

Tuvalu National Energy Policy





May 2009



FORWARD

This Tuvalu National Energy Policy (TNEP) is the first ever produced in an attempt to clearly define and direct current and future energy developments and usages throughout Tuvalu. The rapid shift from subsistence to cash or monetary economy in contemporary Tuvalu as posed by the effects of globalization paved the way for such immediate and fitting policies and responses to be devised to address such swift changes. TNEP is no doubt a product of these much needed responses, and its sole objective is to improve the well-being of the Tuvalu people by promoting the use of its renewable energy resources, which are more cost-effective, reliable, affordable and environmentally sustainable than fossil fuel.

TNEP was developed by the Energy Department and SOPAC following two successive consultation workshops that were conducted by a Technical Assistance from SOPAC and energy stakeholders here on Funafuti in 2005. Its eventual completion and release is timely with the very recent surges in oil prices and Tuvalu's growing demand and dependency on fossil fuel. Renewed global interest in exploring renewable energy sources to substitute fossil fuels makes this document very crucial.

TNEP provides the framework necessary for coordinating both our domestically financed efforts as well as regional and bilateral assistance in the energy sector.

I commend this document for all.

Hon. Kausea Natano
Minister for Public Utilities and Industries



ACKNOWLEDGEMENT

The Minister of Public Utilities and Industries and the management of the Department of Energy would like to acknowledge the collaboration effort of Energy stakeholders, consultants and others, who assisted directly or indirectly in the formulation of the first Tuvalu National Energy Policy. It is impossible to acknowledge all people by name, but thanks are due to all of them for their wholehearted participation and hard work.

However, particular thanks are due to Mr Anare Matakititi, Energy Advisor from the SOPAC for his technical assistance in the development and formulation of the TNEP through in country consultations provided under the Pacific Island Energy Policies and Strategic Action Plans (PIEPSAP) in policy formulation. His contributions, technical know-how in all aspects of energy related activities and valuable advises were very much appreciated.

Grateful thanks are also extended to Mr Rupeni Mario also of SOPAC for the final tuning and production of this final document for the Tuvalu Energy sector for the coming years.



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VISION

"By the year 2020 guided by the principles in the "Te Kakeega II" and the "Malefatunga Declaration", Tuvalu shall attain a prosperous living standard that is fostered through an energy policy that promotes the provision of socially, financially, economically, technically, politically and environmentally sustainable energy systems and within the framework of the Tuvalu Initial National Communication under the United Nations Framework on Climate Change (Oct 1999)."

GOAL

To improve the well-being of the Tuvalu people by promoting the use of its renewable energy resources and implementing cost effective, equitable, reliable, accessible, affordable, secure and environmentally sustainable energy systems.



INTRODUCTION

The National Energy Policy Framework sets out the Government's policies for the planning and management of the energy sector over the next 15 years. The framework defines the strategies that government is taking to ensure that the objectives of the policies are fully realised. In developing the energy policy framework government is mindful of the critical role of the energy sector in the attainment of its overall socio-economic development goals of improving the livelihood of all its peoples.



IMPORTANT POLICY CONSIDERATIONS FOR TUVALU



There are three principal energy policy considerations detailed in the Tuvalu National Energy Policy Framework, namely:

(i) Supply issues:

For Tuvalu the provision of adequate, secure, and cost-effective energy supplies through the promotion of indigenous energy resources specifically renewable energy resources using the least cost options and diversification of supply sources both from within and outside the country is critical to ensuring security of supply.

(ii) Utilisation issues:

The efficient utilization of energy and to discourage wasteful and non-productive patterns of energy consumption is vital for a country that is so dependent on imported energy sources.

(iii) Environmental issues:

Due to the fragility of the environment in Tuvalu government always place environmental issues high on its agenda. Therefore it is important that the energy policies are targeted at minimising the negative impacts of energy production, transportation, conversion, utilisation and consumption on the environment.

This policy framework provides details of how the government of Tuvalu can effectively address the three critical considerations highlighted above. Along this line the policy framework has identified seven strategic areas on which appropriate policies are formulated.



1. ENERGY SECTOR PLANNING, CO-ORDINATION, AND MANAGEMENT

Government must establish its capacity to plan, coordinate and manage energy sector development plans. There is a Department of Energy established in the Ministry of Public Utilities and Industries, the effectiveness of this department depends to a great extent on the resources available at its disposal. More importantly, the department needs to be provided with a formal framework - covering institutional, financial and legal issues - to facilitate its operation. There are a host of stakeholders and players in the energy sector therefore policies addressing the different sector of the economy and their diverse stakeholders need proper planning and coordination.

2. PETROLEUM

Tuvalu is heavily dependent on imported petroleum fuels. There is a high priority need to address petroleum consumption issues in all sectors of the economy and to devise appropriate policy responses, such as energy conservation initiatives and the greater use of energy pricing and taxation as instruments for petroleum conservation and end use efficiency. The maintenance of a reliable and cost effective supply of petroleum products is essential for Tuvalu.

With rising fuel cost, and the possibility of the price of crude oil hovering close to US\$100 per barrel mark in the not too distant future, the fuel supply chain and its mechanism will need to be reassessed. All efforts should be directed towards minimising the adverse impacts on the economy of such huge hikes in prices and measures should include looking at available alternative energy sources.

The impact of petroleum spillages and emissions on the environment can be significant, particularly for the fragile atoll marine environments. For this reason, the proper handling, storage and use of petroleum products is an important issue for Tuvalu.

It is therefore essential for government to put in place a policy framework that provides sufficient autonomy and financial incentive to maintain supply of petroleum products in a commercially orientated and cost effective manner, that sets appropriate price signals to encourage their conservation and efficient use, and that enforces sufficient regulation and control measures to protect the Tuvalu environment.



3. TRANSPORT

The transport sector consumes quite a substantial volume of imported fuels. This is expected, as modern transport systems are very much reliant on imported fossil fuels. In Tuvalu more than 50% of petroleum imports are used in the transport sector. Clearly, this calls for appropriate measures to conserve transport fuels and increase their efficiency use. It may also be prudent to look at the type and size of vehicles imported into the country.

4. ELECTRICITY

The importance of establishing a reliable electricity supply to support socio-economic development cannot be understated. Electricity has been proven to the world over as a vehicle for development. It is for this fact that the provision of electricity both in the urban and rural areas is critical and given high priority in the government development plan (Te Kakeega II).

The Tuvalu Electricity Corporation (TEC), the Government owned power utility supplying power to Funafuti and also to the outer islands, needs to be nurtured and strengthened to ensure that electricity supplies are permanent and sustainable. Measures such as institutional strengthening, capacity building and asset management should be given prominence in the corporate planning programme of TEC.

5. RENEWABLE ENERGY

The link between energy and the environment highlights the importance of having to place more efforts to the development of the renewable energy resources available in Tuvalu. The development of renewable energy resources to diversify the energy mix in Tuvalu offers some degree of security for the energy supply in Tuvalu. The development of renewable energy resources such as solar, wind, bio-fuel, etc, provides a good prospect to broaden the energy supply sources in Tuvalu. Tuvalu was one of the first PICs to have established a solar energy company. But due to poor management and other related issues, the company stopped operating. Given renewed interest in Government's commitment to the promotion of renewable energy the revival of the solar energy company will be necessary.



6. CONSERVATION AND EFFICIENCY

Policy responses to address the efficient use of energy sources promote economic gains and augurs well with the responses aimed at addressing environmental issues. The rising energy cost together with the associated adverse impacts of energy production and use on the environment necessitate policy responses aimed at conserving and the efficient use of energy.

7. ENVIRONMENT

The adverse impacts caused as a result of energy production, transportation and use can be counter-productive to development efforts. Scientific evidence related to the cause of global warming and associated extreme weather patterns points to the inefficient production, transportation and use of energy. Although the impacts of Tuvalu's responses to minimising Green House Gas (GHG) emission may be insignificant, the adverse impacts of global warming and sea level rise pose a real threat to the very survival of Tuvalu. Therefore it is imperative for Tuvalu to demonstrate to the world its commitment to contribute to the protection of the environment.



KEY STRATEGIC AREAS AND POLICIES



1.0 ENERGY SECTOR PLANNING, CO ORDINATION, AND MANAGEMENT

POLICIES

- 1.1 Maintain and strengthen the Department of Energy's capacity to plan, and manage the implementation of the national energy policy.
- 2.1 Establish and maintain formal links between the Department of Energy and Government agencies, including public corporations and Kaupule, the Tuvalu Electricity Corporation (TEC), NGOs and the private sector involved in the energy sector..
- 3.1 Consolidate all energy sector planning, co ordination and management so as to rationalise decision making and ensure more reliable and effective energy sector planning, management and oversight.
- 4.1 Establish an Energy Coordinating Committee (ECC) and as required, convene ECC meetings to discuss and provide advice and recommendations to the Department of Energy on major energy sector issues and initiatives.
- 5.1 Promote public awareness programmes on energy related gender issues.



2.0 PETROLEUM

POLICIES

- 2.1 Ensure a secure, reliable and cost efficient supply of petroleum products to Tuvalu including the outer islands.
- 2.2 Ensure that all petroleum products imported to Tuvalu conform to the Pacific wide accepted Australian Product Standard, AS 3570.
- 2.3 Promote the use of cleaner petroleum products.
- 2.4 Reduce dependence on petroleum products by actively encouraging fuel conservation and efficient end-use and by actively searching for, proving and utilising cost-effective alternatives as appropriate.



- 2.5 Ensure that all petroleum storage and handling facilities are built according to the "Pacific Islands Storage and Handling Standard (1994)."
- 2.6 Ensure that all primary fuel storage facilities have sufficient storage capacity to hold a minimum contingency reserve of two (2) months of all petroleum products under normal re-supply schedules. [This will apply to storage volumes in the outer islands and not only in Funafuti]
- 2.7 Minimise the risks associated with handling, storage and waste-disposal of petroleum products on the environment.
- 2.8 Ensure that all importers are responsible for collection, storing, transportation and disposal and/or shipping used/waste oil and petroleum products out of Tuvalu.
- 2.9 Ensure that proper training and awareness programmes are provided to all stakeholders and the general public on the risks associated with the use of petroleum products.



3.0 TRANSPORT

POLICIES

- 3.1 Ensure that the sea and land transport sectors promote fuel conservation and efficiency measures.
- 3.2 Promote public awareness programmes in the area of good transportation management practices including, vehicle tuning and fuel conservation measures.



4.0 ELECTRICITY

POLICIES

- 4.1 Ensure that the Tuvalu Electricity Corporation (TEC) operates as a commercial power utility and is able to provide a cost effective and reliable electricity supply to meet the electricity demand within Funafuti and the outer islands.
- 4.2 Ensure that all power supply systems in Tuvalu operate with strict adherence to established environmental guidelines.



5.0 RENEWABLE ENERGY

POLICIES

- 5.1 Promote and implement the use of appropriate, proven, affordable and cost effective renewable energy technologies both for urban and rural applications.
- 5.2 Establish and maintain a knowledgebase for all available renewable energy sources and technologies appropriate for Tuvalu.
- 5.3 Ensure Tuvalu's limited biomass, copra bio-fuel and other renewable energy resources are used efficiently, in an economically, environmentally and culturally sustainable manner.
- 5.4 Develop local expertise in the installation, operation, management and maintenance of technically and economically proven renewable energy systems.
- 5.5 Develop partnerships with potential foreign and local investors, donors and agencies in seeking funding sources for the development of renewable energy programmes in Tuvalu.



6.0 ENERGY CONSERVATION AND EFFICIENCY

POLICIES

- 6.1 Promote energy conservation and efficiency programmes in all sectors of the economy.
- 6.2 Ensure that energy conservation and efficiency measures are incorporated in TEC operations including generation, transmission and distribution systems.
- 6.3 Promote the use of renewable energy as a means to achieve energy efficiency where attainable.
- 6.4 Promote public awareness in conservation and efficiency measures.
- 6.5 Promote the use of energy saving measures including the use of efficient appliances and equipment.



7.0 ENVIRONMENT

POLICIES

- 7.1 Minimise the adverse impact of energy production, distribution and consumption on the environment, and ensure that energy resources are consumed in an equitable and environmentally sustainable manner.
- 7.2 Ensure the close co operation and co ordination of organisations in the energy sector within the framework of the National Environmental Management Strategy.
- 7.3 Promote Environment Impact Assessment (EIA) in all energy sector development.
- 7.4 Promote public awareness programmes on the impact of energy related pollution on the environment.
- 7.5 Ensure that all modes of transportation specifically land and sea that use fossil fuels have minimum detrimental impact on the environment.



STRUCTURE OF THE POLICY



Vision



"By the year 2020 guided by the principles in the "Te Kakeega II" and the "Malefatunga Declaration", Tuvalu shall attain a prosperous living standard that is fostered through an energy policy that promotes the provision of socially, financially, economically, technically, politically and environmentally sustainable energy systems and within the framework of the Tuvalu Initial National Communication under the United Nations Framework on Climate Change (Oct 1999)."

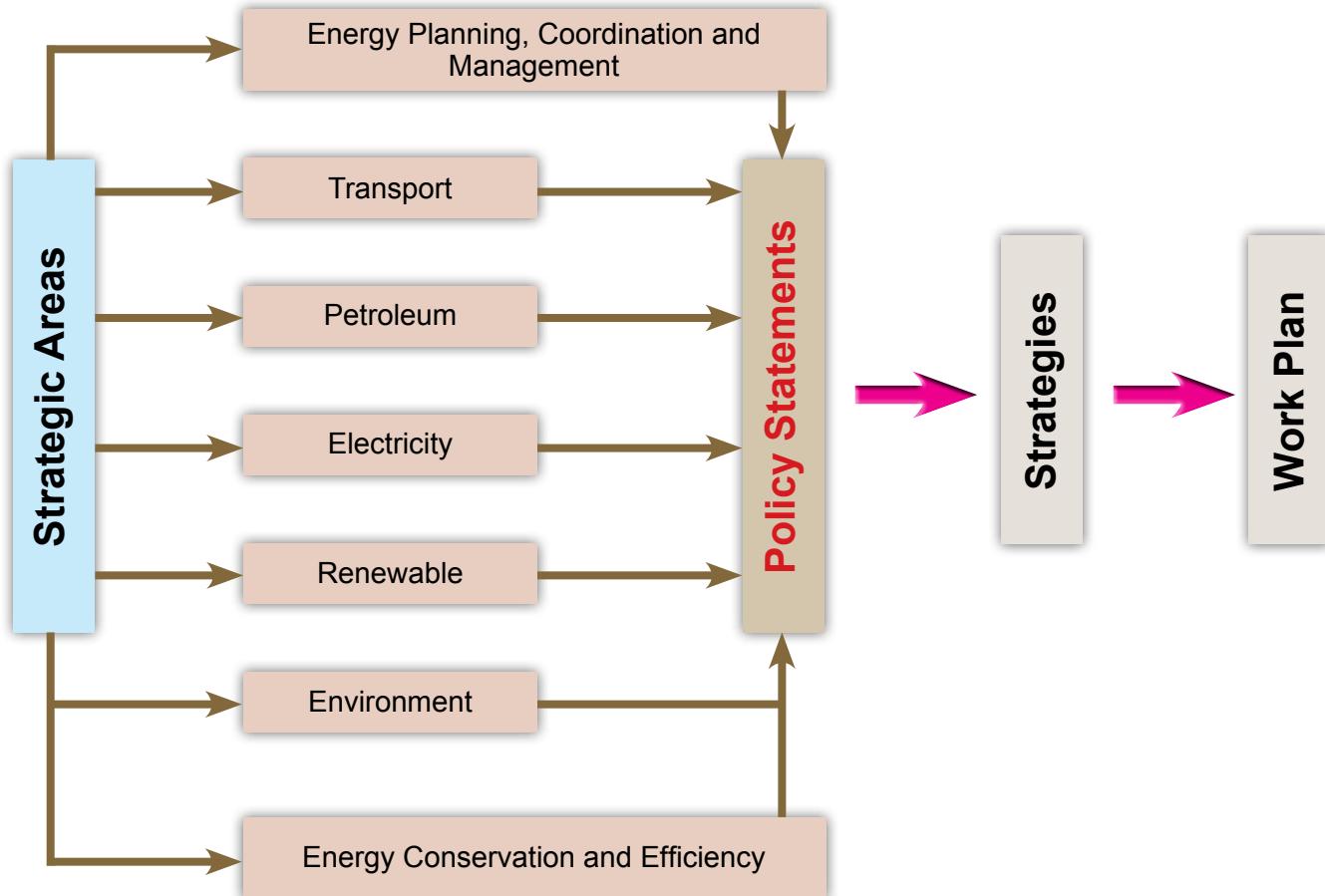


Goal



To improve the well-being of the Tuvalu people by promoting the use of its renewable energy resources and implementing cost effective, equitable, reliable, accessible, affordable, secure and environmentally sustainable energy systems.





ACRONYMS

ECC Energy Coordination Committee

EIA Environment Impact Assessment

GHG Greenhouse Gas

NGOs Non-Governmental Organisations

PICs Pacific Island Countries

SOPAC Pacific Islands Applied Geoscience Commission

TEC Tuvalu Electricity Corporation

TNEP Tuvalu National Energy Policy







Fakanofoga mo Enetise i Tuvalu





Mei 2009



PATI FAKATOMUA

Te Fakanofoga mo Enetise Atufenua Tuvalu (TNEP) tenei ko te taumafaiga muamua eiloa ne fai ke fakapatino kiei te fakasoaga mo te fakaagaga o te enetise i Tuvalu saukatoa. Te sui vave mai te olaga masani ki te ola ki tupe i Tuvalu i aso nei tela e pogai mai te siotasi o te lalolagi ko manakogina fakavave iei ke fakatoka ne fakanofoga ke agai atu ki te vave o mafuli'fuliga. Te TNEP ne fakatoka ona ko manakoga ke fakaagai atu, tela te autu o fakamoemoega iei ke tai faka'lei ki tino Tuvalu i te fakaaoga o enetise tutumau, kola e tau mamaa, fakatuagagina, mafai o 'togi kae se fakamasei ki te enivaelomene pela mo te oela.

TNEP ne fakatoka ne te Matagaluega o Enetise i te SOPAC mai fai'patiga i uekisopu e lua kola ne takitaki ne se Tino Fesoasoani mai te SOPAC mo tino ei fakaaoga i te eneise i luga i Funafuti i te 2005. Kae tenei ko oti ne tusi ko taimi tonu eiloa ki te foe ki luga o 'togi o oela mo te tumau o soloki aka te fakaaoga ne Tuvalu te oela. Te soloki aka o te manakoga i te lalolagi ke sukesuke ke fakaaoga enetise tutumau ko 'tau iei ke fakataua te tusi tenei. Te TNEP se fakatokaga e manakogina ke fakasoa kiei te 'togiga o'tou manakoga i loto pena foki mo fesoasoani mai tua ki luga i feitu tau enetise.

Ko tuku atu ne au te tusi tenei ki tino katoa.

Malu Kausea Natano

Minisita mo Public Utilities and Industries



FAKAPATINOGA

Te Minisita o Public Utilities and Industries mo tino pulepele I Matagaluega o Enetise e ma'nako o fakapatinogina te taumafaiga kaufakatasi o tino fakaaoga enetise, tino ne fai fautuaga mo niisi, kola ne fesoasoani tonu io me i niisi auala i te tuku fakatasiga o te tusi muamua tenei o Fakanofoga mo Enetise Atufenua Tuvalu. E se mafai o fakapatinogina a tino katoa ki olotou igoa, kae e fakaoko atu eiloa fakafetai kia latou katoa mo te loto fia'fia o kaufakatasi kae ga'lue malosi.

Kae uiiei, e fia fakapatinogina ne fakafetai ki a Mr. Anare Matakiviti, Energy Advisor mai te SOPAC mo tona fesoasoani I te faitega o te TNEP mai i fai'patiga ne fai i loto i te atufenua mai lalo o te Pacific Island Energy Policies and Strategic Plans (PIEPSAP) i te fakatokaga o fakanofoga. Tona tusaga tona iloa mo ana fautuaga katoa I mea katoa tau enetise ne taliagina fiafia malosi eiloa.

E lagona foki loto fia fakaoko atu fakafetai ki a Mr. Rupeni Mario mai te SOPAC foki mo te toe fakatokaga ke 'lomi te tusi tenei i mea tau Enetise i Tuvalu mo tausaga mai mua.



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KILOGA

"Ki te tausaga 2020 fakatakitaki ki fakavae o te Kakeega II" mo te "Malefatuga Declaration" ka oko Tuvalu ki se tulaga 'lei o te olaga e fakamafuagina ne se fakanofoga mo enetise tela e tulaga tonu mo feitu tau ki te olaga, tipe, maumea, galuega, politiki mo te 'lei o te enivaelomene kae tela e tautali ki fakatokaga i te Tuvalu Initial National Communication mai lalo o te United Nations Framework on Climate Change (Oct 1999).

TAPULAA

Ke soloki aka te 'lei mo tino Tuvalu I te fakamalosigina ke fakaaoga ana enetise tutumau kae ke fakagalue ke tau mamaa, fakasoagofie, fakatuagagina, fakamaugofie, mafai o 'togi, se fakalavelavegina kae 'lei ki te enivaelomene a te fakagaluega.



FAKATOMUAGA

Te National Energy Framework e fakasino iei a fakanofoga a te Malo mo palanega ke fakasoa kiei mea tau enetise i te sua 15 tausaga. A te framework e fakamatala iei a fakasoaga a te Malo ke fakataunu kiei te fakamoemoega o ana fakanofoga. I te taumafaiga tenei o fakatino se fakanofoga mo enetise, ne se puli i te Malo a te tusaga taaua o te enetise ki te fakataunuga o tapula katoa kola e soloki aka kiei te olaga lei-maumea mo ona tino katoa.



FAKANOFOGA TAAUA E MAFAUFAUGINA MO TUVALU



E tolu a fakanofoga fakamautu mo enetise e fakapatinogina i te Tuvalu National Energy Policy Framework, konei:

(i) Fakamauaga:

Mo Tuvalu a te fakamaua ke lava, kae ke 'togi mamaa foki te enetise mai te fakaaoga o enetise maua loto maise enetise tutumau kae ke se 'togi mafa mo te faka'kese o koga ke puke mai iei me loto me mai tua o te atufenua e taaua ke fakatumau kie'i te mafai o maua.

(ii) Fakaaogaaga:

Te fakaaoga faka'lei o te enetise ke se fakamaumau kae ke fakafoliki foki te sona fakaaoga valevale e taaua mo se atufenua tela e fakalagolago malosi ki enetise 'togi mai mai tua o te atufenua.

(iii) Te Enivaelomene:

Ona ko tulaga vaivai o te enivaelomene e fakatulaga maluga faeloa ne te Malo a feitu tau ki te envivaelomene. Tela ko taaua iei ko fakanofoga mo enetise ke taketi ki te fakafolikiga o pokotiaga kie'i i te fakamauaga o te enetise, te aveavega, fakamafuliga, fakaaogaaga mo te fakagaluega.

Te fakanofoga tenei e fakapatino iei me pefea ke saga tonu a te Malo o amanaia a mea e tolu ko fakamalosigina mai luga. 'Soko atu kie'i, ko fakapatino atu iei ne te fakanofoga tenei ne vaega e fitu ke fakatulaga kie'i te fakatokaga o fakanofoga.



1. PALANEGA O ENETISE, FAKASOAGA, MO TE FAKAGALUEGA

Te Malo e 'tau ke fakatulaga tonu mafai o palane, fakasoa kae fakagalue atiakega tau enetise. E isi se matagaluega o enetise ne fakatu i te Ministuli o Public Utilities and Industries, te galue 'lei o te matagaluega tenei e pogai malosi i maumea e fakaaoiga iei. Kae taaua atu, e manakogina ne te matagaluega ne fakanofoga ne fakatoka faka'lei ke fakatino iei – fakatulagaga, mo feitu tau ki tupe mo tulafono – ke fakatele kiei. E uke foki vaega o tino e fakaaoiga kae sokoga ki enetise tela e manakogina ei ke palane kae fakasoa faka'lei ne fakanofoga mo vaega kese'kese o te maumea mo manakoga o tino kola e pokotia iei.

2. MEA TAU OELA

Tuvalu e lasi te fakaaoiga o mea tau oela kola e 'togi mai tua. Kae manakogina ke fakatulaga maluga a te fakasoasoaga kiei i feitu katoa tau ki te maumea kae ke fakatulaga foki fakanofoga e tautonu kiei, pela mo taumafaiga ke fakaaoiga faka'lei mo feitu tai 'lasi atu pela mo te 'togi o te enetise mo lafoga ke iku ei ki te sagatonu atu o atafai te fakaaoagaaga a mea tau oela. Te mafai o fakatumau kae tausi faka'lei o se aofaki o mea tau oela manakogina i se 'togi 'lei se tulaga e taaua mo Tuvalu.

Te tele aka o te 'togi o fiuolo, mo te mafai o te 'togi o te oela o eva aka ki te US\$100 l te paelo l se taimi pili mai mua, a te aveavega o te fiuolo mo faifaiga kiei e 'tau ke toe fakavasega. E 'tau ke tuku atu te malosi katoa ke fakafoliki pokotiaga ki te maumea mai te masiki vave aka o 'togi tela 'tau ke aofia iei se Salasalaga ki niisi o vaega o enetise e mafai o fakamaua.

Te pokotiaga ma fai e ma'ligi mea tau oela kae 'sofi atu foki ki te enivaelomene e mafai o lasi, maise ki enivaelomene vaivai o fenua fai namo. Ona ko te pogai tenei, te ata pukepuke, te tausiga mo te fakaaoagaaga o mea tau oela se mataapu taaua mo Tuvalu.

Tela ko taaua iei ke fakatulaga tonu ne te malo se fakanofoga fakatino tela e tautonu kiei kae ke pena foki i feitu tau tupe ke fakatumau kiei te maua o mea tau o eola tela e fakataugina me 'togi mama, tela ko fakamalosigina foki iei te manakogina ke tausi kae fakaaoiga faka'lei, kae ke fakatoka foki iei ne puipuiga ke lava mo te tausiga o te enivaelomene o Tuvalu.



3. TRANSPORT

Te feitu ki te aveave o mea e lasi te fakaogagina iei te fiuolo ‘togi mai niisi atufenua. E fakamoemoegina ke penei, me i mea olo malaga i aso nei e fakaoga malosi a te fiuolo oela ‘togi mai niisi atufenua. I Tuvalu e silia atu i te 50% o mea tau oela e ‘togi mai niisi atufenua e fakaoga ki te olo malaga. E fakaasi manino iei, ke fakasoasoa ‘tau kae ke se sona fakaoga valevale te fiuolo mo te olo malaga. Kaati e ‘tau foki ke onoono ki vaega o mea mo olo malaga e ‘togi mai ki loto i te atufenua.

4. ITI

Te taaua ke fakatulaga ke tumau te maua o te iti i te atiakega o te olaga-maumea e se mafai o tuku ki lalo. Ko fakamaonigina te iti i te lalolagi katoa me fakaoso atiakega. Ona ko te tulaga tena tela ko fakataua kae fakatulaga maluga foki iei ke isi se iti i te laumua mo fenua foki i tua i te palane atiake a te malo (Te Kakeega II).

Te Kamupane Iti o Tuvalu (TEC), tela e a te Malo ke fakaoko atu ne ia te iti i Funafuti mo fenua foki mai tua, e manakogina ke ata fakamalosigina ke mafai o fakatuagagina ke fakatumau te maua o te iti. Feitu ke fakatulaga faka’lei te kamupane, fakalasi te atamai mo te mafai o tino ga’lue, te tausiga faka’lei o kope e ‘tau ke fakatulaga maluga i te palane mo polokalame a te TEC.

5. RENEWABLE ENERGY

Te sokoga o te enetise ki te enivaelomene ko ‘tau iei ke tai fakamalosi te taumafai ke fakaoga enetise tutumau e maua I Tuvalu. Te soloki aka o fakaoga enetise tutumau ke pulutaki mo niisi enetise i Tuvalu ka mafai o tai fakalava kiei te enetise manakogina ne Tuvalu. Atiakega ke fakamaua enetise tutumau pela mo iti la, matagi, fafie, niisi, se auala ‘lei ke fakalauefa kiei te enetise maua i Tuvalu. Tuvalu se tasi o fenua i PICs ne fakatuu tena kamupane iti la. Kae ona ko se te ‘lei o te fakagaluega mo niisi pogai tau kiei, ko te kamupane loa ko se fakagalue. Kae ona ko te Malo ko toe manako ke fakamalosi te fakaoga o enetise tutumau ko ‘tau ei ke toe fakatu te kamupane iti la.



6. CONSERVATION AND EFFICIENCY

Fakanofoga fakaagatonu ke fakaoga faka'lei enetise e 'sao ei tupe kae tau tonu foki mo te manakoga ke se fakamasei te enivaelomene. Te fanaka o te 'togi o te enetise fakatasi mo ona pokotiaga fakamasei ki te enevealomene i te fakamauaga mo tena fakaogaaga ko manakogina ei ne fakanofoga tautonu ke tausi kae ke se sona fakaoga enetise.

7. ENEVAELOMENE

Fakamaseiga e pogai mai te fakamauaga o te enetise, tona aveavega mo te fakaoga e mafai o fakatukaki ki atiakega e taumafaigina. Fakaasiga a saienitisi tau ki te soloki o 'vela te lalolagi mo mafuliga 'lasi ki tau masani e tusi me pogai mai se te 'lei o te fakamauaga, te aveavega mo te fakaogaaga o enetise. Kae e ui e se lasi te tusaga o Tuvalu i keesi fakamasei ki te vateatea (GHG), a fakamaseiga mai te soloki o 'vela te lalolagi mo te soki aka o te levolo o te tai se fakamatatakuga ki te mafai ne Tuvalu o sao mai ei. Tela ko 'tau iei ke fakaasi atu ne Tuvalu ki te lalolagi a tona sagatonu o fai tona tusaga o puipui te enevealomene.



TULAGA TAAUA KE FAKANOFOGINA



1.0 PALANEGA O MEA TAU ENETISE, FAKASOAGA, MO TE TAUSIGA

FAKANOFOGA

- 1.1 Fakatumau o fakamalosi te mafai o te Matagaluega o Enetise o palane, tausi, fakagalue a te Fakanofoga mo Enetise i Tuvalu.
- 1.2 Fakatulaga kae fakatumau a sokoga o te Matagaluega o Enetise mo matagaluega I te Malo aofia iei kamupane a te malo mo Kaupule, te Kamupane Iti (TEC), NGOs mo te vaega se aofia i te Malo kola e aofia I mea tau enetise.
- 1.3 Fakatumau te palane, fakasoaga mo te tausiga o mea tau enetise katoa ko te mea ke 'lei te faiga o ne ikuga ko te mea ke tai fakatuagagina te 'lei o te palanega, fakasoaga mo tona tausiga.
- 1.4 Fakatulaga se Komiti Fakasoa Enetise (ECC) tela kafai ko manakogina, ko fono o fai'pati kae fai ne fautuaga ki te Matagauega o Enetise i mataupu mo ne taumafaiga 'lasi e fakamoemoegina.
- 1.5 Usu ki te Kamupane Iti ke fai ne polokalame ke fakamalosi te iloa o tino I mea tau enetise.



2.0 MEA TAU OELA

FAKANOFOGA

- 2.1 Ke fakatuagagina te maua o mea tau oela 'togi mamaa ki Tuvalu mo ona fenua foki i tua.
- 2.2 Ke onoono ko mea tau oela katoa e 'togi mai ki Tuvalu e tulaga tonu mo manakoga o te Australian Product Standard, AS 3570 tela e lasi te fakaaoga l te Pasefika.
- 2.3 Fakamalosi ke fakaaoga mea tau oela kola e se lasi te fakalailai.
- 2.4 Fakafoliki te fakalagolago ki mea tau oela ki taumafaiga ke tausi kae fakaaoga faka'lei kae ke sagatonu o sukesuke, kae ke fakamaoni ke fakaaoga niisi mea foki kola e tau tonu kae 'togi mamaa.



- 2.5 Ke fakatulaga tonu te faitega o tane mo utu mo te tausiga ki manakoga o te “Pacific Islands Storage and Handling Standard (1994).”
- 2.6 Fakatulaga ke lava te aofaki o mea tau oela katoa e tausi mo se taki lua masina i va o utuga takitasi. (Ke pena foki te aofaki ke tausi i fenua i tua kae se ko Funafuti fuu)
- 2.7 Fakafoliki fakamaseiga ki te enevaealomene l te pukepuke, te utuga ke tausi mo te ‘ligi o ‘pei o mea tau oela katoa.
- 2.8 Ko tino katoa e ‘togi mai l mea tau oela ke fakatuagagina ke puke, tausi, ave kae ke ‘pei foki ne latou io me ke ave keatea mai Tuvalu i vakamutu a otaota oela mo mea tau oela katoa.
- 2.9 Ke fai ne akoakoga fakamasani kae fakalasi te iloa ki tino ga’lue mo tino katoa l faKalavelave mo fakamatakuga ma fakaaoga mea tau oela.



3.0 AVEAVEGA

FAKANOFOGA

3.1 Ke fakamaonia ko te aveavega l te tai me l fenua e tausi ka atafai.

3.2 Fakamalosi polokalame fakailoa ki tino l te aveavega faka'lei mo te tausiga ke aofia iei, te tiuniga o mea fakatele'tele mo te fuafua 'tau o te fakaoga o fiuolo.



4.0 Iti

FAKANOFOGA

- 4.1 Ke fakatulaga te Kamupane Iti (TEC) ke fakapisini te iti kae ke fakatumau te iti ki se ‘togi mamaa mo manakoga i Funafuti mo fenua i tua
- 4.2 Fakatulaga ko te fakamauaga o te iti saukatoa ke tautali tonu ki fakanofoga fakatino mo te tausiga o te enevaelomene.



5.0 ENETISE TUTUMAU

FAKANOFOGA

- 5.1 Fakamalosi ke fakaaoga i te laumua mo fenua i tua a poto tau enetise tutumau kola e tau tonu, ko fakamaonia, kae tau mamaa te 'togi.
- 5.2 Fakatulaga kae fakatumau te iloa mo poto foki e manakogina i enetise tutumau katoa e mafai o tagolimagina kae tautonu foki ki Tuvalu.
- 5.3 Onoono ke fakaaoga faka'lei a otaota, te popo mo fafie mo niisi mea e maua iei te enetise tutumau ke fetau i tonu mo te maumea, te enevaelomene mo te olaga masani
- 5.4 Atiake te poto o tino ke iloa o fakatuu, fakagalue, tausi kae faite a mea fakamaua enetise tutumau kola ko fakamaonigina kae tau mamaa foki.
- 5.5 Fakatulaga ke ga'lue fakatasi kau o iti mai tua o te atufenua mo loto, mo fakapotopotoga fesoasoani tupe i te 'salaga o ne tupe mo fakatulaga se polokalame tau enetise tutumau i Tuvalu.



6.0 POLOKALAME PUIPUI KAE FAKAAOGA

FAKANOFOGA

- 6.1 Fakamalosi polokalame puipui kae fakaaoga faka'lei enetise l tulaga katoa tau ki te mamea.
- 6.2 Onono ko te puipuiga mo te fakaaogaaga faka'lei o enetise ke fakagalue i te TEC, aofia iei ana mesini iti, te fakaokoga mo te fakasoaga.
- 6.3 Fakamalosi ke fakaaoga enetise tutumau ke faka'lei kiei tulaga o te enetise manafai e mafai
- 6.4 Fakalasi te iloa o tino l te puipui mo te fakasoa faka'lei o enetise.
- 6.5 Fakamalosi ke fakaaoga mea kola e foliki te iti e fakaaoga kiei, pela mea e fakaola ki te iti mo mea faigaluega.



7.0 ENEVAELOMENE

FAKANOFOGA

- 7.1 Fakafoliki pokotiaga fakamasei ki te enevaelomene mai te fakamauaga, tufatufaga mo te fakaogaaga o enetise, kae fakatulaga foki ke fua'tau te fakaoga o enetise ke se fakamasei ki te enevaelomene.
- 7.2 Fakatulaga ke fakatau fesoasoani a kau o te enetise o ga'lue fakatasi ki fakatulagaga i te National Environmental Management Strategy.
- 7.3 Fakamalosi ke fai a lloiloga ki te Pokotia o te Enevaelomene (EIA) i so se atiakega tau ki enetise efai.
- 7.4 Fakamalosi polokalame fakailoa ki tino pokotiaga fakamasei o te enetise o fakalailai te enevaelomene.
- 7.5 Fakatulaga ke fakafoliki te fakamaseiga ki te enevaelomene mai mea e aveave kiei oela l lug a l fenua mo te tai.



FAKATULAGAGA O TE FAKANOFOGA



Kilogā



"Ki te tausaga 2020 fakatakitaki ki fakavae o te Kakeega II" mo te "Malefatuga Declaration" ka oko Tuvalu ki se tulaga 'lei o te olaga e fakamafuagina ne se fakanofoga mo enetise tela e tulaga tonu mo feitu tau ki te olaga, tipe, maumea, galuega, politiki mo te 'lei o te enivaelomene kae tela e tautali ki fakatokaga i te Tuvalu Initial National Communication mai lalo o te United Nations Framework on Climate Change (Oct 1999)."

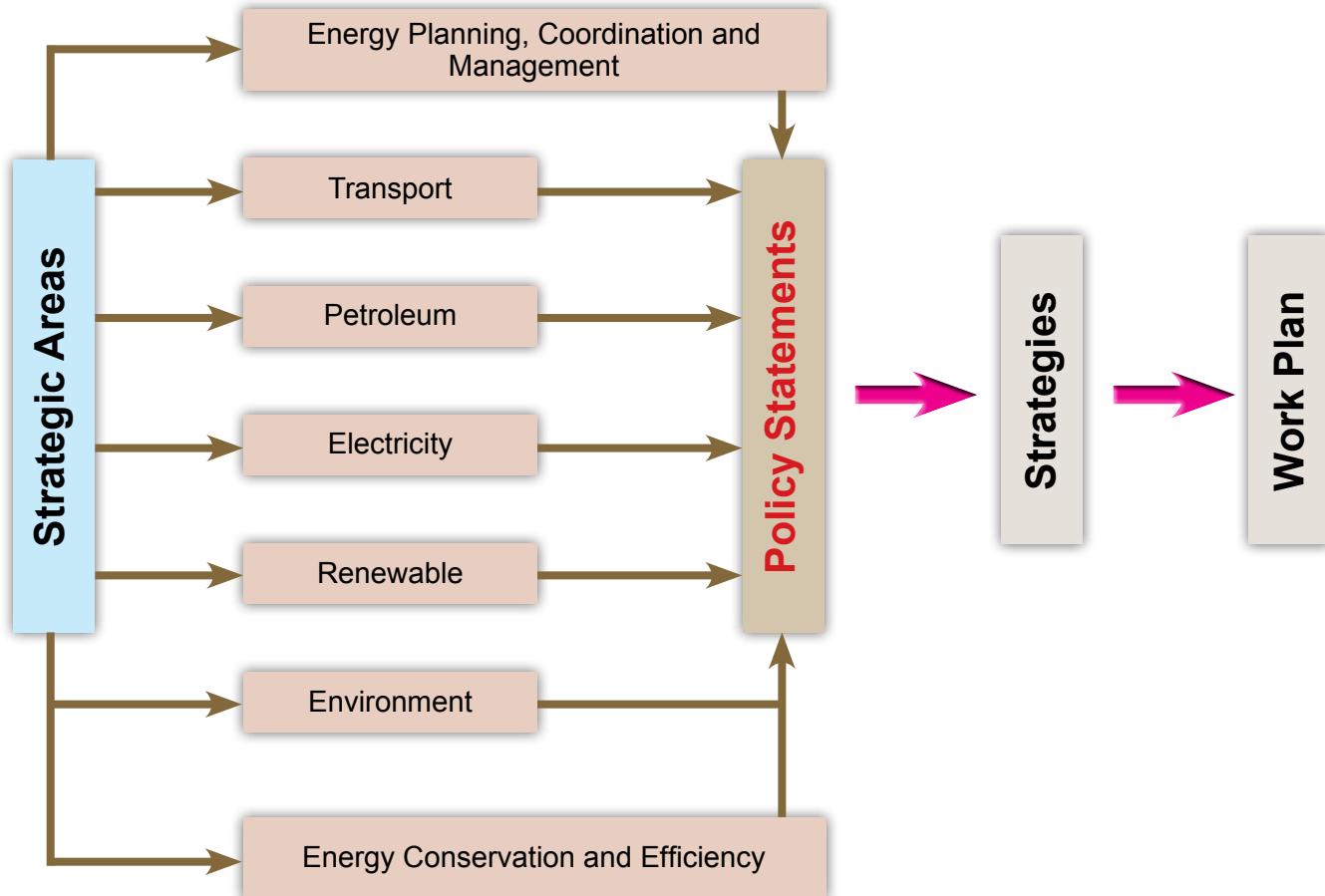


Tapulaa



Ke soloki aka te 'lei mo tino Tuvalu I te fakamalosigina ke fakaaoga ana enetise tutumau kae ke fakagalue ke tau mamaa, fakasoagofie, fakatuagagina, fakamauagofie, mafai o 'togi, se fakalavelavegina kae 'lei ki te enivaelomene a te fakagaluega.





FAKA'LOAGA

ECC Komiti Fakasoa Enetise
EIA Iloiloga Pokotiaga ki te Enivaelomene

GHG Keesi I te Vateatea
NGOs Fakapotopotoga se aofia I te Malo
PICs Fenua i te Pasefika

SOPAC Pacific Islands Applied Geoscience Commission
TEC Kamupane Iti Tuvalu
TNEP Fakanofoga mo Enetise I Tuvalu



