

**NATIONAL ENERGY AUTHORITY**



# **CORPORATE PLAN**

## **2023 - 2027**

**“TO PROMOTE ACCESS TO AFFORDABLE,  
RELIABLE AND SUSTAINABLE ENERGY  
SERVICES FOR ECONOMIC GROWTH AND  
COMMUNITY PROSPERITY THROUGHOUT  
PAPUA NEW GUINEA”**





## TABLE OF CONTENTS

Vision, Mission, Goal.....	2
Our Guiding Principles and Core Values .....	3
Message from the Minister .....	4
Chairman's Foreword.....	5
Managing Director's Remarks .....	6
Executive Summary .....	7
Introduction .....	9
Operating Environment .....	9
Core Functions and Capabilities.....	12
Key Roles and Functions .....	12
Key Capabilities .....	12
Corporate Governance.....	13
Human Resources .....	15
Financial Resources.....	16
Strategic Goals and Priorities .....	17
Key Corporate Goal .....	17
Key Strategic Priorities.....	18
Our Key Partners .....	20
Our Key Activities .....	22
Monitoring and Evaluation.....	23



## VISION, MISSION, GOAL

### VISION

"TO BE A LEADING AUTHORITY DRIVING SUSTAINABLE AND INCLUSIVE ENERGY DEVELOPMENT AND MANAGEMENT FOR A PROSPEROUS PAPUA NEW GUINEA."

### MISSION

"TO FORMULATE AND IMPLEMENT FORWARD-THINKING POLICIES, REGULATIONS AND MANAGING ENERGY SECTOR PROGRAMS THAT ENSURE THE AVAILABILITY AND EFFICIENT USE OF RELIABLE, AFFORDABLE AND CLEAN ENERGY AND CONTRIBUTE TOWARDS PROVIDING 70% OF HOUSEHOLDS WITH ELECTRICITY ACCESS BY 2030 AND 100% BY 2050 FROM RENEWABLE ENERGY SOURCES."

### KEY CORPORATE GOAL

"TO PROMOTE ACCESS TO AFFORDABLE, RELIABLE AND SUSTAINABLE ENERGY SERVICES FOR ECONOMIC GROWTH AND COMMUNITY PROSPERITY THROUGHOUT PAPUA NEW GUINEA."



## OUR GUIDING PRINCIPLES AND CORE VALUES

We will be guided by the following Nine (9) Principles as indicated in the National Energy Policy 2017 – 2027 to work toward realising our Vision. Our Annual Work Plans will be developed in accordance with the respective Strategies for Social, Economic, Environment and Energy Security:

### ❖ Principle 1

Strengthen Institutional Capacity and Recruit Appropriate Human Resources to Manage the Energy Sector.

### ❖ Principle 2

Develop an Integrated Planning Process for Sustainable Energy Supply and Utilization.

### ❖ Principle 3

All Energy Resources will be developed by the State for the betterment of all citizens.

### ❖ Principle 4

Promote a Conducive Environment for Long Term Sustainable Economic Solutions in the Supply of all Energy Sources.

### ❖ Principle 5

Encourage involvement of the Private Sector in the Development and Provision of Energy Infrastructure and Services.

### ❖ Principle 6

Ensure Energy Resources are Developed and Delivered in an Environmentally Sustainable Manner.

### ❖ Principle 7

Promote Efficient Systems and Safety in Energy Supply in all Sectors (transport, residential, commercial, industrial and agriculture).

### ❖ Principle 8

Diversify the Cost-Effective Development and Utilization of Energy Resources for the Nation's Well-Being and Economic Prosperity.

### ❖ Principle 9

Promote Energy Efficiency and Conservation Measures and Wise Use of Energy.



## MESSAGE FROM THE MINISTER

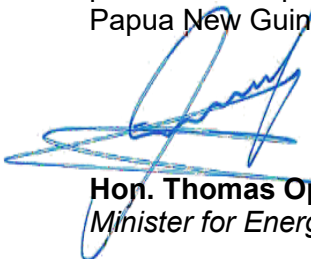


The National Energy Authority's first Corporate Plan for the period from 2023 to 2027 lays out our vision to enhance energy security, promote sustainable development, and drive economic growth in Papua New Guinea. Our strategy is grounded in the recognition that access to reliable, affordable, and sustainable energy is critical to achieving our national development goals. We will continue to work closely with our partners in the public and private sectors to pursue innovative solutions that increase energy generation and distribution, improve energy efficiency, and promote the development of renewable energy sources.

To achieve these objectives, we will prioritize the following initiatives over the next five years:

1. **Developing Papua New Guinea's renewable energy resources:** We will work to harness the power of the sun, wind, biomass, geothermal and hydro to increase the share of renewable energy in our energy mix and reduce reliance on fossil fuels. This includes partnering with private sector entities to develop new hydroelectric, solar, geothermal, biomass and wind power projects across the country.
2. **Strengthening energy infrastructure:** We will invest in improving and expanding our energy infrastructure to increase access to energy, particularly in rural communities. This includes upgrading transmission and distribution networks, facilitating construction of new transmission and distribution networks, expanding the use of mini-grids, solar home systems, and utilizing innovative financial mechanisms to crowd in private investment.
3. **Promoting energy efficiency:** We will continue to prioritize energy efficiency initiatives to help consumers and businesses save money, reduce greenhouse gas emissions, and increase energy security. This includes supporting the adoption of energy-efficient technologies, developing better energy performance standards, and promoting public awareness of energy efficiency benefits.
4. **Facilitating private sector investment:** We will work to create an enabling environment for private sector investment in energy projects, including through the development of clear regulatory frameworks, targeted fiscal, and non-fiscal incentives, and streamlined project approval processes.

The Papua New Guinea National Energy Authority's Corporate Plan for 2023-2027 reflects our commitment to delivering reliable, sustainable, and affordable energy to all Papua New Guineans as well as the commercial and industrial users of energy. We look forward to working closely with our partners in the public and private sectors to achieve our shared goal of a prosperous and energy-secure Papua New Guinea.



**Hon. Thomas Opa, MP**  
Minister for Energy



## CHAIRMAN'S FOREWORD

I am delighted to launch the National Energy Authority's (NEA's) inaugural Corporate Plan. The Plan establishes the key principles and strategic planning framework to guide the NEA's development, management, and operational activities over the next five years.

The Government has set an ambitious goal of delivering access to affordable and reliable power services to 70 per cent of the population by 2030, and then to achieve 100 per cent access by 2050. The NEA has been established to lead, facilitate, and accelerate progress toward delivering these goals.

This is a most challenging task. Currently, less than 20 per cent of our citizens have access to affordable and reliable power supplies. And most of those people are in urban centres.

To realise the Government's ambitious goals, we will need to greatly increase access to affordable and reliable power supplies in rural and remote areas. To succeed in this endeavour, we will need to effectively engage with local communities, with a view to developing strong partnerships built on mutual respect and trust.

We will also need to marshal all innovative, efficient, and cost-effective means available to extend access to affordable and reliable power services, and to do so quickly. To this end, we will seek to work closely with our key partners in government, the donor community and in the private sector to develop new, innovative, and commercially sustainable methods for raising the capital and deploying the innovative technologies needed to deliver timely and cost-effective outcomes now and into the future. I see great opportunities for renewable energy and for greater use of more distributed power solutions to help achieve our goals.

These are exciting times for Papua New Guinea. Our country is entering a critical period for the development of its domestic energy sector, full of challenges and offering great opportunities for progress. The 2023-2027 Corporate Plan outlines how the NEA intends to respond to these challenges and opportunities through a comprehensive and integrated suite of policy, legal, regulatory and program initiatives in the domestic energy sector over the next five years.

I look forward to working with all our key stakeholders to help realise these ambitious goals.

**Joseph Gabut, OBE**  
Board Chairman  
National Energy Authority





## MANAGING DIRECTOR'S REMARKS



I am pleased to present our first-ever Corporate Plan for Papua New Guinea National Energy Authority. This plan is a significant milestone for us as it outlines our vision for the next five years.

As you may be aware, our role as an Energy Authority is crucial in providing reliable and sustainable energy for our nation's economic growth and prosperity. We have crafted this plan through extensive workshops and consultations with our stakeholders, including donors, development partners, and industry players.

Our Corporate Plan 2023-2027 sets out the strategic direction for us to take over the next five years as we continue to support the Government of Papua New Guinea towards its national development goals as outlined in the PNG Medium-Term Development Plan IV and Vision 2050. Our focus is on enhancing regulatory framework, expanding off-grid electrification, and harnessing the potential of renewables.

I am confident that the strategies outlined in this inaugural Corporate Plan will take us a step closer towards achieving our goal of providing 70% of households with electricity from renewable sources by 2030 and 100% by 2050. Our commitment is to work collaboratively with all stakeholders to ensure its successful implementation.

On that note, I invite all of you to read through this Plan to gain a better understanding of our vision for Papua New Guinea's energy sector. Together, let us work towards achieving our common objective of providing sustainable and reliable energy for all Papua New Guineans.

Thank you.

**Ronald Meketa**  
*Managing Director*



## EXECUTIVE SUMMARY

The 2023-2027 Corporate Plan establishes the key principles and strategic planning framework to guide the National Energy Authority's (NEA's) development, management and operational activities over the next five years. In particular, the Plan identifies the NEA's key roles, functions and capabilities; establishes its strategic goals and corporate priorities; and identifies the main activities it will undertake to help achieve its objectives.

The Government of Papua New Guinea (GoPNG) recognises the importance of extending electricity access and has set bold targets to lift access from around 15 per cent of the population at present to 70 per cent by 2030 and 100 per cent by 2050. GoPNG has also announced its ambition to develop a power system based on 100 per cent renewable generation by 2050. The NEA has been established with the primary purpose of leading, facilitating, and accelerating progress toward achieving these goals.

An innovative and flexible approach built on an efficient and well-targeted combination of centralised and decentralised power sector development will be required to drive timely and efficient expansion of access to electricity services. Policy, regulatory and commercial responses will need to be tailored to reflect PNG's unique circumstances, especially its geography, vegetation and climate; its wide variety of cultural and social arrangements; and the limitations of its economic and financial infrastructure. New technologies and new approaches to financing and investment will be needed to reduce deployment costs, raise capital and more effectively manage risk. Supply chains will need to be developed and enhanced, along with a substantial increase in local capacity to deploy and maintain decentralised power systems. A range of innovative, flexible and adaptable policy, legal and regulatory arrangements will need to be developed to provide a foundation for steadily improving access to electricity services across PNG in an affordable, reliable and sustainable way at least cost over time.

Given the nature, scope and magnitude of this challenge and the imperative to respond quickly to meet GoPNG's ambitious access goals, the NEA has adopted the following *key corporate goal* for the next five years:

**"TO PROMOTE ACCESS TO AFFORDABLE, RELIABLE AND SUSTAINABLE ENERGY  
SERVICES FOR ECONOMIC GROWTH AND COMMUNITY PROSPERITY  
THROUGHOUT PAPUA NEW GUINEA."**

This goal focuses on the critical national objective of extending access to energy services, particularly electricity services. It does so in an integrated and holistic way that reflects the key guiding principles proposed in the National Energy Policy 2017-2027, as endorsed by GoPNG. It also recognises the practical requirements associated with extending access to energy services: that these services need to be provided in a manner that is affordable, reliable and sustainable if they are to make a substantive contribution toward materially improving economic development and community prosperity. As a result, this goal provides a sound strategic foundation for the NEA to pursue domestic energy sector development in a way that can deliver tangible results, consistent with GoPNG's wider socio-economic policy priorities.





The nature and scope of the NEA's corporate goal, combined with the practical challenges associated with domestic energy sector development, suggests the following key strategic priorities to guide the development and implementation of its main activities over the next five years.

- **Accelerate energy sector development**, by establishing a policy, legal, regulatory and commercial framework that supports timely, efficient, competitive, innovative and least cost operation and development of a domestic energy sector that will attract efficient investment and accelerate access to affordable, reliable and sustainable energy services throughout PNG.
- **Strengthen energy sector regulation**, by reviewing, developing and implementing coherent, efficient, transparent and accountable economic and technical regulatory and licensing arrangements, that deliver more predictable decision-making, improve overall regulatory coverage and compliance, and reduce related administrative and compliance costs.
- **Progress NEA corporate development**, by quickly and effectively establishing the NEA's supervision and governance of domestic energy sector policy, regulation and development through transparent, innovative, efficient and cost-effective development and administration of its various roles and functions as specified in the NEA Act.

Together, these strategic priorities provide a complementary and mutually reinforcing foundation for pursuing the NEA's key corporate goal and GoPNG's wider socioeconomic priorities for domestic energy sector development. They reflect the inter-related nature of the issues and challenges to be addressed in the context of building an effective policy, legal, regulatory and commercial environment that will support the development of a domestic energy sector that can deliver GoPNG's energy access goals.



NEA will pursue its strategic goals and priorities over the next five years through a range of key activities to help: accelerate energy sector development; strengthen energy sector regulation; and progress corporate development. The main proposed initiatives are identified in summary tables that describe the key activities to be undertaken to help progress each strategic priority, along with some preliminary milestone performance indicators and information in relation to potential project risks and related risk mitigation strategies. PNG is entering a critical period for the development of its domestic energy sector, full of challenges and offering substantial opportunities for great progress. The 2023-2027 Corporate Plan outlines how the NEA intends to respond to these challenges and opportunities through a comprehensive and integrated suite of policy, legal, regulatory and program initiatives in the domestic energy sector over the next five years.



## INTRODUCTION

The 2023-2027 Corporate Plan establishes the key principles and strategic planning framework to guide the National Energy Authority's (NEA's) development, management and operational activities over the next five years. In particular, the Plan identifies the NEA's key roles, functions and capabilities; establishes its strategic goals and corporate priorities; and identifies the main activities it will undertake to help achieve its objectives.

The Plan provides a critical foundation for establishing the NEA's multi-year performance management framework which aims to support and develop more effective performance and risk management over time. It will be used to inform decision-making around resource allocation and deployment, and as a result will help to guide more effective day-to-day operational and project management.

The Plan is intended to be an operational document. It will be updated on a regular basis to ensure that corporate and work program priorities and activities remain current, relevant and effective over the next five years as the domestic energy sector continues to develop and evolve.

### Operating Environment

Modern economies are built on access to affordable, reliable and sustainable energy services. International experience shows that electrification provides a proven pathway to economic development and growing community prosperity.

The Government of Papua New Guinea (GoPNG) recognises the importance of extending electricity access and has set bold targets to lift access from around 15 per cent of the population at present to 70 per cent by 2030 and 100 per cent by 2050<sup>1</sup>. GoPNG has also announced its ambition to develop a power system based on 100 per cent renewable generation by 2050<sup>2</sup>. The NEA has been established with the primary purpose of leading, facilitating and accelerating progress toward achieving these goals.

The national electricity system is currently built around three centralised power grids: the Port Moresby System; the Ramu System; and the Gazelle Peninsula System. These power systems are owned by GoPNG and operated by Papua New Guinea Power Limited (PPL), which is the government's state-owned power utility. Beyond these centralised power systems, PPL also operates 26 provincial grids serving isolated regional centres. In addition, there are several independent power plants serving isolated mining and industrial facilities<sup>3</sup>.

PNG's centralised power systems and provincial grids had a combined total generating capacity of around 580 megawatts (MW), producing around 1 400 terawatt-hours (TWh) in 2019. PPL is the largest electricity producer in PNG, owning and operating around 400 MW of generation capacity. Power generation is dominated by hydroelectric plants, representing 40% of total generating capacity, and diesel-fired plants, representing around 37% of total generating capacity. These power systems are

<sup>1</sup> See GoPNG (2017), *National Energy Policy 2017-2027*, GoPNG (2010), *Papua New Guinea Development Strategic Plan, 2010–2030* and GoPNG (2009) *PNG Vision 2050* for further discussion of these electrification access goals and targets.

<sup>2</sup> GoPNG (2017), *National Energy Policy 2017-2027* for further discussion of the electricity sector decarbonisation goal.

<sup>3</sup> Fallon & Sofo (2019), "Economic Regulation and Electricity Reform in Papua New Guinea", *The National Research Institute of Papua New Guinea Discussion Paper Series*, NRI Discussion Paper No.168.



served by around 7 000 km of transmission and distribution network infrastructure, including around 4 100 km of medium-voltage transmission lines<sup>4</sup>.

Ongoing challenges in relation to power system and service affordability, resilience and reliability are highlighted by the fragility of PPL's centralised power generation and network infrastructure, which is reflected in high levels of generation inefficiency, unplanned outages and network losses<sup>5</sup>. Substantial refurbishment and expansion of these systems will be required to enable them to deliver sufficient, reliable power supplies to accommodate the projected growth in centralised power demand envisaged under the National Electrification Rollout Plan (NEROP)<sup>6</sup>. It is estimated that around 35 per cent of the population currently resides within territory exclusively served by PPL's centralised power systems, and that with further substantial augmentation and reinforcement it may be possible to extend PPL's reach to around 50 per cent of the population by 2036<sup>7</sup>. This outcome would fall well short of GoPNG's electrification goals.

Current regulated electricity prices, which have remained unchanged for residential consumers since 2013, are a crucial constraint on PPL's capacity to accelerate electrification access<sup>8</sup>. At these prices, PPL is unable to generate the cash flow required to fund the refurbishment and new investment needed to meet GoPNG's ambitious 2030 electrification goals. At the same time, GoPNG's potential to directly fund large-scale investment in the electricity sector this decade is likely to be limited by financial constraints and competing policy priorities. While rapidly increasing electricity prices to cost-reflective levels



to help address PPL's cash flow challenges is unlikely to be feasible into the medium-term, reflecting limited residential consumer capacity to pay and likely high community resistance. As a result, substantially increasing electricity access through the existing centralised power systems by 2030 may prove technically challenging and financially problematic.

In addition, rapid expansion and development of the power system in PNG faces several other physical, technical, financial and cultural challenges which together have the potential to delay or defer efforts to extend access to electricity services. These include low population density; challenging geography and environment; limited supply chains; limited financial sector infrastructure and capacity; problematic land access; and a range of complex issues associated with obtaining and maintaining a social license to operate<sup>9</sup>.

<sup>4</sup> See USAID (2022), *Papua New Guinea Electrification Partnership Off-Grid Market Assessment*, and USAID-PEP (2022), *Papua New Guinea Electrification Partnership (PEP): PPL Diagnostic Assessment Report*, for further discussion of PNG's power systems and recent trends.

<sup>5</sup> See USAID-PEP (2022), *Papua New Guinea Electrification Partnership (PEP): PPL Diagnostic Assessment Report*, pp19-21 and pp101-103 for further discussion of these issues.

<sup>6</sup> See NRECA International (2019), *Papua New Guinea National Electrification Rollout Plan (NEROP) Implementation Strategy and Investment Plan*, for further details and discussion.

<sup>7</sup> Papua New Guinea Power Limited (2022), *15 Year Power Development Plan 2022-2036*, p4.

<sup>8</sup> See USAID-PEP (2022), *Papua New Guinea Electrification Partnership (PEP): PPL Diagnostic Assessment Report*, pp19-21 and pp108-125 for further discussion of these issues.

<sup>9</sup> See USAID (2022), *Papua New Guinea Electrification Partnership Off-Grid Market Assessment*, pp30-32 for further discussion of the challenges facing power sector development in PNG.





Given these challenges, and the constraints on quickly expanding electricity access through the existing centralised power systems, it is clear that to achieve GoPNG's access targets, existing grid-based power services will need to be augmented with the deployment of decentralised power solutions on a much larger scale and at a much faster rate than has been attempted in the past. And much of this will need to be renewable if GoPNG's decarbonisation objectives are to be met.

Fortunately, PNG possesses abundant renewable energy resources, especially hydro and solar. In addition, substantial reductions in the capital cost of renewable generation technologies have occurred over the last decade, particularly in relation to small-scale solar photovoltaic power systems. This combination of factors is creating an opportunity to help accelerate the deployment of modern electricity services across PNG. Renewable solar and micro-hydro generation technologies have the potential to support incremental and decentralized deployment, making them well-suited to addressing the various challenges associated with expanding access to power services in PNG in a practical, timely and cost-effective manner.

An innovative and flexible approach built on an efficient and well-targeted combination of centralised and decentralised power sector development will be required to drive timely and efficient expansion of access to electricity services. Policy, regulatory and commercial responses will need to be tailored to reflect PNG's unique circumstances, especially its geography, vegetation and climate; its wide variety of cultural and social arrangements; and the limitations of its economic and financial infrastructure. New technologies and new approaches to financing and investment will be needed to reduce deployment costs, raise capital and more effectively manage risk. Supply chains will need to be



developed and enhanced, along with a substantial increase in local capacity to deploy and maintain decentralised power systems. A range of innovative, flexible and adaptable policy, legal and regulatory arrangements will need to be developed to provide a foundation for steadily improving access to electricity services across PNG in an affordable, reliable and sustainable way at least cost over time.

PNG is entering a critical period for the development of its domestic energy sector, full of challenges and offering substantial opportunities for great progress. The 2023-2027 Corporate Plan outlines how the NEA intends to respond to these challenges and opportunities through a comprehensive and integrated suite of policy, legal, regulatory and program initiatives in the domestic energy sector over the next five years.



## CORE FUNCTIONS AND CAPABILITIES

GoPNG established the NEA in July 2021 with the objective of improving the overall coordination, delivery and effectiveness of domestic energy policy, regulation and governance. Following the passage of the *National Energy Authority Act 2021* (NEA Act) and the *Electricity Industry Act 2021*, a range of policy and regulatory functions previously spread across various government agencies and state-owned enterprises were consolidated under the NEA.

In particular, the NEA is now primarily responsible for developing and regulating the domestic energy sector, including implementing the National Energy Policy 2017-2027 and the NEROP. As a result, the NEA has a key leadership role in advancing GoPNG's electrification access goals in a timely, efficient and least cost manner.



This section briefly describes the nature and scope of the NEA's role, and the key resources, capabilities and partner organizations enabling it to successfully undertake its functions.

### Key Roles and Functions

The NEA is the lead government institution responsible for domestic energy sector policy, regulation and development. Upstream energy sector issues, including those relating to the administration of exploration and development of energy reserves and energy export arrangements, remains the primary responsibility of the Ministry of Petroleum and the Mineral Resources Authority of PNG.

### Key Capabilities

The NEA's success will be built on developing effective organizational, financial and human resource capabilities over the next five years. These elements will enable the NEA to deliver its key functions in an efficient, innovative and cost-effective manner that will promote the development of a vibrant domestic energy sector in PNG. Key priorities for establishing and developing the NEA's capabilities over the next five years include:

- establishing effective corporate governance to lead, oversee and guide the NEA's operations and development.
- establishing a culture of professionalism, learning and continual improvement founded on a comprehensive and effective program of human resource development; and
- implementing effective financial and resource management arrangements to promote efficiency, cost-effectiveness and financial accountability.



## CORPORATE GOVERNANCE

NEA is committed to developing strong corporate governance to deliver on its purposes and strategic priorities in a transparent and accountable manner, and to support effective compliance with its legislative, regulatory, financial and other obligations.

Overall corporate governance and management of the NEA is the responsibility of its Board of Directors. The NEA Act requires that the Board be established as an independent body comprising three ex-officio members and two non-ex-officio members. Its ex-officio members include: the Managing Director of the NEA, the Secretary of the Department of Treasury; and the Secretary of the Department of National Planning and Monitoring. Its non-ex-officio members must include a member nominated by the energy minister; and a member who has sufficient experience in the energy industry. The inaugural Chairman of the Board possesses substantial knowledge and experience in the energy sector, fulfilling the criteria for the selection of a non-ex-officio member with industry expertise and experience.

Under the NEA Act, the Board is responsible for all critical aspects of the NEA's operations and development including approving all policies and plans proposed by the NEA; approving all budgets associated with NEA's operations including implementing proposed policies, plans and programs; approving the remuneration, terms and conditions pertaining to the employment of all NEA staff; and appointing and terminating senior management. The nature and scope of the Board's role and functions enable it to exercise effective strategic oversight and supervision over all the NEA's key activities, providing a transparent and coherent foundation for developing effective corporate governance and management of the NEA. The Board is supported by several internal committees which advise the Board in relation to a range of governance matters including budgeting and financial matters; procurement; and internal auditing.

In addition, the NEA has adopted an internal organizational structure that reinforces transparency and accountability for decision-making and resource deployment, based on aligning responsibility and accountability for each activity with operational roles and functions, consistent with the principles of good corporate governance. The NEA is organized operationally into seven divisions covering its full range of roles and functions as prescribed in the NEA Act including:

- **Policy and Planning Division**, which is responsible for policy development, coordination and related implementation under the NEA Act, with a particular focus on realising the priorities and objectives identified in the National Energy Policy 2017-2027.
- **Economic Regulation Division**, which is responsible for the economic dimensions of domestic energy sector regulation including the development, implementation and enforcement of: electricity and natural gas sector codes; third-party access arrangements; regulated tariffs; power purchase agreements with independent power producers; related licensing arrangements; and the collection of various fees, levies and charges under the NEA Act.
- **Technical Regulation Division**, which is responsible for the technical dimensions of domestic energy sector regulation including the development, implementation and enforcement of: technical standards to ensure the safety, reliability and quality of the electricity and downstream





gas supply industry; standards in relation to electrical systems, equipment, and appliances; technical design standards for electrical and gas installations; and testing and licensing arrangements for electricians and electrical contractors.

- **Projects Division**, which is responsible for facilitating major infrastructure projects required to achieve GoPNG's domestic energy sector development goals, with a particular focus on coordinating implementation of the NEROP and the development of renewable energy resources.
- **Community Outreach Division**, which is responsible for building understanding and acceptance among communities affected by the ongoing development of the domestic energy sector including through: active ongoing engagement with all affected stakeholders including donors, provincial and local governments, landowners and local community organisations; targeted information and education campaigns; and undertaking social and environmental impact assessments. The Division is also responsible for monitoring and evaluating the NEA's key development programs including those associated with the implementation of the National Energy Policy 2017-2027 and NEROP.
- **Corporate Affairs Division**, which is responsible for supporting and advising senior management on cross-cutting corporate issues, and for developing and implementing the NEA's financial, human resource and information technology services including: establishing administrative processes and systems to support efficient and effective internal operations; establishing effective internal performance management processes and systems; establishing effective recruitment, training and staff development processes and systems; establishing effective and transparent financial management processes and systems; and developing effective data management and information technology systems.
- **Legal and Compliance Division**, which is responsible for providing a range of legal services to the NEA including: internal legal advice and guidance on a range of policy, regulatory and administrative matters such as technical and economic regulation, administrative appeals processes, litigious and corporate administrative matters; preparing drafting legislation and subsidiary legislative regulatory instruments and reviewing existing legislation and regulatory instruments; providing secretariat services for the complaints handling process; and providing legal clearance services for the NEA Board. These arrangements provide a solid foundation for establishing and developing effective corporate management and governance over the term of the Plan.



## HUMAN RESOURCES

NEA considers that its people are its greatest asset and that it would be impossible for the NEA to achieve its key goals without a professional and highly capable workforce.

NEA currently has a total of 80 employees. However, the original establishment decision approved an organizational structure with up to 152 positions. This implies that nearly half of the potential positions remain unfilled, with most of these vacancies in legal and compliance services, economic and technical regulation and in community outreach. NEA will give priority to filling the remaining vacancies as soon as possible so that it can more effectively undertake its roles and functions over the term of the Plan.



NEA's current workforce incorporates a diverse range of skilled professionals including mechanical and electrical engineers; development economists; lawyers; human resource specialists; information technology specialists; accountants and financial specialists; and project management specialists. Most NEA staff in specialist roles possess relevant qualifications and experience. In addition, many of the NEA's employees bring substantial energy-related experience gained during their prior employment with the Department of Petroleum and Energy. This combination of experience and expertise represents a valuable resource for the NEA, offering it the opportunity to harness its human resource potential far more quickly than might otherwise be feasible to help rapidly progress its energy sector development agenda. NEA will give priority to conducting a comprehensive skills audit as a first step in helping to identify and mobilize its human resource potential.

However, fully realizing this potential will require innovative management and leadership, reflected in the development of a working environment that seeks to empower professionals to deliver timely and superior outcomes. NEA will seek to facilitate the emergence of this kind of working environment by implementing an effective performance management framework over the term of the Plan. NEA's performance management framework will seek to enable our workforce to give their best by setting clear task-based priorities and milestones for assessing progress; aiming to create an environment where receiving constructive, task-based feedback becomes common practice; empowering managers to be decision-makers and to take responsibility for project delivery; and by recognizing superior staff performance.

NEA will seek to complement the operation of the performance management framework with a comprehensive approach to capacity building and skill development, with a view to broadening and deepening the knowledge and expertise of our employees in ways that equip them to participate more effectively in a high performance, team-based working environment. To this end, the NEA will develop and introduce a range of practical, relevant and accessible training and staff development resources including formal training and development courses, self-paced learning programs and more informal 'on-the-job' development activities.



NEA is also committed to creating a diverse, safe and inclusive working environment where we all belong. At present, around 40 per cent of the NEA's workforce are women, including several senior managers. NEA recognizes that a more diverse workforce is generally more innovative and productive and is looking to increase gender diversity over the term of the Plan. NEA will create a dedicated gender equality, disability and social inclusion (GEDSI) position within human resources to address the full range of gender, disability and social inclusion issues within the organization. The GEDSI officer will also work closely with project partners to help promote positive GEDSI deployment outcomes at the community level.

In these ways the NEA will seek to attract, develop and retain high quality, professional employees, with the ambition of building a high-performance workplace that will become the foundation for delivering the NEA's corporate objectives and outcomes.

## FINANCIAL RESOURCES

In 2021, the NEA was allocated a budget of PGK 2 million for its establishment. At this stage, it is estimated that NEA will require between PGK 50 million and PGK 60 million per annum to effectively undertake its administrative and operational functions over the period of the Plan once the establishment phase has been completed.

To date, the NEA has been fully funded by GoPNG through budget appropriations. However, the NEA Act envisages that funding for the institution will move from an on-budget arrangement to an industry-based funded model. Under the proposed industry-based funding model, it is envisaged that the NEA will source most of the funding required to finance its ongoing administrative and operational functions from various fees, levies and charges to be paid by industry participants on a regular, ongoing basis, or on a fee for service basis in some cases. Project finance will continue to be sourced from a mix of GoPNG and donor funds.

Securing a reliable and sustainable source of operational funding represents a critical precondition for undertaking the NEA's roles and functions. As a result, the NEA will give priority to developing and implementing effective revenue collection arrangements to underpin its financial viability, so that it can confidently discharge its roles and functions over the term of the Plan.

NEA recognizes that the proposed industry-based funding mechanism is likely to bring greater public scrutiny of its expenditures, especially among industry stakeholders, and a strong obligation for the NEA to conduct its financial management with transparency and accountability. NEA is committed to developing best practice financial and resource management practices, to provide the financial certainty and stability required to enable the NEA to deliver its functions in a timely, efficient and cost-effective manner. NEA intends to establish an integrated financial management framework for the entire organization with the objective of improving transparency and accountability for all major financial transactions. Delivering 'value for money' will be a key principle underpinning the development of the financial management framework.





To support the implementation and application of the financial management framework, the NEA will seek to improve financial management capability across the organization. In particular, the NEA will introduce capacity building activities to increase financial literacy and proficiency, equipping staff with the required skills and knowledge to make informed financial decisions. These activities will be supported by initiatives that build a strong culture of financial management and continuous improvement. Through our professional and engaged workforce, we will seek to build our financial and business expertise, improve client service delivery through a risk-based approach and develop a strong financial management culture to help achieve NEA's objectives in a timely, efficient and cost-effective manner.

## STRATEGIC GOALS AND PRIORITIES

The National Energy Policy 2017-2027 proposed the following key strategic goal for national energy policy to 2027: "to provide sufficient, accessible, reliable and affordable energy in a manner that is competitive, sustainable and environmentally friendly"<sup>10</sup>. To achieve this goal, it proposed several key principles to help guide policy development and implementation including:



- Energy sector development should be guided by comprehensive, integrated planning, supported by strategic sub-sector plans and regulatory frameworks.
- Ensure energy resources and supply chains are developed in an efficient, competitive and sustainable manner.
- Ensure cost-effective diversification and utilisation of energy resources, especially renewable energy.
- Encourage more efficient consumption and conservation of energy; and
- Develop capable and effective institutions that can oversee and drive policy development and implementation in a timely, efficient, innovative and least-cost manner.<sup>11</sup>

The NEA's corporate goals and strategic priorities seek to operationalise these objectives and principles in a manner that will bring a clear and practical focus to its work program, with a view to making substantial progress toward achieving these outcomes over the next five years.

### Key Corporate Goal

All effective corporate plans reflect clear strategic goals that provide the foundation for resourcing, directing and driving the development and implementation of related policies and measures. An effective corporate goal needs to be a simple statement of high-level policy intent; something that is readily explainable and can be supported by all key stakeholders. It also needs to be consistent with

<sup>10</sup> See GoPNG (2017), *National Energy Policy 2017-2027*, p2 for further discussion of the proposed vision and strategic policy goal.

<sup>11</sup> See GoPNG (2017), *National Energy Policy 2017-2027*, pp2-6 for further discussion of the proposed guiding principles.



GoPNG's key policy objectives for the domestic energy sector and be realistic and feasible to implement, reflecting the practical circumstances and inherent challenges governing domestic energy policy and regulatory development and implementation in PNG.

GoPNG has made rapidly extending residential access to power services a national priority in the period to 2030<sup>12</sup>. Given the nature, scope and magnitude of this challenge and the imperative to respond quickly to meet GoPNG's ambitious access goals, the NEA has adopted the following *key corporate goal* for this planning period:

**"TO PROMOTE ACCESS TO AFFORDABLE, RELIABLE AND SUSTAINABLE ENERGY  
SERVICES FOR ECONOMIC GROWTH AND COMMUNITY PROSPERITY THROUGHOUT  
PAPUA NEW GUINEA."**

This goal focuses on the critical national objective of extending access to energy services, particularly electricity services. It does so in an integrated and holistic way that reflects the key guiding principles proposed in the National Energy Policy 2017-2027 as endorsed by GoPNG. It also recognises the practical requirements associated with extending access to energy services: that these services need to be provided in a manner that is affordable, reliable and sustainable if they are to make a substantive contribution toward materially improving economic development and community prosperity. As a result, this goal provides a sound strategic foundation for the NEA to pursue domestic energy sector development in a way that can deliver tangible results, consistent with GoPNG's wider socioeconomic policy priorities.

Overall, this corporate goal can provide the strategic clarity and focus needed to guide the development and implementation of the NEA's activities in a way that will help to maximise their efficiency, effectiveness and impact over the next five years.

### **Key Strategic Priorities**

An effective corporate plan will also establish an integrated set of strategic priorities to help guide and shape the more detailed development and implementation of specific measures and activities to deliver organisational goals in a timely, efficient, innovative and least cost manner. The nature and scope of the NEA's statutory role and functions, combined with the key corporate goal and the practical challenges associated with domestic energy sector development in PNG, suggests that the NEA should adopt strategic priorities focusing on energy sector development, regulation and governance. Accordingly, the NEA has adopted the following key strategic priorities to guide the development and implementation of its key activities over the next five years.

<sup>12</sup> GoPNG has set a target of achieving access to electricity services for 70 per cent of the population by 2030. Currently, it is estimated that between 15-20 per cent of the population have access to electricity services that either meet or exceed the World Bank's generally accepted definition of substantial electrification access.



- **Accelerate energy sector development**, by establishing a policy, legal, regulatory and commercial framework that supports timely, efficient, competitive, innovative and least cost operation and development of a domestic energy sector that will attract efficient investment and accelerate access to affordable, reliable and sustainable energy services throughout PNG. Key to success will be the timely and effective development and deployment of priority policies, plans and infrastructure projects including those identified in the National Energy Policy 2017-2027 and in the NEROP. Effective community outreach will provide an important complement to these activities, helping to build stakeholder and wider community support for key programs to improve energy access. Policy and Planning Division, Projects Division and Community Outreach Division will have lead responsibility for delivering outcomes under this strategic priority, with support from Corporate Affairs Division and Legal and Compliance Division.
- **Strengthen energy sector regulation**, by reviewing, developing and implementing coherent, efficient, transparent and accountable economic and technical regulatory and licensing arrangements, that deliver more predictable decision-making, improve overall regulatory coverage and compliance, and reduce related administrative and compliance costs. More effective energy sector regulation has the potential to build stakeholder confidence in the regulatory regime, helping to reduce regulatory risk and encouraging greater private participation to deliver more effective, efficient and least-cost operation and development of the domestic energy sector. Economic Regulation Division and Technical Regulation Division will have lead responsibility for delivering activities and outcomes under this strategic priority, with support from Policy and Planning Division, Corporate Affairs Division and Legal and Compliance Division.
- **Progress NEA corporate development**, by quickly and effectively establishing its supervision and governance of domestic energy sector policy, regulation and development through transparent, innovative, efficient and cost-effective development and administration of its various roles and functions as specified in the NEA Act. Key challenges to be addressed in this context will include: developing and implementing transparent, effective and accountable corporate leadership and governance; developing and implementing effective human resource management including in relation to recruitment, retention and staff development, and performance management; and developing and implementing transparent, effective and accountable financial and program management arrangements, including effective revenue collection mechanisms. NEA senior management, supported by Corporate Affairs Division and Legal and Compliance Division, will have lead responsibility for delivering activities and outcomes under this strategic priority.

Overall, these strategic priorities provide a complementary and mutually reinforcing foundation for pursuing the NEA's key corporate goal and GoPNG's wider socioeconomic priorities for domestic energy sector development. They reflect the inter-related nature of the issues and challenges to be addressed in the context of building an effective policy, legal, regulatory and commercial environment that will support the timely, efficient, innovative, sustainable and cost-effective development of a domestic energy sector that can deliver GoPNG's energy access goals. Accordingly, NEA considers





that adoption of this suite of strategic priorities will bring the clarity and direction required to help accelerate corporate development and strengthen its effectiveness over the next five years.

## OUR KEY PARTNERS

NEA's organizational and operational capabilities are greatly enhanced through cooperation and collaboration with key partner organizations including: various national, regional and local governmental agencies; state owned enterprises; various domestic energy industry participants; independent power producers; large energy consumers; various landowner groups; a range of non-government organizations; various energy industry associations; various international financial institutions; and several donor organizations and countries.

All NEA's partners are greatly valued and make an important contribution to the success of the organization. However, there are a few, whether because of their ongoing influence over the operation and development of the domestic energy sector, or as a result of their financial, technical and organizational contribution, that are considered vital for the ongoing development of the NEA and for successfully delivering its key goals.

### Domestic Partners

- **Conservation and Environmental Protection Authority (CEPA).** CEPA is responsible for assessing environmental impacts and issuing relevant environmental permits for natural gas projects, hydropower infrastructure developments, and mining projects. CEPA is seeking to promote renewable energy development, which could support delivering the NEA's objectives.
- **Climate Change and Development Authority (CCDA).** CCDA is the coordinating entity for all climate change related policies and actions in the country and is the designated National Authority under the United Nations Framework Convention on Climate Change (UNFCCC).
- **Department of National Planning and Monitoring (DNPM).** DNPM is the key central agency advising GoPNG on matters relating to development policy, development planning and programming, foreign aid coordination and management, and the monitoring and evaluation of national development projects and programs affecting domestic energy sector development.
- **Department of Petroleum.** The Department of Petroleum is responsible for developing and implementing policies, regulations and programs to facilitate exploration, production and development of PNG's upstream petroleum resources, including natural gas for the domestic energy sector.
- **Department of Treasury (Treasury).** The Department of Treasury is responsible for developing and implementing GoPNG's annual and medium-term budget frameworks; providing economic, investment, and tax policy advice; and managing the government's public debt; all of which influences the fiscal and economic conditions that shape the operation and development of the domestic energy sector.
- **Independent Consumer and Competition Commission (ICCC).** The ICCC is PNG's principle economic regulatory body. Several of its energy sector price regulation and licensing



functions were transferred to the NEA. ICCC has considerable knowledge and experience in domestic energy sector regulation, making it a potentially highly valued advisor for the NEA.

- **Kumul Consolidated Holdings Limited (KCHL).** KCHL is a 100-percent state-owned statutory corporation that operates as the holding company for nine state-owned enterprises including PPL. KCH exercises substantial influence over the strategic direction of PPL, and as such has considerable ability to shape the development of the domestic energy sector.
- **PNG Power Limited (PPL).** PPL is a vertically integrated, state-owned enterprise that functions as PNG's national electricity utility. It operates PNG's three main power systems and several isolated provincial systems. As a result, it holds a unique position in the domestic energy sector and has a critical role in implementing the NEROP.

### International Donor Partners

- **Asian Development Bank (ADB).** ADB is a valued development partner which has funded over 30 energy-related projects in PNG worth nearly \$250 million. ADB is undertaking a range of projects in PNG to increase the national electrification rate from 12 percent to 19 percent by 2028, including investing in new and existing hydropower plants and expanding network infrastructure.
- **Australia Department of Foreign Affairs and Trade (DFAT).** Australia is PNG's largest development partner and funds a range of critical infrastructure investment, demonstration and technical assistance activities supporting PNG's energy institutions and the development of the domestic energy sector through various programs and projects delivered through DFAT.
- **Japanese International Cooperation Agency (JICA).** JICA is a valued development partner which most recently funded major projects in the power sector including: the Ramu Transmission System Reinforcement Project; and the Lae Area Distribution Network Improvement Plan.
- **New Zealand High Commission (NZHC).** New Zealand, through the NZHC, supports several power sector development projects including providing USD 17 million for the Rural On-Grid Extension Project, which is New Zealand's single largest aid activity in PNG; the Town Electrification Investment Program with the ADB; and the Enga Hydropower Project.
- **United Nations Development Programme (UNDP).** UNDP is a valued development partner that is supporting and financing several energy projects in PNG, focusing on increasing sustainable and inclusive economic development of rural areas through the deployment of renewable energy technologies.
- **United States Agency for International Development (USAID).** USAID is a valued development partner that supports a range of energy sector projects across PNG, including the USD 57 million PNG Electrification Partnership Project which aims to extend electricity access to at least 200,000 households over five years.



- **The World Bank Group (WBG).** WBG is a valued development partner that has been involved in several energy sector development projects in PNG. In particular, the WBG supported the development of PNG's National Energy Policy 2017-2027 and the NEROP. WBG recently loaned PPL USD 30 million to undertake a utility performance and reliability improvement project and is in discussions with PPL about other projects including a pilot rooftop solar program in Port Moresby and the refurbishment of PPL's mini-grid systems.

NEA welcomes the continued support and assistance of its key partners and looks forward to building on these productive and effective partnerships over the next five years.

## OUR KEY ACTIVITIES

NEA will pursue its strategic goal of promoting access to affordable, reliable and sustainable energy services throughout PNG by developing and implementing an integrated set of measures and activities over the next five years that deliver outcomes consistent with its key strategic priorities to:

- accelerate energy sector development;
- strengthen energy sector regulation; and
- progress NEA corporate development.

This section provides a high-level summary of the key measures and activities proposed to help achieve these objectives. The information is presented in tabular form, with separate tables summarising the key measures and activities for each key strategic priority, to help make the information clearer and more accessible for stakeholders and other interested parties. Identification of measures and activities by strategic priority also emphasises the relationship between individual projects and delivering tangible outcomes consistent with the NEA's strategic

corporate objectives, while helping to highlight the underlying rationale for project selection. Each measure and activity listed in the following tables is accompanied by a short, high-level description of its nature and scope, along with some preliminary milestone performance indicators and information in relation to potential project risks and related risk mitigation strategies.



Performance evaluation and assessment of progress in relation to the development and deployment of key measures and activities will be undertaken on an annual basis over the course of the five-year Plan in the context of preparing the NEA's Annual Report. In addition to this annual review process, it is envisaged that the NEA Board will oversee and monitor progress in relation to the development and implementation of critical measures and activities on a quarterly or half-yearly basis. NEA will





give priority to further developing and refining its project performance management and risk mitigation framework over the course of this Plan, with the intention of improving the framework's overall quality, coverage and application, so that it can become a more effective mechanism for driving superior performance and outcomes across the organisation over time.

NEA's intention is to make the performance and risk management regime a central part of its corporate culture. Ultimately, NEA aims to embed the regime in the management and execution of all internal policies, processes and practices, with its application underpinned by practical tools and techniques to support more timely, balanced and informed decision-making at all levels throughout the organisation. Successful implementation of an effective performance and risk management regime not only offers the potential to deliver superior performance over time; it also offers the opportunity to develop a more flexible and adaptable organisation that will be better equipped to respond quickly and effectively to rapid change in an increasingly dynamic domestic energy sector.

The following three tables summarise the key measures and activities to be developed and implemented by the NEA over the next five years to help accelerate energy sector development; strengthen energy sector regulation; and progress corporate development.

## MONITORING AND EVALUATION

The implementation of this Corporate Plan will be monitored on a quarterly and annual basis through respective Activity and Performance Reports.

The main elements to monitor will be on the NEA's functional areas and based on progress and achievement of activities. Results will be monitored on a quarterly basis during staff work plan review exercises. Adjustments to the results will be made annually to reflect on challenges and way forward. A results-based management approach will be adopted and practised within the new Authority.

The NEA will do an evaluation of the implementation of this plan using the services of an external evaluator. This will enable us to maintain objectivity and avoid subjective assessments and promote high standards of management, accountability, and transparency.

An evaluation criterion for this Corporate Plan will be approved and authorized by the NEA Board at the end of the implementation period including its mid-term review.



**Table 1 Key Measures and Activities to Accelerate Energy Sector Development**

Measures & Activities	Summary Description	Project Milestones	Project Risks & Mitigations Strategies
<b>National Energy Policy 2017-2027 (NEP) review</b>	The first 5-yearly review aims to refresh and further develop the general policy principles, goals and frameworks established in the NEP. Other elements will include developing and implementing policies to support the creation of a national grid; extend off-grid and rural electrification; and to progress the transition towards a decarbonised the energy sector.	<ul style="list-style-type: none"> <li>• NEP review to be completed by Q3-2027, with the NEA Board approved draft report and recommendations submitted for NEC consideration by Q4-2027.</li> <li>• Substantial progress toward completion of other policies to be achieved by 2H-2023.</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Decline in policy relevance and effectiveness due to rapid energy sector evolution</u> – to be addressed through the development and implementation of holistic and objective-based policies that are adaptable and can be flexibly interpreted and applied over time; supported by a system of regular policy review and development using the 5-yearly review cycle.</li> <li>• <u>Insufficient political and institutional support</u> – to be addressed through effective whole-of-government dialogue, possibly supported by formal committees; targeted dialogue with key stakeholders; and provision of high quality, consistent and persuasive advice to key policymakers.</li> </ul>
<b>Develop and implement energy subsector policies</b>	Key fuels and technologies to be addressed include hydro; solar; geothermal; biofuels; hydrogen and ammonia. Subsector policies in relation to a domestic market obligation and women in energy are also envisaged.	<ul style="list-style-type: none"> <li>• Initial subsector policies in relation to solar geothermal, hydro generation and DMO to be completed by Q4-2023.</li> <li>• Others to proceed in 12-month intervals throughout the initial 5-year planning period.</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Insufficient financial resourcing</u> – to be addressed through prudent financial management; internal advocacy to increase operational funding allocations; collaboration with donors and development partners; and through joint development activities with key governmental partners, possibly via formal working groups including Treasury and national planning bodies.</li> </ul>
<b>Prepare and deploy implementation plans for the NEP and for subsector energy policies</b>	Implementation plans will be developed for each energy policy approved by the National Executive Council (NEC).	<ul style="list-style-type: none"> <li>• Develop and commence deployment of implementation plans within 6 months of receiving NEC policy approval.</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Insufficient human resourcing</u> – to be addressed through improving internal quality assurance processes; internal capacity building programs; targeted recruitment; and securing additional technical resources from donors/development partners.</li> </ul>
<b>Develop and deploy an effective system of energy data and information collection and management</b>	Review current data management arrangements including: the nature and coverage of data collected; and the effectiveness of data and information collection systems, storage and dissemination, with a view to improving the quality and coverage of energy sector data collections; and developing and implementing more timely, efficient and effective data management and collection arrangements, including establishing a data repository hub (Data Lab), and greenhouse gas inventory system for the energy sector.	<ul style="list-style-type: none"> <li>• Conduct the review and make recommendations by Q4-2023.</li> <li>• Commence implementation of recommendations in cooperation with relevant stakeholders within 6 months of receiving approval to proceed.</li> <li>• Establish data repository by Q4-2024.</li> <li>• Establish GHG inventory system by Q4-2024.</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Insufficient support from donors and development partners</u> – to be addressed through targeted dialogue with key stakeholders; and by formulating partnership agreements or similar strategies with key donor and development partners.</li> </ul>
<b>National Electrification Rollout Plan</b>	Support the development and deployment of key grid-based generation and network infrastructure projects required to advance	<ul style="list-style-type: none"> <li>• Substantial progress toward the initial development of network and</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Regulatory and institutional barriers to timely project development and deployment</u> – to be addressed by proactively identifying potential</li> </ul>



<b>(NEROP) implementation</b>	grid densification and grid expansion to meet NEROP targets and GoPNG's electricity access goals.	generation projects to advance grid <i>densification</i> by 2H-2023. • Substantial progress toward the initial development of network and generation projects to advance grid <i>expansion</i> by 2H-2023.	barriers in advance, in consultation with key stakeholders, and engaging with responsible bodies to help address them before they become a significant impediment.
<b>Measures &amp; Activities</b>	<b>Summary Description</b>	<b>Project Milestones</b>	<b>Project Risks &amp; Mitigations Strategies</b>
<b>Off-Grid Master Plan implementation</b>	The Off-Grid Master Plan supports NEROP implementation beyond the centralised power systems by advancing off-grid electrification through multiple modalities including mini-grids; stand-alone solar PV systems, mini and micro hydro; and hybrid systems.	<ul style="list-style-type: none"> <li>• Initial tranche of projects selected and approved under the Off-Grid Master Plan by Q4-2023.</li> <li>• Deployment of initial tranche of projects commenced under the Off-Grid Master Plan by Q4-2023.</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Ineffective coordination of project activities</u> – to be addressed by establishing bilateral and multi-lateral dialogue mechanisms that bring together all key donors and development partners on a regular basis, supported by more frequent formal and informal exchanges between key parties in relation to individual projects.</li> </ul>
<b>Major project facilitation and development</b>	Provide project facilitation and coordination services supporting the development and deployment of major renewable energy projects including assistance in relation to planning; licensing; development approvals; system integration; stakeholder engagement; and complementary project activities.	<ul style="list-style-type: none"> <li>• Provision of timely and comprehensive advice to the proponents and related parties associated with all major projects receiving support during 2023.</li> <li>• Development of a comprehensive and effective 'one-stop-shop' service for major renewable energy project facilitation by 2H-2023.</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Insufficient financial resourcing</u> – to be addressed through prudent financial management; internal advocacy to increase operational funding allocations; and targeted, proactive engagement with potential financiers, donors and development partners.</li> <li>• <u>Insufficient human resourcing affecting timeliness and quality of advice</u> – to be addressed through improving internal quality assurance processes; internal capacity building programs; targeted recruitment; and securing additional technical resources from donors/development partners.</li> </ul>
<b>Community awareness and outreach</b>	Undertake activities to positively engage local communities in the electrification process, to help build support for electrification programs and projects. Key elements include conducting information and awareness campaigns; providing liaison between local communities and development partners; electrification advocacy; and educating local communities about opportunities for efficient and affordable electricity use.	<ul style="list-style-type: none"> <li>• Develop general information, education and awareness campaign materials by Q4-2024.</li> <li>• Prepare community engagement strategies for each engaged local community within 12 months of initial engagement.</li> <li>• Commence and progress 8 community engagements in 2023.</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Insufficient financial resourcing</u> – to be addressed through prudent financial management; internal advocacy to increase operational funding allocations; and targeted, proactive engagement with other potential financiers, donors and development partners.</li> <li>• <u>Insufficient human resourcing to deliver timely and effective services</u> – to be addressed through improving internal quality assurance processes; internal capacity building programs; targeted recruitment; and securing additional technical resources from donors/development partners.</li> </ul>
<b>Local commercialisation of energy access</b>	Develop and disseminate advice on potential commercial and economic applications of electricity, including tailored advice in relation to potentially productive	<ul style="list-style-type: none"> <li>• Develop general information and advice on potential commercial and economic applications of electricity by Q4-2024.</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Insufficient local community and landowner interest and engagement</u> – to be addressed by</li> </ul>





	local commercial and industrial uses and related business models to help harness the economic and wealth-creating potential of access to electricity services.	<ul style="list-style-type: none"> <li>• Prepare business development strategies for each engaged local community within 2 years of initial engagement.</li> <li>• Commence and progress 4 business development engagements in 2023.</li> </ul>	<p>identifying causes of disengagement and subsequently improving communication and refining outreach programs and supporting materials, to address identified causes and to help improve relevance and effectiveness. Targeted financial incentives could be considered to create an enabling environment, subject to availability and cost-effectiveness.</p>
<b>Landowner participation in energy projects</b>	Landowner participation guidelines and related explanatory materials will be developed to help operationalise various NEA Act provisions relating to national content requirements and the participation of landowners in local energy projects.	<ul style="list-style-type: none"> <li>• Development and dissemination of the guidelines and supporting explanatory materials by Q4-2024.</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Low affordability discouraging engagement and participation</u> – to be addressed through targeted financial assistance programs, potentially including access to electricity services subsidised through the proposed Community Service Obligation (CSO) program.</li> </ul>



Table 2 Key Measures and Activities to Strengthen Energy Sector Regulation

Measures & Activities	Summary Description	Project Milestones	Project Risks & Mitigations Strategies
<b>Develop and administer effective economic regulatory arrangements for the domestic energy sector</b>	Review and revise existing codes, regulations, rules, and guidelines governing economic regulation of the domestic energy sector, focusing on the power and downstream natural gas sectors. Key elements include review and develop the Electricity Grid Code; review and develop the Third-Party Access Code; review and develop and Electricity Off-Grid Code; and develop and implement legislative amendments to provide a sound legal basis for undertaking economic regulation in the NEA Act. Establish transparent and robust administrative arrangements to support regulatory evaluation and decision-making processes. Develop and implement effective monitoring, compliance and enforcement arrangements.	<ul style="list-style-type: none"> <li>• Review and prepare amendments to update and strengthen the National Electricity Grid Code by Q4-2023.</li> <li>• Review and prepare amendments to update and strengthen the Third-Party Access Code by Q4-2023.</li> <li>• Complete development and implementation of the Electricity Off-Grid Code by Q4-2023.</li> <li>• Review and prepare legislative amendments to address gaps in the NEA Act's legal framework to enable more effective economic regulation by Q4-2024.</li> <li>• Review, develop and revise key regulatory methodologies, evaluation guidelines and processes by Q4-2025.</li> <li>• Develop and implement effective regulatory compliance monitoring and enforcement arrangements by Q4-2027.</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Decline in regulatory effectiveness due to rapid change in the energy sector</u> – to be addressed through the development and implementation of objective-based approaches to regulation that deploy bounded discretion and are therefore adaptable and able to be more flexibly interpreted and applied over time; supported by regular review of regulatory rules and arrangements to enable timely updating over time.</li> <li>• <u>Insufficient political and institutional support</u> – to be addressed through effective whole-of-government dialogue, possibly supported by formal committees; targeted dialogue with key stakeholders; and provision of high quality, consistent and persuasive advice to key policymakers.</li> </ul>
<b>Develop and administer effective technical regulatory arrangements for the domestic energy sector</b>	Review and revise existing regulations, standards, and guidelines governing technical regulation of the domestic energy sector, focusing on the power and downstream natural gas sectors. Key elements include review and revise technical regulations governing the safety, reliability and quality of domestic power and natural gas supplies; develop and implement electrical appliance standards consistent with global energy efficiency and safety standards; and develop and administer technical design standards for electrical and gas installations. Develop and implement effective monitoring, compliance and enforcement arrangements.	<ul style="list-style-type: none"> <li>• Review and revise key technical regulations governing the safety, reliability and quality of domestic power and natural gas supplies by Q4-2024.</li> <li>• Develop and implement appliance standards by the end of Q4-2024.</li> <li>• Review and revise technical design standards by the end of Q4-2027.</li> <li>• Develop and implement effective regulatory compliance monitoring and enforcement by the end of Q4-2023.</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Insufficient human resourcing to deliver timely and effective services</u> – to be addressed through improving internal quality assurance processes; internal capacity building programs; targeted recruitment; and securing additional technical resources from donors/development partners.</li> <li>• <u>External resistance among key stakeholders</u> – to be addressed by undertaking targeted, proactive engagement with key stakeholders to inform, educate and to positively influence perceptions, with a view</li> </ul>
<b>Develop and implement efficient regulated tariffs and service standards</b>	Establish a tariff system that is accessible, affordable, and sustainable for all parties in the electricity and energy industry. Review the existing methodology for setting regulated tariffs and service standards, and update as	<ul style="list-style-type: none"> <li>• Review, develop and implement revisions to key regulated tariffing methodologies by the end of Q4-2023.</li> <li>• Review, develop and deploy revised service standards by the end of Q4-2023.</li> </ul>	



<b>for the domestic energy sector</b>	appropriate. Revise tariff and service standards, and administrative processes and systems to reflect resulting changes. Review and revise all related public information, documentation and guidelines to reflect any amendments.	<ul style="list-style-type: none"> <li>• Review and revise administrative systems and processes to reflect changes in the regulated tariffing methodology and service standards by the end of Q4-2023.</li> <li>• Review and update all public information, documentation and guidelines to reflect any amendments by the end of Q4-2023.</li> </ul>	to building wider support for the relevant measure or activity.
<b>Measures &amp; Activities</b>	<b>Summary Description</b>	<b>Project Milestones</b>	<b>Project Risks &amp; Mitigations Strategies</b>
<b>Develop and administer effective economic licensing arrangements</b>	Review, develop and administer the terms and conditions, procedures and systems governing economic licensing arrangements in the domestic energy sector including developing licensing procedures and systems for independent power producers (IPPs) and auto producers. Develop and implement effective arrangements for monitoring and enforcing compliance with economic licensing requirements.	<ul style="list-style-type: none"> <li>• Review, develop and implement revised licensing terms and conditions and procedures for IPPs and auto producers by Q4-2027.</li> <li>• Update, develop and deploy revised guidelines and other explanatory documents to support the introduction of changes to the licensing regime for IPPs and auto producers by Q4-2025.</li> <li>• Develop and implement related compliance monitoring and enforcement arrangements by Q4-2027.</li> </ul>	
<b>Develop and administer effective technical licensing arrangements</b>	Review, develop and administer the standards, procedures and systems governing technical licensing arrangements in the domestic energy sector including establishing standards and procedures for certification of electricians and electrical contractors; and developing a database of certified electricians and electrical contractors. Develop and implement effective arrangements for monitoring and enforcing compliance with technical licensing requirements.	<ul style="list-style-type: none"> <li>• Review, develop and deploy revised standards and procedures for certification of electricians and electrical contractors by the end of Q4-2023.</li> <li>• Develop and deploy a comprehensive database of certified electricians and electrical contractors by Q4-2023.</li> <li>• Develop and implement effective arrangements for monitoring and enforcing compliance with technical licensing requirements by the end of Q4-2023.</li> </ul>	
<b>Develop and administer a robust and efficient contractual regime for independent power producers</b>	Review and revise the current contractual regime governing the development and operation of IPP and auto producer facilities. Particular attention will be given to evaluating the core terms and conditions that typically apply to IPP projects and related power purchase agreements (PPAs), with a view to updated those terms and conditions to better reflect expectations in relation to availability, reliability and cost-effectiveness. Revisions	<ul style="list-style-type: none"> <li>• Review, develop and implement updated contractual standards, revised model contract documentation and explanatory guidelines for new IPP's and PPA's by the end of Q4-2023.</li> <li>• Review and revise the core terms and conditions pertaining to standard IPP contractual agreements by Q4-2023.</li> </ul>	





	will be reflected in the preparation of new model contractual documentation and companion guidelines for future IPP projects and related PPAs.		
<b>Review and administer the NEA's industry levy regime</b>	Manage and enforce the collection of fees, levies and charges under the NEA Act and other regulations. Develop and implement transparent and accountable collection systems and procedures, including compliance and debt recovery.	<ul style="list-style-type: none"> <li>• Review fees and levies in consultation with key stakeholders by Q4-2027.</li> <li>• Develop and deploy collection systems and procedures that are compatible and integrated with the NEA's financial management systems and processes, including compliance and debt recovery mechanisms by Q4-2027.</li> </ul>	



Table 3 Key Measures and Activities to Progress Corporate Development

Measures & Activities	Summary Description	Project Milestones	Project Risks & Mitigations Strategies
<b>Develop and implement effective corporate governance arrangements</b>	Develop and implement a range of initiatives to build and maintain a transparent and accountable organisation that is strategic and forward-thinking; and which encourages innovation and professionalism that delivers productivity and performance, consistent with the outcomes achieved by high-performance organisations.	<ul style="list-style-type: none"> <li>• Develop and implement a governance charter for the NEA to provide clear principles and a comprehensive strategic framework for addressing all corporate governance matters in a coherent, integrated and effective way by Q2-2023.</li> <li>• Develop and implement key corporate management systems and processes, including for corporate planning, annual reporting and auditing cycles; for managing coordination of partners and donors; and for international cooperation activities, to deliver a comprehensive and integrated approach to the management of cross-cutting activities across the NEA by Q4-2023.</li> <li>• Develop and implement metrics and procedures to support effective ongoing monitoring and evaluation of corporate governance by the NEA Board by Q4-2026.</li> <li>• Develop and deploy key corporate management policies, manuals, guides and administrative instruments to support effective implementation by Q4-2023.</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Insufficient human resourcing delays effective development and implementation and/or timely/effective provision of services</u> – to be addressed through improving internal quality assurance processes; internal training and capacity building programs; targeted recruitment; and securing additional technical resources from donors/development partners.</li> <li>• <u>Insufficient financial resourcing delays effective development and implementation and/or timely/effective provision of services</u> – to be addressed through prudent financial management; internal advocacy to increase operational funding allocations; and targeted, proactive engagement with other potential financiers, donors and development partners.</li> <li>• <u>Insufficient physical resourcing delays effective implementation and service provision</u> – to be addressed through prudent procurement management; internal advocacy to increase funding; and targeted, proactive engagement with</li> </ul>
<b>Develop and implement effective human resource management policies, processes and practices</b>	Develop, implement and maintain a range of policies, processes and practices to: attract, develop and retain staff; build workforce diversity; effectively address capability requirements; and create a safe, participative and highly productive, team-based working environment where all staff are empowered to maximise their contribution to delivering the NEA's key goals and its success.	<ul style="list-style-type: none"> <li>• Develop and deploy a staff development masterplan to provide a strategic framework for addressing all human resources development activities in an integrated and effective way across the NEA during this corporate planning cycle by Q4-2023.</li> <li>• Develop and implement recruitment, retention and succession planning policies and procedures by Q4-2025.</li> <li>• Undertake a skills audit to inform the development and implementation of a 3-year training and development program, initially focusing on deploying priority management and staff training and development programs, with training programs commencing from 2H-2023.</li> <li>• Develop and deploy gender equity, diversity and social inclusion policies and procedures by Q4-2023.</li> <li>• Develop and deploy key human resource management policies, manuals, guides and administrative instruments to support effective implementation by Q4-2023.</li> </ul>	
<b>Develop and implement effective financial resource management policies,</b>	Develop and implement a range of policies, processes and programs to deliver efficient, prudent, transparent and accountable financial resource management throughout the NEA, with a	<ul style="list-style-type: none"> <li>• Develop and deploy a financial management masterplan to provide a strategic framework for addressing all financial resources management activities in an integrated and effective way across the NEA by Q4-2023.</li> <li>• Develop and implement transparent and accountable financial management systems and processes, including a high-level financial</li> </ul>	



<b>processes and programs</b>	view to achieving timely, efficient and cost-effective outcomes that represent value for money, consistent with those achieved by high-performance organisations. Develop and implement methodologies for determining NEA's fees, levies and charges, and for updating them over time.	reporting framework for senior management and the Board, by Q4-2025. <ul style="list-style-type: none"> <li>• Develop and implement a comprehensive financial accounting framework to support transparent, program-based financial management and auditing by Q4-2023.</li> <li>• Develop methodologies for determining and reviewing NEA fees and levies in consultation with key stakeholders by Q4-2023.</li> <li>• Develop and deploy key financial management policies, manuals, guides and administrative instruments to support effective implementation by Q4-2023.</li> </ul>	other potential financiers, donors and development partners.
<b>Measures &amp; Activities</b>	<b>Summary Description</b>	<b>Project Milestones</b>	<b>Project Risks &amp; Mitigations Strategies</b>
<b>Develop and implement effective performance and risk management processes and systems</b>	Develop and implement a range of policies, processes and programs to deliver an effective performance and risk monitoring and management framework to support more transparent, accountable and effective decision-making and operational outcomes throughout the NEA. In particular, an effective performance and risk management framework should aim to provide critical information to support effective corporate governance supervision, human resource management and financial management.	<ul style="list-style-type: none"> <li>• Develop and deploy a performance management and risk mitigation masterplan to provide a strategic framework for developing all performance and risk monitoring and management activities in an integrated and effective way across the NEA by Q4-2023.</li> <li>• Refine, develop and deploy performance management and risk mitigation metrics for each major project, measure and activity, to support more effective monitoring, management and assessment of performance and related business risks by Q4-2026.</li> <li>• Develop and implement systems, processes and programs to support the deployment of effective performance monitoring, management and risk mitigation arrangements, including a suite of practical tools and techniques to support effective implementation, by Q4-2026.</li> <li>• Develop and introduce a system of performance-based agreements that explicitly link individual and team-based performance to achieving key corporate objectives by Q4-2025.</li> <li>• Develop and deploy key performance management and risk mitigation policies, manuals, guides and administrative instruments to support implementation of effective arrangements by Q4-2024.</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Incomplete coverage or application of performance and risk monitoring and management arrangements</u> – to be addressed through regular review of activities to identify and address gaps; improving performance and risk management information systems, tools and reporting; and training and capacity building to address gaps resulting from poor implementation and evaluation.</li> <li>• <u>Insufficient organisational capacity and/or internal resistance to effectively apply and deploy new policies, processes and programs</u> – to be addressed by undertaking organisation-wide information and training prior to the implementation of any new systems and processes to inform, educate and positively influence perceptions, with a view to building wider support for</li> </ul>
<b>Establish effective information technology and property management processes and systems</b>	Develop and implement a range of policies, processes and programs to deliver timely, efficient and cost-effective information technology and property management services including internal computing and device management and support; data storage and management; asset	<ul style="list-style-type: none"> <li>• Develop and deploy an information technology development masterplan to provide a comprehensive strategic framework for developing and implementing all information technology activities in an integrated and effective way across the NEA by Q4-2023.</li> <li>• Develop and implement policies, protocols and procedures for storing, accessing, distributing and securing electronic data by Q4-2025.</li> <li>• Develop and deploy an asset management masterplan to provide a comprehensive strategic framework for developing and implementing all asset management activities in an integrated and effective way across the NEA by Q4-2024.</li> </ul>	





	procurement; and asset maintenance and management.	<ul style="list-style-type: none"> <li>• Develop and establish a comprehensive asset register that identifies and tracks all NEA corporate assets including all computing equipment, vehicles and other physical assets, by Q4-2023.</li> </ul>	
<b>Establish effective internal legal advisory services</b>	Establish and maintain an effective legal services capability that is able to deliver timely, accurate and comprehensive legal input and advice in relation to a range of matters including: drafting of laws, regulations and related rules and guidelines; drafting of contracts, formal agreements and other legal documents; complaints handling and management; and advice on the legal aspects of policy, regulatory or administrative proposals and decisions.	<ul style="list-style-type: none"> <li>• Provision of timely, accurate and comprehensive legal advice, review and clearances on a project and program specific basis as required.</li> <li>• Provision of timely, accurate and comprehensive legal drafting services on a project and program specific basis as required.</li> <li>• Development and implementation of complaints and appeals handling procedures and processes by Q4-2025.</li> </ul>	proposed changes; training to be supported by simultaneously providing updated guides, manuals and administrative instruments to support seamless transition and implementation; and provision of individual support/help mechanisms to address specific practical implementation challenges.



National Energy Authority



Goad Herea Building  
Waigani Drive



P O Box 494  
Waigani  
National Capital District



[info@nea.gov.pg](mailto:info@nea.gov.pg)



(675) 3253233



<https://www.nea.gov.pg>