



Marshalls Energy Company (MEC), Inc.

**Comprehensive Recovery Plan
SUMMARY DOCUMENT**

FY2010-2012

Marshall's Energy Company (MEC), Inc.

COMPREHENSIVE RECOVERY PLAN FY2010-2012

A Summary of Goals, Objectives and Actions

Background and Reform Resolution

Whereas the Republic of the Marshall Islands (RMI) experienced an unprecedented energy crisis in 2008, which was exacerbated by financial and operational challenges in the Marshall's Energy Company (MEC), and which had severe impacts on the budget, economy and people of the RMI; and

Whereas despite stabilization in MEC's operations in 2009, the financial and operational integrity of the company remains at risk; and

Whereas the MEC now continues to represent a major risk to the national budget, fiscal system and overall economy; and

Whereas MEC and the energy sector at large have been identified by the RMI as priority areas for national reform; and

Whereas the RMI Combined Utilities Board, the Asian Development Bank, the World Bank, the Pacific Power Association, the RMI National Energy Policy and Action Plan, and other sources have put forth practical and achievable policy, governance, technical, and operational reform recommendations for MEC and the energy sector;

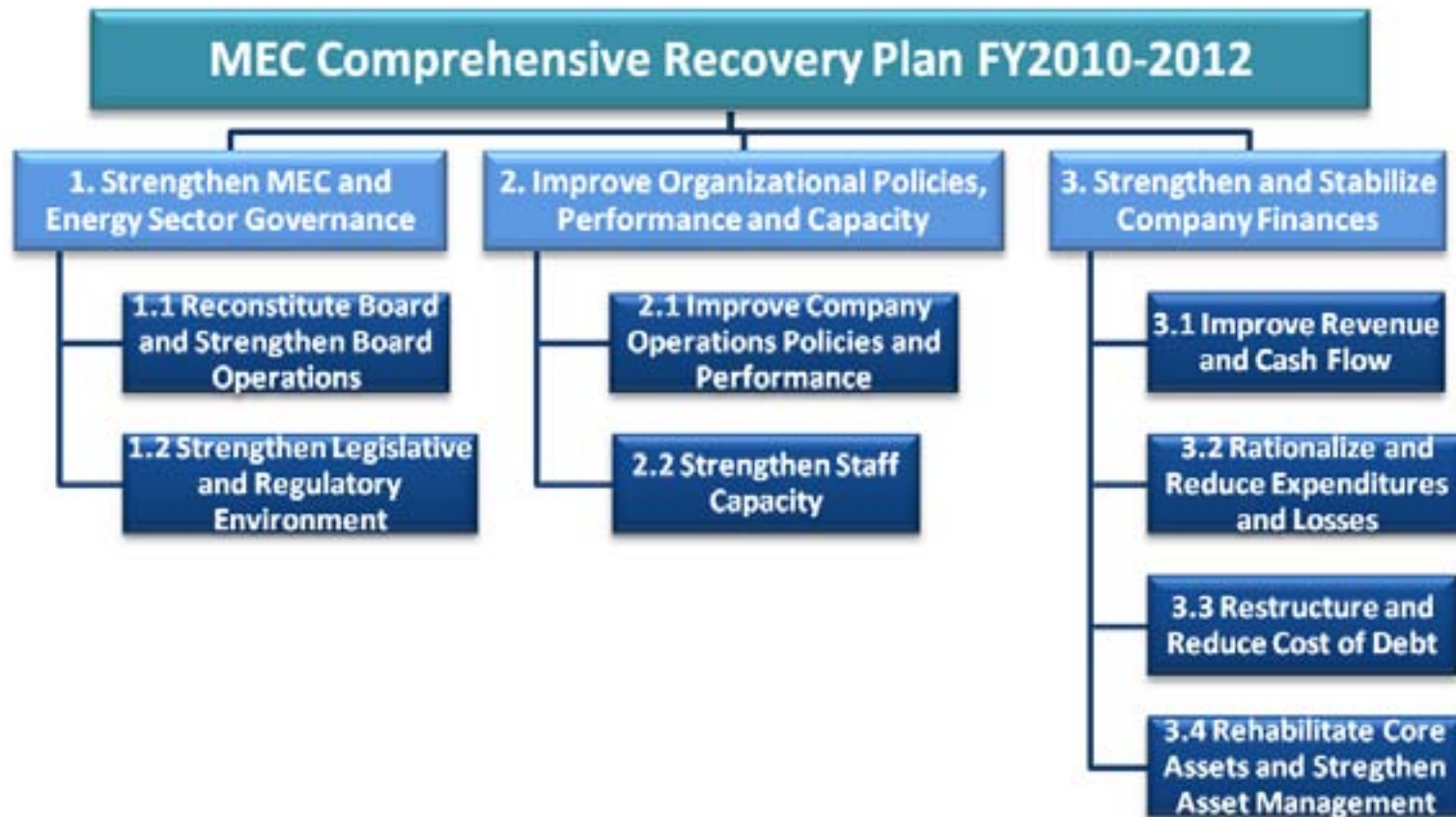
Now, therefore, the Board of Directors and Management of MEC hereby resolve to pursue a new Comprehensive Recovery Plan, with the following reform objectives and actions, to their best ability and within available resources;

These objectives and actions and the Comprehensive Recover Plan as a whole shall, furthermore:

- a) Support and form a key component of the broader national Comprehensive Adjustment Program (CAP) under development by the RMI;
- b) Be implemented over the three year FY2010 through FY2012 period;
- c) Serve the overarching aim of stabilizing MEC's operations and restoring the utility's reputation as a reliable and efficient supplier of energy;
- d) Build upon the earlier recovery plan developed in 2006 as a result of the performance review undertaken in that year with support from the Office of Insular Affairs, US Department of the Interior; and
- e) Evolve and expand as conditions and circumstances require.

The Comprehensive Recovery Plan: Goals, Objectives, Actions and Timeframe

MEC's Comprehensive Recovery Plan is simplified in the following diagram, with detailed Goals, Objectives and Actions following:



Goal 1. Strengthen MEC and Energy Sector Governance

Objective 1.1 Reconstitute Board and Strengthen Board Operations

Actions, Details and Timeframe:

1.1.1 Reduce Board membership from 10 to 7	This objective has been completed. Right sizing of the Board membership was necessary to provide practicality and efficiency for the Board of Directors to function properly. With a 7 member Board it only requires 4 members to be present to have a quorum.	FY2010 (completed)
1.1.2 Recompose Board membership to strengthen capacity and effectiveness	The role of the Board of Directors as an oversight authority to provide policy and management guidance as well as representation of various sectors within the community is imperative for the well being of the Utility Sectors. As part of effective governance, Board members must be well oriented of their fiduciary roles and responsibilities in order to provide effective policy and management guidance throughout their tenure as members. A Board of Directors' governance manual will be formulated and an orientation period for each members and subsequent members mandatory.	FY2010
1.1.3 Develop and adopt new policies to strengthen Board meetings and procedures	Board of Directors' governance manual will be formulated to clearly define the roles and responsibilities of the Board of Director to ensure proper appropriation of Company resources to help facilitate the function of the Board of Directors.	FY2010-2011
1.1.4 Adopt new corporate and Board bylaws	A review and update of the Corporate and Board of Directors' Bylaws is essential in order to take into account current Board and Management structures and the contemporary circumstances the Utility Sectors are confronting.	FY2010
1.1.5 Develop appropriate Board orientation and training program	Refer to objective 1.1.2	FY2010-2011
1.1.6 Develop new company policies handbook	The company's policies handbooks for each Department are essential as proper guides for internal control to facilitate effective management. The handbooks will entail specific terms of reference, vis-à-vis rules and guidelines, standard operating procedures and other guiding mechanisms deemed necessary.	FY2011

Objective 1.2 Strengthen Legislative and Regulatory Environment for Energy Sector

Actions, Details and Timeframe:

1.2.1 Adopt internal policies and regulations to clearly delineate responsibilities and structures for energy supply distribution and their management and to better define performance standards and strengthen overall governance regime including strengthening public reporting requirements	This is more or less an internal arrangement and setup needs to be done vis-à-vis the responsibilities and structures for the overall supply of energy. Develop internal policies and regulations defining the roles and responsibilities of the overall supply of energy structures to ensure processes are efficient and streamlined. Incorporate public reporting to support management accountability.	FY2010-2011
1.2.2 Develop inspection and certification mechanisms including associated legal tools for inspection and certification of fuel storage handling and safety procedures and licensing	This effort will have to be coordinated between the MEC Legal Counsel and the Safety Control Officer and the National and Local Authorities.	FY2011-2012

Goal 2. Improve Organizational Policies, Performance and Capacity

Objective 2.1 Improve Company Operations Policies and Performance

Actions, Details and Timeframe:

2.1.1 Develop and adopt new procurement policy	The Board of Directors formally adopted the RMI Government's Procurement code on October 15, 2009, as a guide for all procurement processes. To ensure proper and effective implementation of such a code, The Board of Directors established the Procurement Department and created the post of the Procurement Manager. As part of the new procurement process, all acquisition of supplies and services must be price quoted with three competitive bidders. The company has already realized significant returns on this investment with a one-time saving of \$90K through competitive bidding. On a daily basis, the company may realize potential savings of a \$500 to a \$1000 per day through the bidding process. For an Utility this size, a potential annual saving between \$182K to \$365K is significant which could positively affect the bottom line.	FY2010 (completed)
2.1.2 Develop and adopt new personnel policy	The Personnel Policy Manual will incorporate MEC's Corporate Policies and Procedures, with the aim and objective of providing all employees with a clear interpretation of the company's procedural guidelines. The scope of the Manual will incorporate policies relating to personnel, staff training and development, occupational health and safety and vehicles. The content of this Policy Manual will provide positive guidelines in determining correct decision-making and will clearly define what rights, privileges and entitlements each employee has within the company. It is envisaged that new policies and procedures will be added from time-to-time with Management and the MEC Board's approval.	FY2010
2.1.3 Develop and adopt new financial management and reporting policies	The new financial management and reporting template will be produced on monthly basis from each of the Departments. The reporting templates will provide critical statistical data for management to make informed business and management decisions for each respective Department.	FY2010

	These same reports will be the basis for management's monthly report to the board of directors to facilitate policy and management guidance to management from time-to-time. Proposal to provide RUS with financial reporting on a quarterly basis.	
2.1.4 Develop and adopt new vehicle use policy	The Vehicle Policy will provide comprehensive policy statements governing the operations, maintenance, procurement and financial control of the MEC vehicle fleet. The cost of vehicles represents a very large capital investment to MEC such that the proper care and maintenance of all vehicles is essential, in order to protect the Company's investment, the safety of drivers and passengers, the company's public image and to avoid unnecessary expenditure. To achieve these aims, the Vehicle Policy will provide a system for controlling vehicle use in order to maximize vehicle service life and to reduce associated maintenance costs to a minimum. The goal of the new vehicle use policy should result in an initial cost saving of 5% which equates to approximately 65K per year. Further assessment of the vehicle policy will need to be performed on an annual basis to identify additional cost saving opportunities.	FY2011
2.1.5 Develop and adopt other operational policies as deemed necessary by the Board and management	Refer to objective 2.1.2	FY2010-2012
2.1.6 Develop and adopt a new Performance-based Management System with Key Performance Indicators and periodic reporting and evaluation processes	The purpose of a Performance Based Management system (PBM) is to give an entity, such as MEC, a management tool to plan and measure corporate as well as unit performance. As well, it helps to link work plans with actual financial envelopes that helps allocate resources more efficiently in the planning stage. It also allows for measurements to be introduced so that organizational and financial performance can be measured on a timely basis, such as quarterly and annually. And, it links organizational performance along with financial performance on an ongoing basis to improve corporate and unit efficiency and effectiveness. A PBM system for the MEC should have the following components. The	FY2011

	team would use any existing plans and strategies and work with MEC management and staff to apply planning information in a useful way. Corporate Mandate and Mission Strategic Goals Medium Term Objectives and Expected Results (Outcomes) that result from the Strategic Goals A set of indicators that will measure corporate performance to achieve the objectives Cost activities that MEC units plan to achieve the Objectives and accompanying Outputs to measure the progress of implementing activities. Review of the above data to identify progress, issues confronted and potential next steps.	
2.1.7 Produce annual MEC Company Reports, including annual financial, technical and operational information	The annual report which include financial, technical and operational information is being developed and will be a requirement starting this FY 2010. The annual report will articulate the accurate financial standing of the company and data needed on the technical and operational aspects of the business, in order to make informed and sound management decisions year-in and year-out. The annual report will be the main tool for the Board of Directors to provide sound and informed management guidance. Proposal to include RUS in the annual MEC Company report distribution upon publication.	FY2010 onwards

Objective 2.2 Strengthen Staff Capacity**Actions, Details and Timeframe:**

2.2.1 Develop and adopt new MEC Staff Capacity Development Plan	The standardization of an employee evaluation process. The standardization of a training program for each of the Departments.	FY2010
2.2.2 Train Government, MEC and private sector representatives in energy auditing and energy management techniques	Improved energy efficiency represents the most cost effective option for reducing the impacts of global warming and the need for sustainable development. This initiative will provide training of selected Government, MEC and the private sector personnel in demand side management strategies, with the aim of increasing the efficiency of energy utilization, with resultant benefits to the customer, utility and society as a whole.	FY2010-2011

Goal 3. Strengthen and Stabilize Company Finances

Objective 3.1 Improve Revenue and Cash Flow

Actions, Details and Timeframe:

3.1.1 Develop and adopt full cost recovery tariff template and appropriate pricing structures for all goods and services	The new tariff template for electricity usage has been implemented to achieve full cost recovery. The new pricing structure went into effect as of February 1, 2010. The increase in tariff is expected to net an additional \$3.2M in revenue per annum to make the power generation/distribution part of the business break-even financially. MEC projections indicate additional revenue flow to be recognized as early as Fiscal Year 2011 in the amount of approximately \$700K. Current rates effective February 1st 2010 are as follows: Government – 36.8 cents Commercial – 35.8 cents Residential – 29.8 cents Lifeline – 27.8 cents The current rates are based on the Diesel Price per Barrel (MOPS) of \$85.00. Rates are subject to change (increase/decrease) by MEC management in compliance with the new tariff template approved by the RMI government. The fuel sales operation is one of only two profit making ventures for the company. In August 2009, a new pricing strategy was adopted and implemented to ensure full cost recovery for the operation and a sustainable return on investment. The propane/LPG sales operation is the other profit making venture of the company. Similar pricing strategy was also adopted to ensure business sustainability and a reasonable return on investment.	FY2010 Ongoing
3.1.2 Adopt an appropriate lifeline tariff that genuinely	Part of a tariff study, a benchmark will be established to	FY2011

assists the bottom 20 percent of residential accounts (based on household consumption levels)	accurately develop a lifeline tariff which will assist the bottom 20 percent of residential accounts so they can continue to have access to electricity while being able to afford it. With the implementation of the pre-paid metering program, the lifeline tariff will begin to phase out and no longer be applicable.	
3.1.3 Eliminate all cross-subsidization between services	The comprehensive recovery plan warranted a total cessation of cross-subsidization between all services within MEC. The cross-subsidization between the Fuel sales, LPG sales and Power Generation/Distribution services have been the model on which the company has based its operations on for over 20 years. Cross-subsidization between services only contributes to inefficiencies, un-competitiveness and sometimes ill-management. With the initiative of other CRP objections such as the system loss quantification and index engine, expectation is to eliminate cross-subsidization between services within one (1) calendar year. The objective to eliminate all cross-subsidization should not impact the electricity tariff rates due to the fluctuation of diesel price per barrel.	FY2011
3.1.4 Strengthen collections on outstanding accounts receivables	Effective as of October 2009, MEC and the Bank of the Marshall Islands (BOMI) entered into a debt collection agreement. BOMI is to collect all accounts receivable that are a 90 day outstanding or beyond. The total accounts receivable as of September 30, 2009 is \$5.3M, of which \$3.2M is greater than 90 days aged. The disconnection policy is being fiercely enforced with zero tolerance. The credit terms for all customers has been standardized to a 30 day credit term (changed from a 60 day credit term for all residential customers). Customers are to pay their electricity bills	FY2010 (Ongoing)

	within 30 days from the billing date. The goal is to minimize aging of accounts receivables and decrease the risk of bad debt activity.	
3.1.5 Initiate Majuro atoll-wide conversion to a pre-pay meters system to improve cash flow and reduce receivables accumulation	On February 1, 2010, a tender for a pre-pay metering system was issued. The bid is expected to be awarded by the end of March 2010. The implementation of the pre-pay metering System will be beneficial to MEC in its efforts to minimize future account receivables and future collection efforts on outstanding receivables. The pre-pay system will enable customers to proactively manage their consumption of electricity and will eventually reduce overall consumption. The pre-pay meters system will be applicable for residential customers only. As a result, there is an expectation of immediate cash flow injection of up to \$500K per month cost and cost savings to minimize the company's exposure to bad debt activity.	FY2010-2012 (Ongoing)
3.1.6 Adopt aggressive and innovative measures to recapture and expand fuels business	An exercise to streamline cost and to make the fuel sales more competitive is underway with the goal of being the most competitive fuel supplier in the region.	FY2010-2011

Objective 3.2 Rationalize and Reduce Expenditures and Losses

Actions, Details and Timeframe:

3.2.1 Conduct full system loss survey to locate and quantify key loss areas/sources	A quantification of system loss is underway. According to the FY 2008 audit report, the overall system loss was around 25% which is equivalent to \$3.2M in revenue loss per annum. The goal is to reduce the system loss to the industry standard of 9%-12%. The result of this exercise will identify what the losses are and where they are occurring and what steps to take to mitigate these	FY2010
--	---	--------

	losses. This exercise will be of a major benefit to the survivability and sustainability of MEC as an electricity company.	
3.2.2 Develop and execute a Power Loss Reduction Plan to reduce avoidable supply side losses by 20 percent of the 2010 baseline by 2012	Part of the quantification of a system loss survey is to identify the parasitic loss at the power stations. The survey will specifically pinpoint what equipment on site is not necessary and what to replace it with to reduce the parasitic load. The industry standard is around 3%-5% compared to a staggering 12% loss in 2008.	FY2010-2012
3.2.3 Aggressively explore options to reduce generation cost factors, including exploration of alternative fuel sources and grid-connected alternative generation technologies	For FY2008, 89% of MEC's operating cost was attributed to fossil fuel to run the generators. The aim under the CRP is to explore options to reduce power generation cost by venturing into Clean Development Mechanism (CDM) technologies that should reduce the consumption of fossil fuel and increase efficiencies. There is a potential saving of a 30%-40% on fuel consumption once this new technology is operational The other viable option is to implement the solar to grid concept. Currently, the Japanese Government will be funding a \$4M Solar to Grid project for the Majuro Hospital. The hybrid system (Solar, Wind and Diesel Generator combined) which is being seriously considered, will be ideal for the remote rural atolls such as Wotje and Jaluit. This is one of the most viable investments to venture into as it should yield immediate dividends: these two rural centers being losing propositions year-in and year-out.	FY2010-2012
3.2.4 Reduce streetlight losses through Majuro streetlights retrofitting program	The streetlight retrofitting project for both Majuro and Ebeye is underway. The retrofitting project should reduce the consumption of electricity for public streetlights by 75%. The project is expected to be completed by FY2010.	FY2010 (underway)
3.2.5 Explore regional and sub-regional bulk procurement options	This is a regional effort and the premise behind this concept is to leverage the purchasing power of all the Utilities in the Pacific Region under a single tender for fuel procurement to maximize	FY2010-2012

	scale. This is still at the exploratory stage.	
3.2.6 Strengthen procurement procedures (including new procurement policy)	The procurement procedures are being standardized through the establishment of the Procurement Department and the creation of the Procurement Manager's position. All tenders must be competitively bid with a minimum of 3 eligible bidders. The most competitive prices usually win the tender provided that specifications are met. Procurement and financial controls are being implemented most especially for the fuels and propane sales processes. Customers are to deal directly with the Fuels Marketing Department only. The Fuels Marketing Manager coordinates with the Fuel Farm Operations Manager or the LPG/Propane Farm Operations Manager on the volume of product to be delivered to customers via the Product Delivery Receipt, which is independently verified by a Security Officer.	FY2010 (underway)
3.2.7 Conduct detailed expenditure review and reduce non-essential expenditures	This process has already been implemented and will be carried out on an annual basis. Recently as last month, Management identified several expenditures that could be eliminated by streamlining services within the company to absorb tasks once outsourced. The amount realized from such an undertaking is around \$148K for FY2010.	FY2010 (Ongoing)
3.2.8 Conduct a job review to eliminate duplication and streamline staffing	The objective is to conduct a personnel audit to ensure that there is no duplication of responsibilities within the company. If the audit happens to find any duplication occurring and suggests a possible reduction in the work force, then the process will be very objective and non-arbitrary. In our efforts to eliminate duplication and streamline staffing, MEC has recognized within FY 2010 a cost saving of \$43K due to	FY2011

	the cancellation of several service maintenance contracts that can be fulfilled using existing staff members with little to no disruption to other normal daily operations. To further add, it has been a common practice for MEC in the past to outsource major task such as engine overhauls. Within the second quarter of fiscal year 2010, MEC was able to utilize the required skill sets of new talents, thereby resulting in a cost saving of approximately \$231K.	
3.2.9 Initiate legal negotiations with RMI Government with the aim of establishing formal Community Service Obligation (CSO) contracts that will adequately compensate MEC for loss-making operations in Jaluit, Wotje, Rongrong, the Outer Island Solar Program, and other loss-making areas	This is fundamental for the survivability and sustainability of MEC as a Power Utility Company. Any loss-making operations within the MEC system will have to be subsidized via the CSO agreement to ensure longevity of these services in these remote communities of the Marshall Islands. As long as the Jaliut, Wotje, Rongrong and the Outer Island Solar Program continue to operate at a loss, it is crucial that MEC continues to receive subsidy funds from the RMI government. For fiscal year 2010, RMI government will be subsidizing 954K.	FY2010-2012

Objective 3.3 Restructure and Reduce Cost of Debt

Actions and Timeframe:

3.3.1 Renegotiate the terms of the Rural Utilities Services (RUS) loan with the aim of deferring loan servicing payments for at least 3 to 5 fiscal years	Part of the overall debt management strategy for MEC is to seek debt service deferment for 3 to 5 years to free up needed working capital to reinvest in the company's core assets. The overall aim is not to take on more debt but to explore this option and in return amortize the remainder of the loan plus the years deferred with the net present value of the loan.	FY2010
3.3.2 Restructure commercial debt with the Bank of Guam with the aim of securing concessional financing from a development finance institution (preferably the Asian Development Bank) to liquidate the Bank of Guam debt	Part of the overall debt management strategy for MEC is to seek a concessional financing arrangement with the Asian Development Bank (ADB) to liquidate the Bank of Guam's commercial debt. In the short, medium and long term, it will help MEC financially	FY2010

	though concessional rates of 1.5% interest per annum with a 7 year grace period. The working capital available will be used to upgrade the generation/ distribution systems by investing in equipment to help reduce overall system losses.	
3.3.3 Establish MEC Debt Servicing Sinking Fund with appropriate capitalization period to service future debt obligations	MEC will establish a new Debt Servicing Fund (DSF) by official Board resolution. The DSF will be held in a new bank account separate from MEC's core accounts. Starting in 2010, MEC will allocate a portion of the \$1.9 million annual savings accruing from the liquidation of the BOG loan towards the DSF. Assuming a seven year grace period if the loan is granted, MEC will apportion around \$500,000 per year into the account, leaving around \$1.4 million available each year to be used for MEC's recovery efforts. This will assure that a minimum balance of \$3.5 million is in the DSF by 2018, to serve as the core base for the servicing of the loan over the ensuing 20 to 40 year payback horizon.	FY2012 onwards

Objective 3.4 Rehabilitate Core Operating Assets and Strengthen Asset Management

Actions and Timeframe:

3.4.1 Develop new Asset Management Plan	The Asset Management Plan Database will enable MEC to effectively manage its assets properly at every aspect of its operation. The database will have a detailed list of all equipment and assets that are in the system and the life span for each item. Being equipped with such data, MEC will be able to plan effectively at every aspect of the planning process – be it for maintenance work, procurement or acquisition of new equipment and/or financial planning for future investments.	FY2011
3.4.2 Rehabilitate power plants, prioritizing full rehabilitation of the two Deutz generators	This is one of the most urgent undertakings and needs to be highly prioritized. The total MW output from these two generators is 12MW at maximum efficiency. Currently, one of the Deutz engines is out of service and the other engine is yielding only 4.7MW at the best.	FY2010

	The total cost to fully overhaul both generators will be around \$4.5M. Additionally, there is a 9-12 month lead time to receive the required parts. MEC has gained RMI government's commitment to support the rehabilitation initiative. To date, MEC has received 500K in grant funds for the purchase of parts from the US and RMI. Refer to the Procurement Schedule for a detailed listing of the parts and costs.	
3.4.3 Conduct environmental and integrity assessments of the Tank Farm	An Environmental Site Assessment has been carried out on the tank farm. The results should be available in a few weeks time. An integrity assessment of the fuel tanks is being explored and would require significant funding to complete such a task. The estimated cost per tank is around \$30K – do note that there are 9 tanks in total.	FY2010 (Ongoing)
3.4.4 Implement comprehensive rehabilitation of Tank Farm facilities	Refer to objective 3.4.3	

Development Partner Support

A number of the RMI's development partners are providing support and assistance (both financial and technical) to facilitate reforms in MEC and the broader energy sector. A summary of development partners and their assistance follows:

- US (Department of the Interior and JEMFAC)
 - Providing funding to the Pacific Power Association to undertake a full system survey in December 2009 to identify and quantify losses in MEC's generation and distribution systems (the results of which will form the basis for MEC's plans for reducing avoidable system losses)
 - Providing \$627,000 grant to MEC for initial phase of conversion to pre-pay meters (for residential customers), with disbursements to be made in three equal installments over 2010, 2011, and 2012
 - RMI seeking authorization of US Compact infrastructure grant funding for MEC capital investment
- World Bank
 - Sent initial fact-finding team to RMI in September 2009 to assess MEC situation and to identify possible follow-up technical assistance to support reform and recovery efforts
 - Proposing to conduct follow-up technical assistance efforts in 2010, including assistance to: develop an appropriate legislative/governance regime
 - investigate national liquid fuels issues
 - improve cost recovery
 - rationalize delivery of social service obligations by MEC
- Governments of Italy and Austria through IUCN
 - Providing \$1.1m for Majuro and Ebeye streetlight retrofitting and solar streetlight installation project and \$17,000 to complete household CFL project
- Government of Australia (Pacific Technical Assistance Mechanism):
 - Providing two-year Energy Advisor to RMI
- Asian Development Bank
 - Provided rapid energy assessment study in late 2008
 - Provided support for energy conservation program in late 2008 and early 2009
- Pacific Power Association
 - Providing MEC with technical assistance on procurement processes, asset management system, and system loss reduction efforts
- European Union
 - Provided funding for development of RMI's first National Energy Policy and medium-term Energy Action Plan in 2008/2009
- Government of Japan
 - Providing \$4 million solar-to-grid project on Majuro
 - Providing \$1.9 million under the JNPG
- Republic of China (ROC)
 - Provided short Term Budgetary support