



## Republic of Palau

### Intended Nationally Determined Contribution

November 2015

#### 1. Introduction

The Republic of Palau is committed to the successful conclusion of negotiations under the Ad-Hoc Working Group on the Durban Platform for Enhanced Action (ADP) in order to adopt, at COP21, a new legally-binding agreement under the United Nations Framework Convention on Climate Change (UNFCCC) applicable to all Parties, to come into effect in 2020.

In accordance with decisions 1/CP.19 and 1/CP.20, the Republic of Palau is pleased to communicate its Intended Nationally Determined Contribution (INDC) towards achieving the objective of the UNFCCC, as well as accompanying information to facilitate clarity, transparency, and understanding of its INDC.

The Republic of Palau is also pleased to provide additional accompanying information on our mitigation effort and support for implementation.

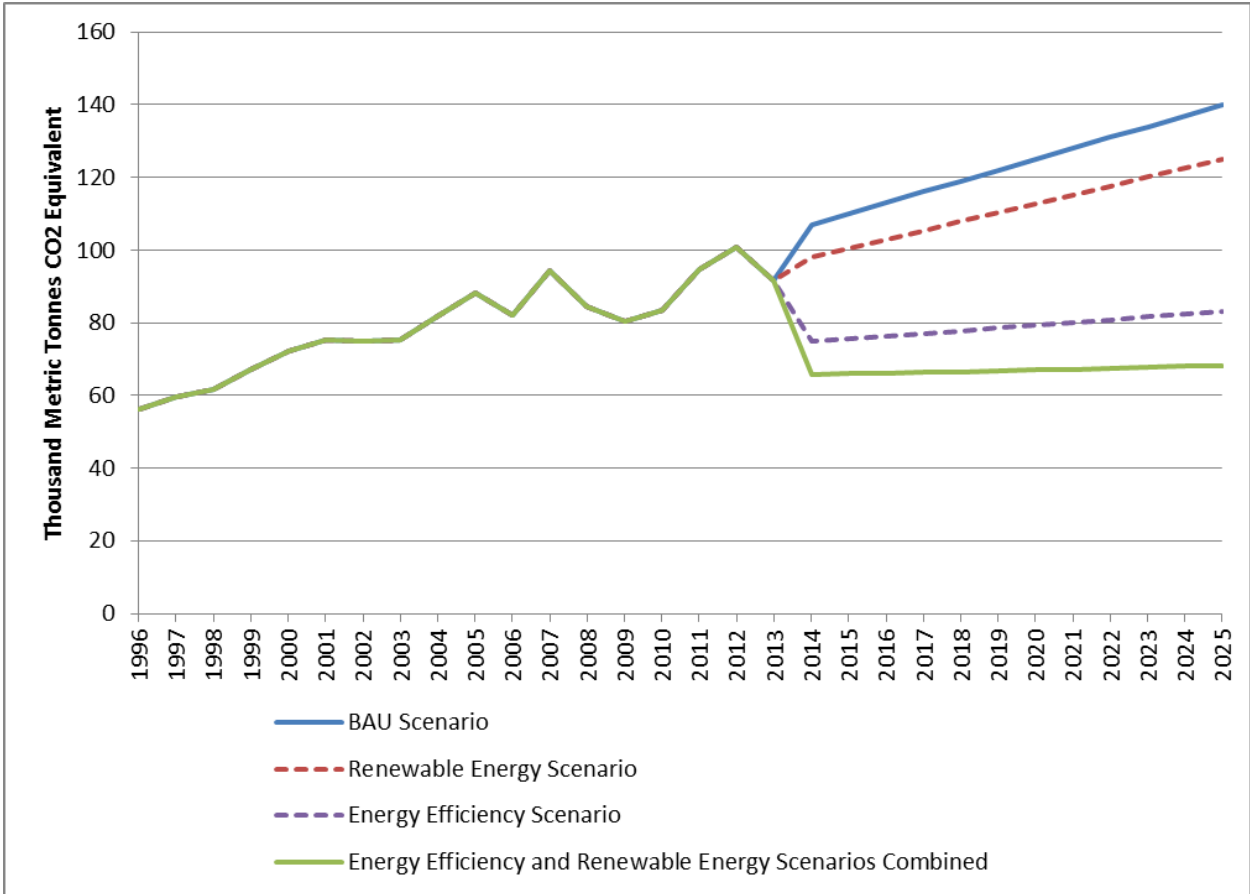
#### 2. Intended Nationally Determined Contribution – Mitigation [Contribution]

Timeframe	Start year: 2020	End year: 2025
Type of commitment	Absolute energy sector emissions reduction target, with additional reductions coming from the waste and transport sectors.	
Reference/base year	Reference/base year is 2005 – emissions were approximated at 88 thousand tCO <sub>2</sub> e	
Estimated quantified emissions reductions	Indicative targets: <ul style="list-style-type: none"> <li>- 22% energy sector emissions reductions below 2005 levels by 2025</li> <li>- 45% Renewable Energy target by 2025</li> <li>- 35% Energy Efficiency target by 2025</li> </ul>	
Coverage	Energy (electricity generation), transport and waste sectors	

	Gases: Carbon dioxide (CO <sub>2</sub> ) and methane (CH <sub>4</sub> )
Baseline assumption	<p>Business as Usual (BAU) emissions scenario projections are based on economic growth in the absence of new climate change policies and measures in addition to those in place in 2015, and greater coverage and implementation of existing measures.</p> <p>BAU projections include the electricity sector only, which is Palau's largest emitting sector. BAU assumptions include a GDP per capita growth of 3.72% per year (historical 15 year CAGR) and EIA oil price projections in reference case as the basis for residential, government and commercial sector energy use growth projections. Commercial energy use growth projections also took into consideration energy use by private generators in the tourism sector.</p> <p>Emission from the waste management and transport sectors are not included in the BAU projection however emission reduction initiatives will be addressed on a project basis.</p>
Intention to use market-based mechanisms to meet target	No
Land sector accounting approach	N/A
Planning Process	<p>Palau's INDC is grounded in the <i>Palau Climate Change Policy</i>, which was informed by input from communities, civil society and other stakeholders, as well as on the preparatory work for Palau's second National Communication which was also widely consulted.</p> <p>The <i>Policy</i> establishes Palau's National Appropriate Mitigation Actions (NAMA) and National Adaptation Plan (NAP) as well as the institutional and policy frameworks for: (a) climate change mitigation via management of greenhouse gas emissions including carbon sinks; and (b) climate change adaptation and risk reduction and management. It establishes the policy framework that will guide and inform action in accordance with Palau's <i>National Master Development Plan – Palau 2020</i>.</p>
Fair and Ambitious	<p>The Republic of Palau's total emissions are <i>de minimis</i> in the global context. Given Palau's remoteness, the small size of the economy, low GDP per capita, dependence on partnership support and vulnerability to climate change, Palau's proposed targets are ambitious and fair as measured against other nations.</p> <p>Under the BAU scenario emissions would be 140 thousand tCO<sub>2</sub>e in 2025, compared to 68 thousand tCO<sub>2</sub>e if both the renewable energy and energy efficiency targets are met.</p>

	<p>Emissions in 2005 were approximated at 88 thousand tCO<sub>2</sub>e. Full implementation of the renewable energy and energy efficiency strategies outlined below puts Palau on a trajectory to reducing emissions by half as against BAU in 2025, the equivalent of 22% under 2005 emissions levels.</p>
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**Business-As Usual emissions projection against INDC full implementation emissions projection (and Renewable Energy and Energy Efficiency scenarios disaggregated)**



**3. Accompanying Information on Palau’s INDC**

**a. General information on Palau**

Palau is joining the community of nations, both industrialised and developing, in taking action to address the causes and impacts of climate change. Palau is particularly vulnerable to the impacts of climate

change, principally from sea level rise and the increase in extreme events (drought, flooding, Category 4 and 5 typhoons). Sea-level rise threatens vital infrastructure, settlements, and facilities that support the livelihood of island communities. Moreover, under most climate change scenarios, water resources in small islands are likely to be seriously compromised. Subsistence and commercial agriculture will be adversely affected by climate change, and ocean warming and acidification will heavily impact coral reefs, fisheries, and other marine-based resources crucial to our livelihoods, economy and culture.

## **b. Mitigation: Current and Future Policies and Measures to achieve INDC targets**

### **i. Current Policies and Measures**

Currently Palau is working to increase the share of renewables in our energy mix and to increase energy efficiency initiatives. To date, total renewable energy efforts have only reached 8% of the needed 22%, principally because two grid-connected solar projects (1.5 and 3.5MW respectively) never came to fruition. However to date Palau has achieved an approximately 30% reduction in energy use due to efficiency measures taken.

Current renewable energy and energy efficiency policies and measures include: a pilot loan subsidy for solar roof panels which will be increased to cover more homes if successful; a Home Energy Efficiency Program at the Palau National Development Bank; prepaid metering at Palau Public Utilities Corporation; distribution of CFL light bulbs; government building retrofits; and, a pilot Energy Audit program for large commercial buildings.

### **ii. Future Policies and Measures to achieve INDC targets**

To achieve the renewable energy target Palau will need considerable additional installed capacity, including the 5MW of solar already planned (two or more solar projects plus additional roof-top solar) plus an additional 10 MW to power the water sector. Palau will also have to work to reduce transmission and distribution losses. (Solar Capacity Factor is assumed to be 15.3%.)

To implement the Energy Efficiency target, Palau will:

- Increase the Energy Retrofit Program;
- Institute a Tropical EE Building Code;
- Adopt the Energy Star Appliance Standard;
- Implement an Energy Labeling Scheme;
- Significantly expand our Cool Roof Program;
- Expand Energy Audit program to include all government and non-government buildings;
- Enhance the Building Managers Working Group; and
- Improve Wastewater Infrastructure.

Many of these renewable energy and energy efficiency initiatives will depend on the availability of partnership finance and technology support.

**i. Additional project based initiatives in the transport and waste sectors**

*Reducing Methane Emissions from the Solid Waste Sector*

- Palau has developed a “National Solid Waste Framework” but has not had funding to implement the planned actions. A key next step is to analyze landfill gas emissions and evaluate the potential for landfill gas capture projects at the national landfill site.

*Transport Sector*

- Currently there is a pending national legislation that would mandate the use and commercial sale of four stroke outboard motor engines only to reduce emissions.
- Palau is investigating a project to convert waste cooking oil to biofuel for diesel vehicles, beginning with public school buses and a potential public bus route.

**c. Support for Implementation**

Climate change presents a major challenge for Palau’s sustainable development, for which the nation relies significantly on development partnerships. Similarly, as noted above, implementation of many of the policies and measures needed to achieve our emissions reduction target will depend on the availability of partnership finance, technology support and capacity development.

Based on a first-order estimate, the upfront investment cost for the renewable energy and energy efficiency measures in Palau’s INDC would be on the order of \$5.5 million USD. This investment has the potential to generate savings, on a net-present-value basis, of \$2.5 million by 2025. This figure doesn’t show the full picture of potential returns on investment though, as there was not sufficient data to assess the energy efficiency savings which have the potential to be substantial.