES, LEGISLATION	OBJECTIVES
<p>The Sustainable Development Agenda 2015–2030</p>	<p>A global effort under Sustainable Development Goal (SDG) 7 to: 1) ensure universal access to affordable, reliable, and modern energy services; 2) increase substantially the share of RE in the global energy mix; and 3) double the global rate of improvement in EE.</p>
<p>The Small Islands Developing States Accelerated Modalities of Action (S.A.M.O.A) Pathway 2014</p>	<p>Recognized that dependence on imported fossil fuels has been a major source of economic vulnerability and a key challenge for small island developing States for many decades and that sustainable energy, including enhanced accessibility to modern energy services, EE, and use of economically viable and environmentally sound technology, plays a critical role in enabling the sustainable development of Small Island Developing States.</p>
<p>The Sendai Framework for Disaster Risk Reduction 2015–2030</p>	<p>Aims to achieve the substantial reduction of disaster risk and losses in lives, livelihoods, and health and in the economic, physical, social, cultural, and environmental assets of persons, businesses, communities and countries over the next 15 years.</p>
<p>The Framework for Resilient Development in the Pacific (FRDP) 2017–2030</p>	<p>Goal 2: More efficient end-use energy consumption, reduced carbon intensity of development processes, increased conservation of terrestrial and marine ecosystems and increased resilience of energy infrastructure.</p>
<p>Framework for Energy Security and Resilience in the Pacific (FESRIP) 2021–2030</p>	<p>Strengthen the collaboration among partners and with PICTs. FESRIP consists of two volumes: Volume 1 is the Framework; and Volume 2 covers the energy background and issues in the Pacific. This document is aligned with relevant international and regional frameworks. With a total of 23 priority areas, FESRIP has brought to the fore current and emerging energy issues that are confronting the Pacific region and will need to be addressed in the next decade.</p>
<p>2050 Strategy for the Blue Pacific Continent and First Implementation Plan</p>	<p>The 2050 Strategy sets the long-term approach to working together as a region, and as countries and territories, communities, and people of the Pacific. It frames regional cooperation and broader action around seven key thematic areas which are designed and developed to support the achievement of our vision. These thematic areas include political leadership and regionalism; people-centered development; peace and security; resource and economic development; climate change and disasters; ocean and environment; and technology and connectivity.</p>

5. Mission

To advance the sustainable socio-economic development of FSM through climate-resilient and affordable energy services.



6. Vision

FSM achieves universal access to affordable, reliable, and sustainable energy, by fully transitioning to a 100% renewable-energy based system. This transition will drive economic growth, environmental sustainability, and resilience across all states.

7. Goals

The policy aims to support specific targets and achieve key outcomes in both the short and long term:

Short-term goals by 2030:

- i) Ensure 100% of FSM citizens have access to reliable and affordable electricity.
- ii) Provide 100% access to clean cooking options for all FSM citizens
- iii) Generate 70% of electricity from renewable resources.
- iv) Reduce greenhouse gas emissions from electricity generation by more than 65% below 2000 level.

Long-term goals by 2050:

- i) Achieve 100% of electricity generated from renewable resources.
- ii) Phase down and ultimately eliminate the use of fossil fuels in FSM.
- iii) Promote the use of alternative fuels.
- iv) Significantly reduce carbon emissions, establishing a clear pathway to achieving net-zero emissions.



8. Guiding principles

The energy future of the FSM is built on principles of equitable access, clean technologies, and responsible development. This policy outlines a pathway for transforming our energy landscape, empowering communities, and ensuring the long-term preservation of our islands for future generations. Although the policy establishes sequential priorities, it remains adaptable to changing circumstances, aligning with available resources and collaborative efforts with partners and state leaders to focus on initiatives that provide immediate benefits and contribute towards long-term sustainability goals. The implementation of this policy will follow these guiding principles:

Access

The Policy emphasizes that all residents of FSM have equitable, reliable, safe and affordable access to energy resources and services. This principle also acknowledges the importance of providing equal opportunities for both men and women in capacity building and employment within the energy sector. In this context, access focuses on inclusivity, recognizing that energy is a fundamental enabler of social and economic development and a critical element for achieving equity and sustainability in society.

Affordability

The policy emphasizes the need to make clean energy affordable to all residents of FSM. Addressing the high tariff rates, which exceed international averages, involves implementing cost-effective technologies and efficient practices to reduce energy burdens without compromising reliability. Targeted support measures, such as subsidies, grants, and innovative financing models, will enhance affordability, particularly for disadvantaged and remote communities. By creating an environment conducive to independent energy providers and incentivizing their participation, the policy aims to diversify the energy mix and promote a sustainable, efficient, and inclusive energy sector. A competitive environment streamlined permitting processes, and incentives will encourage diverse contributions.

Capacity

The policy emphasizes the crucial importance of building capacity within the energy sector through strengthening institutional frameworks, providing technical education and training, enhancing infrastructure, engaging communities, and supporting innovation and research. Investments will target the development of long-term capabilities, aiming to create a robust and sustainable energy infrastructure for FSM.

Security

Ensuring power supply security at both national and household levels is a priority. By pursuing diverse energy sources and strategic locations and adopting standards (building codes, equipment) for power installations, the policy aims to enhance resilience. A focus on redundancy of distribution lines to critical public institutions such as hospitals, airports, evacuation shelters and schools, underscores the importance of reliable energy supply for essential services. Reliability is crucial, particularly in areas prone to frequent brownouts and outages, as consistent energy supply is essential for maintaining economic activities, supporting essential services, and improving the overall quality of life for affected communities.

Sustainability

This policy goes beyond efficiency gains by prioritizing sustainability through a comprehensive approach that encompassing various factors. It focuses on minimizing our ecological footprint by using renewable energy sources, implementing sustainable land-use practices for energy infrastructure, enhancing community engagement, and preserving biodiversity. Key initiatives will promote responsible waste management and foster a circular economy within the energy sector.

Efficiency

Efficient energy use is paramount in optimizing resource utilization. This policy emphasizes energy efficiency across sectors from appliances and buildings to vehicles and public transport to maximize the utilization of each energy input.

Gender equality and social inclusion

To ensure equitable access and participation, this policy emphasizes inclusivity by empowering marginalized communities such as men and women, Community Faith Organizations, NGOs, youth, Indigenous Peoples, persons with disabilities, and other marginalized groups to play active roles in shaping FSM's energy landscape. By enhancing local capacity through technical training, supporting productive community owned renewable energy projects, and fostering collaboration among diverse stakeholders, the policy aims for an inclusive and sustainable energy transition, benefitting all FSM citizens. Integrating a gender perspective aligns with the National Gender Policy (2018) and supports addressing gender disparities in electricity access and utilization.

Innovation

Continuous innovation, embracing emerging technologies, and stakeholder collaboration are crucial for advancing Micronesia's energy future. The policy seeks to enhance public-private partnerships, expand private sector engagement in energy supply, technologies (both off grid and on-grid), and leverage digital energy services to spur job creation, attract green investments, and deploy cutting-edge technologies.

Environmental responsibility

A core commitment of the policy is minimizing environmental impact and social impact assessments for major projects, adherence to stringent environmental standards, and emphasizing renewable energy integration, energy efficiency, and sustainable resource management. Aligning with national climate goals and promoting recycling and responsible waste management, especially for vehicles, appliances, solar PV system components and energy storage systems, the policy advocates for harmonious coexistence with the environment.

9. Policy objectives

9.1 KFA 1: ENERGY ACCESS AND EQUITY

Modern energy services are critical to human well-being and economic development in FSM’s rural and remote communities. While no universal definition exists for modern energy access, key elements include:

- Household access to a minimum level of electricity.
- Household access to safer and more sustainable (minimum health and environment impact) cooking fuels and stoves.
- Access to modern energy enabling productive economic activity in agriculture, fisheries, tourism, and related cottage industries.
- The significance of modern energy for public services like electricity for health facilities, schools, and street lighting, contributing to economic and social development.

This policy strongly commits to ensuring universal access to electricity and clean cooking alternatives for all citizens by 2030. It promotes inclusivity within the energy sector at national, state, and municipal levels, focusing on maintaining affordable services, engaging stakeholders in energy planning, and enhancing gender equality and social inclusivity through rights-based approaches.



9.1.1 AREA OF INTERVENTION 1 - Reliable and affordable electricity

Overarching objective

9.1.1.1 Ensure access to reliable and affordable electricity services for all FSM citizens by 2030

Approximately 18.7% of the population lacked electricity access in 2019, predominantly in rural, maritime, and informal settlements. Universal electricity access is a priority for the FSM Government. DoRD will collaborate with state utilities and relevant stakeholders to implement mini/off-grid systems in the outer islands and main islands with dispersed household distribution unsuitable for grid extension. In a remote area, standalone solar PV systems will be considered. Tariff studies for mini-grid and off-grid systems will be analyzed to ensure affordability, sustainability, and alignment with state priorities and community needs.

Enabling objectives

9.1.1.2 Enhance capacity for demand and socio-economic surveys

An estimated 52 islands in the states of Chuuk, Pohnpei and Yap remain unassessed for energy demand. Lessons from ongoing activities, like pre-feasibility studies for outer islands in Chuuk, will inform on long-term planning. Efforts include building capacity within DoRD and respective State utilities, establishing standardized guidelines for community energy demand consultations, and fostering collaboration among stakeholders.

9.1.1.3 Establish a national electrification program

Securing adequate financing and coordinating stakeholder efforts are essential to ensure FSM citizen's universal electricity access. This involves resource mobilization, creating a revolving electrification fund, enhancing coordination mechanisms, and supporting state utilities' efforts to provide electricity to households, essential facilities (health and education access), and productive economic centers. DoRD, with the NEWG and stakeholders, will guidance and oversee program implementation.

9.1.1.4 Increase access to skill transfer programs

Enhancing the local workforce is crucial for advancing electrification. This involves increasing human and institutional capacity through tailored training at educational and professional levels, focusing on areas like planning, demand forecasting, project management, technology and resource assessment, energy efficiency, and gender equity and social inclusion (GESI) awareness, and the installation and design of off grid and grid-tied PV systems with and without BESS.

DoRD will collaborate with COM-FSM to create new training initiatives, strengthen the existing Technical and Vocational Education and Training (TVET) programs, support internships, job placement programs, and capacity-building activities in the country. These programs can be integrated into existing and future energy projects to ensure that the workforce is well-equipped to support electrification initiatives effectively.

9.1.1.5 Implementing financial, operational, and management mechanisms

Establish a transparent tariff framework for off grid and stand-alone systems to ensure sustainability. This framework should accurately capture operational, maintenance, and replacement costs for each island system. Collaboration between state utilities stakeholders is essential to determine suitable tariff structures that promote the long-term sustainability of these systems.

9.1.2 AREA OF INTERVENTION 2 - Clean Cooking

Overarching objective

9.1.2.1 Achieve 100% access to clean cooking for all FSM citizens by 2030 through affordable and accessible alternatives

The NEP acknowledges women’s key role in the uptake of clean cooking fuels and technologies, especially in rural and outer island communities, both as key beneficiaries and as agents of change. By actively participating in the clean cooking value chain, women have opportunities to drive economic empowerment as entrepreneurs and employees, contributing to the growth of a sustainable and thriving clean cooking industry aligned with the nation’s energy goals. Some actionable steps include:

1. **Gender mainstreaming:** Integrate gender considerations into clean cooking programs and projects, ensuring women’s perspectives, needs, and priorities are central in decision-making processes.
2. **Capacity building:** Offer targeted training and capacity-building programs for women in rural and outer island communities on clean cooking technologies, including installation, maintenance, and efficient use. Empower women with technical skills for leadership in clean cooking initiatives.
3. **Economic empowerment:** Support women entrepreneurs in the clean cooking sector by offering financial assistance, market access, and business development opportunities.
4. **Awareness and advocacy:** Run awareness campaigns to emphasize clean cooking’s benefits for women’s health, safety, and well-being, promoting transitions to clean cooking fuels.
5. **Collaboration and partnerships:** Partner with civil society organizations (CSO), community groups, and stakeholders to promote gender equality in clean cooking initiatives, engaging local women leaders to drive community acceptance.

Enabling objectives

9.1.2.2 Promoting efficient biomass and biogas cookstoves

The DoRD will support programs promoting biomass biogas cookstoves. Access to clean fuels and technologies will be incorporated into relevant policies and activities, such as those related to health, education, women practical needs and renewable energy productive centers.

9.1.2.3 Accelerating access to clean fuels and technologies

The DoRD will collaborate with CSOs, faith-based organizations, community-based organizations, women lead organizations and local clean technology providers to raise awareness and encourage the adoption of clean cooking solutions. Community engagement will include tree replanting to ensure sustainable resource management. The promotion of LPG/Butane gas stoves and improved cookstoves will involve (a) educational campaigns in schools; (b) grants for clean cooking technologies; (c) rural electrification projects; and (d) partnerships with local communities. Recycling and reusing butane canisters will be emphasized when feasible.

9.1.2.4 Monitoring and disseminating clean cooking information

Collaboration with international and regional partners will be essential for conducting research and gathering data on clean cooking practices. Securing funding is vital for the widespread distribution of efficient biomass stoves to replace obsolete methods.



9.2. KFA 2: JUST AND ORDERLY TRANSITION

In FSM, transitioning away from fossil fuel dependence to renewable energy requires a comprehensive strategy addressing energy security, affordability, and sustainability. Although fossil fuels currently dominate FSM’s energy landscape due to their reliability and global market accessibility, shifting to renewable alternatives such as solar, hydro, wind, tidal, and wave energy coupled with hydrogen and battery energy storage is vital to meet national energy goals and reduce carbon emissions.

Given prior investments, increased petroleum-fueled generation underscores the need for a new, inclusive approach that fosters collaboration among energy stakeholders. This holistic strategy aims to catalyze funding and innovation within FSM’s electricity and transportation sectors, with a focus on enhancing energy efficiency, energy security, and infrastructure resilience against climate change impacts. Partnerships with development partners, academic institutions, private sectors, and CSOs are crucial for achieving a sustainable energy transition.

9.2.1 AREA OF INTERVENTION 3 - Conventional energy

Overarching objective

9.2.1.1 Petroleum safety and cost management

The policy underscores the importance of maintaining petroleum fuel safety standards and effectively managing costs to support the economic viability and sustainable development of FSM’s energy sector. Addressing high energy costs is crucial to promote renewable energy projects. Energy security depends on maintaining safety standards, managing fuel costs, reducing reliance on imported fuels, enhancing contingency measures for supply disruptions, and increasing resilience to climate and disaster risks within FSM’s energy systems and services.

Enabling objectives

9.2.1.2 Mitigating adverse environmental impacts of imported fuels

To protect soil, groundwater, and nearshore fisheries, DoRD, in partnership with DECEM, will collaborate with stakeholders like the Environmental Protection Agency (EPA) to ensure responsible collection, transportation, and disposal of waste oil, and petroleum by-products, aiming to minimize environmental impacts.

9.2.1.3 Upholding petroleum product quality and optimizing infrastructure

Encourage FSM's sole supplier, Vital Group, to maintain high quality standards for petroleum products while promoting technologies that reduce emissions. DoRD, in partnership with Vital Group, will develop fuel standards to enhance energy security, access, sustainability, efficiency, and facilitate a transition from fossil fuels.

9.2.1.4 Studying fossil fuel subsidies

Review FSM Government's fossil fuel subsidies with a view towards reforms that align with the national climate objectives for transitioning to a low carbon economy by 2050. As practical, establish distinct timelines for phasing down fossil fuels for the different island states, with DoRD securing funding for the study.

9.2.1.5 Regional collaboration on fuel prices

DoRD will collaborate with other Pacific Island nations to monitor and coordinate regional fuel prices, potentially leading to bulk purchasing benefits. Review national energy pricing structures and support comprehensive electricity tariff reforms to improve affordability and incentivize IPPs.

9.2.2 AREA OF INTERVENTION 4 - Renewable energy development

Overarching objectives

9.2.2.1 Achieving 70% of renewable electricity generation by 2030 and 100% by 2040

Recognizing the challenge of meeting the national target of 70 per cent renewable share in power generation by 2030, given the current 13% share, the policy calls for targeted initiatives such as independent power producer (IPP) and public private partnership (PPP) initiatives. It highlights the importance of an economies of scale approach in achieving affordable tariffs, investment and funding reducing financial burden on governments and facilitating technology transfer and knowledge sharing.

9.2.2.2 Advocating for sustainable alternative fuels and energy storage technologies

To reduce economic dependence on imported fossil fuels, this policy supports exploring alternative energy solutions, including pilot projects with tidal, wave, ocean thermal energy, hydrogen, and battery energy storage. These efforts should be based on necessity and viability with minimal government investment.

Enabling objectives

9.2.2.3 Increasing renewable electricity production

Enhance the capacity of utilities to plan, develop, and implement renewable energy systems (both off grid and on grid). Improving grid architecture to increase absorptive capacity for 100% renewable energy requires enhancing grid flexibility, upgrading infrastructure, and integrating advanced energy storage and smart grid technologies to efficiently manage variable renewable energy inputs. Encourage IPP and public-private partnerships (PPP) initiatives to reduce electricity costs. DoRD will work with stakeholders to support the IPP/PPP initiatives and seek financial support to address viability gap funding, where necessary.

9.2.2.4 Smart grid implementation

Integrate smart grids for real-time information on energy demand and supply information, enhancing renewable energy integration and grid optimization. State Utilities, under the guidance of AMU, to standardize technical specifications and equipment to benefit from economies of scale in procurement, operation, and maintenance.

9.2.2.5 Enhancing access to renewable energy technologies

Prioritize promotion of:

- **Solar power generation:** Encourage large-scale solar PV farms to be on land and floating solar PV (FPV) on water bodies if land is unavailable coupled with BESS for meeting evening load and grid stability. Consider rooftop solar installations with appropriate tariff regimes, and appropriate measure to measure to manage disrupt grid stability.
- **Hydropower initiatives:** Implement small-scale hydropower projects in Pohnpei and Kosrae, with regulatory measures ensuring optimal water use for energy and non-energy purposes. The regulator to consider introducing water resource royalties for power generation and ensure environmental impact mitigation measures meet regulatory standards.
- **Wind energy projects:** Conduct feasibility studies for both onshore and offshore wind projects and maintain the wind resource data. Develop onshore and offshore wind energy projects within lagoons if land is unavailable, leveraging experiences gained from Yap's Wind Farm operations. While the plant load factor of wind facilities appears similar to solar plants, the availability of wind at night reduces the need for larger BESS capacity.
- **Other Initiatives:** Encourage or explore other pilot renewable technologies including tidal, wave, ocean thermal energy, and coupled with green hydrogen and battery storage based on necessity and viability, with minimal government investments.

9.2.2.6 Enhancing funding for storage technologies

Recognize the necessity of storage technologies for transitioning to renewable energy sources and providing grid stability. Promote the adoption of batteries, and other emerging technologies relevant to FSM's energy needs.

9.2.3 AREA OF INTERVENTION 5 - Energy efficiency and energy conservation

Overarching objectives

9.2.3.1 Scale up efforts on energy efficiency and conservation activities and opportunities in the FSM

The policy supports adopting multi-sectoral strategies to enhance energy efficiency, aligning with global improvement targets. By implementing energy efficiency policies across sectors, substantial energy savings can be achieved, thereby reducing infrastructural investment needs and susceptibility to fluctuating fossil fuel prices. Meeting these targets by 2030 requires the expedited development of green building codes, minimum energy performance standards and labeling (MEPSL), transport mode shifts, and fuel economy improvements.

Enabling objectives

9.2.3.2 Improving supply-side management

Enhance the efficiency of energy production and distribution through supply side management initiatives, including upgrading power plants, implementing loss reduction strategies, and modernizing distribution networks to minimize inefficiencies. State utilities should strive to minimize total system losses, including auxiliary, technical, and non-technical losses.

9.2.3.3 Increasing demand-side management

Implement demand side management programs to reduce energy consumption in government facilities, residential and commercial buildings, and industry (fisheries). Educate and encourage financial institutions and state utilities to adopt energy efficiency practices while being mindful of “low-hanging fruit” upgrades that may lead to lock-in effects. Conduct energy audits for large industries and establish policy guidelines for integrating energy efficiencies measures in new and existing public facilities, such as the procurement of energy-efficient lighting, air conditioners, and appliances. Share lessons learned from past energy efficiency initiatives like NDC Hub and MBSPEE projects with the public.

9.2.3.4 Introducing green building codes

Promote energy-conserving practices through the development and enforcement of energy efficient building codes for new constructions and retrofits. Research energy-efficient construction materials, facilitate market mechanisms, and explore fiscal incentives for energy efficient building codes in consultation with the Department of Transport, Communication, and Infrastructure (DTC&I). Encourage the tourism industry to adopt energy-efficient measures and recognize high performers through education and awareness initiatives.

9.2.3.5 Capacity development and training programs

Enhance capacity among building sector stakeholders (architects, engineers, planners, developers, artisans, masons, retailers, manufacturers, etc.) through training programs in collaboration with DTC&I/DoRD and training institutions such as COM-FSM.

9.2.3.6 Promoting incentives for efficient energy use

Collaborate with the Department of Finance and Administration (DOFA) to establish financing and incentive strategies including taxes, subsidies, and tariffs, to expedite the adoption of energy efficient appliances in the market. Further support ongoing initiatives like the House Energy Loan Programme (HELP) with the FSM Development Bank.

9.2.3.7 Conducting energy audits and research

Conduct energy audits and research focused on efficient lighting, heating, ventilation, and air conditioning (HVAC) system upgrades, and industrial process optimization. DoRD in collaboration with private sector and utilities to identify high energy consuming buildings and conduct comprehensive energy audits to collect baseline information. Work with development partners in conducting more comprehensive energy audits and implementing the retrofits to benefit FSM. DoRD could consider implementing energy efficient measures through legislation in residential, commercial, and industrial sectors comprising of (i) Efficient Lighting systems, (ii) HVAC System Upgrading, and (iii) Industrial Process Optimization.

9.2.3.8 Developing standards and appliance labelling program

FSM's appliance and lighting energy efficiency programs will align with US labelling systems like the Energy Guide and Energy Labels. Drawing on lessons from Pacific appliance energy efficiency schemes and the human resources available within DoRD's Energy Division, a straightforward approach to Standards and Labelling (S&L) will be adopted:

- i. **Raise Public Awareness of Energy Labels:** Successful implementation of a standards and labelling (S&L) program hinges on stakeholders' education. This involves a robust information campaign, during both voluntary and mandated phases, focusing on the benefits of Energy Labels. Awareness strategies to include radio broadcasts, brochures, community consultations, school competitions, exhibitions and social media, tailored to budget constraints.
- ii. **Promote Voluntary Use of Energy Labels:** Initially introduce Energy Labels on imported electrical appliances through a voluntary scheme, as these labels are easy to understand and indicate energy efficiency. The voluntary approach will run for one year and during which period a monitoring system must be established to track the imports of Energy labelled appliances.
- iii. **Mandate Energy Labels through Legislation:** After evaluating the voluntary phase, introduce legislation requiring the import and use of Energy Labels on priority appliances such as air conditioners, lighting, refrigerators, and freezers. This mandate will ensure compliance, improve energy efficiency across households and businesses, and align with national sustainability goals. Enforcement mechanisms, including customs monitoring and market inspections, will be established to support adherence to the legislation.

9.2.3.9 Integrating energy efficiency and energy conservation lifecycle costs in public procurement

Implement fiscal incentives to mitigate appliance cost disparities, while conducting consumer awareness programs. DoRD will:

- Develop and enforce appliances monitoring protocols.
- Ensure the Department of Finance and Administration (DOFA) incorporates energy efficiency and energy conservation lifecycle costs into the public procurement system.
- Offer fiscal incentives, when viable and funded, to offset the higher initial costs of labeled appliances and to accelerate market penetration.
- Execute consumer awareness programs.

9.2.4 AREA OF INTERVENTION 6 - Transportation sector transformation

Overarching objectives

9.2.4.1 Phasing down fossil fuel usage in the transportation sector

The FSM plans to phase down fossil fuel use in its transportation sector (land, marine and air) by 2040, with a complete phase-out by 2050. Currently, this sector is fully reliant on petroleum fuels. For FSM, a transition to low-carbon transportation is anticipated to accelerate from 2030 and beyond.

Enabling objectives

9.2.4.2 Enhancing vehicle efficiency

Advancements in internal combustion engines provide improved fuel efficiency, albeit at a higher initial cost, resulting in reduced fuel consumption and operating costs in the long-term. Policies may impose restrictions on less energy efficient vehicles based on engine sizes and models.

9.2.4.3 Promoting sustainable transport modes

Adopting sustainable transport methods can significantly improve efficiency without compromising quality of life. This includes promoting public transportation to alleviate traffic congestion and emissions and implementing intelligent transport systems with features like dynamic speed limits and parking guidance systems. The DTC&I, with municipal collaboration, will consider energy efficiency and environmental conservation in town planning to encourage cycling and walking, and alleviate traffic congestion. Establish vehicle advisory services across the island states to promote electric and hybrid vehicles, provide emission guidance for importers and governmental, facilitate emission testing and vehicle fitness evaluations, and manage vehicular waste, aligning with FSM's nationally determined contributions (NDC) targets.

9.2.4.4 Developing an Electric Vehicle Policy and Roadmap

By 2030, DoRD, in partnership with DTC&I, aims to develop a comprehensive electric vehicle policy and roadmap to transition from internal combustion vehicles. The shift to electric vehicles (EVs) will reduce GHG emissions, enhance vehicle fuel economy, diversifying transportation modes, and building an EV market underpinned by policies, incentives, and enforcements that ensure EVs and charging infrastructures are safe, accessible, affordable, and integrate smoothly with the electricity grid.

9.2.4.5 Developing a Marine Transport and Shipping Efficiency Action Plan

DoRD, in partnership with DTC&I will initiate the development of a Marine Transport & Shipping Efficiency Action Plan through technical expertise and lessons learnt from other neighboring countries to assess maritime transport emissions, set baseline targets, and propose efficiency measures.

Investment in the action plan will support emission reduction through operational and physical efficiency improvements to government vessels, initiate standards and incentives like ship energy management plans, and consider measures such as route optimization, propeller upgrades, engine tuning and low-emission propulsion retrofitting. Efforts will include phasing out inefficient two-stroke outboard engines and promoting high-efficiency engines, alongside exploring emissions management strategies, and securing international support and technical assistance for maritime emission reduction initiatives.

9.2.5 AREA OF INTERVENTION 7 - Security and climate resilience

Overarching objectives

9.2.5.1 Striving for net-zero carbon emissions by 2050

FSM's updated 2022 NDC aims to reduce carbon dioxide emissions from electricity generation by over 65% from 2000 levels. The SDG 7 Roadmap analysis highlights energy-saving potential across various sectors targeted for 2030. Achieving net zero emissions by 2050 involves decarbonizing FSM's power sector first and transitioning all energy systems to electricity. Emerging technologies, such as electric cook stoves and EVs, are commercially available and key to this transition.

9.2.5.2 Enhance Climate-Resilient Energy Infrastructure

Extreme weather events threaten energy supply, creating a need for resilient systems to protect communities and economies. By enhancing climate-resilient infrastructure, the policy aims to protect communities, reduce economic losses, and promote sustainability and resilience in the face of evolving environmental challenges. Leveraging lessons from past typhoons and disasters, infrastructure projects will incorporate advanced forecasting, protective systems, and long-term sustainability practices. These efforts aim to secure reliable energy access for all communities while minimizing disruptions and fostering environmental and economic resilience.

Enabling objectives

9.2.5.3 Supporting transition to low-carbon technologies

The government of the Federated States of Micronesia (FSM) is dedicated to transitioning to low-carbon technologies in line with the targets outlined in this Policy and the updated 2022 Nationally Determined Contributions (NDC). Achieving this commitment requires a comprehensive approach that includes financial incentives and securing investments to support renewable energy adoption and expand energy storage. Public engagement and international collaboration are also critical to this transition. Educational campaigns will raise awareness about the benefits of low-carbon technologies, encouraging individuals to adopt sustainable practices and support renewable energy initiatives.

On both regional and global scales, the government will foster partnerships to share knowledge, exchange best practices, and participate in international climate agreements. Together, these efforts aim to reduce greenhouse gas emissions, mitigate climate change, and ensure a resilient and sustainable energy future for the Federated States of Micronesia.

9.2.5.4 Long-term, low-emission development strategy

In partnership with DECEM, DoRD will lead the development and implementation of the Federated States of Micronesia's (FSM) long-term, low-emission development strategy, aligned with the Paris Agreement. This strategy aims for economy-wide decarbonization by 2050, encompassing ambitious emission reduction targets, sector-specific decarbonization plans, and significant investments in innovative technologies such as energy storage and carbon capture. It includes strengthening policies and regulations, enhancing capacity building and education, and securing funding through various financial mechanisms. Public engagement and international collaboration are also key, fostering partnerships to share knowledge and participate in global climate initiatives, ultimately contributing to FSM's resilient and sustainable energy future.

9.2.5.5 Promote climate-resilient energy infrastructure

Designing resilient energy infrastructure is crucial as regional weather patterns change. Infrastructure projects will account for extreme weather, incorporate safety and recovery plans, and apply lessons from past experiences. Comprehensive disaster recovery strategies will accompany all major projects. Community awareness initiatives and climate education programs will be integrated into all energy programs in collaboration with DECEM.

9.2.5.6 Disaster Risk Reduction (DRR) Policy Framework for Electric Utilities

Strengthen energy utility disaster resilience through legal frameworks that ensure robust design, construction standards, and material standardization. Assess energy infrastructure locations for vulnerability to long-term climate impacts like sea level rise and extreme weather, employing siting strategies to minimize risks.

9.3. KFA 3 ENERGY GOVERNANCE

The National Energy Workgroup (NEWG), formed under the 2012 National Energy Policy, oversees energy sector activities, especially in relationship to the implementation of the national energy policy. It consists of members from the key departments in the national government, the four state utilities and a state representative coming out of each State Energy Workgroup (SEWG).

The NEWG shall remain to oversee the energy sector and implementation of this policy. It includes DoRD, DOFA, ODA, DTC&I, DECEM, SEWG, representatives from utilities, Vital Group, and others by invitation. The Secretariat, managed by the Energy Division under DoRD, is responsible for agenda setting and decision monitoring.

Key focus areas:

- **Enhancing Investments:** Target investments to enhance resilience, reducing energy poverty, and meeting sector needs.
- **Private Sector Engagement:** Foster collaboration across agencies to support private sector participation and promote PPPs in the energy sector.
- **Establish relevant Task Forces:** Addressing specific challenges and achieving strategic goals such as transparent fuel and electricity tariff pricing, performance evaluation etc.



9.3.1 AREA OF INTERVENTION 8 - Policy and regulatory reform

Overarching objective

9.3.1.1 Ensure effective planning, compliance and oversight for a successful and sustainable energy transition.

Specific policy and regulatory reforms will be undertaken to enhance energy planning, compliance and to encourage investments. The Government may support well-designed enabling policies and regulations supporting private sector renewable energy initiatives, promote transparency and accountability, improves project sustainability and maximizes social economic benefits.

Enabling objectives

9.3.1.2 Developing the monitoring key performance indicators covering environmental, social and economic aspects of the energy sector

The DORD in collaboration with relevant stakeholders, will develop a monitoring and evaluation framework that aligns with national policy goals and targets. The framework will undergo annual review and adjustment to reflect undated conditions and new insights. Annual reporting on the NEP progress will be prioritized and shared with stakeholders via relevant platforms, ensuring accessibility and ease of understanding for all. Mechanisms will be established for stakeholders to provide feedback on the report and the progress of the energy policy. These mechanisms could include surveys, public consultations, and stakeholder meetings such as NEWG, SNLC and R&D conferences.

9.3.1.3 Developing energy sub sector policies and implementation plans

The Energy Division, in collaboration with the National Energy Workgroup and relevant stakeholders, may develop energy sub-sector policies and implementation plans tailored to FSM's unique energy needs and goals. These initiatives will be shaped by evolving priorities. Additionally, continuous support will be provided for the review and revision of existing plans, such as the 2018 Energy Master Plan.

9.3.1.4 Establishing an Energy Act and regulatory framework

DoRD, in partnership with the Attorney General's office, will develop an overarching Energy Act for FSM. This Act will: (i) define the roles and powers of the Energy Division, DoRD, NEWG, and establish an energy regulator and other relevant bodies; (ii) ensure a coherent institutional and regulatory framework for managing, planning, and co-ordination of FSM's energy sector; (iii) establish standards and regulate energy services; and (iv) promote private sector involvement and research initiatives.

The energy regulator will develop and enforce regulations regarding the establishment, ownership, operations, and activities related to energy goods and services. The focus will be on: (i) providing incentives for innovation and investment in replacement, upgraded, and new assets; (ii) improving efficiency and offering services that meet consumer demands; (iii) sharing the benefits of efficiency gains with consumers, including through lower prices; and (iv) delivering energy services that are safe, affordable, efficient, fair, reliable and environmentally sustainable.

The Act will incorporate:

Fiscal and regulatory incentives: To stimulate private investment in renewable energy projects, the government will introduce financial and regulatory incentives, such as:

- i. Feed-in tariffs (FITs) or competitive bidding schemes for fair and consistent revenue streams.
- ii. Net metering and net billing options to encourage rooftop solar installations, where appropriate.
- iii. Establish national renewable energy mandates and generation premiums to incentivize renewable energy production.
- iv. Streamline licensing procedures and facilitate land acquisition or leasing.
- v. Provision of tax credits or exemptions for project developers.
- vi. Assistance in securing guarantees from global financial institutions like the Asian Development Bank, and the World Bank.
- vii. Collaborate with financial institutions to offer risk sharing facilities.
- viii. Support for accessing viability gap funding, capital subsidies, grants, or rebates.
- ix. Evaluation of unsolicited proposal, if deemed relevant.

9.3.1.4 Enhancing energy sector data management and dissemination.

Improving the collection, management and dissemination of energy data is crucial for effective planning, investment decisions, and emissions monitoring. DoRD will lead the following initiatives to strengthen data management practices.

Central Data Repository: Establish a central data repository system resourced adequately for data collection, compilation, analysis, and dissemination and maintenance of all energy sector data in FSM.

Partnerships for enhanced data management: To improve data collection, analysis, and dissemination, DoRD will collaborate with the East West Center, University of the South Pacific, University of Guam, COM–FSM, and other academic institutions. These partnerships will explore opportunities for academic institutions to support national data needs.

Building capacity for data management: Recognizing the evolving data requirements for energy proposals, audits, reports, and investment strategies, DoRD will focus on enhancing existing capabilities and recruiting new personnel dedicated to data collection, analysis, and dissemination.

Enhancing data collection in transport sector: DoRD, in cooperation with relevant institutions and development partners, will support improving data collection and analysis of energy consumption in the marine and land transport sectors. Close collaboration with Public Transport and Safety and DTC&I will drive efforts to enhance data, management practices within the transport sector.

9.3.1.5 Enhancing collaboration with the private sector.

Increasing engagement and collaboration with the private sector is vital for advancing energy sector goals. The Energy Division within DoRD will collaborate with the Department of Tourism, Investment, and Trade, alongside private sector advisory committees, to refine guidelines for public-private partnerships. This effort aims to align energy initiatives with a broader spectrum of private sector objectives and investments. Additionally, the Energy Division will ensure that information on key energy sector projects and investment opportunities is well-documented and easily accessible.

9.3.2 AREA OF INTERVENTION 9 - Enhancing access to resources

Overarching objective

9.3.2.1 Maximizing energy sector funding.

Encouraging private sector participation as Independent Power Producers (IPPs) presents significant potential for Pohnpei and Chuuk, where market conditions are more conducive compared to Kosrae and Yap. To maximize private sector involvement in FSM's energy sector, strategic opportunities can be explored through well-structured Public-Private Partnership (PPP) arrangements.

A viable approach to achieving this would involve leveraging economies of scale by engaging a single private provider to serve all four states. This unified model can streamline operations, enhance efficiency, and ensure consistency across the energy sector, addressing disparities in capacity and readiness among the states. Recognizing the critical role of viability gap funding will be key in attracting private sector participation. Such funding can bridge financial shortfalls, particularly in initial stages, to ensure projects remain financially sustainable. Through market-driven PPP initiatives, FSM can support the private sector in establishing commercially viable operations, transferring technical expertise, and introducing innovative solutions that align with national energy goals.

Additionally, these efforts can enable the introduction of more affordable feed-in tariffs, making renewable energy integration more accessible while maintaining a focus on cost recovery and sustainability. By fostering collaboration with the private sector, FSM can drive long-term development of renewable energy infrastructure, strengthen energy security, and inspire technological advancement across the region.

Enabling objectives

9.3.2.2 Encouraging IPP participation.

Independent power producers (IPPs) have demonstrated global effectiveness when incentivized by performance-based returns. They bring advantages such as swift project execution, cutting-edge technology utilization, reducing the financial strain on governments, and driving reforms in the power sector. Given FSM's goal of achieving a 70% share of renewable energy share by 2030, private sector engagement is crucial and supported by this policy. Alongside PPPs, this policy supports developing an IPP implementation plan to expedite nationwide IPP initiatives, leveraging economies of scales to boost renewable energy grid penetration and manage tariffs effectively. The IPP implementation plan will include:

- Deploying decentralized renewable energy systems, mini-grids, and rooftop solar solutions.
- Implementing energy efficiency initiatives in buildings and industries.
- Upgrading grid infrastructure and adopting energy storage technologies.
- Supporting energy related research and development.
- To expedite IPP adoption, DoRD, in partnership with the NEWG, will proactively engage with developers to solicit and award contracts for private entity-led electricity supply projects and unsolicited proposals, if deemed relevant.

9.3.2.3 Resource mobilization plan developed and implemented

The government will mobilize funds for energy projects from various sources, including development partners. Non-sovereign guarantees for private loans in energy projects may help meet the sector's financing requirements.

The funding sequence for the four main grids will be:

- i. Grants
- ii. Forgivable or concessional loans
- iii. Private financing
- iv. Blend of private and public financing or utilization of public guarantees to attract private investments
- v. Fully funded by the government.
- vi. While this funding sequence is preferred for the outer islands, it may not be necessary unless financially sensible.

Where necessary, diverse financing sources — public, private, multilateral, bilateral — should be blended and coordinated to leverage additional financial, technical, knowledge, and human resources. “Non-reimbursable loans”, functioning like grants, may support projects or technical assistance. DoRD in coordination with ODA, will compile funding sources and procedures.

9.3.3 AREA OF INTERVENTION 10 - Institutional coordination

Overarching objective

9.3.3.1 Implementing strong institutional and stakeholder coordination

This policy provides a guiding tool for stakeholder coordination and participation, aimed at achieving FSM national goals and targets. A technical task force and regulatory body will be established to support independent decision making.

Enabling objectives

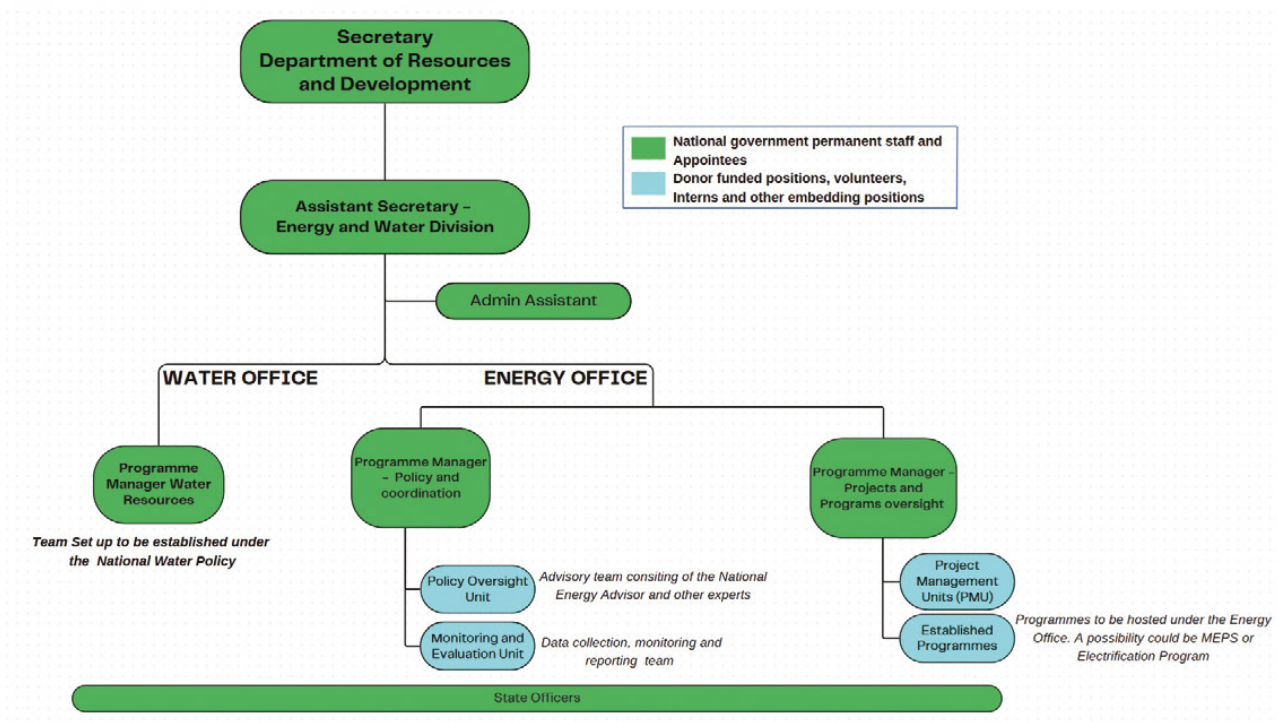
9.3.3.2 Enhancing institutional capacity within Energy Division in Department of Resource and Development.

Alignment of national energy initiatives with socio-economic priorities is paramount. The Energy Division will engage stakeholders and the National Energy Workgroup (NEWG) to prioritize energy investments that align with key sector's objectives. Through coordinated efforts and enhanced capacity-building within the Energy Division, the focus will shift towards implementing sustainable development actions, such as:

1. Energy policy, planning, and capacity building.
2. Implementing Clean Development Mechanism projects, like improved cook stoves for 17,000 households in FSM, achieving 100% access to clean cooking sources.
3. Enhancing finance, resource mobilization, and cooperation.
4. Sustaining energy efficiency and energy conservation initiatives.
5. Conducting preparatory studies and pilots for long-term sustainability beyond 2030.
6. Undertaking public-private regulatory reforms.

Currently, the Division of Energy has two permanent positions: (i) the Assistant Secretary of Energy and (ii) the Program Manager for Water Resources. Other personnel consist primarily of project-based or contracted consultants. To bolster capacity and expertise within the energy sector, it is proposed to create additional permanent positions. These may include new Energy Program Managers responsible for tasks such as policy development, planning, reporting coordination, and overseeing the implementation of projects and programs. Additionally, the importance of appointing dedicated State Energy Officers (see Figure 3) is recognized. Workforce planning will be a key element in defining these roles. Meanwhile, resources and capabilities within the division will be further strengthened through ongoing project support, exchange programs, and the integration of embedded consultants.

Figure 3 Proposed administration and coordination structure (ideas in mind that is subject to change)



9.3.3.3 Enhancing stakeholder collaboration for energy transition.

Strengthening collaboration among government entities, private sector stakeholders, and communities is vital for driving the nation’s energy transition. The DoRD will play a central role in fostering partnerships and organizing key initiatives to support this goal. Efforts will focus on enhancing stakeholder coordination through the established National Energy Work Group (NEWG) and State Energy Work Group (SEWG) forums. Additionally, the creation of specialized Energy Task Force Committees will address specific energy challenges.

The terms of reference for the NEWG and SEWG, provided in Annexes 1 and 2, will be updated as required. The DoRD will continue working with development and donor organizations to secure technical and financial support for FSM’s energy transition initiatives. The significance of partnerships cannot be overstated, and monitoring and evaluation of these partnerships should be conducted annually and documented in the NEP monitoring and evaluation framework (Annex 4)

Key collaborative areas include:

- **Collaboration with national departments and entities:** Strengthening ties with agencies like DECEM, DTC&I, and Vital Group will bolster the NEWG and contribute to climate change mitigation, low-carbon transport, energy efficiency, and sustainable infrastructure development.
- **Data-driven energy planning:** The DoRD through its Division of Energy and the Division of Statistics, will jointly develop and update FSM's Energy Balance and Supply and Demand projections. This will provide critical insights to guide decision-making, prioritization, and resource mobilization.
- **Partnerships for research and capacity-building:** Working with the College of Micronesia will enhance research, feasibility studies, and initiatives in renewable energy technologies, rural electrification, energy efficiency, and youth empowerment.
- **Financial coordination and incentives:** Collaborating with financial institutions, state governments, and communities will enable the exchange of best practices and the development of financial incentives for energy efficiency and clean energy adoption. Coordination with the Customs and Tax Administration will help establish agreements that promote the importation of energy-efficient technologies.
- **Regular information sharing and joint initiatives:** Promoting frequent knowledge exchange, the development of joint activities, and systematic evaluation will ensure effective collaboration and track progress within the energy transition framework.
- **Public education and awareness:** Enhancing public understanding of energy issues, including conservation, climate change, and renewable energy benefits, will be prioritized. Efforts will include integrating energy-focused curricula into schools in partnership with the Department of Education to create an informed and inclusive future workforce. Gender equity will also be emphasized by encouraging women's participation in the energy sector through training, mentorship, and leadership opportunities.

10. Reporting and monitoring

Evaluating the energy sector’s performance will involve both qualitative and quantitative analyses. DoRD will serve as the repository for macro-level energy information. Utilities must maintain their data in a usable format, regularly disclosing essential information to the public and providing select data to the regulator and DoRD. The data will typically include:

1. **Key Performance Indicators (KPIs):** Establish KPIs for energy access and sustainability in each state with metrics for progress evaluation. Monitoring and Evaluation Mechanisms: Develop regular assessments and stakeholder feedback processes through utilities. Impact assessments and surveys, coordinated to streamline public input, will help shape future projects and policies.
2. **Annual Energy Reports:** DoRD will publish annual energy reports to provide transparent reporting and public access to energy data for developmental purposes. Reporting will also provide inputs and progress based on the indicators provided from the monitoring and evaluation framework from Annex 4
3. **Meetings and Conferences:** Organize regular forums, workshops, and conferences to bring together key stakeholders, including policymakers, utilities, regulators, and the public. These events will:
 - a. Facilitate the exchange of ideas and best practices in the energy sector.
 - b. Serve as a platform for reviewing performance, discussing challenges, and identifying areas for improvement.
 - c. Provide updates on energy policies, technological advancements, and project milestones.
 - d. Strengthen collaboration between states and ensure alignment with national and regional energy goals.

By fostering dialogue and transparency, these meetings and conferences will play a critical role in the continuous improvement and sustainability of the energy sector.

4. **Various agencies will implement** disclosure policies, updates, tariffs revisions, and reports on their websites. Important notifications will be disseminated through Short Message Service (SMS) and other social media platforms to reach a broader audience promptly and effectively.

11. Policy Review

Although this policy spans from 2024 to 2050, conducting periodic reviews at intervals of 5 to 10 years is essential to maintain its relevance and effectiveness to ensure the nations short term (2030), medium term (2040) and long term (2050) energy targets are achieved. The energy landscape in the Federated States of Micronesia (FSM) is expected to experience significant transformations due to technological advancements, evolving international energy markets, and the increasing impacts of climate change. These factors necessitate regular assessments to address unforeseen developments and emerging challenges. Strategic milestones set for 2030, 2040, and 2050 will serve as critical checkpoints to evaluate progress and recalibrate actions. By embedding flexibility through scheduled reviews, FSM can maintain a proactive approach to its energy policy, ensuring long-term success while adapting to dynamic conditions.



Annexes

ANNEX 1 - Terms of Reference for the National Energy Workgroup

1. Objective:

- a. Oversee and coordinate the activities in the energy sector especially in relationship to the implementation of the national energy policy as well as to help steer priority developments and initiative in the direction as identified in the energy policy/action plans.
- b. Coordinate effectively with the State Energy Workgroups to ensure the alignment and success in implementing both the national and state energy plans.

2. Scope of work:

- a. Regularly reviewing and updating national and state energy plans to ensure alignment with evolving national energy needs and policy objectives.
- b. Providing strategic direction and guidance to State Energy Workgroups (SEWGs) for the development and implementation of their respective energy strategies.
- c. Monitoring energy plans, evaluating progress toward national targets, and proposing necessary adjustments.
- d. Identifying and addressing policy, regulatory, or institutional barriers hindering the implementation of energy plans.
- e. Facilitating the exchange of best practices, lessons learned, and innovative solutions among SEWGs.
- f. Leading resource mobilization efforts, including coordination of funding sources and technical assistance for implementing energy plans.
- g. Establishing performance indicators and monitoring mechanisms to evaluate the progress and impact of energy plans.
- h. Coordinating with national government agencies, development partners, and stakeholders to ensure coherence and alignment with broader national strategies and policies.
- i. Overseeing all national energy sector efforts and coordinating overseas development assistance for the implementation of Action Plans.
- j. Assisting in the implementation of Action Plans by SEWGs and providing technical assistance as needed.

3. Membership and governance:

- a. The National Energy Workgroup (NEWG) shall comprise of representatives from national government; DoRD (Division of Energy), DTC&I, DECEM, Office of Overseas Development Assistance (ODA), Chairs of SEWG from each State, State Utilities, Association of Micronesian Utilities (AMU), Vital Group and College of Micronesia (COM-FSM).
- b. A senior official from DoRD or designated representative of the Energy Division shall chair the National Energy WorkGroup.
- c. The Assistant Secretary for the Division of Energy as Secretariat will be responsible for coordination, preparation of the agenda, related meeting documents and official minute for the respective sessions.
- d. The NEWG will meet regularly such as biannually to review progress, address challenges, and make decisions regarding the implementation of the National Energy Policy and including national and state energy plans.
- e. Whenever possible the NEWG meetings will be combined with training activities and/or lesson learned and reflection activities, launching of activities, Project steering committee meetings and other national level events.
- f. The NEWG members will make decisions on a consensus basis wherever possible. Where consensus cannot be reached, a majority vote will determine specific outcomes.

4. Coordination with State Energy Workgroups:

- a. Establish regular communication channels and collaborative mechanisms with the State Energy Workgroups.
- b. The National Energy Workgroup will offer guidance, support, and collaboration to the State Energy Workgroups to ensure the effective implementation of the state energy plans.
- c. Organize periodic meetings or workshops to facilitate the exchange of information, best practices, and lessons learned among the State Energy Workgroups.
- d. Provide technical assistance, capacity building, and support for resource mobilization as needed by the State Energy Workgroups.
- e. Ensure State Energy Workgroups report their progress, challenges, and proposed solutions, maintaining alignment and coordination with the National Energy Plans.
- f. Incorporate feedback and input from the State Energy Workgroups into the development and execution of the national and state energy plans.

5. Coordination with Project Steering committees:

The National Energy Workgroup underscores the critical need for coordinated event planning to enhance the effectiveness of project steering committees. Acknowledging that core members of the NEWG participate in multiple committees, it advocates for streamlined facilitation to efficiently manage resources, minimize scheduling conflicts, and guarantee consistent representation in key meetings.

- a. The National Energy Workgroup will actively participate in all energy project steering committees to provide guidance and ensure alignment with national and state energy plans.
- b. The National Energy Workgroup will foster collaboration and ensure project activities contribute to overarching energy goals, avoiding duplication of efforts.
- c. Energy projects will regularly report their progress, challenges, and proposed solutions using standardized formats for clarity and transparency. Continuous reporting and feedback mechanisms will maintain alignment with the National Energy Plans and ensure accountability throughout project execution.

6. Coordination with the Energy Task Force committees:

NEWG recognises that specific Energy Task force committee will be established to advance strategic energy initiatives to ensure effective governance and coordination across energy-related initiatives.

- a. The National Energy Workgroup will provide guidance to ensure that the Task Force's initiatives align with national energy policies and objectives.
- b. Leverage the diverse expertise of the expanded team to address complex challenges and drive innovative energy solutions.
- c. Track energy project progress and deliver detailed updates, enabling informed decision-making and accountability.

ANNEX 2 - Terms of Reference for the State Energy Workgroups

1. Objective:

- a. Provide effective oversight and coordination in implementing energy sector activities within the state.
- b. Update and implement state-level Energy Plans in alignment with the National Energy Policy and emerging priorities.

2. Scope of work:

- a. Oversee and coordinate State efforts in the energy sector: Ensure alignment across all energy-related activities and initiatives.
- b. Implement State Energy Action Plans: Drive the execution of strategic energy policies and programs.
- c. Advise the state government on energy issues: Provide expert guidance on policy and decision-making.
- d. Monitor and evaluate energy plans: Track progress toward state-level targets, propose adjustments to address local needs, and overcome implementation challenges.
- e. Enhance coordination: Collaborate with the NEWG to align energy efforts between National and State Governments, donor partners, and stakeholders while integrating national and state energy plans.
- f. Prioritize projects: Focus on renewable energy, battery energy storage systems (BESS), and essential diesel-based generation projects to meet the state's energy demands.
- g. Set realistic renewable energy targets: Establish phased goals for transitioning states to generate 50%, 70%, and ultimately 100% of electricity from renewable sources.

3. Membership and governance:

- a. The State Energy Workgroup (SEWG) shall comprise of representatives from the respective state government departments, state utility and other relevant stakeholders.
- b. The Workgroup will be chaired by a senior government official or a representative from the state's government.
- c. The designated State energy officer, whether part of the State Utility or State Government, will act as the Secretariat. They will handle coordination, prepare agendas, meeting documents, and official minutes for sessions.
- d. The SEWG will meet regularly such as quarterly to review progress, address challenges, and make decisions regarding the implementation of the state energy plans.
- e. The SEWG members will make decisions on a consensus basis wherever possible. Where consensus cannot be reached, a majority vote will determine specific outcomes.

4. Coordination with National Energy Workgroups:

- a. The State Energy Workgroup will maintain consistent communication with the NEWG, sharing updates on progress, challenges, and proposed solutions. This includes submitting detailed reports to ensure transparency and alignment.
- b. The State Energy Workgroup will actively engage in National Energy Workgroup meetings, contributing updates, insights, and feedback to strengthen the coordination and effectiveness of energy initiatives.
- c. The State Energy Workgroup and the National Energy Workgroup will establish well-defined communication channels and collaborative frameworks. This will facilitate seamless coordination, comprehensive information exchange, and alignment of state and national energy objectives.

ANNEX 3 - Theory of Change for the FSM National Energy Policy (2024 – 2050)



Vision

FSM achieves universal access to affordable, reliable, and sustainable energy, by fully transitioning to a 100% renewable-energy based system. This transition will drive economic growth, environmental sustainability, and resilience across all states.



Problem Statement

FSM's energy sector faces significant challenges, including:

- High energy costs and heavy reliance on imported fossil fuels.
- Limited access to reliable energy, particularly in remote areas.
- Environmental degradation and vulnerability to climate impacts.

These issues hinder development, exacerbate energy poverty, and create barriers to sustainability and resilience.



Long-Term Outcomes (2050)

- Achieve net-zero carbon emissions.
- Transition to clean transportation systems.
- Improved living standards and reduced energy poverty.
- Inclusive participation of marginalized groups in energy initiatives.



Intermediate Outcomes (2040)

- 100% renewable, resilient energy systems.
- Economic growth driven by a sustainable energy sector.
- FSM recognized as a regional leader in climate action.



Immediate Outcomes (2030)

- Universal access to affordable and reliable electricity.
- 70% renewable energy contribution to electricity generation.
- Significant reduction in indoor air pollution through clean cooking technologies.
- Enhanced governance with operational regulatory frameworks.





Outputs

- Expanded electricity grids and operational renewable energy systems.
- Increased access to clean cooking solutions.
- Developed policies, standards, and energy efficiency measures.
- Strengthened partnerships with stakeholders and private investors.
- Enhanced institutional capacity and stakeholder collaboration.
- Improved data management and dissemination for informed decision-making.



Key Activities

- **Infrastructure Development:** Expand and upgrade energy grids, install renewable systems, and develop climate-resilient infrastructure.
- **Capacity Building:** Train government officials and communities, and create educational programs to foster local expertise.
- **Policy and Regulation:** Establish an independent regulatory body, create incentives for renewable energy, and promote private sector involvement.
- **Public Engagement:** Conduct awareness campaigns on energy efficiency and clean technologies while promoting inclusivity.
- **Funding Access:** Develop financing models, strengthen partnerships, and provide grants and incentives.
- **Regional Cooperation:** Collaborate with Pacific nations to share best practices and leverage international frameworks.
- **Monitoring and Evaluation:** Implement an M&E framework to track progress and inform adjustments.
- **Research and Feasibility Studies:** Conduct technical assessments to guide decision-making and ensure sustainability.



Inputs

- **Financial Resources:** Government budgets, international funding, and private sector investments.
- **Human Resources:** Trained professionals, local expertise, and stakeholder collaboration.
- **Technical Assistance:** Support in renewable technologies and regulatory frameworks.
- **Policy Support:** Comprehensive national and state-level policies.
- **Community Engagement:** Involvement in planning, implementation, and awareness campaigns.



Assumptions

- Continued political commitment from FSM's government.
- Adequate financial resources and sustained international support.
- Community readiness to adopt energy innovations.
- Advances in renewable technologies and private sector investment.

ANNEX 4 – Monitoring and Evaluation Framework

The Monitoring and Evaluation Framework encompasses efforts from 2025 to 2030. It will be reviewed and updated every five years.

Key Result Areas	Area of Intervention	Overarching Objective	Enabling Objective	Indicator
KRA 1: ENERGY ACCESS AND EQUITY	1. Reliable and affordable electricity	1.1 Ensure access to reliable and affordable electricity services for all FSM citizens by 2030	1.1.1 Enhance capacity for demand and socio-economic surveys	Standardize current guidelines or SOPs for community energy consultations.
			1.1.2 Establish a national electrification program	Development of a national electrification program
			1.1.3 Increase access to skill transfer programs	Annual number of local technicians and scholarships offered to students taking specialized programs in STEM fields
			1.1.4 Implementing financial, operational, and management mechanisms	Development of a transparent tariff framework for off grid and stand-alone systems to ensure sustainability.
	2. Clean cooking	2.1 Achieve 100% access to clean cooking for all FSM citizens by 2030 through affordable and accessible alternatives	2.1.1 Promoting efficient biomass and biogas cookstoves	Creation of a grant funded project to promote biomass and biogas cookstove.
			2.1.2 Accelerating access to clean fuels and technologies	Development of awareness and educational campaigns conducted in collaboration with civil society and community organizations.
			2.1.3 Monitoring and disseminating clean cooking information	Development of partnerships with international and regional organizations for research on clean cooking practices.

Baseline (2024)	Target	Means of Verification	Timeline	Responsible Parties
Existing guidelines and SOPs are largely driven by individual projects. There is a pressing need to establish standardized practices across all states and at the national level to ensure consistency and efficiency.	Guidelines standardized by 2026	Guidelines and SOPs available	2026	DORD, State Utilities, EPA, COM-FSM
No national electrification program has been developed yet. Although islands have been identified in the energy master plan, the implementation approach to electrify these islands is delayed with respect to national targets.	National electrification program developed by 2026	National electrification program documents, Annual reports submitted by mayors/chiefs on the outer islands	2026	DORD, Utilities, NEWG, SEWG, AMU
COM FSM through CTEC offers a number of training courses and internship programs in electrical, refrigeration, and engine repair, among others from the college and have undertaken a number trainings targeting local technicians. In regards to graduates, there is a lack of graduates in electrical engineering and selected energy fields in FSM.	Train and certify at least 40 local technicians annually, at least 4 students are being allocated Specific STEM field scholarships annually.	Annual list of scholarship funded. List of graduating students from COM FSM and DOE. Reports of trainings facilitated through energy projects in FSM.	2025-2030	COM-FSM, DOE, DORD/NEWG
No standardized tariff framework exists for off-grid and stand-alone systems across FSM.	Framework completed and approved by 2026	Transparent tariff framework	2026	DORD, NEWG, SEWG, State Utilities
Selected state level projects in the past was promoted in Pohnpei in regard to biogas digesters. An estimated 50 units installed. Shift in cooking mode preference over the years is seeing more reliance to butane cans over kerosene stoves.	Grant secured with biomass and biogas cookstoves being promoted from 2027	Grant Secured Number of houses using Biomass and Biogas cookstoves	2027-2030	DoRD, DECEM, DOHSA
Limited to no clean cooking awareness campaigns being undertaken.	Awareness and educational campaigns established by 2026	Awareness and educational campaign materials	2026-2030	DoRD, DECEM, locally based CSOs
Limited to no research being undertaken on clean cooking studies in FSM.	At least 3 partnerships established from 2026	MOU	2026-2030	DoRD, DECEM, EPA

Key Result Areas	Area of Intervention	Overarching Objective	Enabling Objective	Indicator
KRA 2: JUST AND ORDERLY TRANSITION	3. Conventional energy management	3.1 Petroleum safety and cost management	3.1.1 Mitigating adverse environmental impacts of imported fuels	Strengthened efforts into supporting DECEM over FSM use Oil Management.
			3.1.2 Upholding petroleum product quality and optimizing infrastructure	Development of national fuel quality standards in collaboration with Vital Group to maintain high quality standards for petroleum products.
			3.1.3 Studying fossil fuel subsidies	Review mechanisms in which fossil fuel subsidies are being applied indirectly and directly in FSM and their alignment with climate objectives.
			3.1.4 Regional collaboration on fuel prices	Creation of a subregional framework or agreement for fuel price monitoring and bulk purchasing.
	4. Renewable energy development	4.1 Achieving 70% of renewable electricity generation by 2030 and 100% by 2040	4.1.1 Increasing renewable electricity production	Increase resource mobilisation efforts to support implement the Energy Master plan and updated action plans.
			4.1.2 Smart grid implementation	Development and deployment of smart grid technologies to enhance grid optimization and renewable energy integration
		4.2 Advocating for sustainable alternative fuels and energy storage technologies	4.2.1 Enhancing access to renewable energy technologies	Progress in prioritizing studies to enhance FSM's readiness for additional renewable energy technologies
			4.2.2 Enhancing funding for storage technologies	Increased integration of diverse energy storage technologies within existing and upcoming renewable energy initiatives.

Baseline (2024)	Target	Means of Verification	Timeline	Responsible Parties
Used Oil Management is not a new concept is not a new concept for FSM since 2014. There has been assessments and projects that have assisted the states to address their used oil issues. Facilities have been built in all states to store used oil and wait for possible export. However timely removal has always been challenging due to the costs involved to ship this out of FSM.	Used oil better managed in terms of collection, storage, export and including treatment for re-using within FSM.	Facilities in Place, Supporting project reports.	2026	DECEM, EPA, DORD, Vital Group
Vital Group upholds fuel quality standards to guarantee safety, efficiency, and adherence to international benchmarks. However, at the state level, opportunities for improvements remain, particularly regarding the implementation of quality standards at gas stations.	National fuel quality standards developed by 2030	National fuel quality standards, Quality audit reports	2030	DORD, Vital, EPA, DECEM
No comprehensive review of fossil fuel subsidies has been conducted. Noted cross-subsidies are being undertaken in the electricity sector as part of managing fuel price adjustments in electricity tariffs. Additionally, there have been fuel grants being applied in the past as part to reduce the electricity tariff.	Review completed by 2028	Review report	2028	DoRD, NEWG, SEWG, AMU, FSM Petrocorp
Bulk fuel procurement initiative has been raised at the 26th MIF with the communique calling to “investigate regional bulk fuel procurement of fuel” https://www.mifsecretariat.org/wp-content/uploads/2024/06/26th-MIF-Joint-Communique.pdf	Review completed by 2026	Review report	2026	DoRD, NEWG, SEWG, AMU, Power Tariff and Fuel Surcharge Task Force
The 2018 Energy Master Plan outlines Technical, Financing, and Implementation Plans with state and national targets for electricity access, reliability, renewable energy expansion, diesel reduction, and lower greenhouse gas (GHG) emissions. To accelerate renewable energy adoption needed resource mobilisation efforts are need.	Funds secured or committed towards meeting the target renewable energy installations in FSM.	List of projects signed on funds secured or committed to FSM.	2026	DORD, NEWG, SEWG, State Utilities, ODA
Limited or no smart grid infrastructure in FSM’s energy system.	At least 5 smart grid technologies (e.g., advanced meters, sensors, communication systems) integrated across FSM’s grid, improving real-time energy management by 2030	Project Documents	2030	DoRD
The 2018 Energy Master Plan outlines Technical, Financing, and Implementation Plans with state and national targets for electricity access, reliability, renewable energy expansion, diesel reduction, and lower greenhouse gas (GHG) emissions. To accelerate renewable energy adoption in FSM, a review and update are needed, supported by technical studies and preparative actions that fast-track implementation.	Completion of at least 80% of priority studies by 2028 to support FSM’s readiness for integrating additional renewable energy technologies.	Study reports	2028	DoRD and State utilities
FSM’s utility grids are nearing capacity limits, restricting further renewable energy (RE) installations. Without upgrades, challenges such as grid instability, power fluctuations, and curtailment risks will persist. Strengthening grid infrastructure and deploying battery energy storage systems (BESS) are essential for ensuring reliable RE integration.	Ensure that 100% of existing and upcoming renewable energy initiatives incorporate diverse energy storage technologies by 2030.	Operational energy storage systems/facilities	2030	DoRD and State utilities

Key Result Areas	Area of Intervention	Overarching Objective	Enabling Objective	Indicator
KRA 2: JUST AND ORDERLY TRANSITION	5. Energy efficiency and energy conservation	5.1 Scale up efforts on energy efficiency and conservation activities and opportunities in the FSM	5.1.1 Improving supply-side management	Development and implementation of supply-side management initiatives to enhance power generation and distribution efficiency
			5.1.2 Increasing demand-side management	Development and implementation of demand-side management programs to reduce energy consumption in government facilities, residential and commercial buildings, and industry (fisheries)
			5.1.3 Introducing green building codes	Development of a Green building code for FSM.
			5.1.4 Capacity development and training programs	Enhancement of capacity among building sector stakeholders, training institutions, and private sectors through training programs
			5.1.5 Promoting incentives for efficient energy use	Strengthening of financing and incentive strategies for energy-efficient appliances.
			5.1.6 Conducting energy audits and research	Development of an Energy Efficiency Policy and Action plan for FSM
			5.1.7 Developing standards and appliance labelling program	Development of a MEPSL program for FSM
			5.1.8 Integrating energy efficiency and energy conservation lifecycle costs in public procurement	Ensure that public procurement decisions incorporate energy efficiency and energy conservation lifecycle

Baseline (2024)	Target	Means of Verification	Timeline	Responsible Parties
Aging power plants and distribution infrastructure contribute to high system losses and inefficiencies.	Upgrade at least 2 power plants and improve 2 distribution networks by 2030	Supply side management programs	2030	DoRD, State Utilities
Past initiatives have been undertaken to promote EE initiatives in FSM targeting government buildings.	Achieve at least 10% reduction in energy consumption in government facilities, residential, commercial, and industrial sectors through demand-side management programs by 2028.	Demand side management programs	2028	DoRD, State Utilities
No mandatory energy-efficient building codes enforced nationally.FSM currently don't have a building code.	Green Building Code officially developed and integrated into FSM's national building regulations by 2030	Publicly accessible version of the code outlining standards and guidelines	2030	DoRD, DTC&I
Limited or no formal training programs focused on energy-efficient building practices.	Training programs established and regularly conducted in partnership with COM-FSM and other institutions by 2027	Training Reports	2027	DoRD, DTC&I, COM-FSM, DECEM
No structured financing or incentive mechanisms (tax breaks, subsidies, or tariffs) in place. There is an existing Home Energy Loan Programme with FSMDB - https://www.fsmdb.fm/fsmdb-products/home-energy-loans/	At least 3 financing and incentive strategies supported from 2028.	Financing and incentive strategies	2028	DoRD, DOFA
No EE policy and action plan available. FSM has undertaken a number of energy audit initiatives in the past.	Energy Policy and action plan for FSM developed by 2026	Endorsed Energy Efficiency Action plan	2026	DoRD, DECEM, DTC&I
No legislation in place requiring Energy Labels.	MEPSL Program developed by 2030	Legislation passed and implemented. FSM Standards and Appliances	2030	DORD, DECEM
No appliance monitoring protocols in place to look at energy efficiency consideration for appliance being procured.	Protocols developed and enforced from 2028	Appliance Procurement requirement protocols	2028	DoRD, DOFA,DTC&I

Key Result Areas	Area of Intervention	Overarching Objective	Enabling Objective	Indicator
KRA 2: JUST AND ORDERLY TRANSITION	6. Transportation sector transformation	6.1 Phasing down fossil fuel usage in the transportation sector	6.1.1 Enhancing vehicle efficiency	Development of vehicle efficiency guidelines for FSM
			6.1.2 Promoting sustainable transport modes	Development of awareness and educational campaigns in promoting sustainable transport modes
			6.1.3 Developing an Electric Vehicle Policy and Roadmap	Development of the EV policy and roadmap.
			6.1.4 Developing a Marine Transport and Shipping Efficiency Action Plan	Development of a Marine Transport & Shipping Efficiency Action Plan.
	7. Security and climate resilience	7.1 Striving for net-zero carbon emissions by 2050	7.1.1 Supporting transition to low-carbon technologies	National and state level educational awareness promoting low-carbon technologies and number of regional and international partnerships supporting low-carbon initiatives
			7.1.2 Long-term, low-emission development strategy	Development and implementation of FSM's Low-Emission Development Strategy (LEDS).
		7.2 Enhance Climate-Resilient Energy Infrastructure	7.2.1 Promote climate-resilient energy infrastructure	Percentage of new energy infrastructure projects incorporating climate-resilient designs.
			7.2.2 Disaster Risk Reduction (DRR) Policy Framework for Electric Utilities	Development of Disaster Risk Reduction (DRR) Policy Framework for Electric Utilities

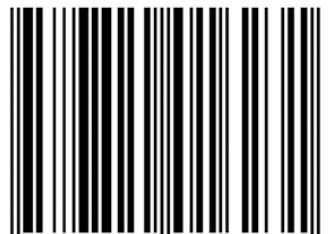
Baseline (2024)	Target	Means of Verification	Timeline	Responsible Parties
No vehicle efficiency guidelines in FSM	Vehicle efficiency guidelines developed and available to FSM DoRD for advocacy and advisory purposes from 2027.	Vehicle Efficiency Standards available and in use	2027	State Department of Public Safety, EPA, Customs & Tax, DORD, TC&I
Limited to no awareness campaigns on sustainable transport modes being undertaken.	Awareness and educational campaigns implemented from 2026	Land transport Programme	2026	State Department of Public Safety, Land & Tenure, EPA, DORD, TC&I
No EV policy or roadmap in place	EV policy and road map developed by 2030	EV policy and road map	2030	DORD, TC&I, DECEM, EPA, Department of Public Safety
No Marine Transport & Shipping Efficiency Action Plan.	Marine Transport & Shipping Efficiency Action Plan developed and approved by 2030	Marine Transport & Shipping Efficiency Action Plan	2030	TC&I, DORD, DECEM, State Port Authorities, NORMA, COM-FSM
Actions will be targeted at the NEWG,	At least 1 Educational campaigns undertaken and a new regional and international partnerships undertaken from 2027	Awareness and educational campaign materials and partnerships signed.	2027	DORD, DOE, DECEM, TC&I, FSMDB
No Just transition or LEDS strategy in place.	LEDS developed and adopted by 2030	LEDS in Place	2030	DORD, DECEM, COM-FSM
Stocktake of all energy Infrastructure installations having climate-resilient designs yet to be undertaken.	100% of new energy infrastructure projects include climate-resilient designs from 2026.	Project documents	2026	DORD, TC&I, DECEM, State Utilities
DRR Policy Framework approved in 2024	DRR policy framework operational by 2025.	DRR endorsed policy and plan	2025	DORD, State Utilities

Key Result Areas	Area of Intervention	Overarching Objective	Enabling Objective	Indicator
KRA 3: ENERGY GOVERNANCE	8. Policy and regulatory reform	8.1 Ensure effective planning, compliance and oversight for a successful and sustainable energy transition.	8.1.1 Developing and monitoring key performance indicators covering environmental, social, and economic aspects of the energy sector.	Development of an operational M&E framework aligned with national policy goals and targets.
			8.1.2 Developing energy sub sector policies and implementation plans	Number of sub sector policies and energy plans reviewed and or developed.
			8.1.3 Establishing an Energy Act and regulatory frameworks.	Establishment of the Energy Act and regulatory frameworks
			8.1.4 Enhancing energy sector data management and dissemination	Energy repository system designed, developed, and operational.
			8.1.5 Enhancing collaboration with the private sector	Strengthened engagement of private sector actors in upcoming energy projects and initiatives.
	9. Enhancing access to resources	9.1 Maximizing energy sector funding	9.1.1 Encouraging IPP participation	Development of an IPP Policy and Implementation plan for FSM
			9.1.2 Resource mobilization plan developed and implemented	Development of a resource mobilisation plan for the FSM Energy Division
	10. Institutional Coordination	10.1 Implementing strong institutional and stakeholder coordination	10.1.1 Enhancing institutional capacity within Energy Division in Department of Resource and Development.	Strengthened institutional capacity of the Energy (and Water) Division within DoRD
			10.1.2 Enhancing stakeholder collaboration for energy transition.	Collaboration Quality Index of the National Energy Workgroup

Baseline (2024)	Target	Means of Verification	Timeline	Responsible Parties
No M&E framework for the National Energy Policy exists.	M&E framework developed and implemented by 2025.	M&E framework	2025	DORD
Current Plans available include Energy Master Plan (2018) SDG 7 roadmap	Energy sub sector policies and/or Implementation plans updated/developed every three to five years.	Implementation plans per state	2028 - ongoing every three years	DoRD, NEWG, AMU, SEWG
National Energy Office Act 2010 Public Law 15-08_ PetroCorp Vital RE Bill State Utility Acts FSM Climate Change Act 2013 PUBLIC LAW NO. 18-52 - Telecommunication and TRA	Compiled and passed into bill with Congress by 2027	Endorsed Energy Act with supporting regulations	2027	DORD, DOJ, DECEM, TC&I, State Utilities, NEWG, SEWG
No central repository exists.	Repository operational by 2025.	Online Database available and operational	2025	DORD, DECEM, AMU, NEWG
Limited to no local private sector engagement or collaboration.	Achieve active participation from at least 10 private sector stakeholders in energy projects and initiatives annually from 2026	DoRD Energy Division stakeholder database	2026-2030	DORD (Trade and Investment)
No IPP policy and plan exists.	IPP Policy and implementation plan developed and approved by 2026.	IPP Policy and Implementation plan document. Funding database tracking new investments on IPP related work for FSM.	2026	DORD, DOFA, DECEM
The Energy Division has undertaken several resource mobilization efforts to support the implementation of activities in the Energy Masterplan. However, a dedicated resource mobilization plan with supporting concept notes has yet to be developed.	Resource Mobilisation plan developed and is consistently being updated and tracked by DoRD and ODA from 2025.	Resource Mobilisation plan document	2025	DORD, ODA
The Energy Division currently has two permanent staff members, with the remainder being project-based. There are no established programs within the Energy Division at present. The division currently oversees water resources and will be formally renamed the Energy and Water Division	A fully resourced Energy and Water Division established for FSM to strengthen coordination and accelerate implementing priority energy actions for FSM by 2027	DORD ED Operational Plan and Budget	2027	DORD, State Utilities, NEWG, SEWG
There are existing coordination mechanism in place through the DORD with NEWG,AMU,SEWG. Also Noting National and subregional events through the SNLC, Executive Meeting, R&D conference, MIF.	Collaboration Quality Index score of 85% or higher.	Outcome statements from Energy Summit, Established Energy Act	2025-2030	DORD, ODA, DECEM,TC&I, NEWG, DOFA



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