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NAURU UTILITIES CORPORATION  
Aiwo District, Republic of Nauru

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# Nauru Utilities Corporation

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*Corporate Strategy*

December 2012

## Letter from the CEO

By mid-2013, NUC will reach its second year of service since its establishment as a public Corporation in mid-2011.

Whilst the Corporation focuses on improving its service deliveries to all customers, it is considered vital at this stage to develop a corporate plan which summarizes the major strategic directions NUC will pursue over the coming three to five years.

To this regard, management has developed and incorporated specific objectives and Key Performance Indicators (KPIs) with the aim to achieve outcomes related to each objective within the set time framework. The identified objectives will encompass the scope of required developments within NUC and will inevitably contribute to the overall achievement of its vision “to provide affordable, sustainable energy and water supplies at levels of reliability and quality that satisfy Nauru’s customers,” and at the same time achieve the vision of the RON National Sustainable Development Strategy.

Priority areas NUC ought to focus on and continue to improve are power generation and transmission systems; research and implementation of renewable energy projects; water production and delivery services; tank farm management and technical supports; identification of areas where NUC can improve energy efficiencies; financial management and control systems; capacity building; continued efforts to create a working environment which encourages collaborative work and sincerity.

A significant part of this plan is the extensive management input that has been built into the process of developing this document. It ensures that this plan is relevant to all departments and sectors of the Corporation.

I would also like to thank all of the people who provided input into producing an excellent resource for NUC and acknowledge the special assistance provided by ADB with preparation of this Corporate Strategies.

I look forward to the successful implementation of this Corporate Plan.





## Introduction

### About NUC

Nauru Utilities Corporation was established under the terms of its own Act of Parliament<sup>1</sup> on 24 June 2011. The Act sets out the purposes of the NUC and establishes its regulatory, governance, and management structures. The powers and functions of NUC relate to the generation, transmission, and supply of electricity; the treatment, distribution, and supply of water; and the buying, storing, and selling fuel within Nauru.

NUC's corporate form is that of a non-departmental public body in that it has no shareholders or board of directors, but is subject to Ministerial oversight and has a legal personality separate from that of the Government. The Minister is advised by an Advisory Committee in connection with matters related to the operation of NUC, and operational matters are managed by a Chief Executive Officer (CEO). The corporation requires cabinet approval for borrowing, acquisition or disposal of property, and must ensure that proper accounting records are kept. The approval of the Minister is required to appoint the corporation's external auditor.

NUC is the successor body to the Nauru Utilities Authority (NUA) which took over the utilities operation from the predecessor body of Republic of Nauru Phosphate (RonPhos)<sup>2</sup> in July 2005. NUC's fixed assets comprise of those initially inherited from the Nauru Phosphate Corporation (NPC) and those subsequently funded by donor partners or NUC itself.

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<sup>1</sup> Act No 13 of 2011

<sup>2</sup> Nauru Phosphate Corporation ceased to exist by Act of Parliament in July 2005 and was replaced by RonPhos.



# Vision, Mission, and Values

## Vision

NUC's vision statement defines its reason for being and consciously establishes a path forward, guiding future actions of the corporation. It is the foundation for all strategies, objectives, and expectations of

the corporation. The mission statement is inherently outward-facing and describes how the organization serves its external stakeholders. NUC's vision is as follows:

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*To provide affordable, sustainable energy and water supplies at levels of reliability and quality that satisfies Nauru's customers.*

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## Mission

NUC's mission statement describes the future desired state of the corporation and defines what success will look like within a given timeframe. The mission statement is a critical first step to defining the organization's strategy. As opposed to the mission statement, which is outward-facing to NUC's stakeholders and employees, the vision exists for the corporation's employees and describes what the corporation needs to do in order to best meet the needs of its stakeholders. NUC's mission statement is as follows:

NUC seeks to support the economic and social development of the Republic of Nauru through the provision of energy and water supply that:

1. Is affordable for customers of all income levels
2. Can be provided sustainably, where "sustainably" means:
  - a. Maximizing the utilization of domestic resources and minimizing dependency on imported fuels
  - b. Priced to allow NUC to recover its efficient costs of operation and maintenance, and any costs of financing required to achieve other elements of the Corporate Mission and Vision (affordability, service quality, reliability, and safety)
  - c. Strengthening employee capacity and pride in their work
3. Is delivered according to reliable, predictable schedules
4. Meet customer expectations of reliability and service quality, and
5. Comply with internationally-acceptable standards for utility workers and customers.

## Core Values

NUC's core values are the principles and standards which guide all actions and decisions of the organization. Core values are not externally justified but rather are created to have intrinsic value and importance for the employees of an organization. While NUC's corporate strategy will change with time and market conditions, its core values will generally remain the same.

- Good governance
- Customer-focus
- Teamwork
- Safety first



# Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis

The reform of NUC requires a sincere appraisal of where we stand as an organization. This appraisal includes an assessment of where our strengths lie and how we can use those strengths to take advantage of our opportunities. It also includes an evaluation of the things wrong with our organization. This allows for a frank assessment of the threats that face our organization so that we can avoid them moving forward.

## Strengths

We have a number of strengths that can be leveraged to create a bright future for our utility and island. Broadly speaking, we can benefit from our role as the sole utility service provider within the Nauruan market, high levels of external support, a high-potential staff and a streamlined governance structure.

**Position in the Nauruan utility market.** Exclusive operating rights over multiple business segments in the utility sector of Nauru is a strength of our market position. As the sole producer and distributor of water and energy in Nauru, we do not have competitors for many services, and thus do not have to respond to competitive market dynamics. This allows us to focus on the best interests of the people of Nauru directly, rather than on competing with other companies. In addition, having multiple business segments allows economies of scope and flexibility in pricing, including the flexibility to cross-subsidize. Not all of our business segments must be profitable. More profitable segments can cross-subsidize other segments that are less profitable but important to customers.

**External support.** Strong support from donors allows us to leverage grants for capital projects and receive free technical assistance. In 2010, 10 water projects and 5 power and energy projects with an estimated cost of A\$ 6.8 million and A\$ 2 million, respectively, had been proposed by various donors including AusAid, JICA, the EU and SOPAC. In addition to financial support, we have access to a strong team of expatriate staff which helps us apply best

practices knowledge from around the world. Most executives employed on fixed-term contracts are in donor-funded positions, filled by expatriates.

**High-potential of human capital.** Our young workforce has a high potential to learn. With these employees, we can build a great utility from the ground up. The age of the workforce allows us to benefit from early training of potential leaders and talent management strategies for technical and other highly-trained staff over their career with NUC.

**Governance structure.** We have a newly streamlined governance structure which should reduce bureaucracy and encourage innovation, service improvement, and efficiency. In 2011, the corporatization of NUC (NUA) restructured the management of the organization, set the scene for reducing unnecessary bureaucracy, and improved management autonomy and accountability.

**Access to skilled employees.** Our exclusive right to produce and distribute energy and water makes us the only jobs provider for skilled utility on the island.

**Management Potential.** It is clear that many of the contracted management team have potential to lead and supervise the

*“We have a newly streamlined governance structure which decreases bureaucracy and encourages innovation and efficiency.”*



transformation of the culture and performance of the organization; and are ready and willing to embrace the performance management system for themselves and their teams. Some aspects of performance appraisal and discipline

## Weaknesses

**Dilapidated and fragile infrastructure.** Our electricity transmission system is old and suffers from a backlog of maintenance, making it fragile and susceptible to frequent interruptions and voltage fluctuations. High-voltage transmission switches, circuit breakers, and utility poles are damaged beyond repair. Water system infrastructure is also



**Figure 1. Many of our assets urgently need repair**

dilapidated. Some of the concrete water storage tanks leak and are open to contamination. Breakdowns are common at the reverse osmosis (RO) units, which provide fresh water during droughts on the island. The fragility of the infrastructure contributes to the unreliability of power and water service. The development of significant technical skill and an influx of investment capital is required to bring the island's infrastructure into good working order.

**Poor culture of maintenance.** We have no preventative maintenance plans in effect, and as a result maintenance is carried out on an emergency or *ad hoc* basis. Accidents

management are already being implemented. There is also potential for talented Nauruan employees to move into key management-trainee positions with initial counterpart mentoring.

are not prevented and the results are handled after accidents occur, compromising service quality.

**Lack of management autonomy, despite corporatization.** Despite our newly streamlined governance structure, we are still subject to Ministerial oversight and require cabinet approval for borrowing and the acquisition and disposal of property. Typically, utilities provide better service if they have managerial and financial autonomy from the government that regulates them. When government places too many restrictions on managers' decisions, it risks standing in the way of innovation and service improvement.

**Chronic lack of proper tools and equipment.** We frequently lack the tools and equipment necessary to properly maintain our system, which leads to further dilapidation or the implementation of unsafe workarounds to system problems. For instance, our steel utility poles are corroded and should be replaced, yet we have insufficient timber to replace all poles on the island. Also, the wires at some damaged high voltage switches have been rerouted using improper methods because the appropriate equipment was not available. The lack of proper equipment prevents the improvement of service quality through system rehabilitation and routine maintenance.

**Dependency on imported fuel for power and water production.** We depend on imported diesel fuel for almost all of our power production. Fresh water production from the RO units is highly energy intensive and depends largely on imported fuel. This dependency makes us

highly susceptible to fuel price fluctuations, making future financial sustainability highly uncertain, and partially beyond our control.

**Dependency on RO units for water production.** Our dependence on RO units for much of our fresh water production is a significant weakness because, as mentioned above, it makes the cost of water supply highly susceptible to fuel price risk. There is limited scope for energy efficiency improvements for this equipment. Furthermore, this equipment breaks down frequently, threatening the reliability of water supply on the island.

**Poor communication at all levels of the organization.** Poor communication among workers and between departments throughout our organization makes coordination and problem-solving difficult and inefficient.

**Low salaries (low opportunity costs for laborers).** Unclear compensation policies and worker classifications result in inefficient allocation of compensation at NUC. We have a seniority-based, rather than merit-based pay structure. This is a weakness because low salaries fail to encourage good performance or loyalty from low-wage workers while high salaries based on seniority rather than performance provide little incentive for senior and talented workers to perform.

**Poor safety practices.** Due to lack of adequate training and appropriate safety equipment and procedures, we suffer from poor safety practices. This weakens the well-

being and productivity of our staff, as well as the effectiveness of the organization as a whole in delivering reliable utility service to the island.

**Lack of procedures for planning.** We lack procedures for capital expenditure (CAPEX) and procurement planning. This is essential for efficient utility operations and important for prevention of service interruptions. Furthermore, lack of CAPEX planning make forecasting our future financial situation difficult, as capital expenditures may arise unexpectedly. Additionally, we lack procedures for procurement and stores management. Furthermore, there is no reconciliation of fuel purchases and use, which also weakens our ability to evaluate past performance and responsibly plan for future operations.

**Lack of local capacity.** Management and technical positions must be staffed by expatriates because of the lack of local capacity within the organization.

**Poor debt collection.** Some government and industrial customers do not pay their bills regularly. There is currently a lack of regulation to support collection of debts from customers, resulting in poor cash flow.

**Unfilled management positions.** A number of key managerial positions remain unfilled or filled on a temporary and inappropriate basis.



## Opportunities

In the coming years, we will have the opportunity to capitalize on: increasing water and energy demand, support from international donors, the potential to increase energy and water sustainability, unchallenged access to skilled employees, and regulatory support from the Government of Nauru. While many challenges lie ahead, we are well-positioned to leverage our strengths to take advantage of these opportunities.

**Increasing Demand.** Demand for electricity and water is expected to grow due to the increasing population, number of new buildings, and the expansion of businesses. Increased demand will expand our rate base, providing the opportunity for revenue growth.

**Support from donors.** We have the opportunity to take advantage of the willingness of donors to fund technical assistance and CAPEX to develop new internal procedures and infrastructure. International focus on Nauru's development has increased in response to the Australian OPC. Thus we have the opportunity to position ourselves for more funding and assistance.

## Threats

**Increase in diesel prices.** Fuel costs are partially subsidized by Government and foreign donors, but an increase in diesel prices would substantially erode our corporation's financial sustainability.



**Figure 2. Fuel provision is one of NUC's key business areas**

**Increase energy and water sustainability.** We have the opportunity to improve water and energy sustainability by developing renewable energy technologies. Utilization of renewable energy technologies and greater rainwater harvesting would reduce our reliance on diesel by reducing dependence on RO

units. We are likely to be able to leverage donor assistance for capital expenditures for these projects.

**Government support.** The Government of Nauru supports our overall reform agenda. We can leverage this regulatory support to propose innovative reforms in areas such as tariff setting.

**Change in government to one less supportive of or familiar with reform agenda.** The Government of Nauru is currently engaged in the wholesale reform of the social and economic sectors in an attempt to restore a struggling economy; a key component of which is the reform of the utilities sector. There is strong government support, but the reforms are still fragile. Changes to government less supportive of and familiar with the reform process could stall or retrench the progress of the last two years.

**Failure to follow through on reform agenda.** Execution of our reform agenda is critical to our future success. However failure to follow through on some of the critical elements of the agenda could prevent us from achieving our goals. Key threats in this area are as follows:



**Inclusion of agreement on clear tariff path in CEO contract.** We are highly reliant on government and donor subsidy, and it is essential that a clear tariff path is followed to ensure our financial sustainability. Failure to include tariff path implementation in the CEO's contract threatens the financial future of the corporation.

**Appoint independent auditor to monitor CEO performance contract.** Not only is it essential that the CEO contract include performance targets, but it is also important that progress towards these targets is evaluated to ensure compliance. Lack of an independent auditor for this work would present a threat to our reform success.

**Complete asset register and balance sheet.** Establishing the basis for proper asset accounting and allocation is necessary in light of our lack of proper tools and equipment for maintenance and management of our utility systems. Failure

to complete the asset register and balance sheet might prevent effective budgeting and CAPEX planning.

**Collect data baseline and set service quality standards.** Quantifying the current "baseline" service quality situation in our corporation is essential to setting and managing future service quality. Service quality standards must also be set in order to evaluate our senior staff and the quality of utility service provision over time. Failure to do so would threaten our ability to validate the effects of the reform effort.

**Implement performance management system.** In addition to collecting data and setting service quality standards, it is important that a system for comparing service quality and other key performance indicators against set standards is in place. Without creating and implementing a data management system, we face the threat of not realizing service and performance improvements.





## Corporation Objectives and Strategies

We have developed specific objectives as broad statements of organizational intent in pursuit of our vision and mission. The objectives are:

- **Objective 1:** Service Quality, Reliability, and Safety
- **Objective 2:** Sustainability of Resource Use
- **Objective 3:** Financial Sustainability
- **Objective 4:** Sustainability of Human Capital
- **Objective 5:** Affordability of Utility Services

A number of strategies have been developed to meet these objectives. The strategies outline specific actions that we must take in order to meet the objectives these strategies support. Strategies are organized by the timeframe in which they should occur, according to both the urgency of the action needed and the feasibility of carrying out these actions within the specified timeframe:

- **Short-term actions:** should be completed within the next 1-2 years
- **Medium-term actions:** should be completed within the next 3-5 years
- **Long-term actions:** should be completed within the next 6-10 years.



## Objective 1: Service Quality, Reliability, and Safety

Service quality, reliability, and safety are essential to the provision of adequate utility service to our customers and the sustainability of our organization's human capital. Improving the safety of infrastructure and service delivery, for both customers and NUC employees, is essential for service quality and employee safety.

### Strategy 1: Improve Investment Planning

Improving investment planning will allow us to ensure infrastructure investments are made prior to equipment failure. It will also enable us to make strategic investments to plan for future needs in a way that minimizes costs while attaining service quality goals. Timely investment supports the safe operation of equipment, reduces the need for hasty emergency repairs, and prevents reductions in service quality due to dilapidated infrastructure.

#### *Short-term actions*

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- 1. Include Government commitments on CAPEX funding in CEO's performance contract.** Government commitments to tariff increases and subsidies should be included in the performance contract for the CEO, since the CEO cannot, in many cases, hit targets without sufficient financial resources.
- 2. Establish process for CAPEX planning (including replacement).** It is necessary to develop a process for long-term planning of major asset purchases and replacements. Adopting a proactive, rather than reactive, approach to asset management will enable us to make strategic investments in capital equipment, reducing the likelihood of service interruptions and unsafe outcomes for our staff.
- 3. Establish process for financial planning, linked to CAPEX plan.** Our financial success is tied closely to our investments. As a result, financial planning will be linked to the process for CAPEX planning, as the two are highly interdependent. The financial planning process will ensure that CAPEX planning considers the current and projected financial position of the utility and the effects that CAPEX plans will have on that position.
- 4. Develop annual procurement plan, linked to CAPEX and financial plans.** In order to execute on CAPEX and financial plans, it is necessary to coordinate and manage procurement planning in step with CAPEX and financial planning. Developing a plan for procurement will ensure that CAPEX plans are actually carried out and assets are acquired on schedule according to the needs of our company and customers.

### Strategy 2: Improve Asset Management

Continual attention to preventative and strategic maintenance is essential to ensuring a high level of service quality, worker and customer safety, and customer satisfaction. .

#### *Short-term actions*

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- 1. Review of the quality of water storage tanks.** The water storage tanks that hold freshwater after desalination in the RO units are leaking; four out of six are not used due to excessive leaking. A technical review of the state and quality of these water tanks will be conducted in order to identify the source of their leaks and develop plans to improve them.
- 2. Review, design and replace membranes for RO units.** The state of the RO unit membranes will be reviewed in order to determine if they require replacement. If necessary, the membranes will be replaced.



**3. Component-level technical assessment of generation assets.** Significant sums are expended on generator repairs and maintenance yet there are no preventive maintenance plans. The condition of some generators remains a concern. It is therefore urgent that the information regarding generation assets is gathered to inform long-term key asset management plans.

**4. Component-level technical assessment of T&D assets.** Survey and mapping of T&D assets will determine the physical existence, condition, and technical capacity of infrastructure to enable rational decision making with respect to preventive maintenance and replacement planning.

**5. Survey and mapping of T&D assets** Transmission and distribution systems will be fully and accurately mapped to the component level. This includes identifying poles, switches, transformers, and other infrastructure in sufficient detail to establish engineering control over the network.



**Figure 3. Current management of assets is very poor**



**Figure 4. The system used to schedule asset maintenance is inadequate**

**6. Compile GIS database.** It is envisaged that a Geographic Information System (GIS) would be used to survey, map, and manage T&D asset data.

**7. Develop asset management and maintenance plans for each key asset.** NUC will hold facilitated management team workshops with the goal of developing an asset evaluation framework. Under this framework, each asset will be assessed and graded according to service importance to identify immediate priorities for maintenance and replacement.

**8. Develop and maintain an inventory of critical parts on site.** Critical parts are often scarce, and we lack a systematic inventory process. It is important to develop such an inventory to encourage planning and acquisition of critical parts for each asset.

**9. Create a store/warehouse for all parts.** We lack systematic stock management arrangements and stores at NUC; this has led to uncontrolled, dispersed, and ad hoc storage arrangements, which make asset management and inventory planning difficult. A well-organized store/warehouse for all parts and equipment will be established to enable better asset management. The establishment of an on-site warehouse has the logistical advantage of being close to hand for responsive purposes, but also helps to establish the separate identity of NUC as a Corporation rather than as a formal part of Central Government.

### ***Medium-term actions***

**10. Develop asset security policy.** It is necessary to develop a fixed asset security policy. This will include the development of a framework that addresses the cost, risk, and priority of improving security of system assets.

**11. Develop asset disposal policy.** Approvals for disposal are required from the Minister, which encourages the use of assets until they are obsolete. While wider changes in regulation might be required, a formal asset disposal process will address this issue and enable the more timely disposal and replacement of assets.

**12. Develop asset revaluation policy.** Revaluation of assets every three to five years is an important practice, especially as NUC's infrastructure undergoes significant changes. This will enable focus on the actual value of different assets and enable the strategic phasing out of valueless assets.



**Figure 5. Assets are often disregarded when they no longer useful**

### **Strategy 3: Increase Water Production, Distribution, and Storage Capacity Infrastructure**

In order to ensure that all customer demand is met, it will be necessary for NUC to increase water production, as well as distribution and storage capacity.

#### ***Short-term actions***

**1. Install additional RO units.** Existing RO Units are operating at half capacity only. Additional RO units will be needed to meet increasing water demand on the island.

**2. Study the feasibility of solar powered RO units in alternative locations.** NUC will implement a technical study to determine the feasibility of establishing a backup RO Unit station in the Anibare Boat Harbour Area, or other possible areas. This study will be implemented in cooperation with the Department of Commerce, Industry, and Environment (CIE).

**3. Study the feasibility of additional storage with reticulated water distribution.** NUC will study whether bulk water storage tanks can be installed that allow water to be reticulated to customers, reducing fuel cost on delivery by tankers. This study is to be implemented in cooperation with CIE.

#### ***Medium-term actions***

**4. Consider refurbishing storage units not in use.** As noted under Strategy 2 (above), four out of six storage tanks are not used due to excessive leaking. A technical review of the state and quality of these water tanks will be conducted in order to identify the source of their leaks and develop plans to improve the tanks. NUC will also investigate other existing bulk water tanks around Nauru to check whether they can be renovated and reutilized for storage purposes.

**5. Work with CIE on centralized rainwater collection and treatment.** There are abundant opportunities for additional rainwater collection on Nauru. NUC is already considering how to improve rainwater collection (from roof above tanks, the nearby Noddy's building, the water dispatch office building, and the Marine building) and CIE is currently

studying the possibility of collecting rainwater from the airport runway. NUC will continue to work with CIE on how best to integrate rainwater collection into water supply.

#### **Strategy 4: Develop Monitoring and Evaluation Procedures**

In order to determine whether reliability, service quality, safety, and financial and operational performance are being improved, it is necessary to develop targets for each of these objectives and a system for measuring progress towards them.

##### ***Short-term actions***

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**1. Agree with government on key performance indicators (KPIs).** There is not currently a clear set of performance indicators to measure NUC's performance as a utility. NUC will agree with Government on a set of KPIs against which its performance will be measured.

**2. Collect information baseline.** NUC's progress against KPIs must be measured against its current performance. Once a set of KPIs is agreed, NUC will collect the data required to establish a baseline for each KPI.

**3. Identify achievable targets in cooperation with government.** Once the data baseline is established for the KPIs, NUC will agree with government on reasonable targets and deadlines for the KPIs.

**4. Establish and implement procedures for reliably recording and reporting KPIs.** KPIs can support NUC's accountability when they are recorded in a timely manner, and reported to Government and customers. NUC will establish clear internal procedures for collecting, recording, analyzing, and reporting data on KPIs.

**5. Report quarterly to government on KPIs.** NUC will report KPIs to Government on a quarterly basis.

**6. Develop procedures for handling and monitoring customer complaints.** Customer complaints are important indicators of service quality, reliability, and overall customer satisfaction. NUC will develop clear procedures for handling, monitoring, and responding in a timely fashion to customer complaints.

#### **Strategy 5: Strengthen Safety and Occupational Health Measures**

Development of explicit safety and occupational health policies for staff members is essential for ensuring our staff is able to perform its duties. It is important to train our staff on these policies, implement monitoring systems, and acquire the equipment necessary to ensure that all staff can carry out their jobs safely.

##### ***Short-term actions***

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**1. Strengthen health and safety policies and practices.** NUC must train and enforce all electrical utility technicians in safety procedures for operating high and low voltage equipment to prevent accidents. It is also important that we train water utility technicians in safety procedures, such as preventing water contamination.

**2. Provide appropriate health and safety equipment for all staff.** Sufficient utility safety equipment will be acquired to ensure that all our staff can carry out their jobs safely and effectively.



## Objective 2: Sustainability of Resource Use

Nauru's lack of naturally-occurring traditional power generation resources leads the island to rely on imported energy sources for electricity generation. Limited fresh water resources also constrain the growth of the provision of fresh water on the island. Developing sustainable resource-use practices will better enable the economy and environment of our island to continue to support life and economic prosperity, without compromising the economy or environment. It is important for us to both make efficient use of Nauru's existing and imported resources and simultaneously identify opportunities for the expansion of our resource base without compromising the availability of these resources in the future.

### Strategy 1: Diversify Fuel Mix

#### *Short-term actions*

**1. Develop new project proposals for feasibility study on hybrid and grid-connected solar.** Nauru has significant potential for electricity generation from solar power. While capital-intensive, development of solar power would mitigate fuel price risk while simultaneously providing Nauru with a guaranteed supply of electricity for decades. We will evaluate the technical and economic feasibility of developing grid-connected solar to serve electricity needs on the island.

#### *Medium-term actions*

**2. Produce consolidated “options study” for government on other possible sources of generation (e.g. wind, wave, fuel cell, methane digester, etc.).** While solar power is an important short-term option, it is important to evaluate other alternatives to diesel fuel. Numerous, isolated studies have been completed with donor assistance on various renewable energy technologies, but there has not been a single consolidated assessment of all options on the basis of technical, economic, and financial viability. We will produce a comprehensive generation options study in order to determine other non-fuel alternatives that might be attractive to Nauru.



**Figure 6. Potential for new energy technologies such as wind and wave generation should be assessed in the medium to long term**

#### *Long-term actions*

**3. Develop new studies to support options study as new technologies become available.** The cost of many new technologies is falling, and Nauru's energy needs will likely shift over time. We will commission new studies as necessary in order to reevaluate the energy options available to the utility as they change over time.

## **Strategy 2: Improve Supply- and Demand-Side Energy Efficiency**

Supply-side energy efficiency will enable Nauru to generate more electricity for the same price, reducing the cost of electricity supply over the long term. It will also enable Nauru to increase its electricity consumption while minimizing the cost and environmental effects. Demand-side energy efficiency will enable Nauru to provide the quality services to its customers at lower cost while using less fuel and water.

### ***Short-term Actions***

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**1. Reduce fuel losses by establishing a process of reconciliation for fuel supply to the power station generators.** Fuel losses (fuel lost in transport from tank farm to the generators) may be costly for NUC. In order to protect itself against such losses, NUC will establish a clear process for reconciling the fuel supplied by tank farm and the fuel used by generating units.

**2. Introduce prepaid metering for all residential and commercial customers.** Not all residential and commercial customers have prepaid meters. Cash power meters are important for NUC's collection efficiency and cash flow. NUC will therefore complete the roll-out of prepaid meters for all residential and commercial customers.

**3. Install meters for industrial and government customers.** Some industrial and government customers do not have their own meters but instead share meters with other customers. This makes it difficult for NUC to accurately bill customers and determine the cause of non-technical losses.

**4. Check to ensure all post-paid and pre-paid meters function correctly.** Evidence suggests that some of the post-paid meters underestimate consumption. Customer tampering with pre-paid meters (by circumventing the meter) is also a problem. Proper functioning of post- and pre-paid meters is essential in the short-term to NUC's cash flow and in the long-term to its financial viability

**5. Educate and inform users on energy and water conservation practices.** Develop and implement demand-side management programs in order to improve energy efficiency and reduce household energy consumption.

### ***Medium-term Actions***

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**6. Develop new project proposals for improvement of transmission and distribution line losses.** A number of donor-supported studies have been conducted to assist NUC in determining the magnitude and cause of technical and non-technical losses in distribution and transmission. These studies are only speculative without the proper metering in place. Additional studies will be needed as metering improves.

**7. Introduce the use of high efficiency electrical appliances.** The introduction of high-efficiency electrical appliances, such as freezers, can improve demand side energy efficiency on Nauru. NUC will work with the Government to determine whether and how to encourage the introduction of higher efficiency electrical appliances which represent substantial load on the system.

**8. Budget for powering existing street lights from solar power.** As part of the focus on demand-side energy efficiency, NUC will consider allocating some of its budget to power street lights.





**9. Consider measures to prevent meter tampering.** Ultimately, physical measures may be needed to prevent or discourage meter tampering. NUC will consider how best to prevent meter tampering, including moving meters outside of homes to prevent bypass.

### Objective 3: Financial Stability

Financial sustainability is the achievement of long-term, enduring financial health of NUC, which is necessary for the assurance of customer service, service reliability, and the achievement of nearly every other objective in this plan. It is the basis for the successful operation of NUC and the fulfillment of our mission, vision, and core values.

#### Strategy 1: Move Toward Full Recovery of Operating and Maintenance Costs

One of the pillars of financial sustainability of our corporation is the recovery of our full cost of operations and maintenance. This is necessary to guarantee that operations and maintenance can continue according to schedule, ensuring safety, reliability, and service quality. In order to recover all costs, it is necessary to understand the full cost of operations and maintenance and determine a tariff strategy to support this recovery.

##### *Short-term Actions*

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**1. Develop new proposal to commission cost-of-service study.** A first step toward financial sustainability is understanding our costs. NUC will work with Government and donor partners to commission a cost-of-service study that can be used to determine electricity and water tariffs.



**Figure 7. At NUC, we value our employees and understand the importance of adequate training**

##### *Medium-term Actions*

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**2. Ensure funding for renewal and repair fund as part of annual budgeting.** NUC will develop a Repair and Renewal Fund as a vehicle to address its long-term CAPEX funding requirements. In the short-term, sales from scrap metals could be credited to this fund. This has the advantage of establishing control of scrap metal sales.

### Objective 4: Sustainability of Human Capital

Human capital is one of NUC's most valuable assets. The maintenance of institutional knowledge within NUC is important to its future success, and our employees should be properly managed by supervisors, rewarded based on merit, and trained and developed in accordance with documented need.

#### Strategy 1: Develop and Implement Training Needs Assessment

##### *Short-term Actions*

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**1. Identify needs for training plans and mentoring of staff at all levels.** NUC will identify the training needs of our staff and document it in a formal training plan. Because of limited domestic resources, it will be necessary to send workers abroad or bring in expatriates to train our employees. NUC's training plan will identify and prioritize training supply options and link these to individualized needs.

**2. Develop budget for implementation of training programs.** Training will be expensive, but the investment will pay dividends in the increased capabilities of our staff and through improved safety and service. A budget will be developed with which training programs can be implemented.

### ***Medium-term Actions***

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**3. Implement training programs, formal training, training attachments, on-the-job training, and workshops.** After determining our training needs and developing training plans, it will be necessary to implement wide-ranging training programs for our staff. This will undoubtedly be a multi-year endeavor and one that we will look to achieve in the medium-term.

**4. Talent identification Program.** As part of our overall recruitment strategy, NUC will look at Secondary School students to identify potential individuals for recruitment.

**5. Develop an Apprenticeship Scheme.** NUC will develop an apprenticeship program where secondary school students can gain work experience, learn relevant skills, and become candidates for full-time positions with NUC.

**6. Scholarship program.** NUC will develop a working relationship with the Government Scholarships to establish a specific scholarship for utilities.

### **Strategy 2: Improve Management and Administrative Procedures**

The development of formal management and administrative procedures is necessary to ensure the professionalism and efficiency of our business processes and thus the efficient deployment of our human capital. This involves developing efficient best practice protocols for every aspect of our internal operations.

### ***Short-Term Actions***

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**1. Develop in-house capacity to administer payroll.** The payroll system remains enmeshed with the Public Service system, and is inefficient, possibly inaccurate, and largely unaudited. We will develop the internal capacity in support of the adoption of the unified classification and salary structure.

**2. Develop job descriptions for all positions in new organizational chart.** Descriptive job and process documentation needs to be developed and used for various key staff management systems. The organizational chart will serve as a guide for supervisors, a training manual for users, as a source of information for internal customers, a means of checking work, and will improve overall efficiency. This activity is particularly imperative in order to document who does what and outline competency and training requirements.

**3. Develop workload planning process.** Our work planning system needs development for action planning, coordination and monitoring progress of individuals or teams, and supporting organizational and CEO performance indicators and targets.

**4. Develop Human Resources Information System (HRIS).** The human resource information system (HRIS) will be developed as a valid, accurate, up-to-date, reliable computer based record and reporting system. This initiative will collect, populate and maintain the system with current data.

**5. Develop policies and procedures on employee leave and related entitlements.** The current policies on attendance, leave, incremental advancement, internal promotion, training and professional development, job filling and rotation, and salary review need to be appraised and expanded. The policy and processes must be further developed to ensure that procedures for individuals are clear and transparent and that management controls are in place and enforced. Policies and processes that enable managerial decisions regarding incremental movement, internal promotion, training and professional development, job filling and rotation, salary review, and maintenance also need to be developed in support of organizational goals for target achievement, performance improvement, career management, occupational and community health and safety, and viable corporation independence.



## ***Medium-Term Actions***

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**6. Develop operations, safety, maintenance, and service manuals for all key equipment.** It is essential for the efficiency and safety of the workforce, as well as the preservation of our institutional knowledge, to develop manuals that provide instructions on the maintenance and service for all essential power utility equipment. This will be started immediately and is likely to span two or more years.

### **Strategy 2: Immediately Implement Short-Term Targeted Training**

The formalization of certain technical aspects of NUC's business processes are high priority and will be targeted within the short-term. For example, these require training of technical staff in the following basic functions and standards:

#### ***Short-Term Actions***

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- 1. Training on Asset Management Standards (for Engineering and Finance Staff).** The Institute of Asset Management published the international standard for Asset Management in 2008. The standard focuses on the necessity of a collaborative, multi-disciplinary approach between finance and engineering. This standard addresses the whole life cycle of asset management and would be a useful addition to the knowledge and culture of our corporation.
- 2. Training on Accounting Standards.** We will build capacity in our staff's asset accounting abilities to support improved financial management practices such as IPSAS standards.
- 3. Training on Internal Controls (for Engineering and Finance Staff).** NUC will strengthen the internal control environment in our organization based on guidelines and standards of the Committee of Sponsoring Organizations of the Treadway Commission (COSO) or The International Organisation of Supreme Audit Institutions (INTOSAI).
- 4. Training for Supervisors.** Supervisors at all levels and across the NUC play an important part in supporting organizational objectives and achievement of targets. Supervisor's competencies need to be developed as they move to implement new supervisory and managerial systems.

## **Objective 5: Affordability of Utility Services**

The need for investments in infrastructure and human capital must be balanced by the need to keep tariffs affordable for customers.

### **Strategy 1: Ensure that Costs of Operation and Maintenance are Efficient**

A utility's costs of operation and maintenance directly impact the level of tariffs that need to be charged. It is important to ensure that these costs are minimized, while still allowing NUC to provide levels of service acceptable to customers.

#### ***Short-Term Actions***

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- 1. Develop KPIs to measure efficiency of operations.** A subset of the KPIs (described under Objective 1, Strategy 4) will focus on the efficiency of utility operations. Performance monitoring will allow NUC to compare its performance over time and in comparison to other utilities in the region through benchmarking.

### **Strategy 2: Understand Customer Willingness-to-Pay and Affordability**

Government and NUC must understand what different classes of customers—especially residential customers—are willing and able to pay in order to keep tariffs affordable.



### ***Short- Term Actions***

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**1. Develop project proposals for Willingness-to-Pay and Affordability Studies.** NUC will discuss with Government and donors the possibility of funding studies of customer Willingness-to-Pay and affordability. These studies, in conjunction with the cost-of-service study (Objective 3, Strategy 1, Action 1), will inform the level of subsidies required to protect vulnerable customers.



