

NS-48 - Supporting Implementation of 100% Renewable Electricity by 2020

Cook Islands

NAMA Seeking Support for Implementation

A Overview

A.1 Party	<input type="text" value="Cook Islands"/>
A.2 Title of Mitigation Action	Supporting Implementation of 100% Renewable Electricity by 2020
A.3 Description of mitigation action	The Cook Islands Government (CIG) has set a policy goal for 100% renewable electricity by 2020 with a phased-in implementation plan that achieves 50% by 2015. This NAMA sets out the support requirements beyond that which has already been secured from international sources. (For further detail, see the separate "Full Description" file of this NAMA.)
A.4 Sector	<input checked="" type="checkbox"/> Energy supply <input type="checkbox"/> Residential and Commercial buildings <input type="checkbox"/> Agriculture <input type="checkbox"/> Waste management <input type="checkbox"/> Transport and its Infrastructure <input type="checkbox"/> Industry <input type="checkbox"/> Forestry <input type="checkbox"/> Other <input type="text"/>
A.5 Technology	<input checked="" type="checkbox"/> Bioenergy <input checked="" type="checkbox"/> Energy Efficiency <input type="checkbox"/> Hydropower <input checked="" type="checkbox"/> Wind energy <input type="checkbox"/> Carbon Capture and Storage <input type="checkbox"/> Land fill gas collection <input type="checkbox"/> Cleaner Fuels <input type="checkbox"/> Geothermal energy <input checked="" type="checkbox"/> Solar energy <input type="checkbox"/> Ocean energy <input type="checkbox"/> Low till / No till <input checked="" type="checkbox"/> Other <input type="text" value="see 'Full Description' of"/>
A.6 Type of action	<input type="checkbox"/> National/ Sectoral goal <input type="checkbox"/> Strategy <input type="checkbox"/> National/Sectoral policy or program <input checked="" type="checkbox"/> Project: Investment in machinery <input checked="" type="checkbox"/> Project: Investment in infrastructure <input type="checkbox"/> Project: Other <input type="checkbox"/> Other <input type="text"/>
A.7 Greenhouse gases covered by the action	<input checked="" type="checkbox"/> CO2 <input type="checkbox"/> N2O <input type="checkbox"/> PFCs <input type="checkbox"/> CH4 <input type="checkbox"/> HFCs <input type="checkbox"/> SF6 <input type="checkbox"/> Other <input type="text"/>

B National Implementing Entity

B.1.0	Name	
B.1.1	Contact Person 1	Tangi Tereapii, Director, REDD
B.1.2	Address	
B.1.3	Phone	+682 25494 ext 808

B.1.4	Email	tangi@pmoffice.gov.ck
B.1.5	Contact Person 2	
B.1.6	Address	
B.1.7	Phone	
B.1.8	Email	
B.1.9	Contact Person 3	
B.1.10	Address	
B.1.11	Phone	
B.1.12	Email	
B.1.13	Comments	

C Expected timeframe for the implementation of the mitigation action

C.1	Number of years for completion	8
C.2	Expected start year of implementation	2013

D Currency

D.1	Used Currency	<input checked="" type="checkbox"/> AED Conversion to USD: 1
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E Cost

E.1.1	Estimated full cost of implementation	236300000
E.1.2	Comments on full cost of implementation	
E.2.1	Estimated incremental cost of implementation	
E.2.2	Comments on estimated incremental cost of implementation	

F Support required for the implementation the mitigation action

F.1.1	Amount of Financial support	550000
F.1.2	Type of required Financial support	<input checked="" type="checkbox"/> Grant <input type="checkbox"/> Guarantee <input type="checkbox"/> Loan (sovereign) <input checked="" type="checkbox"/> Equity <input checked="" type="checkbox"/> Loan (Private) <input type="checkbox"/> Carbon finance <input type="checkbox"/> Concessional loan <input type="checkbox"/> Other <input type="text"/>
F.1.3	Comments on Financial support	The NZD 550,000 is the initial support required for this NAMA to cover the annual cost (for 8 years) of a renewable energy technology trades training programme and the cost of policy assistance for new legal and regulatory frameworks, in particular as required for private sector investment in renewable electricity systems. (For further detail, see the separate "Full Description" file of this NAMA.)
F.2.1	Amount of Technological support	
F.2.2	Comments on Technological support	
F.3.1	Amount of capacity building support	
F.3.2	Type of required capacity building support	<input checked="" type="checkbox"/> Individual level <input type="checkbox"/> Institutional level <input checked="" type="checkbox"/> Systemic level <input type="checkbox"/> Other <input type="text"/>
F.3.3	Comments on Capacity Building support	The financial support outlined above is for capacity building activities. There is a need for increasing the number of and upskilling local trades people involved with installing and maintaining renewable energy systems. This should begin to occur prior to the implementation of the first systems, so as to

ensure local trades people (men and women) can be part of the installations rather than just ‘imported’ trades expertise (that will return home with the receipts of their labours following the installation, so only have minimal ‘benefit footprint’ on the local economy). There is also a need for policy assistance in developing new legal and regulatory frameworks associated with private sector engagement in the electricity sector, tariff reform and technical and non-technical aspects of connecting renewable energy systems to the grid. To a significant extent, the successful engagement of domestic and international private capital and Cook Island businesses and households will depend on an improved policy, legal and regulatory framework, including incentives that flow down to encourage individual actions. A major barrier that has been identified internationally for private capital availability in developing countries is “policy risk” (sometimes also called, or included in, sovereign risk). In short this represents uncertainties about a stable investment environment with respect to government policy and decisions that may affect ‘the deal’ and negatively impact on the expected return on investment. The Cook Islands government will need expert help to put in place an “investment grade” policy framework that will enable and attract private investment in the larger renewable energy systems required on Aitutaki and Rarotonga. This includes such practical issues as the best form and required detail of requests for expressions of interest for IPPs seeking to enter into PPAs with the government electricity companies/institutions, should this approach be taken. One key matter of detail is how offers by the IPPs might fit with the objective of the CIG to lower the electricity tariffs for consumers.

F.4 Financial support for implementation required

F.5 Technological support for implementation required

F.6 Capacity Building support for implementation required

G Estimated emission reductions

G.1 Amount

0.03

G.2 Unit

MtCO₂e/yr

G.3 Additional information (e.g. if available, information on the methodological approach followed)

Currently, power generation by the public owned electricity systems in the Cook Islands is by diesel generators. The objective of this NAMA is to see all these replaced by renewable sources of electricity, with diesel generators only kept for emergency back-up purposes. The benefits of replacing diesel generation with renewable sources of electricity are quite straightforward. Using an emissions factor of 2.7 kgCO₂/litre diesel, the avoided emissions based on the current total generation per annum in the Cook Islands is about 25 kt CO₂. It is as yet unclear the extent to which demand reductions from energy efficiency measures being implemented will equal and exceed demand increases from projected economic growth and increased tourism. If demand were to increase, then avoided emissions of diesel generation would increase commensurately.

H Other indicators

H.1 Other indicators of implementation	The primary indicator of implementation will be the percent of diesel generation replaced by renewable sources as measured in MWh per annum.
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I Other relevant information

I.1 Other relevant information including co-benefits for local sustainable development	<p>There are a wide range of economic and social effects associated with a programme to replace diesel generation with renewable energy. These include:</p> <ul style="list-style-type: none"> • the direct benefit of jobs created during installations of the RE systems • the general financial benefit of lowered electricity tariffs (which are planned) to consumers who will have more disposal income to spend elsewhere, thereby stimulating the economy • the macro economic benefit of avoided diesel purchase with the commensurate reduction in foreign transfers and balance of trade deficit (noting that this benefit may be offset to some degree if an effect is that diesel imported/sold in the transport sector becomes more expensive) • the macro and micro economic benefit if more private sector capital is attracted to the Cook Islands, e.g. investments by IPPs • the intangible benefit of consumer and business confidence about the future costs of electricity with the elimination of the volatile cost of world oil prices – and increased investment that may stem from this increased confidence • the effect of all these positive benefits on stemming migration both from the outer islands to Rarotonga and the Cook Islands to other countries – and, as well, the possibility to attract Cook Islanders living abroad to return and contribute to the national economy <p>There are also important benefits of a physical and environmental nature from reducing and eliminating the use of diesel generators:</p> <ul style="list-style-type: none"> • Importing diesel fuel and shipping it to outer islands has commensurate risks of spills into pristine environments (that attract tourists, vital to the economy), especially with increased projections of severe weather events due to climate change. • There are also problems with leaks from diesel storage facilities and dumping of waste oil during servicing of diesel generators. • Diesel generator emissions can also have local air pollution effects.
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J Relevant National Policies strategies, plans and programmes and/or other mitigation action

J.1 Relevant National Policies	see http://cookislands.gov.ck/docs/renewableenergy/Cook%20Islands%20Renewable%20Energy%20Chart%20Final%20April%202012.pdf
J.2 Link to other NAMAs	.

K Attachments

K	Attachments	Title Description
K.1	Attachment description	
K.2	File	<input style="width: 100%; height: 20px;" type="text"/> <input style="background-color: #d3d3d3; border: none;" type="button" value="Browse..."/>

L Support received

L.1 Outside the Registry	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%;">Support provided</th> <th style="width: 15%;">SupportType</th> <th style="width: 15%;">Amount</th> <th style="width: 20%;">Comment</th> <th style="width: 30%;">Date</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Support provided	SupportType	Amount	Comment	Date					
Support provided		SupportType	Amount	Comment	Date						
L.2 Within the Registry											