



TERMS OF REFERENCE

DEVELOPMENT OF AN ENERGY CONSERVATION POLICY AND IMPLEMENTATION STRATEGY FOR THE TURKS AND CAICOS ISLANDS

1. BACKGROUND

The Turks and Caicos Islands has very few natural resources other than their beaches and surrounding coral reefs. Revenue from tourism has become the mainstay of the economy, as tourist arrivals have increased considerably from 13,343 in 1982 to over 350,000 in 2008. Due to the rapid expansion in the tourism and offshore financial services sectors the economy of the Turks and Caicos Islands grew strongly in the 1990s, reaching a peak of about 13 per cent in 1995. While the rate of growth has since slowed, it has remained quite high, averaging 8 per cent during the last few years.

The successful growth of a new tourist industry, heightened in 2005. It has exponentially increased the demand for power as all sectors of the economy have surged with the building boom. To meet the growing energy demands for power, transport and other uses, the TCI is progressively growing heavily dependent on fossil fuels. It is estimated that the reliance on Light Fuel Oil, specifically number-2 diesel in the Turks and Caicos Islands is greater than 90%. The volatility of the cost of oil reflects deeply into the TCI trade imbalances, government budgets and the incomes of energy consumers.

The average production cost of electrical energy per kWh in the Turks and Caicos Islands is one of the highest in the region, approximately 0.28 USD per kWh. This cost will remain comparatively higher than our regional counterparts due to two main factors; the complicated fuel supply chain and its inherent limitations and the lack of economies of scale due to the small nature of the utilities operating in the Turks and Caicos Islands. The production cost for diesel electric power in the Caribbean is 0.10 USD- 0.15 USD per kWh, and in the Pacific approximately 0.20 USD per kWh. With the recent rise in fuel costs to over USD 100-140 per barrel, the Turks and Caicos Islands Government is compelled to explore alternative sources of energy which are economically viable, technically reliable, safe and reduce dependency on external forces.

Consequently, energy efficiency and energy conservation measures are viable alternatives for the TCI, thereby creating economic savings while reducing GHG emissions.

“Sustainable energy is not only an environmental necessity; it also makes economic and social sense.”

If the Turks and Caicos Islands is to attain its vision of a cleaner cheaper path to energy security through reduction of its dependence on fossil fuel, then there is need for a major paradigm shift by all of the stakeholders. The Government must therefore create the environment to encourage and promote such change in attitudes, as well as technologies that support energy efficiency, energy conservation and renewable electric energy generation. The obligation is on the Government, in consultation and collaboration with all the stakeholders to the development and implementation of an appropriate energy policy, and the establishment of effective legislative framework, processes and procedures that will foster and propel the shift towards energy independence.

The Energy Conservation policy document and supporting implementation Strategy is critical to this paradigm shift as it will outline the Government’s vision and plan for the next 5 -10 years and the actions the Government will be taking towards achieving its goal.

2. PURPOSE OF THE PROJECT

To develop a National Energy Conservation Policy and Implementation Strategy for the Turks and Caicos Islands. This project focuses on reducing the island's dependence on fossil fuels, increasing energy-efficiency and energy conservation by promoting energy efficient technologies and usage. The Policy document will be the first step towards aligning Government’s Policies, legislative procedures and guidelines in a systematic approach for fostering wide public support. It is expected that more sustainable patterns of power consumption and production would be established for the benefit of the TCI’s population, the Turks and Caicos Government (TCIG) and business community.

3. WORK ASSIGNMENT

3.1. Conduct National Energy Audit. Comprising but not limited to:

- 3.1.1. Assessment based upon a representative sample of activities of the current uses and future energy needs, including but not limited to:
 - 3.1.1.1. Public buildings
 - 3.1.1.2. Public serving facilities
 - 3.1.1.3. Hotels/Condominium
 - 3.1.1.4. Housing projects
 - 3.1.1.5. Water production (desalination plants)
 - 3.1.1.6. Transport
 - 3.1.1.7. Utilities (excluding power production)

- 3.1.1.8. Industry
- 3.1.1.9. Fish processing plants
- 3.1.2. Power production. Review the efficiency of the current Power production and distribution in the entire TCI
- 3.1.3. Establish the extent of Demand Side Management initiatives if any in the utility industry
- 3.1.4. Carry out a preliminary survey of the willingness of the community/society to introduce/pay for energy efficient equipment.
- 3.1.5. Carry out a preliminary assessment of the potentialities for power production by Solar Photovoltaic, Wind and other renewable forms of energy in the TCI
- 3.1.6. Assess the feasibility of Renewable Energy Independent Power Providers and the impacts on the incumbent Utilities

3.2. Review current policies and laws to obtain the necessary background. These laws and policies should include but not limited to:

- 3.2.1. Electricity Ordinance
- 3.2.2. Agreements between the TCIG and the Power Companies: Provo Power Company and Turks and Caicos Utilities
- 3.2.3. Custom duties/import restrictions
- 3.2.4. Building code and Development Manual (Department of Planning)
- 3.2.5. TCI Environment Charter and Strategy for Action
- 3.2.6. Draft TCI Climate Change Policy
- 3.2.7. Current and future levels of diesel fuel supplies to ensure security and reliability.
- 3.2.8. Energy Policies of Neighbouring Countries throughout the region (including but not limited to).
 - 3.2.8.1. St. Lucia
 - 3.2.8.2. OECS
 - 3.2.8.3. Montserrat
 - 3.2.8.4. Anguilla
 - 3.2.8.5. St. Vincent
 - 3.2.8.6. CARICOM
 - 3.2.8.7. Cuba

3.3. Assessment of the availability of energy efficient appliances and equipment and equipment for sustainable energy production in the TCI and neighbouring markets (USA and the Caribbean), including but not limited to:

- 3.3.1.1. Energy efficient lighting systems
- 3.3.1.2. Energy efficient electrical appliances
- 3.3.1.3. Water saving appliances
- 3.3.1.4. Energy efficient water heaters (thermo solar)
- 3.3.1.5. Energy efficient air conditioning systems and ventilation
- 3.3.1.6. Energy efficient cooling and freezing systems
- 3.3.1.7. Energy efficient vehicles (excluding ethanol)
- 3.3.1.8. Solar Photovoltaic
- 3.3.1.9. Wind turbines
- 3.3.1.10. Other sustainable energy generators

3.4. Conduct a workshop with Energy Providers to better assess the current situation of the Power Production in the TCI

3.5. Conduct a workshop with equipment and appliance retailers to better assess the situation of the market in the TCI

3.6. Draft and submit a report to the DECR of the results of the activities 3.1 to 3.5

3.7. Draft and submit the TCI Energy Conservation Policy and Implementation Strategy to include but not limited to:

3.7.1. Broad policy goals in compliance with international target/goals such as Climate Change, Environment Charter, UN 2020 goals and others.

3.7.2. Comprehensive action plan for the implementation of the TCI Energy Conservation Policy/Strategy containing specific recommendations for increasing the energy efficiency of:

- 3.7.2.1. Power production and distribution in the TCI.
- 3.7.2.2. Water production by desalination in the TCI, and water uses.
- 3.7.2.3. Public buildings
- 3.7.2.4. Public serving facilities
- 3.7.2.5. Hotels/Condominium
- 3.7.2.6. Housing projects
- 3.7.2.7. Electric appliances
- 3.7.2.8. Lighting

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- 3.7.2.9. Water heating
- 3.7.2.10. Air conditioning and ventilation
- 3.7.2.11. Cooling and freezing
- 3.7.2.12. Utilities (excluding power production)
- 3.7.2.13. Transportation
- 3.7.2.14. Industry
- 3.7.2.15. Fish processing plants

The action plan should also include:

- Activities
- Outputs
- Time lines
- Estimated costs
- Responsibility

- 3.7.3. Draft Terms of Reference for a feasibility study for power production by Solar Photovoltaic and Wind in the TCI
- 3.7.4. Specify measures recommended to the TCIG to encourage the introduction in the TCI of energy efficient equipment, such as waiving duties, subsidizing certain uses, appropriate disposal methods for redundant equipment, etc. A prioritized list of the different energy efficient equipment recommended to be introduced should be attached indicating potential suppliers either in the TCI and neighbouring markets (USA and the Caribbean)
- 3.7.5. Energy and water conservation campaign, which should include encouraging of the use of the aforementioned energy efficient equipment and also other simple measures to conserve energy and water
- 3.7.6. Recommended amendments to each of TCI policies and laws reviewed. This should consider regulations for encouraging power generation from alternative sources, with appropriate EIA built in
- 3.7.7. Advice on how TCIG can improve engagement on energy policy matters and emerging trends at the local and regional level
- 3.7.8. Provide advice on incentive schemes such as grants, feed-in tariffs, mandatory codes and fiscal measures to promote and encourage

renewable energy electricity generation, energy efficiency and energy conservation and usage

- 3.7.9. Assess the relative viability of the various supply options and consider what contribution each could make in the move towards a diversified energy supply and improved energy security

3.8. Workshop on Draft Energy Conservation Policy and Implementation Strategy

- 3.8.1. Conduct one workshop in each of the following islands: Providenciales, Grand Turk, North and South Caicos, to discuss the Draft TCI Energy Conservation Policy/Strategy
- 3.8.2. Conduct one workshop with the Energy Council and Senior Decision makers, to discuss the Draft TCI Energy Conservation Policy/Strategy

3.9. Review and finalization of Draft Policy Document

- 3.9.1. Review and finalization the TCI Energy Conservation Policy/Strategy
- 3.9.2. Submit the TCI Energy Conservation Policy/Strategy for approval to the Energy Council and to the Advisory Council

3.10. Printing, Publication and Dissemination of the TCI Energy Conservation Policy and Implementation Strategy

- 3.10.1. The consultant will print and bind twenty copies of the final policy document and submit to the relevant Government Departments and energy providers.
- 3.10.2. The consultant will produce 50 copies of the final report on Compact Disk to be disseminated to all public libraries and District Commissioner's Offices throughout the TCI.
- 3.10.3. The consultant will create, and the DECR would print and disseminate three series of 500 pamphlets to educate the general public on the energy policy
- 3.10.4. The consultant will draft the concept of an infomercial to be played on local television stations to educate the general public on the energy policy.

3.10.5. Final report uploaded to www.environment.tc

Note: The TCIG will own the copyright of all the documents produced by this consultancy

4. RESULTS AND DELIVERABLES

- 4.1. Stakeholder workshops as outlined in 3.4 and 3.5
- 4.2. Assessment report of current energy usage and future energy needs for the Turks and Caicos Islands as outlined at 3.1
- 4.3. Draft and submit a report to the DECR of the results of the activities 3.1 to 3.5
- 4.4. Develop Draft Energy Conservation Policy and Strategy for the Turks and Caicos Islands as outlined at 3.7
- 4.5. Public Consultation on Draft Energy Policy as outlined 3.8
- 4.6. Final Energy Conservation Policy and Strategy as outlined at 3.9
- 4.7. Dissemination of the TCI Energy Conservation Policy/Strategy as outlined at 3.10

Interested parties are invited to send a letter of interest by Email to (energypolicytci@yahoo.com) addressed to:

Director
Department of Environment and Coastal Resources
Lower Bight Road
Providenciales
Turks and Caicos Islands
BWI

Department of Environment
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Turks & Caicos Islands

Parties expressing interest will be forwarded the DECR Technical Proposal Tender Form for completion.

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