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Review of the Fiji National Energy Policy

Draft Strategic Action Plan

August 2013

**Submitted to GIZ Secretariat of the
Pacific Community by:**

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Abbreviations and acronyms

CC	Commerce Commission
CCCPIR	Coping with Climate Change in the Pacific Island Region
DoE	Department of Energy
EE	Energy Efficiency
FEA	Fiji Electricity Authority
FJD	Fiji Dollar
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GDP	Gross Domestic Product
IPP	Independent Power Producer (private single purpose investor)
NECC	National Energy Coordination Committee
NECF	National Energy Consultative Forum
NEP	National Energy Policy
NEF	National Energy Forum
PPA	Power Purchase Agreement
PPP	Public Private Partnership
RBF	Reserve Bank of Fiji
RE	Renewable Energy
RESCO	Renewable Energy Service Company
SOE	State Owned Enterprise
SE4ALL	Sustainable Energy for ALL (UN Initiative)
SPC	Secretariat of the Pacific Community
UNDP	United Nations Development Program

Preface to plan

This report sets out the Draft Strategic Action Plan prepared by a team of consultants under the *Review of the Fiji National Energy Policy* project with the support of the Department of Energy. The Strategic Action Plan accompanies the Draft National Energy Policy, published in July 2013. The consultants are contracted under the *Coping with Climate Change in the Pacific Island Region* (CCCPiR) programme, which is funded by GIZ and jointly implemented by the Secretariat of the Pacific Community (SPC) and GIZ.

DRAFT STRATEGIC ACTION PLAN

August 2013

Introduction

This Strategic Action Plan sets out the key actions over the next five years that are required by different stakeholders to implement the new National Energy Policy. The plan is applicable to all stakeholders in the energy sector, although most actions are led by the Department of Energy (DoE), as the public sector institution with primary responsibility for planning and policy development. The Strategic Action Plan will be reviewed and updated on a yearly basis.

More context and background is available in the National Energy Policy, to which this Strategic Action Plan is an accompanying document.

Policy Area I: Grid-Based Power Supply

Policy Statement and Objectives

Summary of baseline

Fiji's electricity system needs significant investment over the next decade (estimated to be in the order of FJ\$ 1.5 billion), which cannot be financed by public sector investment alone. Therefore, as a matter of urgency, Fiji needs to attract private investment in generating capacity. As yet there has not been a single true (privately-owned) Independent Power Project (IPP) project in Fiji. This is due to the lack of a clear regulatory framework for encouraging private generation, general weaknesses in Fiji's business climate and (for renewable energy) a lack of publicly-available data on resources.

This failure to attract private investment is of particular concern given the potential for Fiji to use its renewable energy resources to reduce the costs of imported oil for power generation, currently around FJ\$ 100 million annually. While promotion of larger renewable energy projects will take time and requires significant preparatory work (for example, the need for adequate resource assessments), Fiji should be able to rapidly deploy small-scale and household systems to take advantage, in particular, of its solar power potential.

Regulatory oversight of FEA is weak. Prices are controlled by the Commerce Commission, but the manner in which prices are reviewed is not transparent and does not offer the long-term certainty and predictability that private investors will require. Other than prices, FEA has been self-regulating including issuing licences, developing technical rules, and defining rules and incentives for third party generation. This creates obvious potential for FEA to block new private generation where it perceives this as conflicting with its own interests.

The lack of investment and limited regulatory oversight is exacerbated by the absence of any clear plans for development of the power sector. Without such plans, investors are not aware of opportunities and regulators cannot assess the reasonableness and efficiency of proposed investments and the tariff levels needed to deliver these.

Overall target(s) for the policy area

1. Expanded role for the private sector in grid electricity generation
2. Increase in the contribution of non-FEA renewable energy, in particular from small-scale systems

3. Restructuring of the regulatory arrangements to improve transparency and accountability and remove possible conflicts of interest
4. Achieve a renewable energy share in electricity generation of 67% by 2020

Strategy 1: Promotion of private investment in electricity generation

- a) Issuing of a transparent process for the procurement of new IPPs – *by December 2014*
- b) Achievement of financial close for a new renewable energy IPP to meet growing electricity demand – *by June 2016* (commissioning date will be dependent on the technology and site of the new IPP)

Strategy 2: Strengthen transparency and effectiveness of regulation

- a) Transfer of responsibilities for technical regulation and procurement of IPP projects from FEA to DoE – *by June 2014*
- b) Implementation of a new multi-year regulatory contract governing FEA's prices and service quality – *by June 2015*
- c) Implementation of a new transparent subsidy mechanism to support rural electrification, renewable energy and vulnerable customers – *by June 2015*

Strategy 3: Encourage investment in small-scale renewable energy generation

- a) Establish feed-in tariff mechanism for small renewable energy generators and (for the smallest generators) net metering mechanisms – *by December 2014*
- b) Promote awareness of the opportunities offered by the new mechanisms – *from January 2015 onwards*

Strategy 4: Improve the efficiency and effectiveness of management of the electricity grid

- a) Institute a process of regular power development planning covering generation and the main electricity grid and integrated into national master plans for electrification and renewable energy development – *by December 2014*
- b) Develop asset management plans to improve the efficiency with which grid assets are maintained and replaced – *by December 2015*
- c) Investigate the potential for introduction of smart grid technology to allow greater participation by customers in demand management

- by December 2016

Strategy 1: Promotion of private investment in electricity generation				
Key Activities	Key Performance Indicators	Responsible Organisation (s)		Indicative timeframe
		Lead agency	Supporting / Participating agency	
Issuing of transparent process for procurement of IPPs (I.1.a) <i>Baseline:</i> No process <i>Action:</i> Develop and issue process <i>Links to other activities:</i> Transfer of regulatory responsibilities to DoE (I.2.a)	Process issued	DoE	FEA Commerce Commission	December 2014
Achievement of financial close for new renewable energy IPP (I.1.b) <i>Baseline:</i> No process <i>Action:</i> Develop and issue process <i>Links to other activities:</i> Issuing of procurement process (I.1.a) Transfer of regulatory responsibilities to DoE (I.2.a)	Financial close	FEA	DoE Commerce Commission	June 2016

Strategy 2: Strengthen transparency and effectiveness of regulation				
Key Activities	Key Performance Indicators	Responsible Organisation (s)		Indicative timeframe
		Lead agency	Supporting / Participating agency	
Transfer of technical regulatory responsibilities from	Transfer completed	FEA	DoE	June 2014

<p>FEA to DoE (I.2.a) <i>Baseline:</i> Responsibilities with FEA <i>Action:</i> Define regulatory responsibilities and transfer authority to DoE. Revise DoE organizational structure and expand resources as needed for new responsibilities <i>Links to other activities:</i> --</p>			Solicitor-General (if legislation required)	
<p>Implementation of multi-year regulatory contract (I.2.b) <i>Baseline:</i> Price and quality regulation conducted on an ad hoc basis <i>Action:</i> Design, consult on and implement multi-year regulatory contract <i>Links to other activities:</i> Preparation of power development plan (I.4.a)</p>	Contract takes effect	Commerce Commission	FEA DoE Solicitor-General (if legislation required)	June 2015
<p>Implementation of new transparent subsidy mechanism (I.2.c) <i>Baseline:</i> Cross-subsidies delivered through existing tariff structure <i>Action:</i> Quantify subsidy requirements, institute new levy and fund to manage these including appropriate governance mechanisms <i>Links to other activities:</i> [rural electrification]</p>	New mechanism legally established	DoE	FEA Commerce Commission Solicitor-General (if legislation required)	June 2015

Strategy 3: Encourage investment in small-scale renewable energy generation				
Key Activities	Key Performance Indicators	Responsible Organisation (s)		Indicative timeframe
		Lead agency	Supporting / Participating agency	

<p>Establish feed-in tariff and net metering mechanisms for small grid-connected renewables generators (I.3.a) <i>Baseline:</i> Cross-subsidies delivered through existing tariff structure <i>Action:</i> Quantify subsidy requirements, institute new levy and fund to manage these including appropriate governance mechanisms <i>Links to other activities:</i> --</p>	<p>New mechanisms implemented</p>	<p>DoE</p>	<p>FEA Commerce Commission</p>	<p>December 2014</p>
<p>Promote use of new mechanisms (I.3.b) <i>Baseline:</i> No small-scale renewable energy installations <i>Action:</i> Promote awareness of opportunities offered by new mechanisms to support small renewables generations <i>Links to other activities:</i> Establishment of feed-in tariff and net metering mechanisms (I.3.a)</p>	<p>1,500 grid-connected household-scale solar installations by December 2015 (1% of household and institutional customers) 30,000 grid-connected household-scale solar installations by December 2018 (20% of household and institutional customers)</p>	<p>DoE</p>	<p>FEA</p>	<p>Throughout period</p>

Strategy 4: Improve the efficiency and effectiveness of management of the electricity grid				
Key Activities	Key Performance Indicators	Responsible Organisation (s)		Indicative timeframe
		Lead agency	Supporting / Participating agency	
<p>Institute a process of regular power development planning (I.4.a) <i>Baseline:</i> Ad hoc and incomplete plans <i>Action:</i> Prepare comprehensive least-cost expansion plan with full supporting justifications in the form of</p>	<p>Completion and publication of first power development plan</p>	<p>FEA</p>	<p>DoE (review) NECC (approval)</p>	<p>December 2014</p>

<p>technical, financial and economic analysis <i>Links to other activities:</i> National electrification master plan (II.1.a)</p>				
<p>Develop grid asset management plans (I.4.b) <i>Baseline:</i> No plans in place <i>Action:</i> Review and inventory condition of all major grid assets and prepared appropriate asset management plans <i>Links to other activities:</i> Power development planning (I.4.a)</p>	<p>Completion and publication of asset management plan</p>	<p>FEA</p>	<p>DoE (review)</p>	<p>December 2015</p>
<p>Review potential for introduction of smart grid technology (I.4.c) <i>Baseline:</i> No assessment exists <i>Action:</i> Review and prepare costed investment plan for smart grid technologies <i>Links to other activities:</i> Grid asset management planning (I.4.b)</p>	<p>Completion and submission for review of proposed smart grid investment plan</p>	<p>FEA</p>	<p>DoE</p>	<p>December 2016</p>

Policy Area II: Rural Electrification

Policy Statement and Objectives

Summary of baseline

Approximately 20% of the rural population does not access to electricity supplies. This policy has adopted a target of achieving 95% rural electrification by 2020. This represents approximately a doubling of the rate of increase in access seen over the last decade (from 69% electrification in 2003 to 80% today).

There is currently no co-ordinated national plan to complete the electrification programme and no comprehensive assessment of the least-cost means of doing so. While grid expansion by FEA has been the main form of electrification, there are also a number of diesel-based mini-grids operated by the Public Works Department or community cooperatives and solar home systems maintained by private contractors who receive a subsidy from DoE. It is clear that grid expansion alone will not be the means of meeting the overall electrification target given the large number of remote islands for which this is unlikely to be economic.

There are also major concerns over the sustainability of rural electricity supplies. FEA is understood to make losses on its rural electrification activities, creating incentives for it to limit their expansion. Community cooperatives lack the financial and technical resources to keep mini-grids operational leading to declining service qualities and sometimes a complete failure of supply. Private contractors find it difficult to collect payments from solar home system customers meaning they become dependent on inadequate government subsidies.

Overall target(s) for the policy area

1. Achieve a rural electrification rate of 95% by 2020
2. Complete the national electrification programme in the most efficient and least-cost manner
3. Improve the sustainability of electrification by reforming subsidy and off-grid delivery mechanisms

Strategy 1: Develop a national electrification master-plan

- a) Prepare a least-cost national electrification master plan, to achieve the rural electrification target of 100% by 2020 – *by December 2014*

Strategy 2: Establish a rural electrification fund and reformed subsidy mechanism

- a) Define rural electrification obligations to be imposed on FEA and a methodology for costing these (ie, the difference between costs and revenues from tariffs) – *by June 2014*
- b) Review the costs of off-grid electrification technologies against affordable tariff levels and define a methodology for calculating the resulting subsidies to off-grid providers (with preference given to subsidizing capital rather than on-going operational costs) – *by June 2014*
- c) Include these obligations and costing methodology in the new multi-year regulatory contract governing FEA's prices (see Policy Area I.2.b) – *by June 2015*
- d) Implementation of a new transparent subsidy mechanism to support rural electrification by FEA and off-grid providers (integrated with the new subsidy mechanism for FEA customers, see Policy Area I.2.c) – *by June 2015*

Strategy 3: Improve the effectiveness and sustainability of off-grid management models

- a) Conduct a review of international best practice in sustainable off-grid electrification models for government and community cooperatives and develop recommendations on reforms to existing models in Fiji – *by June 2014*
- b) Implement the recommended reforms alongside the introduction of concessions for existing providers (see Policy Area II.4) – *from January 2015 onwards*

Strategy 4: Open up participation in off-grid electrification to new providers

- a) Develop a model concession agreement for off-grid electrification, to be administered by DoE – *by December 2014*
- b) Develop rules for award of concessions, including the use of competitive tendering where multiple providers wish to serve a given areas – *by December 2014*
- c) Convert existing off-grid service providers to concessions, of a length sufficient to allow recovery of any outstanding investment costs

- by December 2015

d) Award new concessions in accordance with the national electrification master plan - from January 2015 onwards

Strategy 1: Develop a national electrification master-plan				
Key Activities	Key Performance Indicators	Responsible Organisation (s)		Indicative timeframe
		Lead agency	Supporting / Participating agency	
<p>Develop electrification master plan (II.1.a) <i>Baseline:</i> No plan <i>Action:</i> Develop and issue plan <i>Links to other activities:</i> Develop of least-cost grid power development plan (I.4.a)</p>	Plan approved	DoE	FEA NECC (approval)	December 2014
Strategy 2: Establish a national electrification fund and reformed subsidy mechanism				
Key Activities	Key Performance Indicators	Responsible Organisation (s)		Indicative timeframe
		Lead agency	Supporting / Participating agency	
<p>Define FEA electrification obligations and costing methodology (II.2.a) <i>Baseline:</i> Responsibilities with FEA <i>Action:</i> Define regulatory responsibilities and transfer authority to DoE. Revise DoE organizational structure and expand resources as needed for new responsibilities</p>	Obligations and methodology approved	DoE	FEA Commerce Commission NECC (approval)	June 2014

<p><i>Links to other activities:</i> --</p>				
<p>Define costing methodology for off-grid providers (II.2.b) <i>Baseline:</i> No specific costing or subsidy calculation methodology <i>Action:</i> Design and implement calculation methodology <i>Links to other activities:</i> --</p>	Methodology approved	DoE	FEA NECC (approval)	June 2014
<p>Include obligations and costs in FEA's regulatory contract (II.2.c) <i>Baseline:</i> No specific electrification obligations or specific cost recovery mechanisms <i>Action:</i> Incorporate defined obligations and methodology into contract requirements and tariff calculations <i>Links to other activities:</i> Multi-year regulatory contract for FEA (I.2.b)</p>	Contract takes effect	Commerce Commission	FEA DoE	June 2015
<p>Implementation of rural electrification subsidy mechanism (II.2.d) <i>Baseline:</i> Cross-subsidies delivered through existing tariff structure for grid customers, direct subsidies for off-grid <i>Action:</i> Quantify subsidy requirements, institute new levy and fund to manage these under the overall subsidy mechanism to be established for the industry <i>Links to other activities:</i> Implementation of subsidy mechanism (II.2.c)</p>	New mechanism legally established	DoE	FEA Commerce Commission	June 2015

Strategy 3: Improve the effectiveness and sustainability of off-grid electrification

Key Activities	Key Performance Indicators	Responsible Organisation (s)		Indicative timeframe
		Lead agency	Supporting / Participating agency	
<p>Conduct a review of international best practice (II.3.a) <i>Baseline:</i> No comprehensive assessment of off-grid electrification models <i>Action:</i> Review best practice, develop recommendations for Fiji <i>Links to other activities:</i> --</p>	Recommendations approved	DoE	NECC (approval)	June 2014
<p>Implement recommended reforms (II.3.b) <i>Baseline:</i> Ad hoc off-grid delivery models <i>Action:</i> Implement recommended reforms to delivery models <i>Links to other activities:</i> Review of best practice for off-grid models (II.3.a)</p>	--	DoE		January 2015 onwards

Strategy 4: Open up participation in off-grid electrification to new providers				
Key Activities	Key Performance Indicators	Responsible Organisation (s)		Indicative timeframe
		Lead agency	Supporting / Participating agency	
<p>Develop a model concession agreement for off-grid electrification (II.4.a) <i>Baseline:</i> No concession system <i>Action:</i> Develop model concession agreement consistent with recommended new models <i>Links to other activities:</i></p>	Concession agreement approved	DoE	DPW NECC (approval)	December 2014

Review of best practice for off-grid models (II.3.a)				
<p>Develop rules for award of concessions (II.4.b)</p> <p><i>Baseline:</i> No concession system</p> <p><i>Action:</i> Develop concessioning rules consistent with recommended new models</p> <p><i>Links to other activities:</i> Review of best practice for off-grid models (II.3.a)</p>	Concessioning rules approved	DoE	DPW NECC (approval)	December 2014
<p>Convert existing providers to concessions (II.4.c)</p> <p><i>Baseline:</i> No concession system</p> <p><i>Action:</i> All existing off-grid providers converted to concessions</p> <p><i>Links to other activities:</i> Model concession and concessioning rules (II.4.a and II.4.b)</p>	All existing providers issued with concessions	DoE		December 2015
<p>Award new concessions following the electrification master plan (II.4.d)</p> <p><i>Baseline:</i> No assessment exists</p> <p><i>Action:</i> Review and prepare costed investment plan for smart grid technologies</p> <p><i>Links to other activities:</i> Grid asset management planning (II.4.b)</p>	At least 10 new concessions awarded	DoE		December 2018

Policy Area III: Renewable Energy

Policy Statement and Objectives

Summary of baseline

Fiji is fortunate to have significant renewable energy resources. In particular, Fiji stands out in the Pacific region due to its high use of hydro (~55%) in its grid-based generation mix. There are also a small number of diesel mini-grids that use a CNO-diesel blend (20/80) and over 3,000 solar home systems.

In rural areas, renewable biomass fuels still play a major role with more than 70% of rural households using wood for cooking purposes. While this can be considered renewable in most cases, the negative health impacts of cooking on open fires means this practice should not be encouraged.

Fiji is well endowed with a variety of renewable energies, including hydro geothermal, solar, and wind, and development of these should be encouraged where they are the least-cost means of supply. A diversification of renewable resources would be ideal, given that hydropower is critically exposed to droughts and climate change. Significant progress has been made in assessing Fiji's renewable resources, but much more remains to be done, particularly in improving data quality and access to data. The culture of restrictive information that currently prevails needs to be changed and relevant resource information, feasibility studies and project data needs to be openly shared in order to attract reputable private sector developers to Fiji's energy sector.

While countries in the region and the world have seen significant successes in decentralised, embedded renewable energy generation by households and businesses, investments in roof mounted solar and small scale wind has not taken off in Fiji because the feed-in tariff offered by FEA is too low to stimulate such investments. Net metering i.e. off-setting of a consumers own consumption through embedded generation is not currently allowed in Fiji.

Overall target(s) for the policy area

1. Achieve a renewable energy share in electricity generation of 81% by 2020
2. Achieve a renewable energy share in total energy consumption of 18% by 2020

Strategy 1: Establish a comprehensive assessment of Fiji's renewable energy resources

- a) Develop an inventory of available renewable sites and technologies, ranked by their technical and economic viability and include it in the national energy information system, which will be made available to the public - *by June 2014*
- b) Ensure that all renewable energy related content of the national energy information system is kept up to date and that it is proactively shared with prospective investors - *from June 2014 onwards*

Strategy 2: Research and promote new renewable energy technologies

- a) Research international developments relating to new renewable energy technologies and prepare a summary of developments on an annual basis that is made publicly available through the national energy information system - *from December 2014 onwards*
- b) Hold discussions with tertiary institutions in Fiji on how the existing renewable energy courses can be expanded and how post-graduate students could potentially work closely with DOE on relevant topics - *from June 2014 onwards*

Strategy 3: Investigate geothermal energy resources

- a) Commission study to further investigate the viability of geothermal energy in Fiji (may require drilling), building on existing studies - *by December 2014*
- b) Explore funding options to support an exploratory drilling programme and conduct drilling - *by December 2015*
- c) Launch pilot project on geothermal development if study/ies conclude that it is indicatively viable - *by December 2016*

Strategy 4: Adopt technical standards for renewable technologies

- a) Review the technical standards and guidelines for renewable technologies that already exist and are in use internationally, including those produced by the Sustainable Energy Industries Association of the Pacific Islands, and adopt those that are most appropriate for Fiji - *by June 2015*

Strategy 5: Encourage industry uptake of renewables

a) Hold a working session with key industry participants to identify the key barriers to the uptake of proven renewable technologies and ways that these barriers can be overcome - *by December 2014*

Strategy 1: Establish a comprehensive assessment of Fiji's renewable energy resources				
Key Activities	Key Performance Indicators	Responsible Organisation (s)		Indicative timeframe
		Lead agency	Supporting / Participating agency	
<p>Develop an inventory of available renewable sites and technologies (III.1.a) <i>Baseline:</i> No inventory <i>Action:</i> Develop and publish inventory <i>Links to other activities:</i> Establish a national energy information system that is publicly accessible and populate it (VII.5.d)</p>	Inventory developed with at least 20 sites identified and ranked	DoE	FEA	June 2014
<p>Keep renewable information up to date (III.1.b) <i>Baseline:</i> No up to date information system <i>Action:</i> Maintain information <i>Links to other activities:</i> Establish a national energy information system that is publicly accessible and populate it (VII.5.d)</p>	Information updated	DoE	FEA	June 2014 onwards

Strategy 2: Research and promote new renewable energy technologies				
Key Activities	Key Performance Indicators	Responsible Organisation (s)		Indicative timeframe
		Lead agency	Supporting / Participating agency	

<p>Research international developments relating to new renewable energy technologies (III.2.a) <i>Baseline:</i> No review undertaken to date <i>Action:</i> Conduct research and summarise <i>Links to other activities:</i> Keep renewable information up to date (III.1.b)</p>	<p>Obligations and methodology approved</p>	<p>DoE</p>		<p>December 2014 onwards</p>
<p>Hold discussions with tertiary institutions in Fiji (III.2.b) <i>Baseline:</i> Existing renewable energy program is in place at University of the South Pacific <i>Action:</i> Hold discussions to plan expansion of existing program and possibly start new programs at other institutions <i>Links to other activities:</i> --</p>	<p>Discussions held Renewable program/s expanded</p>	<p>DoE</p>		<p>June 2014 onwards</p>

<p>Strategy 3: Investigate geothermal energy resources</p>				
<p>Key Activities</p>	<p>Key Performance Indicators</p>	<p>Responsible Organisation (s)</p>		<p>Indicative timeframe</p>
		<p>Lead agency</p>	<p>Supporting / Participating agency</p>	
<p>Commission study to investigate the viability of geothermal energy (III.3.a) <i>Baseline:</i> One existing geothermal study conducted by JICA <i>Action:</i> Update JICA study to further test geothermal potential <i>Links to other activities:</i> Research international developments relating to new renewable energy technologies (III.2.a)</p>	<p>Study completed</p>	<p>DoE</p>	<p>FEA NECC (approval)</p>	<p>December 2014</p>
<p>Explore funding options to support an exploratory</p>	<p>Results of drilling</p>	<p>Department of Mineral</p>	<p>DOE</p>	<p>December 2015</p>

<p>drilling programme and conduct drilling (III.3.b) <i>Baseline:</i> No existing geothermal drilling <i>Action:</i> Approach donors/sponsors for funding of drilling programme and tender drilling <i>Links to other activities:</i> Explore funding options to support an exploratory drilling programme and conduct drilling (III.3.b) Commission study to investigate the viability of geothermal energy (III.3.a)</p>	<p>programme published and used for competitive IPP procurement</p>	<p>Resources</p>		
<p>Launch pilot project on geothermal development (III.3.c) <i>Baseline:</i> No existing geothermal projects <i>Action:</i> Launch pilot IPP project <i>Links to other activities:</i> Explore funding options to support an exploratory drilling programme and conduct drilling (III.3.b) Commission study to investigate the viability of geothermal energy (III.3.a)</p>	<p>Pilot project launched</p>	<p>DOE</p>	<p>Department of Mineral Resources FEA NECC (approval)</p>	<p>December 2016</p>

<p>Strategy 4: Adopt technical standards for renewable technologies</p>				
<p>Key Activities</p>	<p>Key Performance Indicators</p>	<p>Responsible Organisation (s)</p>		<p>Indicative timeframe</p>
		<p>Lead agency</p>	<p>Supporting / Participating agency</p>	
<p>Adopt appropriate international standards (III.4.a) <i>Baseline:</i> No technical standards or guidelines in place <i>Action:</i> Review the technical standards and guidelines and adopt those appropriate <i>Links to other activities:</i> Research international developments relating to new renewable energy technologies (III.2.a)</p>	<p>Technologies that standards have been adopted for Technologies that guidelines have been published for</p>	<p>DoE</p>	<p>NECC (approval)</p>	<p>June 2015</p>

Strategy 5: Encourage industry uptake of renewables				
Key Activities	Key Performance Indicators	Responsible Organisation (s)		Indicative timeframe
		Lead agency	Supporting / Participating agency	
<p>Working session with key industry participants (III.5.a) <i>Baseline:</i> Limited discussion/cooperation between industry and government <i>Action:</i> Hold working session on barriers to uptake of renewables <i>Links to other activities:</i> Adopt appropriate international standards (III.4.a)</p>	Working session held	DoE	Industrial energy users FEA	December 2014

Policy Area IV: Transport

Policy Statement and Objectives

Summary of baseline

The transport sector is the main user of imported fuel, accounting for over 60% of Fiji's total petroleum consumption in recent years.

The biggest opportunity in fuel savings and energy conservation is in land transport (which makes up around 16% of Fiji's total petroleum consumption). The number of registered land vehicles has grown by around 40% over the last decade. At present, around 4% of land transport uses alternative energy sources (predominantly LPG). The government also promotes improvements in the fuel efficiency of land vehicles through age restrictions on imported cars, maximum axel weight restrictions, and duty concessions on low emission vehicles.

Electric vehicles have future potential to transform the sector, although this depends on grid-based electricity being from renewable sources or there is no true move away from dependency on petroleum products.

The air and marine transport industries are major imported fuel users (26% and 22% of Fiji's total petroleum consumption respectively) but the potential for Fiji, acting alone, to increase efficiency in these is much more limited given that these industries are largely governed by international treaties and conventions.

Fiji's new transport policy is currently under development and provides a significant opportunity to increase the sector's focus on energy efficiency, in particular by improving public transport and the layout of urban areas to encourage other non-motorised transport and reduce congestion

Overall target(s) for the policy area

1. Improve the fuel efficiency of the transport fleet
2. Achieve fuel consumption of 0.079 litres per FJD of GDP by 2020

Strategy 1: Develop a transport policy that encourages energy efficiency

- a) Draft a new transport policy that encourages public transport, walking and cycling, and the efficient layout of public areas – *by December 2013*
- b) Monitor the progress of the transport policy implementation with respect to energy efficiency – *From December 2013 onwards*

Strategy 2: Promote the fuel efficiency of land transportation

- a) Monitor the effectiveness of implementation of the existing age limits for second hand vehicles and import tax incentives, and consider ways to extend them such that they further promote fuel efficiency – *By June 2014*
- b) Assess the viability of introducing new measures including labelling for vehicle fuel economy and tyre pressure, and implement if considered viable – *By December 2014*
- c) Launch information campaigns and driver training that promote fuel-efficient driving practices – *From December 2014 onwards*
- d) Improve the enforcement of vehicle maintenance and maximum axel weight standards – *From December 2013 onwards*
- e) Assess the viability of mandatory fuel efficiency standards, and establish a plan to implement them if considered viable – *By June 2014*

Strategy 3: Promote the fuel efficiency of marine transportation

- a) Assess the viability of introducing mandatory inter-island vessel standards and the options for the better integration of regional sea freight movement, and implement if considered viable – *By June 2014*

Strategy 4: Support actions of industry

- a) Hold a working session with key transport industry participants to identify ways that industry can implement energy efficiency measures on a voluntary basis and identify any support that can be provided by the public sector – *by December 2014*

Strategy 1: Develop a transport policy that encourages energy efficiency

Key Activities	Key Performance Indicators	Responsible Organisation (s)		Indicative timeframe
		Lead agency	Supporting / Participating agency	
<p>Draft a new transport policy that encourages public transport, walking and cycling, and the efficient layout of public areas (IV.1.a) <i>Baseline:</i> No current transport policy <i>Action:</i> Draft new transport policy <i>Links to other activities:</i> --</p>	New transport policy promulgated	DoT	DoE Land Transport Authority Maritime Safety Authority Civil Aviation Authority	December 2013
<p>Monitor the progress of the transport policy implementation with respect to energy (IV.1.b) <i>Baseline:</i> No current transport policy <i>Action:</i> Actively monitor any energy-related policies and actions that are part of the new transport policy. Add such actions to the Strategic Action Plan at annual update and progress report. <i>Links to other activities:</i> Monitor and report on progress relating to the Strategic Action Plan (VII.5.a) Update the Strategic Action Plan, including targets, on an annual basis (VII.5.b)</p>	Strategic Action Plan and progress report updated to reflect energy-related aspects of new transport policy	DoE	DoT Land Transport Authority Maritime Safety Authority Civil Aviation Authority NECC	December 2013 onwards

Strategy 2: Promote the fuel efficiency of land transportation				
Key Activities	Key Performance Indicators	Responsible Organisation (s)		Indicative timeframe
		Lead agency	Supporting / Participating agency	
<p>Monitor the effectiveness of implementation of the existing age limits for second hand vehicles and</p>	Average age of imported	DoE	DoT	June 2014

<p>import tax incentives, and consider ways to extend them such that they further promote fuel efficiency (IV.2.a) <i>Baseline:</i> Existing age limits and tax incentives are in place <i>Action:</i> Conduct Regulatory Impact Assessments of existing age limits and tax incentives. Extend limits and incentives if appropriate. <i>Links to other activities:</i> --</p>	<p>second hand land vehicles Average fuel efficiency of imported land vehicles Regulatory Impact Assessment completed</p>		<p>Land Transport Authority Revenue & Customs Authority NECC (approval)</p>	
<p>Assess the viability of introducing new measures including labelling for vehicle fuel economy and tyre pressure, and implement if considered viable (IV.2.b) <i>Baseline:</i> No vehicle or tyre pressure labelling <i>Action:</i> Conduct Regulatory Impact Assessments of vehicle and tyre labelling. <i>Links to other activities:</i> --</p>	<p>Regulatory Impact Assessments completed Labelling programme implemented (if viable) Percentage of imported vehicles and tyres labelled Average fuel efficiency of imported land vehicles</p>	<p>DoE</p>	<p>DoT Land Transport Authority NECC (approval)</p>	<p>December 2014</p>
<p>Launch information campaigns and driver training that promote fuel-efficient driving practices (IV.2.c) <i>Baseline:</i> Little to no campaigns in existence <i>Action:</i> Launch advertising campaign and a driver training programme <i>Links to other activities:</i> --</p>	<p>Number of advertisements run Number of drivers trained in fuel-efficient driving practice</p>	<p>DoT</p>	<p>DoE Land Transport Authority</p>	<p>December 2014 onwards</p>
<p>Improve the enforcement of vehicle maintenance and maximum axel weight standards (IV.2.d) <i>Baseline:</i> Some enforcement <i>Action:</i> Increase number of testing stations <i>Links to other activities:</i> --</p>	<p>Number of vehicles tested</p>	<p>Land Transport Authority</p>	<p>DoT DoE</p>	<p>December 2013 onwards</p>
<p>Assess the viability of mandatory fuel efficiency</p>	<p>Regulatory Impact</p>	<p>DoT</p>	<p>DoE</p>	<p>June 2014</p>

<p>standards (IV.2.e) <i>Baseline:</i> No mandatory standards <i>Action:</i> Conduct Regulatory Impact Assessments of mandatory fuel efficiency standards. If viable, develop plan to implement. <i>Links to other activities:</i> --</p>	<p>Assessment completed Detailed plan for implementation prepared Mandatory fuel standard implemented (if viable) Average fuel efficiency of imported land vehicles</p>		<p>Land Transport Authority Revenue & Customs Authority NECC (approval)</p>	
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Strategy 3: Promote the fuel efficiency of marine transportation				
Key Activities	Key Performance Indicators	Responsible Organisation (s)		Indicative timeframe
		Lead agency	Supporting / Participating agency	
<p>Assess the viability of introducing mandatory inter-island vessel standards and the options for the better integration of regional sea freight movement, and implement if considered viable (IV.3.a) <i>Baseline:</i> No mandatory standards <i>Action:</i> Conduct Regulatory Impact Assessments of mandatory standards. If viable, develop plan to implement. <i>Links to other activities:</i> --</p>	<p>Regulatory Impact Assessment completed Detailed plan for implementation prepared Mandatory fuel standard implemented (if viable) Average fuel efficiency of imported maritime vessels</p>	<p>DoT</p>	<p>DoE Maritime Safety Authority Revenue & Customs Authority NECC (approval)</p>	<p>June 2014</p>

Strategy 4: Support actions of industry				
Key Activities	Key Performance Indicators	Responsible Organisation (s)		Indicative timeframe
		Lead agency	Supporting / Participating agency	

<p>Hold a working session with key transport industry participants (IV.4.a) <i>Baseline:</i> Limited discussion/cooperation between industry and government <i>Action:</i> Hold working session with key transport industry participants to identify ways that industry can implement energy efficiency measures on a voluntary basis and identify any support that can be provided by the public sector <i>Links to other activities:</i> Monitor the progress of the transport policy implementation with respect to energy (IV.1.b)</p>	<p>Number of transport industry participants undertaking voluntary energy efficiency measures</p>	<p>DoE</p>	<p>Transport industry providers and major users DoT Land Transport Authority Maritime Safety Authority Civil Aviation Authority</p>	<p><i>December 2014</i></p>
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Policy Area V: Petroleum and Substitute Fuels

Policy Statement and Objectives

Summary of baseline

While there is general agreement on the desirability of reducing the volume and cost of imported petroleum products in Fiji, the potential to do so is limited. In 2011, Fiji imported a total of 707 million litres of petroleum products at a value of 1.17 billion FJD. Approximately 50% of imports are consumed in Fiji, while the balance is re-exported to supply smaller Pacific island states. Fuel is supplied by three major international oil companies, BP, Mobil Oil, and Total Oil, who each have their own storage facilities in Fiji. The distribution of fuel supplies to remote islands is expensive and irregular.

The main imported fuels in Fiji are diesel (over 50% of total imports), aviation fuel (~30%), and motor spirit (~10%). Other imported fuels include LPG, and heavy fuel oil. The Commerce Commission regulates all retail fuel prices in Fiji, based on three-monthly submissions made by the oil companies in accordance with a pricing template (based on the cost of supply plus a return on investment for the oil companies). FEA purchases its petroleum fuel through bulk procurement arrangements with the oil companies. There are two retail suppliers of LPG in Fiji, which is used mainly for cooking, (replacing kerosene and open wood fires), although 2% of land transport vehicles also run on LPG.

The government's strategy to curb petroleum imports has been to encourage the development of indigenous energy resources and investigate the potential to replace fuel imports with locally produced bio-fuels. This includes operating a pilot program to blend coconut oil and diesel (20%/80%) as a fuel for government vehicles and for rural electrification schemes. A number of recent studies in Fiji and the region have raised serious doubts about the economic viability of using coconut oil as a replacement fuel. The possibility of ethanol production in Fiji has been repeatedly considered, however its financial viability is highly sensitive to a consistent supply of feedstock, and the rapid decline of the sugar industry over the last 10 years has deterred investors. A World Bank funded study has also shown that molasses based ethanol production requires taxes and levies to be waived in order to make its production by the private sector financially viable.

Petroleum exploration was undertaken in Fiji in the 1970s and 1980s and recoverable reserves were estimated to be up to 1 billion barrels per oil bearing structure. However there has been no further external interest in exploration and Fiji has not conducted any licensing rounds.

Overall target(s) for the policy area

1. Replace 25,000 kilolitres of imported gasoline by locally produced fuels by 2030
2. Reduce supply cost for imported fuels by 5% by 2016

Strategy 1: Establish feasibility of large scale biodiesel production in Fiji

- a) Determine long term feedstock supply from local coconut resources – *By December 2014*
- b) Update World Bank funded study on feasibility of CNO based biodiesel production– *By December 2015*
- c) Assess the viability of CNO/diesel blends – *By June 2015*

Strategy 2: Establish feasibility of large scale ethanol production from molasses and other resources

- a) Determine long term feedstock supply from local sugar cane and other resources – *By December 2014*
- b) Up-date World Bank funded study on feasibility of industrial scale ethanol production – *By December 2014*
- c) Assess the viability of CNO/diesel blends – *By December 2014*

Strategy 3: Review pricing templates used by oil suppliers to determine supply cost

- a) Research the historic supply cost of fuels in the Pacific – *By June 2014*
- b) Independently verify the validity of assumptions and data points used in oil companies price build up – *By December 2014*

Strategy 4: Promote new activities in petroleum exploration

- a) Update petroleum exploration studies – *By June 2015*
- b) Offer new exploration licences to private sector – *By December 2016*

Strategy 1: Establish feasibility of large scale biodiesel production in Fiji				
Key Activities	Key Performance Indicators	Responsible Organisation (s)		Indicative timeframe
		Lead agency	Supporting / Participating agency	
<p>Coconut resource assessments (V.1.a) <i>Baseline:</i> Sustainability of coconut industry and copra production uncertain <i>Action:</i> Conduct detailed resource assessment and determine current and future supply of coconuts/copra in Fiji <i>Links to other activities:</i> Feasibility assessment biodiesel production (V.1.b)</p>	National mapping of coconut stands including age classes available	DOE	SPC/ Ministry of Agriculture NECC (approval)	December 2014
<p>Biodiesel feasibility (V.1.b) <i>Baseline:</i> Feasibility of biodiesel production from CNO not established <i>Action:</i> Update World Bank funded feasibility study on biodiesel production taking into account current world market price situation for fuels and vegetable oils and recent biofuel studies conducted in the Pacific region <i>Links to other activities:</i> Coconut resource assessments (V.1.a)</p>	Bankable feasibility study presented to potential private sector investors	DOE	Ministry of Agriculture NECC (approval)	December 2015
<p>Assess the viability of CNO/diesel blends (V.1.c) <i>Baseline:</i> Financial/economic viability of CNO use as substitute fuel in fuel blends not established <i>Action:</i> Conduct financial and economic analysis of fuel blend use on the basis of empirical data collected in DOE's CNO pilot operations in remote areas. This should include an assessment of additional cost incurred through maintenance, and repairs</p>	Comprehensive data set on cost and benefits of CNO fuel blending available	DOE	Ministry of Planning NECC (approval)	June 2015

Links to other activities: Coconut resource assessments (V.1.a)				
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Strategy 2: Establish feasibility of large scale ethanol production from molasses and other resources				
Key Activities	Key Performance Indicators	Responsible Organisation (s)		Indicative timeframe
		Lead agency	Supporting / Participating agency	
<p>Feedstock supply assessment ethanol production (V.2.a) <i>Baseline:</i> Sustainability of feedstock supply for industrial fuel ethanol production uncertain <i>Action:</i> Independently assess sugar industry and other agricultural operations (large scale starch production) as a source for industrial ethanol production <i>Links to other activities:</i> V.2.b :Ethanol feasibility study</p>	Independent assessment published	Ministry of Sugar	DOE/Ministry of Agriculture/FSC	December 2013
<p>Update World Bank ethanol study (V.2.b) <i>Baseline:</i> Financial, economic and environmental feasibility of large scale ethanol production not established <i>Action:</i> Up-date World Bank study on fuel ethanol production using current and projected price developments for fuel and food commodities as well as environmental impacts of industrial ethanol production (effluent management) <i>Links to other activities:</i> Ethanol supply assessment (V.2.a) Study on flexi-fuel vehicles (V.2.c)</p>	Feasibility study published	FSC	DOE NECC (approval)	December 2014
<p>Viability of flexi-fuel vehicles (V.2.c) <i>Baseline:</i> Financial, economic feasibility of introduction</p>	Feasibility study published	DOE	Department of Transport	December 2014

<p>of flexi-fuel vehicles not establish <i>Action:</i> Conduct on import and use of flexi-fuel petrol engine powered private and commercial vehicles into Fiji <i>Links to other activities:</i> Update World Bank ethanol study (V.2.b)</p>			NECC (approval)	
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Strategy 3: Review pricing templates used by oil suppliers to determine supply cost				
Key Activities	Key Performance Indicators	Responsible Organisation (s)		Indicative timeframe
		Lead agency	Supporting / Participating agency	
<p>Research the historic supply cost of fuels in the Pacific (V.3.a) <i>Baseline:</i> Samoa fossil fuel supply cost consistently lower than Fiji's <i>Action:</i> Compare historic supply cost for fuels in the Pacific (in particular for the two countries) over the last 10 years <i>Links to other activities:</i> Independently verify the oil companies price build up (V.3.a)</p>	Comparative analysis of fuel supply cost published	DOE	Commerce Commission NECC (Approval)	June 2014
<p>Independently verify the oil companies price build up (V.3.b) <i>Baseline:</i> <i>Action:</i> Independently verify the validity of assumptions and data points used in oil companies price build up <i>Links to other activities:</i> Research the historic supply cost of fuels in the Pacific (V.3.a)</p>	Report on price build up published	Commerce Commission	DOE	December 2014

Strategy 4: : Promote new activities in petroleum exploration				
Key Activities	Key Performance Indicators	Responsible Organisation (s)		Indicative timeframe
		Lead agency	Supporting / Participating agency	
<p>Update petroleum exploration studies (V.5.a) <i>Baseline:</i> No updated information available on status of fossil fuel exploration <i>Action:</i> Up-date studies on fossil fuel reserves considering data and information from other countries in the region <i>Links to other activities:</i> Offer new exploration licenses to the private sector (V.5.b)</p>	Updated study on fossil fuels published	Department of Mineral Resources	DOE NECC (approval)	June 2015
<p>Offer new exploration licenses to the private sector (V.5.b) <i>Baseline:</i> No fossil fuel exploration activities <i>Action:</i> Transparently tender exploration licenses to private sector <i>Links to other activities:</i> Update petroleum exploration studies (V.5.a)</p>	Tender documents published	Department of Mineral Resources	DOE	December 2016

Policy Area VI: Energy Efficiency

Policy Statement and Objectives

Summary of baseline

Fiji's economy has a relatively low energy intensity of around 7 MJ input per US\$ of GDP, reflecting the dominance of the service sector in its economy. However improving energy efficiency is still likely a highly cost-effective way to increase the availability of energy in Fiji. Fiji has not had an energy efficiency target until now.

The government's initiatives relating to demand-side energy efficiency have so far focused on appliance labelling for refrigeration technology, the development of training material for a programme on energy efficiency in schools, and public awareness campaigns. There is clearly potential to expand these initiatives and make more of an impact on energy efficiency, including by ramping up the labelling awareness campaigns and targeting improvements in the public sector.

FEA scores well with respect to supply-side energy efficiency in comparison with other Pacific utilities, both with respect to fuel consumption and technical losses on the network. However little progress has been made with respect to developing the potential of smart grid technologies and improving asset management to further reduce losses.

Overall target(s) for the policy area

1. Achieve energy intensity of 0.215 kWh per FJD of GDP by 2020
2. Achieve fuel consumption of 0.079 litres per FJD of GDP by 2020

Strategy 1: Increase public education and awareness of energy efficiency

- a) Provide information to households and businesses on the range of energy saving technologies and options available. This includes encouraging businesses to undertake energy audits, to factor in the operating costs of energy use as well as the capital costs when investing, and publicly recognising best performers – *from June 2014 onwards*

Strategy 2: Promote energy efficiency in appliances and equipment

- a) Introduce energy labelling and minimum standards for all widely imported electrical appliances and industrial equipment that contribute substantially to energy demand – by *June 2016*
- b) Assess the viability of providing customs and tax incentives to energy efficient appliances and equipment – by *December 2014*

Strategy 3: Collect energy-efficiency data

- a) Collect demand side energy data on an annual basis and publish it through the national energy information system – from *December 2014 onwards*
- b) Assess viability of energy efficiency measures – by *June 2015*

Strategy 4: Promote energy-efficiency in the public sector

- a) Launch a demonstration project in the public sector. Assess the viability of creating an Energy Services Company (ESCO) to undertake it – by *December 2015*
- b) Establish energy conservation and efficiency protocols for the operation of public sector facilities – from *December 2015*
- c) Identify public institutions/facilities that are the largest energy consumers and monitor their energy performance – from *December 2014 onwards*

Strategy 5: Promote energy efficiency in buildings and industry

- a) Update the codes and standards for buildings and industry, including minimum standards for energy use for ventilation, cooling, and lighting – by *June 2016*

Strategy 1: Increase public education and awareness of energy efficiency

Key Activities	Key Performance Indicators	Responsible Organisation (s)		Indicative timeframe
		Lead agency	Supporting / Participating agency	
<p>Provide information to households and businesses on the range of energy saving technologies and options available (VI.1.a)</p> <p><i>Baseline:</i> Little to no campaigns currently run</p> <p><i>Action:</i> Launch advertising campaign and a driver training programme. Announce award to best industry performer.</p> <p><i>Links to other activities:</i></p> <p>--</p>	<p>Number of advertisements run</p> <p>Number of awards issued</p>	DoE		June 2014 onwards

Strategy 2: Promote energy efficiency in appliances and equipment				
Key Activities	Key Performance Indicators	Responsible Organisation (s)		Indicative timeframe
		Lead agency	Supporting / Participating agency	
<p>Introduce energy labelling and minimum standards for all widely imported electrical appliances and industrial equipment that contribute substantially to energy demand (VI.2.a)</p> <p><i>Baseline:</i> Energy labelling of refrigerators only</p> <p><i>Action:</i> Identify applicable appliances and institute labelling programme based on Australia/New Zealand practices (in phased manner)</p> <p><i>Links to other activities:</i></p> <p>Provide information to households and businesses on the range of energy saving technologies and options available (VI.1.a)</p>	<p>Number of different types of appliances part of labelling programme</p> <p>Number of imported appliances labelled annually</p>	DoE	Revenue & Customs Authority NECC (approval)	June 2016

<p>b) Assess the viability of providing customs and tax incentives to energy efficient appliances and equipment (VI.2.b) <i>Baseline:</i> No existing customs and tax incentives for energy efficient appliances and equipment <i>Action:</i> Conduct Regulatory Impact Assessment and implement incentives if viable <i>Links to other activities:</i> Introduce energy labelling and minimum standards (VI.2.a)</p>	<p>Regulatory Impact Assessment completed Incentives implemented (if viable) Number of energy efficient applications and equipment imported annually</p>	<p>DoE</p>	<p>Revenue & Customs Authority NECC (Approval)</p>	<p>December 2014</p>
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Strategy 3: Collect energy-efficiency data				
Key Activities	Key Performance Indicators	Responsible Organisation (s)		Indicative timeframe
		Lead agency	Supporting / Participating agency	
<p>Collect demand side energy data on an annual basis and publish it through the national energy information system (VI.3.a) <i>Baseline:</i> Little to no demand-side energy data collected <i>Action:</i> Collect demand-side energy data and add it to the national energy information system, where it is made publicly available <i>Links to other activities:</i> Establish a national energy information system that is publicly accessible and populate it (VII.5.d)</p>	<p>Complete demand side energy balance published annually Improvement in energy efficiency published annually</p>	<p>DoE</p>		<p>December 2014 onwards</p>

<p>Assess viability of energy efficiency measures (VI.3.b) <i>Baseline:</i> Cost effectiveness of energy efficiency and conservation measures not clear <i>Action:</i> Determine priority cost effective energy efficiency measures based on energy efficiency and cost data (examples: led street and indoor lighting, cooling, solar water heating) <i>Links to other activities:</i> Collect demand side energy data on an annual basis and publish it through the national energy information system (VI.3.a)</p>	<p>List of cost effective energy efficiency and conservation measures published</p>	<p>DOE</p>	<p>FEA</p>	<p>June 2015</p>
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Strategy 4: Promote energy-efficiency in the public sector				
Key Activities	Key Performance Indicators	Responsible Organisation (s)		Indicative timeframe
		Lead agency	Supporting / Participating agency	
<p>Launch a demonstration project in the public sector. Assess the viability of creating an Energy Services Company (ESCO) to undertake it (VI.4.a) <i>Baseline:</i> No existing demonstration projects <i>Action:</i> Identify suitable project and implement it <i>Links to other activities:</i> --</p>	<p>Number of demonstration projects carried out</p>	<p>DoE</p>	<p>NECC (approval)</p>	<p>December 2015</p>

<p>Establish energy conservation and efficiency protocols for the operation of public sector facilities (VI.4.b) <i>Baseline:</i> No existing standards protocols <i>Action:</i> Prepare standards/protocols <i>Links to other activities:</i> Launch a demonstration project in the public sector (VI.4.a) Update the codes and standards for buildings and industry (VI.5.a)</p>	<p>Energy conservation and efficiency protocols for the public sector published Improvement in energy consumption of public sectors institutions/facilities</p>	<p>DoE</p>	<p>NECC (approval)</p>	<p>December 2015</p>
<p>Identify public institutions/facilities that are the largest energy consumers and monitor their energy performance (VI.4.c) <i>Baseline:</i> No monitoring of public sector energy performance <i>Action:</i> Establish database for monitoring public sector energy efficiency, publish results annually amongst public sector institutions <i>Links to other activities:</i> Launch a demonstration project in the public sector (VI.4.a) Establish energy conservation and efficiency protocols for the operation of public sector facilities (VI.4.b)</p>	<p>Report on energy efficiency of public sector institutions/facilities published Improvement in energy consumption of public sectors institutions/facilities</p>	<p>DoE</p>		<p>December 2014 onwards</p>

Strategy 5: Promote energy efficiency in buildings and industry				
Key Activities	Key Performance Indicators	Responsible Organisation (s)		Indicative timeframe
		Lead agency	Supporting / Participating agency	

<p>Update the codes and standards for buildings and industry, including minimum standards for energy use for ventilation, cooling, and lighting (VI.5.a) <i>Baseline:</i> Existing codes are inadequate <i>Action:</i> Update building codes <i>Links to other activities:</i> --</p>	<p>New building code/s promulgated</p>	<p>DoE</p>		<p>June 2016</p>
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Policy Area VII: Governance and Institutional Arrangements

Policy Statement and Objectives

Summary of baseline

Fiji's current institutional and policy framework for the energy sector is quite complex, with overlapping responsibilities and significant gaps in the areas of coordination, regulation and oversight. This has led to weak sector governance.

Coordination of the various public sector institutions with responsibilities in the energy sector has traditionally been a key weakness of sector governance and implementation of the previous National Energy Policy. These institutions include (but are not limited to) the Ministry of Works, Transport, and Public Utilities, the Ministry of Tourism and Public Enterprises, the Ministry of Finance and National Planning, the Ministry of Foreign Affairs and International Cooperation, the Commerce Commission, the Fiji Electricity Authority, and the Land Transport Authority.

The lack of an institution with overall responsibility for planning and policy development has been another key weakness. The previous energy policy foresaw a significant restructure of institutional responsibilities for planning and regulation in the energy sector, including new legislation that would empower the Department of Energy (DoE) to become Fiji's central policy-making and planning entity for the energy sector. However this did not eventuate and DoE remained largely focused on detailed implementation in specific areas such as energy efficiency and rural electrification, rather than focusing on sector-wide planning and oversight which have greater potential to bring about change and development in the sector.

Effective sharing and management of energy information is another serious challenge for sector governance. Numerous recent energy sector studies in Fiji and the wider Pacific region have identified the poor quality of national and regional energy sector data as severely limiting opportunities for policy, planning, rational decision-making, private investment and future performance improvement. In many cases a culture of restrictive information still prevails.

Economic regulation of the energy sector is led by the Commerce Commission, however the manner in which prices have been set has often lacked transparency. This is particularly the case for electricity tariffs and a number of different studies have highlighted the need for a regulatory contract that reduces discretionary powers. Fiji Electricity Authority (the state-owned power utility responsible for providing grid based electricity) has traditionally self-regulated on technical matters, including issuing licences and grid connection of IPPs and embedded

generation. This creates possible conflicts of interest.

Fiji has been unsuccessful in encouraging significant private sector participation in the energy sector. This is largely due to weak sector governance (in particular the lack of a clear regulatory framework for encouraging third party electricity generation), resource information not being made public, and a general weakness in Fiji's business climate.

Overall target(s) for the policy area

1. Improve the governance of the energy sector
2. Ensure that the NEP and Strategic Action Plan are implemented successfully

Strategy 1: Improve overall coordination and direction

- a) Establish the National Energy Coordination Committee (NECC) – *by December 2013*
- b) Hold NECC meetings at least two times per year, focused on improving sector coordination – *from December 2013 onwards*

Strategy 2: Improve planning and policy development

- a) Give DoE the legal mandate for planning and policy development of the energy sector – *by June 2014*
- b) Restructure DoE in light of its new responsibilities – *by December 2014*
- c) Contract out any responsibilities that DoE has for detailed implementation activities – *by June 2015*
- d) Conduct Regulatory Impact Assessments on specific actions and programmes under the NEP – *from June 2014 onwards*

Strategy 3: Consult with stakeholders

- a) Consult at least two times per year with external stakeholders in the energy sector through a National Energy Consultative Forum (NECF) – *from June 2014 onwards*

Strategy 4: Improve sector regulation

- a) Give DoE the legal mandate to carry out technical regulation and third party power procurement – *by June 2014*

Strategy 5: Ensure adequate reporting, monitoring, and evaluation

- a) Monitor and report on progress relating to the Strategic Action Plan – *from June 2014 onwards*
 b) Update the Strategic Action Plan, including targets, on an annual basis – *from December 2014 onwards*
 c) Establish a national energy information system that is publicly accessible and populate it – *by June 2014 – from June 2014 onwards*

Strategy 1: Improve overall coordination and direction				
Key Activities	Key Performance Indicators	Responsible Organisation (s)		Indicative timeframe
		Lead agency	Supporting / Participating agency	
<p>Establish the National Energy Coordination Committee (VII.1.a) <i>Baseline:</i> No committee <i>Action:</i> Establish committee <i>Links to other activities:</i> --</p>	Committee established	DoE	Commerce Commission Reserve Bank Relevant Ministries	By December 2013
<p>Hold NECC meetings at least two times per year, focused on improving sector coordination (VII.1.b) <i>Baseline:</i> <i>Action:</i> <i>Links to other activities:</i> Establish the National Energy Coordination Committee (VII.1.a)</p>	Number of meetings held per year Minutes of meetings published	DoE	Commerce Commission Reserve Bank Relevant Ministries	December 2013 onwards

Strategy 2: Improve planning and policy development				
Key Activities	Key Performance Indicators	Responsible Organisation (s)		Indicative timeframe
		Lead agency	Supporting / Participating agency	
<p>Give DoE the legal mandate for planning and policy development of the energy sector (VII.2.a) <i>Baseline:</i> No legal mandate (i.e. energy law) <i>Action:</i> Draft new energy bill <i>Links to other activities:</i> Restructure DoE in light of its new responsibilities (VII.2.b)</p>	New legislation enacted	DoE	Solicitor-General/Ministry of Justice	June 2014
<p>Restructure DoE in light of its new responsibilities (VII.2.b) <i>Baseline:</i> Existing structure does not have focus on planning policy development <i>Action:</i> Review organizational structure and resourcing, institute recommendations <i>Links to other activities:</i> Give DoE the legal mandate for planning and policy development of the energy sector (VII.2.a) Contract out any responsibilities that DoE has for detailed implementation activities (VII.2.a)</p>	Review of DoE organisational structure and resourcing completed Restructure and change in resourcing completed	DoE	Ministry of Public Utilities	December 2014
<p>Contract out any responsibilities that DoE has for detailed implementation activities (VII.2.a) <i>Baseline:</i> Some services contracted out, some managed in-house <i>Action:</i> Contract out remaining services/activities <i>Links to other activities:</i> Restructure DoE in light of its new responsibilities (VII.2.b)</p>	Number of services/activities contracted out	DoE	Private sector contractors	June 2015
<p>Conduct Regulatory Impact Assessments on specific</p>	Number of Regulatory	DoE	NECC (approval)	June 2014 onwards

<p>actions and programmes under the NEP (VII.2.d) <i>Baseline:</i> Policies and actions often not founded on rigorous analysis <i>Action:</i> Conduct Regulatory Impact Assessments to ensure that policies and actions will achieve the NEP objectives <i>Links to other activities:</i> Give DoE the legal mandate for planning and policy development of the energy sector (VII.2.a)</p>	Impact Assessments completed			
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Strategy 3: Consult with stakeholders				
Key Activities	Key Performance Indicators	Responsible Organisation (s)		Indicative timeframe
		Lead agency	Supporting / Participating agency	
<p>Consult at least two times per year with external stakeholders in the energy sector through a NECF (VII.3.a) <i>Baseline:</i> Consultations are carried out on an ad-hoc basis <i>Action:</i> Establish NECF and hold consultations at least twice per year <i>Links to other activities:</i> --</p>	NECF established Number of consultations held	DoE	NECC Wider energy stakeholders	June 2014 onwards

Strategy 4: Improve sector regulation				
Key Activities	Key Performance Indicators	Responsible Organisation (s)		Indicative timeframe
		Lead agency	Supporting /	

			Participating agency	
<p>Give DoE the legal mandate to carry out technical regulation and third party IPP procurement (VII.4.a) <i>Baseline:</i> Legal mandate for technical regulation is with FEA <i>Action:</i> Amend existing legislation to transfer legal mandate to DoE <i>Links to other activities:</i> Give DoE the legal mandate for planning and policy development of the energy sector (VII.2.a) Transfer of technical regulatory responsibilities from FEA to DoE (I.2.a)</p>	Legislation amended	DoE	Solicitor-General	June 2014

Strategy 5: Ensure adequate reporting, monitoring, and evaluation				
Key Activities	Key Performance Indicators	Responsible Organisation (s)		Indicative timeframe
		Lead agency	Supporting / Participating agency	
<p>Monitor and report on progress relating to the Strategic Action Plan (VII.5.a) <i>Baseline:</i> Monitoring and reporting is undertaken through corporate plans. <i>Action:</i> Produce progress report and present a progress report at each NECF for consultation, before presenting a final version to the NECC <i>Links to other activities:</i> Consult at least two times per year with external stakeholders in the energy sector through a NECF (VII.3.a) Hold NECC meetings at least two times per year, focused on improving sector coordination (VII.1.b)</p>	<p>Progress report prepared Progress report presented and consulted on at each NECF Progress report presented to NECC</p>	DoE	<p>Wider energy stakeholders Commerce Commission Reserve Bank Relevant Ministries</p>	June 2014 onwards

<p>Update the Strategic Action Plan, including targets, on an annual basis (VII.5.b) <i>Baseline:</i> Previous strategic action plan was not updated <i>Action:</i> Update the strategic action plan on an annual basis, based on the results of the progress report. <i>Links to other activities:</i> Monitor and report on progress relating to the Strategic Action Plan (VII.5.a)</p>	<p>Strategic Action Plan updated</p>	<p>DoE</p>	<p>Wider energy stakeholders Commerce Commission Reserve Bank Relevant Ministries</p>	<p>December 2014 onwards</p>
<p>Establish a national energy information system that is publicly accessible and populate it (VII.5.d) <i>Baseline:</i> Energy information and data is unreliable, fragmented and not publicly available <i>Action:</i> Create a single online repository where all energy information is stored and is made available to the public. It should include supply and demand side energy balances (updated on an annual basis by DoE) and detailed fuel and electricity price data (provided to DoE by the Commerce Commission). <i>Links to other activities:</i> Develop an inventory of available renewables (III.1.a) Keep renewable information up to date (III.1.b)</p>	<p>National energy information system established and accessible to public National energy information system kept up to date Annual energy balances produced Detailed fuel and electricity price data collected annually</p>	<p>DoE</p>	<p>Commerce Commission Bureau of Statistics</p>	<p>June 2014 onwards</p>