



Completion Report

Project Number: 46455-003
Technical Assistance Number: 8754
June 2018

Nauru: Tariff and Subsidy Policy Reform

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TA Number, Country, and Name: TA 8754-NAU: Tariff and Subsidy Policy Reform			Amount Approved: \$225,000.00	
			Revised Amount: N/A	
Executing Agency: Ministry of Finance, Nauru		Source of Funding: Technical Assistance Special Fund V (TASF V)	Amount Undisbursed: \$3,775.12	Amount Utilized: \$221,224.88
TA Approval Date: 7 November 2014	TA Signing Date: 7 November 2014	Fielding of First Consultants: 14 October 2015	TA Completion Date Original: 31 December 2015	Actual: 30 June 2017
			Account Closing Date Original: 30 June 2016	Actual: 31 October 2017

Description.

Nauru is a Pacific island country with a total population of 11,300 people. It has in total 9 state-owned enterprises (SOEs). The Nauru Utilities Corporation (NUC), one of the SOEs, owns, operates, and distributes the country's power generation. NUC is also responsible for operating the diesel-fueled desalination plant and distributing drinking water for the country. The Government of Nauru (the government)'s National Sustainable Development Strategy (NSDS) 2005–2025 identifies utility services as a key economic priority and requested Asian Development Bank (ADB) to support to improve the power sector.¹

In response to government's request, ADB in 2011 provided technical assistance (TA) for Regulatory and Governance Reform for Improved Water and Electricity Supply (TA 7873) for (i) developing legislation for NUC, (ii) preparing an asset inventory, (iii) preparing a corporate strategy, and (iv) introducing a performance management system for NUC's senior management.² While an asset inventory was introduced, and considerable progress since corporatization had been made, several challenges remained. These included (i) NUC had no preventative maintenance plans or procedures for capital expenditure and procurement planning; (ii) the asset inventory had not been updated, and there were no procedures in place to keep it accurate and updated; (iii) no integration of the fixed assets register with the financial management information system; (iv) no clear compensation policies or worker classifications, resulting in an inefficient allocation of human resources; and (v) NUC operated under unclear governance arrangements which differed from good practice. To address these challenges, ADB in 2014 provided a further TA for institutional strengthening of NUC (TA 8631) to improve NUC's financial, operational, and governance performance.³ In 2015, ADB approved a major capital investment project, Electricity Supply Security and Sustainable Project (the project) for rehabilitating NUC's power house and the acquisition of two medium speed diesel generators, financed by ADB, the European Union, and the Government of Australia.⁴ This project included an attached TA to complement the project's investments, and to enhance NUC's long-term sustainability and viability.

Expected Impact, Outcome, and Output.

The impact of this attached TA was to develop policy options ensuring that NUC's revenues from power sales are sufficient to cover the cost of power service to its customers. The expected outcome was improved financial, operational, and governance performance of NUC. The expected outputs were to (i) analyze and confirm NUC's long-run marginal cost of electricity service, consistent with established best practices for determining a utility's rate-based fixed costs (including prudent maintenance and reinvestment costs) and marginal operating costs (e.g., fuel); (ii) identify and value all existing subsidies provided to NUC from the government; between and among NUC's distinct operations (power, water, and fuel-tank management operations), and to and among different classes of electricity customers; (iii) propose options for rebalanced power tariffs that provide for sufficient revenue to recover NUC's power operations costs and that eliminate embedded cross-subsidies between consumer classes and between NUC's distinct areas of operations; and (iv) propose options for provision of a subsidy to disadvantaged residential customers for basic power service.

Delivery of Inputs and Conduct of Activities.

The TA was well-formulated with the lessons from TA-7873 and TA-8631. The TA's terms of reference was expanded to include a study on NUC's water tariffs, in addition to its original scope on the electricity tariffs. The revised outputs covered estimating the cost of electricity and water service, recommending changes to its tariffs, assessing existing subsidies and ways to improve the funding and delivery of subsidies. Consultants focused on the revised outputs and were able to meet the TA's key objectives and deliverables. The TA's overall budget was sufficient to complete the revised activities. However, the TA's completion date was extended to cover the expanded scope. The Ministry of Finance, the executing agency, and NUC, the implementing agency, were proactive in driving the tariff and subsidy reform process. The high-level engagement of NUC was evident throughout the TA. ADB provided close supervision from the Pacific Liaison and Coordination Office in Sydney and fielded 4 review missions and arranged several teleconference meetings between ADB, the consultants, and NUC. The performance of the executing and implementing agencies and ADB are rated satisfactory.

¹ Republic of Nauru. 2009. *National Sustainable Development Strategy 2005-2025*. Nauru.

² ADB. 2011. *TA 7873-NAU: Regulatory and Governance Reform for Improving Water and Electricity Supply in Nauru*. Manila.

³ ADB. 2014. *TA 8631-NAU: Institutional Strengthening of the Nauru Utilities Corporation*. Manila.

⁴ ADB. 2015. *Proposed Administration of Grant for Nauru Electricity Supply Security and Sustainability Project*. Manila.

The TA recruited an international consulting firm through quality and cost-based selection procedures with 90:10 quality to cost ratio following ADB's Guidelines on the Use of Consultants (2013, as amended from time to time). The firm mobilized 5 experts (i) tariff design expert/team leader; (ii) social safety net design expert; (iii) engineering advisor, (iv) senior advisor and (v) tariff analyst. ADB and the firm signed a partial lump sum contract with 9 milestones ensuring satisfactory delivery of TA outputs. The government and NUC were satisfied with the inputs of the consultants.

Evaluation of Outputs and Achievement of Outcome.

The TA was successful in completing the envisaged outputs. Under output 1, the TA recommended to use an allocated cost of service study (ACOSS) approach against a marginal cost study to distribute the revenue requirement amongst NUC's customers. ACOSS is the most common approach used by utility regulators and it can be implemented using currently available data. Accordingly, the study found that the weighted average tariff (\$0.53 per kWh) charged by NUC in 2017 is below the average cost of service (\$0.75 per kWh). TA found the main reasons for revenue deficiency were due to non-technical losses that account for around 11% of generation, and technical losses for around 5%. The TA suggested that NUC can eliminate this deficiency by reducing non-technical losses and filling any remaining gap through a mix of higher tariffs and addition of new customers. The revenue gap for water service is the result of lower tariffs and delivery fees that are below cost-recovery. Under output 2, the TA found that NUC's electricity subsidy had been made up of (i) the lifeline tariff targeting the poor of \$0.25 per kWh for the first 300 kWh consumed each month, and (ii) the residential tariff of \$0.50 per kWh which is \$0.27 below NUC's cost of service. The study found that the subsidized lifeline tariff was available across all the users and had grossly benefitted wealthy households that consume more than 300 kWh per month. This anomaly resulted in wealthy households receiving an annual benefit of about \$2.65 million from the residential tariff subsidy compared to \$0.28 million for the poor. The TA also revealed that the government was paying for fuel supplied to NUC, and NUC treated these payments as income. As of 1 July 2017, NUC is responsible for covering the cost of fuel from the supplier which represent 46% of NUC's revenue over the next five years.

Under outputs 3 and 4, the TA developed tariff models for both the electricity and water sectors and recommended NUC to (i) use cash-needs approach to aggregate its revenue requirement, (ii) collect revenue from each customer based on cost causation, (iii) install a two-part variable tariff in the electricity sector that includes a fuel adjustment surcharge as one component, (iv) implement recommended reforms for subsidy arrangements, (v) transition to cost-recovery electricity tariffs over the next four years, (vi) effect cash transfer from the government to NUC on a monthly basis via an invoice for actual foregone electricity revenue for the month, (vii) charge customers for water service using a combined structure that includes fixed charge, commodity tariff and delivery fee, and (viii) implement recommendations to eliminate cross-subsidies between customer classes. The TA was successful in paving the way for achieving envisaged outcomes expected to be achieved progressively over four years by 2021. This is evidenced by NUC's overall achievement that the average outage duration (SAIDI) has been dropped to around 2 days a year by end 2017 from 47 days in 2015 and average number of interruptions (SAIFI) dropped to 1 outage every 8 days by end 2017 from 1.3 outages every day in 2015. Since completion of the TA in March 2017, NUC has adopted several steps to improve NUC's revenue requirement including (i) agreeing with the government for a transition plan, changes to the tariff structure, cash transfer mechanism, fuel surcharge, appropriate tariffs level that result cost recovery, (iii) adjusting the lifeline tariff block for electricity to 200 kWh in 2017 and a further reduction to 150 kWh through the 2018 budget, (iv) updating the capital plan and funding sources, and (v) public consultations.

Overall Assessment and Rating.

The TA is rated as *successful*; and considered (i) *'relevant'* since its design remained appropriate and aligned to the government's and ADB's plans to improve management and long-term sustainability of the utilities sector in Nauru; (ii) *'effective'* as it provided realistic recommendations for improving cost recovery revenue requirement for NUC following international good practice; (iii) *'efficient'* as its intended outcomes are progressively being achieved with the strong commitment by NUC; and (iv) *'likely sustainable'* as NUC has already started implementing TA recommendations, and is committed to implement recommended reforms in the medium to long-term.

Major Lessons.

Strong government support and NUC's commitment were considered the key factors for TA's success. Detailed discussions between NUC, consultant staff and ADB enabled the identification of improvements to NUC's water sector operations that improve NUC's overall revenues. This resulted in the introduction of a separate tariff model for NUC's water operations.

Recommendation and Follow-Up Actions.

Implementation of the reforms needs to be monitored and followed-up to ensure TA outcomes are sustained. ADB's Pacific Department will support reform implementation through the ongoing project (footnote 4) and the proposed Solar Power Development Project. The deferred establishment of an escrow account for the capital reserve fund will be monitored through ADB's policy-based lending program for Nauru in 2019.