



GOVERNMENT OF JAMAICA
MINISTRY OF SCIENCE, ENERGY AND TECHNOLOGY
OPERATIONAL PLAN 2016 - 2017

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TABLE OF CONTENTS

1.0	INTRODUCTION	1
2.0	VISION, MISSION AND MANDATE	4
3.0	STRUCTURE OF THE MINISTRY	5
4.0	THE MINISTRY’S PERFORMANCE, MAJOR DEVELOPMENTS AND ACHIEVEMENTS DURING THE 2015-16 FISCAL YEAR	10
5.0	APPROVED BUDGET FOR FINANCIAL YEAR 2016-2017	17
6.0	MAJOR PRIORITIES & FOCUS: POLICIES, PROGRAMMES AND PROJECTS FOR THE 2016-2017 FINANCIAL YEAR	20
7.0	MONITORING AND EVALUATIONN	21
8.0	OPERATIONAL PLAN MATRICES 2016-2017	

22

APPENDICES

APPENDIX A:	LEGISLATIVE PROGRAMME 2016 – 2017
APPENDIX B	MONITORING AND EVALUATION PLAN
APPENDIX C	MINISTRY’S AUDIT PLAN 2016 - 2017
APPENDIX D:	LIST OF PUBLIC BODIES WINTHIN MSET
APPENDIX E:	LIST OF PUBLIC SECTOR ENTERPRISES FINANCED THROUGH THE CENTRAL GOVERNMENT’S BUDGET

1.0 INTRODUCTION

The Ministry of Science, Energy and Technology (MSET)¹ is considered one of the larger ministries in terms of its portfolio as it comprises three (3) components, namely science, energy and technology. These components contribute in a significant way towards the facilitation of economic growth and development and are linked to the National Development Plan: Vision 2030. The Science and Technology sectors create growth in industries, innovations, employment and the energy sector through its many different initiatives impacting on the entire economy.

The energy sector priorities are being driven by the National Energy Policy 2009-2030. The imperative outcome identified is for a modern, efficient, diversified and environmentally friendly energy sector capable of delivering to the public cheaper and more affordable energy supplies. This sector also seeks through its diversification to facilitate and attract investment and ultimately the growth of commerce and industry. Consequently, the strategic priorities include diversifying the fuel source, improving energy efficiency and conservation, energy security, strengthening the regulatory and institutional framework, encouraging competition and developing renewable and alternative energy sources.

The importance of science as an area of focus for growth and development cannot be overemphasized. This area can be identified as the area with the greatest need for development as currently its impact on GDP is negligible and insignificant when compared with the rest of the world. Research and Development (R&D) must become areas of focus to start on this journey. The Ministry, during 2015 continued to facilitate improvement in the capability of the National Commission on Science and Technology (NCST), including employment of additional staff, and supporting its mandate to improve the quality of life of all Jamaicans through the application of science and technology (S&T) for social and economic development. The strategic priorities identified include improving the utilization of S&T for competitive and profitable businesses, including Micro Small and Medium Enterprises (MSMEs), enhancing the nutraceutical industry, sensitizing the populace about S&T, developing the local capacity in S&T, broad dissemination of S&T through the school curricula, providing access to computer technology and electronic government services to the wider public and businesses in the society.

The Science, Technology and Innovation (STI) financing in 2015-2016 was approximately \$5,509.4M directed in recurrent and capital expenditure through the eGov Jamaica Limited, e-Learning Jamaica Company Limited (e-Ljam), Scientific Research Council (SRC), NCST and the International Centre for Environmental and Nuclear Sciences.

This Operational Plan represents the first year of the Ministry's four year Strategic Plan. It contains the programmes, policies and projects that will be implemented through the respective divisions, agencies and departments. The Plan reflects the issues highlighted in Vision 2030 and reflected in the Medium Term Socio-Economic Policy (MTSEP) Framework 2015-18. The Plan is reflective of the overall strategic priorities and outcomes at the national level and is linked to the MTSEP Framework through the timelines and targets set for completion of key tasks and activities to meet national objectives.

As outlined, the focus over the medium term for the MSET is an advancement of the policy framework and agenda for STI by completing a new STI policy and the implementation of the new STI road map; strengthening STI education; and providing effective funding mechanisms for R&D and innovation. These five (5) key areas are envisaged through MSET, the Scientific Research Council (SRC), cross cut with other Ministries, the Private Sector Organization of Jamaica and tertiary institutions.

The Ministry, its divisions and agencies are expected to make an impact on national goal number 3 which is Jamaica's economy is prosperous. This contribution is through policies, programmes and project activities that impact energy security and efficiency, a technology enabled society, internationally competitive structures in information and communications technology (ICT) and through STI. This plan contains the priorities, identified through the Corporate Planning process, which are driven by national priorities that are identified at the political directorate, governmental, key stakeholders and ministry levels.

1.2 Jamaica is heavily dependent on expensive imported petroleum as a primary energy source, co-existing with heavy usage for non-productive activities and inefficient usage electricity generation. The Jamaica Public Service Company (JPSCo) has an aging and inefficient electricity generation infrastructure, which adds to the cost through high system losses in transmission and distribution. In order to have a sustainable and affordable energy supply diversification must take place.

¹ Formerly the Ministry of Science, Technology, Energy and Mining. The mining portfolio was transferred to the Ministry of Transport following the change in the political administration in February 2016.

The broad priorities for the energy sector from a MTSEP Framework include:

- An appropriate integrated policy, legislative and regulatory framework
- Accelerate energy security initiatives
- Encourage research, development, and timely and efficient implementation of renewable energy projects
- Mandate and promote energy efficiency and conservation, including demand-side management programmes
- Continued implementation of the framework for timely development, decision-making and implementation of the least cost expansion plan for generation, transmission and distribution of electricity

1.3 STI have a significant role to play in influencing growth and development in any country. At 0.3% of GDP, the levels of STI investment in Jamaica have been lower than the world's average when measured by gross expenditure on R&D. The main issues and challenges facing the development of STI in Jamaica include the gaps in the levels of required skills and capabilities for STI and ICT amongst the work force, low levels of investment in research and development by the Government of Jamaica (GOJ) and the private sector, relatively weak linkages between key players in the innovation process, absence of an overarching policy framework for STI and inadequate STI education in the schools at all levels.

The broad priorities under the MTSEP Framework are to:

- Integrate S&T in all areas of development
- Establish a dynamic and responsive national innovation system for S&T
- Institutionalize STI education throughout the education system by producing training content for STI education, internships for students and teachers in STI organizations and develop STI curricula in association with industry for practical application
- Establish a dynamic and responsive national innovation system – by creating a sustainable funding mechanism for R&D, innovation (based on the Korean Model) and scientific and technological services

This Operational Plan outlines the strategic priorities to be pursued during the year and going forward which include:

- Continue the promulgation of the five (5) energy sub-policies
- Promote and advance energy diversification (LNG, renewables, coal)
- Promote investments in renewable energy
- Develop and implement Waste to Energy Policy
- Continue to refine the energy tariff structures to facilitate increase quantities of renewable energy
- Increase awareness of energy related issues and best practices among consumers including training and energy efficient management systems in MSMEs
- Develop and implement energy efficiency and public awareness programme for all stakeholders
- Increase capacity among regulators and stakeholders within the energy sector
- Reform the primary, secondary and tertiary curricula so as to build up technical capacity in the various sectors
- Retrofit government buildings for increasing levels of energy efficiency in the government sector
- Implement energy efficient standards
- Together with the Cabinet Office, effect the transformation of Government Electricity Inspectorate (GEI) to a regulator in keeping with the new Electricity Act 2015
- Modernize the energy infrastructure including the upgrade of the Petrojam refinery
- Continue to produce training content for STI education
- Provide internships for students and teachers in STI organizations

- Develop STI curricula in association with industry towards practical STI application
- Develop a grants programme with cooperation between the private sector and tertiary institutions (based off the Korean model)
- Implement the STI Road Map and commence development of the STI Policy

1.4 Other priorities include:

- Refocus on oil and gas exploration
- Spectrum Management Policy
- Postal Services Policy
- Continuation of the re-branding of the Rural Electrification Programme (REP) into the National Energy Solutions Limited (NESOL)
- Regulate the Petroleum, Science and ICT sectors
- Cyber security

1.5 **Outstanding Priorities:**

It is expected that the following priorities along with associated activities will be completed during FY 2016-17

- Promulgation of the five (5) energy sub-policies
- Continued transformation of the GEI

1.6 **Legislation**

The priorities enumerated during the FY 2016-2017 include a legislative agenda attached at Appendix A. Priority legislative matters identified include the following, which are in a more advanced stage in the legislation process and therefore more likely to be ready for Parliament:

- i. Information and Communications Technology Act (Telecommunications Act repeal)
- ii. Data Protection Act
- iii. Postal Services Act (Post Office Act Repeal)

The main priorities over the operating year are driven through MSET's divisions, departments and agencies. Some cross cutting of roles and functions will occur which includes other government ministries, Office of the Prime Minister, Ministry of Finance and the Public Service, Ministry of Industry, Commerce, Agriculture and Fisheries, Ministry of Education, Youth and Information, Office of Utilities Regulation, JAMPRO, Bureau of Standards, tertiary level institutions and the private sector.

The major programmes identified under the budget providing financial resources for carrying out the priorities and attaining the strategic objectives are listed below.

1.7 **Major Budget Programmes:**

Fuel and Energy -04
 Electrification Services 04-700
 Telecommunication Services -12
 Technical and Vocational Education – 12-254
 Telecommunication Services – 12-556

- 1.8 The Capital A and Capital B programmes are critical components for advancing and implementing the science, energy and ICT objectives. The key Capital B projects co-financed by the GOJ and external partners that are currently being implemented are the following:
- Energy Security and Efficiency Enhancement.
 - Energy Efficiency and Conservation Loan Programme.

Under the Capital A programme, there is a sole project being implemented by e-Ljam.

1.9 **Strategic Outcomes:**

The various policies, projects and pieces of legislation being developed and implemented are expected to contribute to and result in the following:

- The provision of a higher level and quality of service to stakeholders.
- Reduction in energy costs translated over a period into lower national costs on the energy bill and lower cost to business and household consumers.
- Enhanced energy security through the strategy of expansion and diversification into other energy sources, including renewables.
- A modernized and efficient energy infrastructure through legislative changes, regulations, new policy initiatives and investment in new plant.
- Increased access to and usage of ICT along with continued modernization of the ICT policy and regulatory framework.
- Creation of a common Government Wide Area Network (GovNet).
- Protection of data and ICT assets from cyber attacks.

2.0 **VISION, MISSION AND MANDATE**

The ministry's vision, mission and mandate are as follows:

2.0.1 **VISION**

To create an environment, through policy development and a progressive legislative framework, that facilitates investment, creates jobs and meaningfully improves the well-being of each Jamaican.

2.0.2 **MISSION**

To develop science, energy and technology policies that *Fuel Growth*.

2.0.3 **MANDATE**

Based on the subject areas assigned, the Ministry's mandate is to:

- i. Encourage private sector innovation in the science, energy and technology sectors.
- ii. Lead legal and regulatory reform of the ICT, electricity and gas sectors.
- iii. Improve national energy efficiency and conservation.

- iv. Diversify primary energy sources, particularly to increase the share of renewable energy and to reduce dependence on imported fuels.
- v. Promote and enable the exploitation of S&T for innovation and economic development.
- vi. Create a single ICT regulator.
- vii. Streamline government's ICT operations (GovNet).
- viii. Make access to government services more convenient and efficient using ICTs (e-Government).
- ix. Promote the use of free and open source software by government entities.
- x. Increase access to and usage of ICT within the education sector and all segments of the economy.

2.1 MANDATE IMPLEMENTATION AND THE MINISTRY'S STRUCTURE

The Ministry executes its mandate and implements its programmes, projects and strategies through its units, departments, divisions and agencies. These programmes, projects and strategies may be multi-dimensional and their implementation may involve several other ministries, departments and agencies.

3.0 STRUCTURE OF THE MINISTRY

The Ministry consists of sixteen (16) portfolio agencies, nine (9) internal divisions², and one (1) external division (that is, GEI).

3.1 INTERNAL AND EXTERNAL DIVISIONS AND UNITS

The Ministry has both internal and external divisions and units. The internal entities are located within the Ministry 'proper'. The external entities, usually the largest divisions and department, are located at a different site than the Ministry's head office, which houses the internal divisions and units. Both groups of entities are as follows:

3.1.1 INTERNAL DIVISIONS AND UNITS

- i. **The Political Directorate comprising the Office of the Minister:** This office is responsible for setting government policies, which are transmitted through the Permanent Secretary.
- ii. **The Permanent Secretary's Office (PSO):** The function of this office is to implement GOJ policies transmitted through the Minister, Cabinet, Parliament and other responsible organs of the state.
- iii. **Policy, Planning, Development and Evaluation Division (PPDED):** The PPDED provides policy, planning, development and evaluation direction, oversight and support for the Ministry's three (3) major portfolios. It is also responsible for the preparation of the Ministry's Strategic and Operational Plans, coordinating the preparation of the Ministry's annual sectoral presentations, procurement management, and monitoring and evaluating the performance of the Ministry and its agencies.
- iv. **Energy Division (ED):** The division has an overall mandate to pursue the roll out of the National Energy Policy 2009-2030, including the transformation of the energy sector.
- v. **Information and Communications Technology Division (ICTD):** This division exercises immediate responsibility for the policy direction of the Ministry's ICT portfolio.

² Excluding the office of the Political Directorate and the office of the Permanent Secretary.

- vi. **Finance and Accounts:** The division directs the Ministry's budgetary process, manages its budgetary allocation, and ensures that the Ministry conforms to the requirements of the Financial Audit and Administration Act (FAA Act).
- vii. **Internal Audit (IA):** To ensure compliance with the FAA Act. The division is responsible for ensuring efficiency and accountability of the Ministry's resources through conducting various types and levels of audits in the Ministry and its agencies.
- viii. **Human Resource Management and Administration (HRMA):** This division is responsible for the management and development of the Ministry's human resources as well as the administration of the entire Ministry. The areas of responsibility include Personnel, Training, Industrial Relations, Office Management, Registry and Library Services.
- ix. **Communications and Public Relations Unit (CPRU):** This Unit develops, coordinates and manages the Ministry's Communication Programme and is responsible for disseminating information to the various publics that interface with the Ministry. The Unit is also tasked with coordinating information requirements and outputs of the Ministry.
- x. **Legal Unit (LU):** This Unit prepares and monitors legislation to give effect to the policies of the ministry and its agencies, and assist in providing legal advice on all relevant matters.
- xi. **Information and Technology Unit (ITU):** This unit is responsible for meeting the ICT needs of the Ministry in carrying out its daily information and communication functions including software, programming, email, web page design and updating of the Ministry's web site. It is also responsible for the maintenance and monitoring of the information technology system.

3.1.2 EXTERNAL DIVISIONS/DEPARTMENTS

- xii. **Government Electricity Inspectorate (GEI):** This entity's mandate is to ensure that electrical installations in the country are safe. The mandate includes the inspection of petroleum service stations and garages for tanker wagons associated with the petroleum trade.
- xiii. **Post and Telecommunications Department (PTD):** Headed by the Postmaster General and the largest entity within the ministry, this entity's mandate is to provide efficient and cost effective postal and related services to its customers. It operates through a head office and a network of post offices and postal agencies that offer a full range of postal services, including the acceptance and delivery of mail and the sale of postage stamps. It is also a major conduit through which the GOJ channels pensions to pensioners.

3.2 AGENCIES

The following, outlined by portfolio, are the agencies for which the Ministry is responsible.

SCIENCE PORTFOLIO



- i. **International Centre for Environmental and Nuclear Sciences (ICENS):** Located on the Mona campus of the University of the West Indies, ICENS, which was transferred to the former Ministry of Energy and Mining (MEM) in 2011, is the only entity in the country with a nuclear reactor, which is used for various scientific and analytical purposes. ICENS is a multi-disciplinary research centre whose work is based

largely on applications of the "peaceful uses of the atom". The main programmes at present are in environmental geochemistry and health, with the overall objective of contributing to the resolution of critical socio-economic problems, including environmental protection and the development and retention of local scientific talent. The major goals of ICENS are to:

- a. conduct multi-disciplinary research related to the environment,
- b. help provide solutions to developmental problems, and
- c. contribute to the growth and retention of a cadre of excellent scientists and technologists.



- ii. **Scientific Research Council (SRC):** Established in 1960, by the Scientific Research Council Act of June 16, 1960, the SRC is mandated to foster the development of scientific research, be a repository of scientific information, and facilitate the development, application and transfer and/or the improvement of technology of such research for the benefit of all of Jamaica. It also plays a role as an enabler in the creation of new industries and the encouragement of technical processes on a cooperative basis with all stakeholders involved. The promoting of scientific and technological endeavours is also critical by facilitating training, the implementation of projects, especially in the agro-industrial sector and the conversion of waste to energy.



- iii. **National Commission on Science and Technology (NCST):** Instituted in 1993, the NCST is mandated to enable the society to maximize the benefits to be gained from the strategic uses of S&T applicable to the national, social and economic developmental goals of Jamaica. Chaired by the Prime Minister, the Commission envisioned that the culture of S&T will be widespread across the country and be utilized to maintain food security, to enhance agricultural practices, for natural resources exploitation, a profitable and competitive business environment, wealth creation and education of the populace to be scientifically and technologically capable and competent. To accomplish these undertakings, the NCST collaborates and dialogues with members from academia and the private and public sectors to coordinate monitor and implement S&T policies that will drive the country's development. Acting as an advisory body to the Government, the NCST uses its secretariat/steering committee to guide research, provide S&T policy advice and information, and organize resources of the scientific community to improve the lives of Jamaicans.

TECHNOLOGY PORTFOLIO



- iv. On January 12, 2013 Cabinet gave approval for the repositioning of Fiscal Services Limited as the entity tasked with implementing ICT projects across the GOJ. Arising from the decision, the entity's name was changed to **eGov Jamaica Limited** (eGovJa), it was transferred from the then Ministry of Finance & Planning (MOFP) to the then Ministry of Science, Energy, Technology and Mining. eGovJa will continue to place high priority on providing the necessary support to the revenue departments, namely, Jamaica Tax Administration (JTA) and the Jamaica Customs Agency and be the major link in the information flow among these departments throughout the country. At the macro level, eGovJa will place particular focus on the following priority policy areas:
 - a. Reducing the GOJ's ICT cost;
 - b. Promoting efficiency and effectiveness in government through technology;
 - c. Facilitating a more responsive Public Sector; and

d. Promoting national growth and development.



- v. **E-Learning Company Jamaica Limited (e-Ljam):** Established by Cabinet decision, e-Ljam was incorporated on July 6, 2005 as a limited liability company and carries out its mandate with funding from the Universal Service Fund (USF). e-Ljam is an electronic learning initiative with the main objectives of facilitating web-based and computer-based learning and virtual classrooms utilizing ICT. The E-Learning Project, in collaboration with the Ministry of Education (MOE), targets students at the secondary level with applications and processes of an electronic nature geared towards the improvement of performance at the CXC/CSEC examinations.

- vi. **Post and Telecommunications Department (PTD):** Headed by the Postmaster General and the largest entity within the Ministry, the mandate of this external department is to provide efficient and cost effective postal and related services to its customers. It operates through a head office and a network of post offices and postal agencies that offer a full range of postal services, including the acceptance and delivery of mail and the sale of postage stamps. It is also a major conduit through which the GOJ channels pensions to pensioners.



- vii. **Postal Corporation of Jamaica (PostCorp):** This entity was formed to be a transition company to commercialize and modernize the postal service as certain modernization initiatives could not be implemented within the legislative framework of the PTD. Its Chief Executive Officer is the Postmaster General. The plan is to promulgate a new Postal Services Bill which will result in the creation of a new statutory corporation to be known as “Jamaica Post”, which will assume the functions of the PTD and PostCorp. Subsequently, the PTD and PostCorp will be dissolved.



- viii. **Spectrum Management Authority Limited (SMA):** A limited liability company which commenced operations in April 2001, the SMA was incorporated in accordance with section 21 of the Telecommunications Act, 2000 and the Radio and Telegraph Act, 1973, to advise the minister on matters directed by him and perform functions delegated by the said minister. In its mandate as the independent regulatory body to oversee the radio frequency spectrum, SMA authorizes licenses to operators, collects fees from users of the radio frequency, safeguards the maintenance of frequency bands from unauthorized interference and protects the rights of the spectrum operators. The SMA's major role is to monitor and promote the growth and development of the spectrum in accordance with the International Telecommunications Union's rules and regulations.

- ix. **Universal Service Fund (USF):** In 2012, the USF replaced and assumed the responsibility of the Universal Access Fund Company Limited, which was established in 2005 with the main objective of collecting and managing the universal service levy (USL) on international calls terminating in Jamaica. Its mandate has its genesis in the Telecommunications Act, 2000 (as amended). The USF is a statutory entity geared at facilitating the provision of universal access to the information superhighway by accelerating the deployment of broadband services island-wide. The USL is used to fund projects such as the E-Learning Project.

ENERGY PORTFOLIO

- x. **Board of Examiners (BOE):** The Board of Examiners (BOE) is an independent body mandated under the Electric Lighting Act to, inter alia, conduct examination of persons who wish to engage in certain electrical related activities, issue electrician licenses to suitable individuals and to maintain a roll of all licensed electricians in the country. The BOE works closely with the Government Energy Inspectorate (GEI).



- xi. **Petroleum Corporation of Jamaica (PCJ):** The Petroleum Corporation of Jamaica (PCJ) was formed in June 1977, and is empowered by the Petroleum Act of 1979, to pursue the development of Jamaica's energy resources with exclusive rights to explore for oil and develop Jamaica's petroleum resources. The entity initially was mandated to explore for oil and gas along with the procurement of refining, retailing and distribution of petroleum products. The mandate was later expanded in 1995 to include the development of indigenous renewable energy resources and extended to be a main entity in implementing the National Energy Policy 2009-2030. The PCJ holds equity in a number of entities which also carry out this mandate. These include PETROJAM, PETROJAM Ethanol, Petroleum Company of Jamaica (PETCOM) and Wigton Wind Farm Limited (WWF).



- xii. **PETROJAM Limited (PETROJAM):** This entity, a subsidiary of the PCJ and 49% owned by the Government of Venezuela, manages Jamaica's sole oil refinery. The refinery is currently a 36,000 barrel per day hydro-skimming plant.

PETROJAM imports crude, mainly from Venezuela and Mexico, which it converts to various products, including Liquid Petroleum Gas (LPG), ten per cent Ethanol-blended (E10) Gasoline, Kerosene, Turbo Fuels, Auto Diesel Fuel Oil and asphalt. The refinery's operations are below capacity mainly because of its size and configuration. It is constrained by the number of barrels it can process, the quality and the kinds of value added products which it is unable to produce. These constraints are to be addressed by the proposed Refinery Upgrade Project (RUP), under which its capacity is to be increased to 50,000 barrels per day and improve its ability to produce a larger volume and range of value-added products.

- xiii. **Jamaica Aircraft Refuelling Services Limited (JARS):** A subsidiary of PETROJAM, the Jamaica Aircraft Refuelling Services Limited (JARS) was created in 1999 as a joint venture between PETROJAM, and British-based aviation fuel marketing company, Air BP to supply turbo fuel directly to aircraft and airline customers at the country's two international airports.



- xiv. **PETROJAM Ethanol Limited (PEL):** A subsidiary of PETROJAM Limited, PEL operates a 41.8 million US gallons per year ethanol plant and is a main player in the ethanol market. The company is primarily involved in the procurement of hydrous ethanol feedstock, its dehydration, and the provision of ethanol to PETROJAM for the blending of E-10 gasoline and the exporting of fuel ethanol to the United States under the Caribbean Basin Economy Recovery Act, 1983. Under the Act, PEL is eligible for duty exemption in the supply of fuel grade ethanol to the U.S.A under a quota which changes annually for eligible countries.

Since 2009 the regional ethanol market has experienced a major downturn owing to changes to the Caribbean Basin Economy Recovery Act, 1983. This has resulted in Brazil being able to sell ethanol directly into the US market without the need for third party entities such as PEL. Consequently, PEL's profitability has declined and its major business outside of supplying ethanol to PETROJAM has become the tolling of ethanol (i.e. the processing of ethanol for third parties).



xv. **Wigton Windfarm Limited (WWF):** Incorporated in April 2000, this company is a wholly owned subsidiary of the PCJ. Its objectives are to diversify and develop renewable energy sources through identifying and conducting studies of potential sites for wind and solar energy solutions. The company operates a 38.5 MW wind farm from which it sells electricity to the JPSCo under an executed power purchase agreement (PPA). The company is proposing to add a further 24 MW of generation capacity during the 2013-2016 planning cycle. This would increase its installed capacity to 62.5 MW.

xvi. **National Energy Solution Limited (NESol):** Incorporated in 1975, the REP was originally mandated to provide electricity supply services to rural communities where the provision of the utility would not normally be financially viable to a conventional commercial electricity retailer. Its operations include the construction of electrical distribution pole lines in non-electrified areas and the provision of house wiring assistance to householders in identified communities. As of 2015 approximately 97.5% of the country had electrification. The entity's mandate has been expanded and rebranded which has resulted in a new entity NESol. The expanded mandate includes the provision of energy solutions to individuals and entities embarking on any form of renewable and conventional energy project.

4.0 THE MINISTRY'S PERFORMANCE, MAJOR DEVELOPMENTS AND ACHIEVEMENTS DURING THE 2015-2016 FISCAL YEAR

4.1 ACHIEVEMENTS IN THE ENERGY PORTFOLIO

The Energy Division continued its focus on addressing the issues identified in the National Energy Policy 2009-30 and the achievement of the various outcomes in Jamaica's National Development Plan Vision 2030. The plan envisages for the energy sector a modern, efficient, diversified and environmentally sustainable energy sector, which is capable of delivering energy security, affordable energy which fuels economy activity and growth in the economy. It also envisages improvements in the usage of energy through energy efficiency and conservation in the public and private sector and the diversification in fuel sources and renewable energy.

During the year up to September 2015 the energy division pursued the key strategies to meet these objectives at the policy level and implementation through various projects. At the policy level the Ministry and the Division sought to improve energy efficiency and conservation in households through influencing the increase uptake of solar systems by offering loans to households through the National Housing Trust. In July 2015 a Terms of Reference (TOR) was completed to undertake a renewable energy survey to assess the number of renewable energy systems deployed in Jamaica including solar. A Draft TOR was completed before seeking the Cabinet's approval for the establishment of the National Energy Efficiency Institution (NEEI) in Jamaica.

The modernization of the energy infrastructure is a critical desired outcome to provide cheaper energy and attract investment. The Ministry at the policy level continued to track and monitor the progress of the Jamaica Public Service Company towards these objectives. It is expected that the natural gas project when implemented fully by JPSCo will see a percentage increase in plant reliability and a percentage reduction in generation cost (\$/Kwh). The project was monitored specifically to determine whether progress was being made by the JPS securing commercial agreements for the construction and fuel supply for the natural gas projects. Up to the end of September 2015 procurement was completed for the 120MW diesel fired plant at Bogue to be converted into LNG by March 2016. Procurement was also in progress to build the 190MW LNG fired plant at Old Harbour Power Station to replace old and in-efficient oil fired plants by March 2018. Approval was also granted to JAMALCO to build a cogeneration coal fired power plant.

The development of the renewable energy potential continued to gain priority attention with the development of hydro and wind continued to drive the renewable programme. The plan was to complete feasibility studies on six (6) prospective hydro power sites, promote communication and awareness of wind energy, and create an inventory of existing /new technologies relating to developments in renewable energy. A database has been established with an inventory of existing or new technologies. In July 2015 a request for Proposal was issued for the supply of up to 37MW of electricity generation from renewable energy resources, with a deadline submission by January 2016. In the case of net billing, of the 360 applications submitted 316 licences have been issued. This represents a potential of 4.8MW of new generation capacity. Currently there are 126 systems connected to the grid contributing approximately 2.0MW

The supply of natural gas is a critical requirement for the development and investment of the LNG as an alternative fuel and the energy security plans of the GOJ. During the month of August 2015 the United States Government granted a license to New Fortress Energy Company of the US to export LNG from the USA to Jamaica and subsequently a natural gas supply agreement was signed between New Fortress and JPS to supply fuel to the Bogue power plant when upgraded.

The Ministry has been pursuing improvements in the regulation of the petroleum industry. This is being pursued through a strategy of amendment of the Petroleum Quality Control Act. This is to bring the regulation of the sector and monitoring more effectively under MSET's control. Amendment of the Act will transfer the registration process of service stations and petroleum retailers from the courts to MSET. There were a total of 9 registration certificates granted to tanker drivers, one haulage contractor licences and one import licence. The industrial relations climate was cause for concern as two potential strikes in the petroleum sector was averted regarding unsafe working conditions at Petrojam. The matter has been referred to the Ministry of Labour and is currently before the Industrial Disputes Tribunal (IDT).

During the year, the following were also achieved:

- i. Cabinet approved amendments to the Petroleum Quality Control Act and issued drafting instructions for the Electricity Act 2013. Under the World Bank Energy Security and Efficiency and Enhancement Project, work continued on strengthening the regulatory framework and to increase private sector investment in the energy sector. This work was at an advanced stage to completion under the project as most of the activities designed to strengthen the regulatory framework and attract investment have been completed and includes Draft Electricity Act., Smart grid impact analysis, Feed in tariff assessment and gas regulations. The expansion of the OUR's mandate to include gas and petroleum products remain outstanding.
- ii. The drive to increase the development of Jamaica's renewable potential continued as a total of 10 sites were under consideration, four of which had feasibility studies completed and the 6 new sites were at the Request for Proposal Stage. Development Bank of Jamaica (DBJ) fully disbursed the US\$1,916,650.00 line of credit to small and micro enterprises (SME's) for renewable energy and energy efficiency.
- iii. The energy efficiency programme in the public sector saw steady progress in the retrofitting of public sector institutions in, lighting, cool roof technology and solar solutions. The IDB project reports savings of 241,468.60 in kWh (J\$9,658,744) in 14 facilities since the retrofitting.

4.1.1 MAJOR ENERGY PROJECTS

The Ministry's two main energy projects during fiscal year 2015 – 2016 were:

i PUBLIC SECTOR ENERGY EFFICIENCY AND CONSERVATION PROGRAMME

The Public Sector Energy Efficiency and Conservation Programme, which was launched in 2012 to support the GOJ in its efforts to improve energy efficiency (EE) and energy conservation (EC) within the public sector. It is currently being financed through a loan from the Inter-American Development bank for US\$20m with an original duration of Nov 22, 2011 to Nov. 22, 2015. It has three major objectives, provide technical support to MSET for the execution, management, supervision and monitoring of the programme, The implementation of EE and EC investment measures in the public sector namely; *Lighting, Air-Conditioning and Building Envelope Retrofits*, include financing (a) activities to increase awareness among the public and private sectors regarding EE and EC cost and benefits and (b) workshops and seminars on EE procurement and EE management for private and public stakeholders;

The project addresses some of the key issues from the NEP 2009-30 in Goal 1 and Goal 6, Jamaicans use energy wisely and pursue opportunities for energy conservation and environmental stewardship and Government and its agencies are model leaders in energy conservation. The approved fiscal budget for the year was J\$379.83m with the GOJ funding \$9m through the budget. As at the end of the second quarter J\$70m was incurred in expenditure with a balance of J\$309.82m. Cumulative expenditure from Nov. 2011 – Sep. 2015 is US\$4.54m or 23% of the loan. During the quarter the main activities taking place were energy saving and monitoring activities, in particular the monitoring of electricity consumption and electricity bills of 39 retrofitted facilities. The replacement of air conditioning under EE investments and Education awareness also took place.

ii **ENERGY SECURITY AND EFFICIENCY ENHANCEMENT PROJECT (ESEEP)**

The project is funded by a World Bank, IBRD loan of US\$15m with an original duration of May 2011-June 2015. It has 3 main objectives: (1) Strengthening the regulatory and institutional framework to improve the energy sector's performance, increase private sector investment and support the transition to cleaner fuels, (2) Developing Jamaica's energy efficiency potential and Renewable Energy (RE) potential through private sector investment; and (3) the project objectives also include consumer education/information and Project Management, Monitoring and Evaluation including compliance with fiduciary requirements and appropriate M&E activities.

The projects address the top ticket items of Government Priority (ies): Expand fuel diversification, expand electricity generation from renewable sources, increased energy efficiency and lowered energy costs.

During FY 2015-2016 most of the regulatory and institutional framework has been completed. Apart from the strengthening of the OUR's mandate, over the period 7 contracts were in progress. These are related to building modification, technical assistance, software installation, test chambers in readiness for the Bureau of standards testing of appliances as part of component 2. This testing programme has been delayed and has timelines adjustments, which is likely to flow into the new fiscal year 2016-17.

4.1.2 RENEWABLE ENERGY DEVELOPMENT

MSET continued to focus on Renewable Energy (RE) development. The main RE technologies that are currently of interest to Jamaica, and those that continue to engage the interest of the local, multilateral and bilateral agencies are solar PV and solar thermal, wind, mini-hydro, biomass and bio-fuels.

Biomass / Bio-fuels: Through the Petroleum Corporation of Jamaica (PCJ) and the Ministry of Agriculture and Fisheries, a biodiesel pilot project continued its second year of operation at Bodles Agricultural Research Station, St. Catherine. The pilot project will be conducted for a 5 year period to determine the production parameters for biodiesel from castor and jatropha plants.

The Organization of American States (OAS) supported a pre-feasibility study on bio-fuels development in Jamaica. This was completed and presentations made to private sector entities within the sugar sector, academia, the Ministry of Agriculture and Fisheries (MOAF) and other stakeholders. The Brazilian Agency for Cooperation, through the Brazilian Government, project drafting to enhance the development of a sugar-ethanol industry, was completed. Flowing from the pre-feasibility study, two programmes have been introduced. These are the Life-Cycle Assessment and Sustainable Bio-fuel Development and Legal Preparedness for Sustainable Bio-fuel Development. It is expected that both projects will foster fast-paced sustainable development of bio-fuel in Jamaica.

The PCJ is currently pursuing a bio-fuels development programme with the objective of introducing bio-fuels from oil feed feedstock for usage in the transportation sector. It is hoped that it can develop a fuel that can rival petroleum based fuel. Cultivation and harvesting activities continue at the Caribbean Agricultural Research and Development Institute (CARDI) and the MOAF's Bodles agricultural research station, and the proposal to conduct the pilot project with the Jamaica Urban Transit Company Limited (JUTC) is still being considered pending testing off target.

Wind and Solar Energy

Wind Power Irrigation Project: The project is being executed through the National Irrigation Commission (NIC) with support from MSET. The specific objective of the project is to evaluate the feasibility of utilizing wind technology to reduce the electricity cost for providing irrigation to the farmers. The benefits to be derived include power generating facility utilizing wind energy that would greatly reduce the dependence on the national grid; further reduce the environmental impact; and significantly assist the surrounding farming communities through lower water costs, enhanced availability and the potential for higher crop yields. Wind monitoring equipment for the project was installed on June 22, 2013. Wind assessment data are collected monthly.

Expansion of Wigton's Windfarm:

Wigton Windfarm Limited (WWL) obtained a licence from the OUR to add 24 MW of wind power to the grid. It is expected that the new generation capacity will be completed for connection by the end of April 2016.

IDB Wind and Solar Development Programme:

Wind resource assessment on 20 sites across Jamaica was carried out as part of a wind and solar development programme being implemented by Wigton under a funding agreement between the Inter-American Development Bank (IDB) and the PCJ.

Solar Power Initiatives

The PCJ engaged a consultant to undertake a study relating to solar energy entitled "Solar Market Survey." The aim of the survey is to collect information from both the demand and supply sides of the solar energy market in order to determine the level of market penetration. The project, which is being funded by the PCJ, was commenced in 2012, accelerated in 2013 and was completed in early 2015.

The PCJ is in the process of executing a solar project which will see solar installations completed in 15 schools and in 3 government agencies. Installations were completed in 12 schools at the end of 2015 and work is in progress in 3 other schools. This project is being funded by the PCJ.

.Energy-from-Waste: Appleton continued to implement waste-water management initiatives, which resulted from a study on wastewater management in the rum industry completed in 2011 and managed by the Ministry of Agriculture and Fisheries (MOAF) in collaboration with MSET. The results showed that a proposed waste management solution could generate significant quantities of energy from dehydration and incineration of waste matter.

4.1.3 NET BILLING

As at September 2015, from a total of 360 applicants, 316 licences were issued, which have a potential combined capacity of over 4.8 MW generation capacity and of this amount 126 connections were made. Also the Jamaica Public Service Company Limited (JPSCo) signed 81 Standard Offer Contracts (SOC) and connected 43 properties (mainly in the agricultural/poultry sector) to its grid.

4.1.4 NATIONAL ENERGY POLICY SUB-POLICIES

The following sub-policies of the National Energy Policy were further refined in preparation for submission to Cabinet: on hold /pending

- i. National Renewable Energy Policy 2010-2030.
- ii. National Bio-fuels Policy 2010-2030.

- iii. National Policy for the Trading of Carbon Credits 2009-2030.
- iv. National Energy-from-Waste Policy 2010-2030.
- v. National Energy Conservation & Efficiency Policy 2010-2030.

4.2 ACHIEVEMENTS IN THE SCIENCE PORTFOLIO

4.2.1 SCIENTIFIC RESEARCH COUNCIL

During the 2015-2016 FY, the SRC continued to address priority policy issues outlined in the National Development Plan, Vision 2030, by facilitating a technology enabled society through the integration of S&T into all areas of development. Its strategic objective remained to increase customer productivity and the quality of their services by offering S&T solutions. The strategic areas include full waste water services to the public and private sector, as well as, analytical test services to the private sector and also public sector agencies. Up to the end of the second quarter of the FY 2015-16 the construction and commissioning of nine (9) existing and approximately nine (9) new systems for the Ministry of Health was at an advance stage at the Fellowship Health Centre, Noel Homes Heath Centre and Percy Junor Hospital. Food services were also extended to the Small and Medium sized Enterprises (SMEs) through the use of the pilot plant at SRC as well as technical assistance in food production, drying and milling as well as processing. The provision of biotechnology services continues to be a major growth and demand area for SRC services through the provision of tissue cultures plantlets for a wide variety of major national plants for which foreign exchange is either earned or can be earned, including ginger, bananas, sweet potatoes, Irish potatoes, yams, pineapples and ornamental plants (such as orchids and anthuriums).

The SRC also continued to provide support for the development of new products through R&D Projects geared towards a nutraceutical industry in Jamaica, by developing grant funding proposals, building human and physical capacity, identifying and initiating projects. A coordinated research proposal by the SRC and UWI on Bioavailability of proteins from plant based diets was approved by a Committee from the International Atomic Energy Agency (IAEA) for funding. The entity also continued to develop its data resources, including comprehensive energy database and journals which are available to researchers. The continual sensitisation on the importance and value of S&T to the nation, region and internationally also continued to be a focus of the SRC. The EU INVOCAB Project included residential camps for primary and secondary school participants at the Mico College in July 2015.

The provision of services to the MSMEs include:

- i. The implementation of the Science, Technology and Innovation Road Map.
- ii. Upgrade of Analytical Laboratories to provide for an increase in the number of accredited (ISO 17025) tests for water and food.
- iii. Technology transfer and commercialization.

In executing this mandate, the SRC sought to assist various clients with marketing and business development skills, and understanding the benefits of embracing cleaner production technologies. To achieve these two objectives, it launched a project to develop new technologies and services (products) to satisfy the needs and demands of the productive sectors. These included the following:

- a. The IAEA funded disease and drought resistant materials project aimed at the agricultural sector;
 - b. Resuscitation of the ginger industry;
 - c. Research focused on developing Jamaica's Nutraceutical Industry. Areas of interest are herbal teas, insecticidal properties of Jamaican plants and the anti-oxidant properties in local medicinal plants;
 - d. Provide consultancy services in cleaner production technologies and wastewater treatment options; and
 - e. Training in the use of technologies.
- v. Build out of the Science and Technology Road Map.

These activities were intended to:

- i. Improve Jamaican companies' ability to satisfy requirements for FSMA resulting in increased access to existing and new markets;
- ii. Allow manufacturers to access accredited tests in food and water and approved training courses in food technologies;
- iii. Support brand Jamaica's appeal;
- iv. Increase production efficiencies via implementation of HACCP; and
- v. Contribute to the creation of new jobs and help to expand and improve the economy.

4.2.2 NATIONAL COMMISSION ON SCIENCE AND TECHNOLOGY

The NCST begun work to update the GOJ STI Policy, a STI Thematic Working Group and a policy development working group has been constituted to assist with the development of the policy. With a view to establishing the necessary legislative framework for the development of the nutraceutical industry, a proposed amendment to the Food and Drug Act was drafted and is awaiting final comments. The intention is to attract significant investments along the value chain. Preliminary work also started in the development of suitable STI indicators in order to do benchmarking and assess performance more accurately in the STI sector.

4.3 ACHIEVEMENTS IN THE INFORMATION AND COMMUNICATIONS TECHNOLOGY PORTFOLIO

Increased access to the Internet has facilitated a rapid rise in the number of computer and internet security incidents, including intrusions, hacking, and economic fraud. Having realized the depth and possible impacts of cybercrimes, the GOJ continued, during FY 2015–2016, to take a holistic approach by implementing a comprehensive package of measures to treat with the problem. A Cyber Security Strategy together with a Cyber Incident Response Team (CIRT), which is intended to serve as the GOJ's cornerstone for cyber security coordination and preparedness to protect Jamaica's ICT infrastructure. This comprehensive approach will facilitate a coordinated defence against and response to cyber-attacks.

During the period Digicel (Jamaica) Limited's application for a Domestic Mobile Spectrum Licence for additional spectrum in the 1900MHz band was processed with recommendation for granting of the licence in June 2015. An application was received for frequencies in the 700MHz band from a new operator, Symbiote Investment Limited, associated with the continued expansion of the ICT sector, and in line with international trend. Preparations continue to be made for the introduction of a 'Single Regulator' for the sector.

During the FY the implementation of number portability came into effect with the main telecoms carriers. This is expected to strengthen competition in the sector.

The creation of eGovJa and the post of Chief Information Officer (CIO), moves to develop ICT and Data Protection legislation, number portability, establishment of GovNet, creation of a 'Single ICT Regulator' and creation of the national portal - jamaica.gov.jm, were points of focus during FY 2015-2016. With the assistance of the USF, the e-Ljam continued to build out, through the e-Learning Project, ICT services, ICT-based instructional materials, build capacity and improve the hardware and software available in several schools throughout the country. The five (5) main components of the Project continued to be:

- i. Component 1: Instructional Materials: Acquisition and development of a comprehensive set of standard ICT-based instructional materials for teachers and students in 11 subject areas.
- ii. Component 2: Technology Infrastructure for Storage/Dissemination/Access: Provision of ICT equipment and related software to secondary schools; establishment of a Central Repository for Educational Materials (CREM) to store, reproduce, continuously update, and distribute materials, and to include a web-based repository accessible over the broad-band network; upgrade of the Education Management Information System (EMIS) at the MOE to enhance management and administrative capability.

- iii. Component 3: Teacher Training: Training principals, teachers and subject tutors in modern methodologies for delivery, change management; certification in basic ICT skills (to international standards) and integration of ICT into the teaching/learning process (certification to ISTE standards).
- iv. Component 4: Remedial Support.
- v. Component 5: Continuous Assessment of students throughout the school system, particularly the secondary system.

The programmes and projects pursued under the ICT portfolio were intended to assist in effecting the following:

- i. Accelerating public sector reform by facilitating the widespread use of e-Government in areas that increase productivity.
- ii. Improving performance within our education system, especially at the secondary level. (A similar project for primary and all-age schools is to be developed by FY 2015-2016).
- iii. Improving the provision of convenient, efficient and citizen-centric services delivered electronically via the internet and mobile devices.
- iv. Mitigating corruption and increasing transparency with the implementation of automated systems.
- v. Improving efficiency and service delivery throughout the economy, including the courts, revenues and taxation entities, and security services.
- vii. Increasing the use of the spectrum, including the rate of compliance and reducing radio frequency interference.

4.6 COMMUNICATIONS UNIT

This unit played a main role in providing coverage for the Ministry's various projects and activities, including the ICT, energy and S&T portfolios.

Notably, it accomplished the following:

- Published posters on energy conservation and efficiency.
- Participated in an exhibition on renewable energy.
- Provided support for the public consultation on number portability rules and sensitization on number portability.
- Provided support in crafting the Ministers' 2015 sectoral presentations and other developments that the Ministry pursued during the year.
- Published the Ministry's newsletter.

4.7 INTERNAL AUDIT UNIT

Public sector entities are required to observe various rules aimed at protecting the public's interest, especially as it relates to the use and management of public finances and assets. The Ministry's Internal Audit Unit sought to ensure that this is done. It therefore completed audits of agencies and divisions within the Ministry to ascertain the extent to which they had observed these rules, and where necessary, to outline required corrective measures.

4.8 PERSONNEL MANAGEMENT AND OTHER SUPPORT SERVICES

The Human Resources Division (HRD) sought to create and fill posts in several segments of the Ministry, namely the Financial Management and Accounting Services Division, the Energy Division, and the Internal Audit Unit. An organisational structure for the ministry is beginning to take shape with the filling of several key posts. This is expected to continue into the next FY 2016-17.

5.0 APPROVED BUDGET FOR FINANCIAL YEAR 2016-2017

To support its activities for FY 2016-2017, the Ministry's combined budgetary request for Recurrent and Capital expenditure amounts to **\$5,558,204,000**. The request is broken down as follows:

a.	Recurrent	:	\$3,207,668,000
b.	Capital A	:	\$1,161,520
c.	Capital B	:	\$893,366,000

RECURRENT

The budgetary request for FY 2016-17 to fund the Ministry's activities is **\$3.714 billion**, which includes \$62.5 Million as Appropriations-in-Aid (AIA).

The list of items comprising the requested recurrent budget is shown in Table 1:

TABLE 1: APPROVED RECURRENT BUDGET 2016-2017 FOR THE MINISTRY AND ITS AGENCIES FUNDED THROUGH THE MINISTRY '000

No.	MINISTRY/AGENCY	BUDGETARY SUPPORT 2016-2017 (as per ceiling) (\$) '000	REVISED BUDGET 2015/2016 (\$) '000
1	Head Office	436,766	515,742
2	Energy Inspectorate (GEI)	127,055	122,838
3	Board of Examiners	9,998	8,847
4	Scientific Research Council	504,004	410,337
5	National Commission on Science and Technology	21,742	20,483
6	International Centre for Environmental and Nuclear Sciences	74,129	71,866
7	e-Learning Jamaica Company Limited	102,515	81,938
8	eGov Jamaica Limited	1,480,707	1,415,740
9	National Energy Solutions Limited	444,192	374,654
10	Membership Fees, Grants and Contributions	6,560	8,460
	GRAND TOTAL	3,207,668	6,356,470
11	LESS APPROPRIATION IN AID	179,151	307,855
	NET TOTAL	3,028,517	6,048,615

5.1 RECURRENT BUDGET FOR THE AGENCIES FUNDED THROUGH THE MINISTRY

ENERGY

- i. Board of Examiners: This is a technical body which examines and certifies personnel for the electricity sector. The approved allocation for this activity is **\$9.998M**
- ii. Government Electricity Inspectorate (GEI) - (**\$127.05M**). This allocation is to ensure that the division continues its mandate to ensure that all electrical installations are done in accordance with the governing electrical standards and the Electric Lighting Act. During the year it will inspect and certify where appropriate electrical installations, ensure petroleum facilities are constructed and operated in accordance with the petroleum standards and regulations, put in place infrastructure to improve its service delivery.
- iii. The National Energy Solutions Limited (NESol), formerly Rural Electrification Programme Limited (REP), has been rebranded, its mandate expanded to include the building out of renewable energy solutions to complete rural electrification and other special projects. The company is presently going through the transition phase and there is the need for a revised organizational structure and a new business processes. The approved allocation for financial year 2016/17 is **\$444.19M**. This includes appropriation-in-aid (AIA) of \$125M

This project is intended to extend the provision of electricity supply services to rural communities where the provision of the utility is not economically viable through a conventional commercial entity. The provision of this vital utility will assist in improving the beneficiaries' standard of living, provide the possibility for increased productivity and stimulate community and household-level economic activities. It will continue carry out pole line extensions and electrification as well as continue the energy loss reduction programme on behalf of the JPSCo.

During the 2016-2017, NESol will continue its rebranding, pursue the building of physical infrastructure and human resource capacity, build public awareness and provide energy audits and renewable energy solutions.

INFORMATION AND COMMUNICATION TECHNOLOGY

- i. eGov Jamaica Limited's priority policies are aimed at reducing government's ICT costs, promoting efficiency and effectiveness through technology, facilitating a more responsive public sector and promotion of national growth and development. The entity also provides general ICT services to the entire public sector, advices on systems development in the public sector and implements key national ICT projects. The company is allocated **\$1,48Billion** to effect its mandate during the 2016-2017 FY.
- ii. e-Learning Jamaica Company Limited's allocation amounts to **\$102.51M** to enable it to continue its mandate of propagating ICT throughout the society, particularly within our educational institutions. During the 2016-2017 FY, major projects to be acted upon by the agency include the following:
 - a. Provision of technology management support services to the MOE through technology infrastructure content management and support, diagnostic testing, teacher training and school support.
 - b. Tablets in School Project –Full implementation of Pilot 1 in 39 schools. Approximately 25,000 students are expected to be impacted.

SCIENCE, TECHNOLOGY AND INNOVATION

- i. Scientific Research Council (SRC) (**\$504M**): This allocation, which includes \$54.15M as AIA, is to assist the SRC to continue the implementation of its mandate which includes the Vision 2030 objectives of developing a technology enabled society and to integrate science into all areas of development. It will also help the SRC to continue its mandate to foster and coordinate scientific research and the promotion and its application in all spheres of the economy to assist in improving the country's competitiveness and generating increased wealth and employment. The main areas to be pursued include various waste water systems (for which the SRC has a patent) for the public and private sector, the support to SMEs and the dissemination of science to students and the wider population. It will also assist the SRC with improving its service delivery which continues to expand and exert increased demand on its facilities. While the SRC will continue to concentrate a significant amount of its resources, programmes and projects in support of the growth and development of the country's agro industrial sector, it is also pursuing research in various indigenous plant resources and assisting in the development of a value added Nutraceutical Industry.

- ii. National Commission on Science and Technology (**\$21.74M**): This allocation is to facilitate the entity's revitalization as well as to carry out the development of an updated STI policy, development of R&D Indicators, establish a framework for a Nutraceutical Industry, and enhance the public awareness of the public on the importance of STI as well as assists its popularisation.
- iii. International Centre for Environment and Nuclear Sciences (**\$74.13M**): The proposed allocation is to be used to implement the organisation's programmes for the 2016-2017 FY. These include research and analysis in agriculture and food quality and safety, environmental protection.

5.2 LIST AND COST OF CAPITAL PROJECTS WHICH THE MINISTRY WISHES TO PURSUE IN FINANCIAL YEAR 2016-2017

One (1) Capital A and Five (5) Capital B projects, as outlined in Table 3, are proposed for implementation during the 2016–2017 FY.

Under the Capital B head, the Energy Security and Efficiency Enhancement Project and the Youth Employment in Digital and Animation Industries Project are substantially or totally supported by loan funding. The other proposed projects are supported by grant funding from our various international development partners. These include the IDB, WB/International Bank for Reconstruction and Development (IBRD) and Latin American Energy Organisation (OLADE) and Universal Postal Union (UPU). The Capital A projects now includes the Energy Efficiency and Conservation Project and the eLearning Project which is administered by e-Ljam and entails primarily the tablets in schools program; which is substantially funded by the USF.

TABLE 3: CAPITAL PROJECTS 2016-2017 BUDGET'000

CAPITAL A				CAPITAL B				
No.	NAME OF PROJECT	CODE	COST, J\$'000	No.	NAME OF PROJECT	CODE	FUNDING AGENCY	COST, J\$'000
1	E-Learning Project	2263	700,000	1	Upgrade to International Postal System	9372	UPU	38,911
2	Energy Efficiency and Conservation Project	9372	361,520				GOJ	0
3	National Energy Solution Ltd	2606	100,000					
4				2	Energy Security and Efficiency Enhancement Project	9362	World Bank	357,752
5						9362	GOJ	1,952
6				3	Youth Employment in Digital and Animation Industries	9469	World Bank	190,115
						9469	GOJ	1,985
7				4	Funding of OLADE's Caribbean Sub -Regional Office in Jamaica	9400	OLADE	5,665
						9400	GOJ	1,534
8				5	Improving Innovation Capacities in the Caribbean (SRC)	9450	IDB	26,873
9						9450	GOJ	2,160
	GRAND TOTAL		1,161,520		GRAND TOTAL			626,947
	Less Appropriations In Aid (AIA)		700,000					
	ii. E-Learning							
	NET TOTAL BUDGET		461,520					
	BUDGET CEILING				BUDGET CEILING			
	VARIANCE				VARIANCE			

6.0 MAJOR PRIORITIES & FOCUS: POLICIES, PROGRAMMES AND PROJECTS FOR THE 2016-2017 FINANCIAL YEAR

In addition to new programmes the Ministry will focus on outstanding programmes which have either not yet been completed and are behind over an extended period. They are taken from the timelines set by the Ministry but also more significantly the MTSEP Framework. These items continue up to present to be delayed or not started for various reasons but some should be completed at earliest in the 2016-17 FY. These are:

Policy Related

- Completion of the promulgation of the 5 energy sub-policies.
- Science Technology and Innovation Policy
- Postal Services Policy
- ICT Policy

Other

- Promote and bring investments in renewable energy, example Hydro, to the investment stage in Phase 1 at the 4 sites where feasibility studies have been completed
- Mainstream energy issues in the tax structure
- Introduction of energy efficiency standards
- Waste to Energy Policy
- Amendment of legislation in the various sectors (energy, science and technology)
- Upgrade of the Petrojam Refinery
- 381 MW new generating capacity
- Single ICT Regulator
- Implementation of Performance Management and Appraisal System (PMAS)

In the case of the renewable energy programme, the development of the wind resource sector continues to far outperform hydro and biofuels programmes. The implication of lagging to investment in these areas could result in the renewable target being missed.

The modernization and expansion of generating capacity programme mainly driven through the JPSCo has been delayed at the procurement stage and was taken over by ESET although the Ministry still has a role to facilitate as required. Delays in this programme have affected the outcome of cheaper electricity rates.

During the 2016-17 FY, the Ministry, Divisions and Agencies (MDAs) will undertake the following programmes as outlined in the respective Operational Plans:

- Electrification Services
- Regulation of electrical and petroleum installations
- Influence the transfer of certification of electrical installations into private licensed individuals
- Continue rural electrification – (through 200km pole line installation, wiring of 4,00 houses under the GOJ Revolving Loan Programme, Wiring of 12,000 houses under the JPSCo Loss Reduction Programme)
- Continue the rebranding of the REP to NESol (National Energy Solutions through change to the organization structure and facilities)
- Diversify energy relate services through NESol include energy audits (for 70 schools) and energy solutions including renewable energy to the public and private sector
- Staging of an inaugural Jamaica Energy Exposition and Investment Conference

- Pursue energy efficiency through the labelling and testing of appliances and the development of energy standards
- Develop a national energy conservation plan
- Develop and implement programme to influence market behaviour toward energy efficient use through ESCOs
- Refinery Upgrade project
- Expand renewable energy sources in the energy mix
- Establish technical Review Committee to assess the effectiveness of the implementation of MSET's energy programmes, projects and initiatives
- Continue energy efficiency and conservation measures in the public sector
- Continue to strengthen the NCST
- Develop an STI Policy
- Provide waste water and bio-digester services to the public and private sector
- Provide analytical service and bio technical services through testing and tissue culture to businesses
- Extend services for the development and growth of SMEs in food technology
- Develop a nutraceutical industry through developing the framework and legislation
- Popularize and promote science in schools and population
- Develop and integrated communication plan between the MDA's
- Increase security of electronic communication
- Fully implement the Youth Employment in Digital and Animation Industries project
- Develop a national broadband framework
- Implement PMAS
- Pursue amendments to various pieces of legislation and the promulgation of new pieces of legislation

7.0 MONITORING AND EVALUATION

The Ministry wishes to implement a rigorous monitoring and evaluation programme to track and grade its performance, including that of its portfolio agencies. This can be accomplished through established mechanisms of reporting and performance reviews to ensure an audit and reconciliation of the entities' work plans and programs as against their achievements, but may continue to be restrained by the absence of the required staff. Further details are outlined in the Monitoring and Evaluation Plan attached at Appendix B.

The mechanisms which will be employed to ensure an efficient monitoring and evaluation programme include:

- Implementation of a Monitoring and Evaluation Plan.
- Quarterly reviews of performance of the Ministry and its agencies. Heads of Divisions and Chief Executive Officers will be required to report on actual achievements against plans and to also provide explanations for deviations and revise plans to meet targets.
- Assignment of agencies to Desk Officers in the Division.
- Tabling of Annual Reports to Parliament and submission of periodic of reports to Cabinet.
- Representation of the Ministry on the agencies' Boards of Directors.
- Regular briefing meeting with the Permanent Secretary.
- Analysis of work programme against achievements and periodic audits.
- Face to face meeting with Heads of Divisions, Departments and Agencies to get updates and discuss strategies.

8.0 DIVISIONS' OPERATIONAL PLANS

OPERATIONAL PLAN 2016-2017

POLICY, PLANNING, DEVELOPMENT AND EVALUATION DIVISION

MISSION : To ensure that the Ministry's policy, planning, development and evaluation processes are streamlined, visionary, reflect the Government's mandate, and are linked to ***Vision 2030: Jamaica's National Development Plan.***

PERIOD: 2016 - 2017

ESTIMATED EXPENDITURE : \$33.748 MILLION

ACTIVITY: 1036

PRIORITY POLICY ISSUES	OBJECTIVES	STRATEGIES	OUTPUT	PERFORMANCE MEASURES / OUTPUT INDICATORS	MAJOR TASKS, TARGETS, RESOURCES AND COST			(POLICY DIVISION)
					Q1	Q2	Q3	Q4
Effective policy development, monitoring and evaluation of the ministry's activities.	To enable the ministry to optimize its ability to develop policies, monitor and evaluate the impacts of its policies, legislations, projects and programme, and the effectiveness of its agencies and divisions.	Broad-based consultations with all stakeholders.	Meetings to represent the Ministry are attended and the Minister, PS, CTD briefed as necessary.	Reports from meetings submitted in a timely manner.	Meetings to represent the Ministry are attended and the Minister, PS, CTD briefed as necessary.	Meetings to represent the Ministry are attended and the Minister, PS, CTD briefed as necessary.	Meetings to represent the Ministry are attended and the Minister, PS, CTD briefed as necessary.	Meetings to represent the Ministry are attended and the Minister, PS, CTD briefed as necessary.
		Implementation and constant improvement of a focused monitoring and evaluation programme to allow for the gathering of necessary information and the provision of feedback to stakeholders.	Ministry Papers are compiled and submitted.	Ministry Papers are completed and laid in Parliament in time for the Budget Debate each fiscal year	Ministry Papers are completed and laid in Parliament in time for the Budget Debate each fiscal year.	Quarterly Operational Plan Review Meetings convened with each agency and division within the Ministry.	Ministry's Operational and Strategic Business plans are completed and submitted to Cabinet and the Ministry of Finance.	Ministry Papers are completed and laid in Parliament in time for the Budget Debate each fiscal year.
		Continued training and improvement in the capacity of staff members as a key component to facilitate an effective Policy, Planning, Development and Evaluation Division.	The Ministry's Operational and Strategic Business plans are completed and submitted to Cabinet and the Ministry of Finance.	Documents, including Cabinet Submissions, Cabinet Notes, briefs, reports and memoranda are prepared accurately and on time.	Quarterly Operational Plan Review Meetings convened with each agency and division within the Ministry.	Agencies annual reports are reviewed, and the required Cabinet Notes prepared and dispatched.	Quarterly Operational Plan Review Meetings convened with each agency and division within the Ministry.	Quarterly Operational Plan Review Meetings convened with each agency and division within the Ministry.
		Focused and effective research to guide policy development and evaluation.	Operational and Strategic Business plans for the Ministry's agencies are received, noted and woven into the Ministry's.	All plans completed and submitted to Cabinet and MOFP within the stipulated timeframe.	Weekly IMF Energy Sector Report prepared.	Weekly IMF Energy Sector Report prepared.	Weekly IMF Energy Sector Report prepared.	Weekly IMF Energy Sector Report prepared.
			Quarterly Operational Plan Review Meetings		Agencies annual reports are reviewed, and the required Cabinet Notes prepared and dispatched.	Evidence-based concept and position papers prepared.	Agencies annual reports are reviewed, and the required Cabinet Notes prepared and dispatched.	Agencies annual reports are reviewed, and the required Cabinet Notes prepared and dispatched.
					Ministry-wide biannual strategic and operational planning session held.			

PRIORITY POLICY ISSUES	OBJECTIVES	STRATEGIES	OUTPUT	PERFORMANCE MEASURES / OUTPUT INDICATORS	MAJOR TASKS, TARGETS, RESOURCES AND COST			(POLICY DIVISION)
					Q1	Q2	Q3	Q4
			<p>convened with each agency and division within the Ministry.</p> <p>The annual reports of the Ministry's agencies are received, the required Cabinet Notes prepared and submitted to Cabinet and the reports submitted to Parliament.</p> <p>Ministry-wide biannual strategic and operational planning sessions held.</p> <p>The Minister's Budget Debate speech is compiled, copied and presented to Parliament in time for his presentation.</p> <p>Research aimed at facilitating evidence-based policy and policy revision.</p> <p>Evidence-based concept and position papers prepared.</p> <p>Annual divisional budgets, Strategic 3-Year Plans, Corporate Plans and individual work</p>	<p>Review meetings held according to schedule</p> <p>Cabinet notes and annual reports submitted to the relevant entity in stipulated time</p> <p>Ministry-wide strategic planning session held within the stipulated time.</p> <p>Research reports submitted in a timely manner</p> <p>Reports completed and submitted in agreed timeframe.</p> <p>Divisional budget along with</p>	<p>Individual work plans are monitored and revised to achieve at least an 85% completion rate.</p> <p>Evidence-based concept and position papers prepared.</p>		<p>Annual divisional budgets, Strategic 3-Year Plans, Corporate Plans and individual work plans are completed.</p> <p>Ministry-wide biannual strategic and operational planning session held.</p> <p>Evidence-based concept and position papers prepared.</p>	<p>Annual performance evaluations for staff members completed as per the HRMA Division's dictates.</p> <p>Evidence-based concept and position papers prepared.</p>

PRIORITY POLICY ISSUES	OBJECTIVES	STRATEGIES	OUTPUT	PERFORMANCE MEASURES / OUTPUT INDICATORS	MAJOR TASKS, TARGETS, RESOURCES AND COST			(POLICY DIVISION)
					Q1	Q2	Q3	Q4
			plans are completed. Supervision and guidance provided to staff. Annual performance evaluations for staff members completed as per the HRMA Division's dictates.	Corporate Plans and work plans submitted by October 31 th . Individual work plans are monitored and revised to achieve at least an 85% completion rate. Performance Appraisal Reports are completed and submitted to HRMA in the stipulated time				
Implement the National Energy Policy	Facilitate the development of a modern, efficient, diversified and environmentally sustainable energy sector providing affordable and accessible energy supplies with long term energy security.	Through close alliance with the Petroleum Corporation of Jamaica (PCJ) Group of Companies, the National Energy Solutions Company (NESCO), other public sector bodies, the private sector, academia, donors, and professional bodies promote energy efficiency, national energy security, development of renewables and new forms of energy, and exploration for fossil fuel resources.	New incentives to promote energy efficiency and energy conservation and the development of renewable energy are presented to the Ministry of Finance and Planning (MOFP). Promotions conducted for the building-out of renewable energy technologies. Promotions for climate proofing of operations within the MSET's	Approval of incentives to promote energy efficiency achieved Number of promotional activities done within specified timeframe.	Promote the building-out of renewable energy technologies. Promote climate proofing of operations within the MSET. In partnership with stakeholders, complete studies and pilot projects on various issues necessary to facilitate the development of a biofuels and energy from waste sector in Jamaica	Promote the building-out of renewable energy technologies. Promote climate proofing of operations within the within the MSET's portfolio responsibilities In partnership with stakeholders, complete studies and pilot projects on various issues necessary to facilitate the development of a biofuels and energy from waste sector in Jamaica.	Promote the building-out of renewable energy technologies. Promote climate proofing of operations within the MSET's portfolio responsibilities In partnership with stakeholders, complete studies and pilot projects on various issues necessary to facilitate the development of a biofuels and energy from waste sector in Jamaica.	Promote the building-out of renewable energy technologies. Promote climate proofing of operations within the MSET's portfolio responsibilities In partnership with stakeholders, complete studies and pilot projects on various issues necessary to facilitate the development of a biofuels and energy from waste sector in Jamaica.

PRIORITY POLICY ISSUES	OBJECTIVES	STRATEGIES	OUTPUT	PERFORMANCE MEASURES / OUTPUT INDICATORS	MAJOR TASKS, TARGETS, RESOURCES AND COST			(POLICY DIVISION)
					Q1	Q2	Q3	Q4
			<p>portfolio responsibilities</p> <p>Completion of studies and pilot projects on various issues necessary to facilitate the development of a biofuels industry in Jamaica.</p> <p>Local companies sign MOUs and commit resources to develop biofuels and increase their capacity to develop the biofuels sector.</p>	<p>Studies and pilot project completed in specified timeframe</p> <p>Memorandum of Understanding signed by the end of fourth quarter.</p>				
Active performance of focal point roles: Sustainable Development, Climate Change, Biodiversity, Environment Policy, Minamata Convention, World Heritage Site declaration, etc.	To develop and manage the sectorial strategies and actions, along with monitoring, evaluating and reporting on these strategies and actions.	<p>Participation in meetings.</p> <p>Inter-ministry coordination of various treaty issues</p>	<p>Participation in various fora.</p> <p>Development of Ministry positions and intra-ministry facilitation documents specific to the various treaty and other issues.</p> <p>Collaboration with donor entities to obtain technical and financial support to effect the implementation of agreed treaty and other matters.</p> <p>Review of sustainable development policy and</p>	<p># of meetings and fora attended.</p> <p>Reports prepared and distributed.</p> <p>Meetings held and projects submitted in agreed timeframe</p>	<p>Represent the Ministry at various fora to facilitate the incorporation of climate change adaptation, sustainable development, environmental management, world heritage site declaration, biodiversity, etc. into the strategic planning processes and execution of the Ministry's mandates.</p> <p>Submit projects and meet with donors to access funds to support implementation of programmes and projects cross-cutting both science</p>	<p>Represent the Ministry at various fora to facilitate the incorporation of climate change adaptation, sustainable development, environmental management, world heritage site declaration, biodiversity, etc. into the strategic planning processes and execution of the Ministry's mandates.</p> <p>Submit projects and meet with donors to access funds to support</p>	<p>Represent the Ministry at various fora to facilitate the incorporation of climate change adaptation, sustainable development, environmental management, world heritage site declaration, biodiversity, etc. into the strategic planning processes and execution of the Ministry's mandates.</p> <p>Submit projects and meet with donors to access funds to support</p>	<p>Represent the Ministry at various fora to facilitate the incorporation of climate change adaptation, sustainable development, environmental management, world heritage site declaration, biodiversity, etc. into the strategic planning processes and execution of the Ministry's mandates.</p> <p>Submit projects and meet with donors to access funds to support</p>

PRIORITY POLICY ISSUES	OBJECTIVES	STRATEGIES	OUTPUT	PERFORMANCE MEASURES / OUTPUT INDICATORS	MAJOR TASKS, TARGETS, RESOURCES AND COST			(POLICY DIVISION)
					Q1	Q2	Q3	Q4
			mechanisms, environmental policy, climate change mechanisms, etc.	Policies reviewed and finalized in specified time	and energy sectors. Review of NEPA's Biogas, Coal-fired Plant, and other guidelines and documents.	implementation of programmes and projects cross-cutting both science and energy sectors. Collaborate with other ministries and agencies on the implementation of treaty requirements energy sectors. Review of NEPA's Biogas, Coal-fired Plant, and other guidelines and documents.	implementation of programmes and projects cross-cutting both science and energy sectors. Collaborate with other ministries and agencies on the implementation of treaty requirements within the energy sectors. Review of NEPA's Biogas, Coal-fired Plant, and other guidelines and documents.	implementation of programmes and projects cross-cutting both science and energy sectors. Collaborate with other ministries and agencies on the implementation of treaty requirements within energy sectors. Review of NEPA's Biogas, Coal-fired Plant, and other guidelines and documents.

ENERGY DIVISION'S – Technical & Economic Dept.

Estimated Expenditure: **\$40.32M**

Ministry Policy/ Programme/Project Initiative & Budget No.	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	ENERGY DIVISION			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
Goal 1 - Energy Conservation and Efficiency	Expand the appliances Labelling and Testing Programmes of the BSJ	Extend the testing chambers to test refrigerators, freezers, and air conditioners, and strengthening the related labeling and information program.	Electrical appliances labelled	Testing chambers upgraded # of electrical appliances labelled # of different models of appliances labelled % increase in proportion of labelled appliances	Install new test chambers refurbish existing test chambers Development/installation of software for test chambers Construction and engineering work for modification of building for test chambers	Testing commissioning and handover of new and refurbished test chambers		
	To monitor and coordinate national energy efficiency efforts across all sectors of the society	Develop a National Energy Efficiency Action Plan to support recommendations in the UNECLAC Energy Efficiency Potentials Study for Jamaica	Action Plan Projects developed and financing secured		Secure financial and technical support for the implementation of strategies identified in National Action Plan 2013-2016	Draft National Energy Conservation and Efficiency Plan and circulate for comments	Coordinated National Energy Conservation and Efficiency Plan Approved	Sector Plans Developed for Energy Conservation and Efficiency
		Energy Efficiency and Conservation in Households	Increased uptake of Solar Water Heater Loans from National Housing trust (NHT) Increased uptake of Solar photovoltaic Loans from NHT.	Reduction in average monthly electricity consumption by households	Monitor the establishment of a renewable energy survey to assess the number of solar systems installed in Jamaica	Monitor the establishment of a renewable energy survey to assess the number of solar systems installed in Jamaica	Continue monitoring	Continue monitoring

Ministry Policy/ Programme/Project Initiative & Budget No.	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	ENERGY DIVISION			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
	To assess and define an appropriate institutional framework within the organizational structure of MSET	Establish a National Energy Efficiency Institution (NEEI) in Jamaica	NEEI established	NEEI operationalized	Seek Cabinet's Approval for the establishment of the NEEI			
	To implement a National energy awareness campaign	Develop and execute a comprehensive public education and communication programme towards implementing projects/programmes arising from the National Energy Policy and sensitize Jamaicans about ECE	<ul style="list-style-type: none"> • Seminars • Workshops • Media fora • Curriculum development • Audio visuals and teaching aids • Brochures and pamphlets • Jingle • Inter alia 	Number of workshops held Number of advertisement sponsored Number of publication distributed	Embark on several public awareness initiatives and deliver a minimum of two stakeholder workshops Liaise with stakeholders in planning and staging Jamaica Energy Week for November 2016	Implement public awareness initiatives and deliver a minimum of two stakeholder workshops Liaise with stakeholders in planning and staging Jamaica Energy Week for November 2016	Implement public awareness initiatives and deliver a minimum of two stakeholder workshops Liaise with stakeholders in planning and staging Jamaica Energy Week for November 2016	Implement public awareness initiatives and deliver a minimum of two stakeholder workshops
	To implement a National energy awareness campaign	Develop and execute a comprehensive public education and communication programme to promote the National Energy Policy and sensitize Jamaicans about ECE	Seminars Workshops Media for a Curriculum development Audio visuals Brochures and pamphlets Jingles	# of workshops held # of advertisements sponsored #of publication distributed	Embark on several public awareness initiatives and deliver Of 2 stakeholder workshops Liaise with stakeholders re planning and staging of Jamaica Energy Week	Embark on several public awareness initiatives and deliver Of 2 stakeholder workshops Liaise with stakeholders re planning and staging of Jamaica Energy Week	Embark on several public awareness initiatives and deliver Of 2 stakeholder workshops Liaise with	Embark on several public awareness initiatives and deliver Of 2 stakeholder workshops

Ministry Policy/ Programme/Project Initiative & Budget No.	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	ENERGY DIVISION			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
							stakeholders re planning and staging of Jamaica Energy Week	
			Pursue the implementation and enforcement of the energy efficiency code of the Building Act	Meetings and discussions	Pursue measures to drive the passage of the Building Act			
		Approval of ISO 50001 Energy Management Standards for Jamaica	Wide scale adoption and use of International Standards for Energy Management	Cabinet Approval of ISO 50001 Energy Management Standards for Jamaica	Prepare and seek Cabinet's Approval for ISO50001 Energy Management Standards to be adopted for Jamaica.	Identify three (3) entities (2 public sector and 1 private sector) for implementing pilot projects for ISO 50001 Compliance		
Goal 2 - Modernized Energy Infrastructure	To improve system reliability and reduce system cost	Conduct electricity demand forecasting to optimize generation mix	Electricity demand projection and price sensitivity analyses	Report submitted	Provide recommendations on the general development of the electricity system .			
		Introduce further competition in the electricity market and break the monopoly on distribution of electricity	Competition in the supply and distribution of electricity	Increase the number of players in the supply and distribution of electricity	Electricity Lighting Act promulgated			
	To replace/ upgrade old and efficient plants (generation and refinery)	Review annual generation expansion plans and facilitate timely procurement of new generation plants Identify and capitalize on various sources of funding for energy	Reduced average age of generation plants	Percentage increase in plant reliability Percentage reduction in	Monitor JPS progress in implementing the LNG project to specifically secure commercial agreements for construction, fuel supply and other related activities	Monitor JPS progress in implementing the LNG project to specifically secure commercial agreements for construction, fuel supply and other related activities	Monitor JPS progress in implementing the LNG project to specifically	Monitor JPS progress in implementing the LNG project to specifically secure

Ministry Policy/ Programme/Project Initiative & Budget No.	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	ENERGY DIVISION			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
		projects		generation cost (\$/Kwh).	Monitor use of conventional fuel sources and conduct research on alternative resources	Monitor use of conventional fuel sources and conduct research on alternative resources	secure commercial agreements for construction, fuel supply and other related activities Monitor use of conventional fuel sources and conduct research on alternative resources	commercial agreements for construction, fuel supply and other related activities Monitor use of conventional fuel sources and conduct research on alternative resources
	To ensure safe reliable and efficient supply and distribution of energy	Develop Smart Grid Road Map for Jamaica and facilitate its implementation Establish a monitoring framework to track energy targets and indicators to validate the performance of the supply and distribution systems	Increased grid connectivity for new and alternative energy sources Reduced technical Losses Reduction in non-technical losses	Gradual reduction in technical losses from 10%. Percentage increase in Service reliability.	Liaise with regulator to ensure that loss reduction strategies are being pursued Partner with the JPS through the Rural Electrification Programme in regularizing electricity connections for a set of housing units to be determined.	On-going monitoring of loss reduction strategies Partner with the JPS through the Rural Electrification Programme in regularizing electricity connections for a set of housing units to be determined.	Complete Smart Grid Road Map for Jamaica Ongoing monitoring of loss reduction strategies Partner with the JPS through the Rural Electrification Programme in regularizing	Smart Energy Road Map Implementation Plan Developed and Recommendations for Implementation defined On-going monitoring of loss reduction strategies Partner with the JPS through the Rural Electrification

Ministry Policy/ Programme/Project Initiative & Budget No.	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	ENERGY DIVISION			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
							electricity connections for a set of housing units to be determined.	Programme in regularizing electricity connections for a set of housing units to be determined.
	To increase capacity utilization of the refinery and optimize efficiencies	Monitor the status of and support the Refinery Upgrade project.	Up-to-date status reports	Project implementation	Cabinet Approval and Project Finance Approved	Commence Phased upgrade project	•	•
Goal 3 - Renewable Energy	To identify and develop indigenous energy sources.	<p>Conduct, and otherwise facilitate the performance of technical, economic and financial feasibility assessment of renewable energy projects and make them investment ready</p> <p>Engage in dialogue with the OUR to effect amendments to the tariff structure to make it conducive to securing investment in the RE sector.</p> <p>Provide support to domestic entities by mapping and piloting the use of wind turbines to generate power.</p> <p>Provide technical assistance for</p>	<p>Investments packages</p> <p>Increase the renewable energy contribution to energy supply mix.</p> <p>Wind map for the development of small scale wind turbine</p> <p>4 Wind turbines constructed and installed</p>	<p>Funding secured</p> <p>Resolution of avoided cost issue</p> <p>Clarification of regulatory definition of self-generation</p> <p>Provision of carbon monitoring tool</p> <p>Development of renewable energy resource maps</p> <p>Comparative analysis of policy</p> <p>Assessment of RE potential</p>	<p>Continue to perform feasibility studies on 6 prospective hydro sites.</p> <p>Review reports from the PCJ on the status of renewable energy projects</p> <p>Conduct studies to ensure renewable energy projects (hydro, wind, solar and biomass) are brought to investment ready stage</p> <p>Review performance of existing hydroelectric plants and mobilize investors and financiers for three hydro</p>	<p>Continue to perform feasibility studies on 6 prospective hydro sites</p> <p>Communication & Awareness of Wind Energy</p> <p>Create an inventory of existing /new technologies relating to developments in Renewable Energy</p> <p>Consultancy services for policy review, communication of roadmap, resource mapping, capacity building</p> <p>Develop functional training facilities in Wigton Windfarm</p>	<p>Communication & Awareness of Wind Energy</p> <p>Develop at least one project in sugar sector that exports power to the grid, via appropriate regulatory interventions</p>	<p>• Develop tender for RE capacity in collaboration with OUR</p>

Ministry Policy/ Programme/Project Initiative & Budget No.	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	ENERGY DIVISION			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
		the development of small scale wind technology			<p>sites for which feasibility studies were completed</p> <p>Commence, through the REP, a Solar Energy Pilot Project for the installation of PVs to rural communities</p> <p>Monitor and report on the supply and installation of Cuban renewable energy and energy efficient energy systems at the GC Foster College of Physical Education</p>	Resource Centre		
Goal 4 - Energy Security	To supply natural gas to the power generation and bauxite/alumina sectors.	<p>Liaise with stakeholders in establishing a regulatory framework for the LNG sector and in developing a framework document for the introduction of natural gas</p> <p>Identify and capitalize on various sources of funding for energy projects</p> <p>Research and develop alternate fuels for the transportation sector</p>	<p>Regulatory Framework established</p> <p>Construction of Floating Storage Regasification Unit and Gas Transmission System</p>	# of consultative meetings and established framework document	<p>Monitor JPS progress in implementing the LNG project to specifically secure commercial agreements for construction, fuel supply and other related activities</p> <p>Monitor use of conventional fuel sources and conduct research on alternative resources</p>	<p>Prepare fuel optimization strategy</p> <p>Monitor JPS progress in implementing the LNG project to specifically secure commercial agreements for construction, fuel supply and other related activities</p> <p>Facilitate the recovery and expansion of Co-generation using bagasse and other biomass sources</p>	Monitor JPS progress in implementing the LNG project to specifically secure commercial agreements for construction ,fuel supply and other related activities	Monitor JPS progress in implementing the LNG project to specifically secure commercial agreements for construction, fuel supply and other related activities
Goal 5 - Governance and regulatory framework	Provide a coherent policy and regulatory framework to facilitate competition in the energy supply	<p>Ensure compliance to petroleum regulations through liaison with stakeholders through Petroleum Advisory Committee</p> <p>Forge strategic alliance with the</p>	<p>Amendments to regulations</p> <p>Stakeholders' meeting</p>	<p>Registration targets achieved</p> <p>Number of strike</p>	<p>Foster industrial harmony in the petroleum industry through regular dialogue with stakeholders and members of the Petroleum Advisory Committee.</p>	<p>Prepare document on the registration process for service stations and other petroleum retail facilities</p> <p>Ongoing registration tanker drivers, haulage contractors,</p>	Provide support to the Jamaica Energy Council to ensure its efficient	Provide support to the Jamaica Energy Council to ensure its efficient operations

Ministry Policy/ Programme/Project Initiative & Budget No.	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	ENERGY DIVISION			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
	system Provide integrated monitoring and enforcement of regulations, all overseen by agencies and organizations with the capacity and tools to guide the energy sector.	OUR in the review and formulation of new legislation where such synergy can result in more efficient use of resources and better working relationship.		actions decreased or averted Studies develop relating to the regulatory framework	Ongoing registration tanker drivers, haulage contractors, services stations, ,bulk distributors and parking garages Electricity Division to conduct generation, planning and procurement. Provide support to the Jamaica Energy Council to ensure its efficient operations.	services stations, ,bulk distributors and parking garages Prepare generation expansion plans inter alia procurement Provide support to the Jamaica Energy Council to ensure its efficient operations	operations	
					Collaborate with the BSJ and provide oversight for the development of a National Petroleum Standard Finalization of Second National Energy Policy Action Plan 2013 – 2016 Establish National Energy Policy Review committee Establishment of NEP (2013-2016) targets and indicators , including baselines. Promulgate the Natural Gas Act) Collaborate with the BSJ and	Completion of energy consumption survey partnership with key stakeholders Prepare Status Report highlighting priority areas for further policy implementation, focusing on legal/regulatory barriers Collaborate with the BSJ and provide oversight for the development of a National Petroleum Standard Training for Gas Sector Regulator and other entities Develop the capacity of the Energy Division to conduct electricity planning and		

Ministry Policy/ Programme/Project Initiative & Budget No.	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	ENERGY DIVISION			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
					<p>provide oversight for the development of a National Petroleum Standard</p> <p>Consultant to be engaged for the development of the National Petroleum Standards</p> <p>Strengthen the regulatory framework for private-public partnership monitoring capacity of the energy sector, including, inter alia, developing the capacity of the Office of the Utilities Regulation (OUR)</p> <p>Commence phased implementation of Business Process Review of the GEI (Amanda system)</p>	procurement		
	To provide meaningful energy information that is timely and accurate and necessary for informing policy decisions	<p>Establish new links and strengthen existing ones, whether nationally, regionally and internationally whereby reliable and timely data can be obtained and disseminated.</p> <p>Implement a modern energy database and management system</p>	Reports and energy statistics generated on time	<p>At least 95% turn-around time for data input.</p> <p>95% turn-around time for addressing queries and generating information.</p>	<p>Conduct review of database and ensure that data capturing systems are up-to-date</p> <p>Interface with data providers on a consistent basis to ensure that information is submitted to the Ministry in a timely manner</p>	On-going collection of energy data and database updates	<p>On-going collection of energy data and database updates</p> <p>Complete Energy Demand Forecast and publish results of the model</p>	

Ministry Policy/ Programme/Project Initiative & Budget No.	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	ENERGY DIVISION			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
	To ensure that stakeholders can adequately access energy statistics and information from the Energy Division	Prepare critical energy information such as Annual Energy Balance, Energy Sector Report an Energy Digest on the performance of the energy sector	An up-to-date National Energy Information System (SIEN). Energy Balance generated. Energy statistics generated and published.	Relative ease of access to reliable and timely energy information from the Ministry of Science Energy and Technology.	Prepare Energy Digest Prepare Energy Sector Analysis for the PIOJ and publish statistics on Ministry's website Complete Annual Energy Sector Report for calendar year 2013 Prepare Energy Statistics as contribution to Sectoral Budget Presentation Prepare Energy Balance for 2013 Monitor the implementation of pole line extensions and wiring of houses by the REP	Update National Energy Information System (SIEN) with 2013 data Implement with technical support from OLADE the Regional Energy Information System (SIER) – training, system installation, etc. Monitor the implementation of pole line extensions and wiring of houses by the REP	Publish results of Energy models and outline electricity demand projections Monitor the implementation of pole line extensions and wiring of houses by the REP	Monitor the implementation of pole line extensions and wiring of houses by the REP
Goal 6 - Government is a leader in Energy Conservation	To implement Public Sector Programme on Energy Conservation and Efficiency.	Commence Public Education and Promotions for ECE Liaise with large energy consuming entities and sectors to sensitize them about the Energy Conservation and Efficiency initiatives and opportunities Design and implementation of cost savings EE and EC measures in the public sector.	Energy Conservation and Efficiency measures successfully implemented Reduced energy consumption in the public sector and improved energy efficiencies Retrofits and Energy Efficiency measures	Reduction in energy consumption	Monitor Energy Consumption in the Public Sector through reports from Energy Efficiency and Conservation Programme Develop Energy Savings Monitoring & Verifications Activities. Replacement of lighting Retrofit and insulation of building envelopes	On-going monitoring of Energy Consumption in the Public Sector Develop Energy Savings Monitoring & Verifications Activities. Replacement of lighting Replacement of Air conditioning Systems Retrofit and insulation of	On-going monitoring of Energy Consumption in the Public Sector Develop Energy Savings Monitoring & Verifications Activities.	On-going monitoring of Energy Consumption in the Public Sector Develop Energy Savings Monitoring & Verifications Activities. Replacement of lighting

Ministry Policy/ Programme/Project Initiative & Budget No.	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	ENERGY DIVISION			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
			undertaken		<p>Monitor the implementation of Cabinet Approved Energy Efficiency and Conservation Guidelines for the Public Sector</p> <p>Deliver at least one (1) workshop on EE Management in Public Buildings</p>	<p>building envelopes</p> <p>Analyze Tariffs Schedule and Incentives for EE</p> <p>Design of Standards for the Public Sector</p> <p>On-going monitoring of Energy Efficiency and Conservation Guidelines for the Public Sector</p> <p>Deliver at least one (1) workshop on EE management in public buildings</p> <p>Deliver at least one (1) workshop on EE procurement for public services</p>	<p>Develop the Energy Efficiency Institutional Framework</p> <p>Prepare and complete training and Maintenance and Environmental Disposal Manuals</p> <p>Replacement of lighting</p> <p>Replacement of air conditioning Systems</p> <p>Retrofit and insulation of building envelopes</p> <p>Analyze Tariffs Schedule and Incentives for EE</p> <p>On-going monitoring of</p>	<p>Replacement of Air conditioning Systems</p> <p>Retrofit and insulation of building envelopes</p> <p>Analyze Tariffs Schedule and Incentives for EE</p> <p>On-going monitoring of Energy Efficiency and Conservation Guidelines for the Public Sector</p>

Ministry Policy/ Programme/Project Initiative & Budget No.	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	ENERGY DIVISION			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
							Energy Efficiency and Conservation Guidelines for the Public Sector	
					Deliver at least one (1) workshop on EE Procurement for Public Services	Deliver at least one (1) workshop on EE Management in Public Buildings Deliver at least one (1) workshop on EE Procurement for Public Services	Deliver at least one (1) workshop on EE Management in Public Buildings Deliver at least one (1) workshop on EE Procurement for Public Services	Deliver at least one (1) workshop on EE Management in Public Buildings Deliver at least one (1) workshop on EE Procurement for Public Services
Goal 7- Eco-efficiency in Industry		Conduct detailed energy audits and analysis of energy consumption patterns for Jamaica Develop a carbon emissions tracking mechanism (for the public sector as a model Use biomass cogen in the sugar industry as a frame/focus for clarifying regulatory issues	Energy audits conducted Carbon Impact Monitoring Tool	Technical support given to the private sector to facilitate their transition to eco-efficiencies Potential projects identified and incubated	Perform energy and ozone depleting substance elimination audits in selected hotels – phase 2 Assess ESCOs and Utility companies potential to deliver reliable, competitive and effective service to the Caribbean Tourism Industry	Identify options for internationally credible certifying/rating programs for energy efficiency, low carbon foot print and green building certification. Provide support for the preparation of policy and legislation in EE for the tourism sector Provide support for the preparation of a strategy to enhance the capabilities of	Strengthening of the Government of Jamaica for the implementation of new or existing financial instruments. Continue efforts toward building institutional	Develop at least one project in sugar sector that exports power to the grid. Conduct detailed energy consumption surveys among hotels in the Caribbean region Conduct an analysis on the

Ministry Policy/ Programme/Project Initiative & Budget No.	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	ENERGY DIVISION			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
						<p>ESCOs to service the tourism sector</p> <p>Develop an Action Plan for ESCO support</p> <p>Institutional building on environmental management - procedures and capacity building for NEPA</p>	<p>capacity of the NEPA</p> <p>Develop through the MWLECC an Environmental Stewardship Action Plan</p>	<p>main technical, financial and regulatory bottlenecks to achieve EE and RE</p> <p>Facilitate Training interventions in ISO14000 and 50001</p>

Internal Audit Unit Operational Plan: 2016 – 2017

Internal Audit Vision: To be recognized for excellence and professionalism in the Internal Audit services and be seen as leaders in the implementation of continuous improvement in government stewardship and performance.

Internal Audit Mission: The mission of the MSET Internal Audit is to add value to the Ministry's operations by promoting a controlled environment through open communication, professionalism, expertise and trust while performing audit services of the highest standards.

PRIORITY PROGRAMMES/PROJECTS/INITIATIVES:

Ministry Policy/Programme Projects Initiative	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	INTERNAL AUDIT Estimated Expenditure \$20.39M			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
Conduct audits and process reviews	To add value through the delivery of high quality assurance and consulting services to the Ministry, its external divisions and portfolio agencies through a risk based audit plan for 2016-2017.	Contribute to the effective and efficient performance of the Ministry, its external divisions and portfolio agencies by conducting independent test and analysis of the internal control systems in order to assess their effectiveness	Quality audit reports with practical recommendations for: the control of risks, the safeguarding of assets, compliance with rules and regulations, accurate and reliable accounting and reporting management information, the quality of internal controls and the effectiveness and efficiency of operations	Acceptance rate of critical and important recommendations	Ascertain the extent of compliance with statutory regulation and guidelines established by MOF and the entity being audited	Ascertain the extent of compliance with statutory regulation and guidelines established by MOF and the entity being audited	Preparation and submission of Corporate and Operational Plan for 2016-2019 and 2016-2017 respectively	Risk assessment and preparation of annual Audit Plan 2016-2017
Improved Policies, Programmes and Projects		Conduct independent reviews, analysis and evaluations of existing activities and procedures		Stakeholders' satisfaction with the quality of IA reports				
Prudent Fiscal Management	Completion of Ten (10) routine audits	Review the performance in implementing policies and programmes with a view to bringing about continuous improvement.		Stakeholders' satisfaction with the usefulness of IA reports (survey).	Reviewing and appraising the soundness and adequacy of financial and other operating controls	Reviewing and appraising the soundness and adequacy of financial and other operating controls. H/O and one (1) agency	Examine financial statements to determine the adequacy and correctness of information presented to management	Reviewing and appraising the soundness and adequacy of financial and other operating controls.
				93% and 75% reduction in the level AG's queries and significant breaches reported at the Public Accounts Committee of Parliament for the ministry and agencies respectively				
					Completion of work in progress	Three (3) audits		H/O and one (1) agency

Ministry Policy/Programme Projects Initiative	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	INTERNAL AUDIT			
					Estimated Expenditure \$20.39M			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
				At least eighty five percent (85%) completions of annual audit plan for financial year 2016- 2017	Two (2) audits H/O		Conduct test of the internal systems and procedures to determine the adequacy of internal controls and compliance with Public sector guidelines at MSET H/O and two (2) agencies Three (3) Audits	Two (2) audits Conduct annual Board of Survey

Ministry Policy/Programme Projects Initiative	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	INTERNAL AUDIT Estimated Expenditure \$20.39M			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
	Improved scope and performance of audits	Ensure effective follow up of audit recommendations through a structured and timely follow up audit schedule	Timely reports on follow up audits	Percentage of critical and very important recommendations outstanding for more than 12 months out of those issued over last two years	Assess the implementation level of recommendations accepted by management	Relevant follow up audit		Follow up audits
Improved Human Resource Capacity	To create an effective Internal Audit Unit	Enhance the technical skills and knowledge to improve staff competence by maximizing Human Resource through recruitment and training	Revised Staff Structure Training plan developed	At least (3) three new positions filled by end of 4 th quarter Staff members attend at least one training course	Liaise with HRMA and participate in the recruitment of staff One (1) staff member to receive relevant training	Recruitment of staff Two (2) staff members to receive relevant training	Two (2) staff members to receive relevant training	Two (2) staff member to receive relevant training

Ministry Policy/Programme Projects Initiative	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	INTERNAL AUDIT Estimated Expenditure \$20.39M			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
Timely submission of all reports	Delivery of quality services and promoting an efficient IAU	Establish and maintain an effective partnership with the Audit Committee and the Internal Audit Directorate (IAD) and other stakeholders	Timely reports, delivery and feedback of relevant information. Self-assessment of audit function conducted	Audit Committee's satisfaction (stakeholders' survey) Feedback from IAD's quarterly review Completion self-assessment exercise within the required time frame.	Liaise with Audit Committee and IAD on relevant issues. Submit relevant reports. Attend meeting as necessitated	Liaise with Audit Committee and IAD on relevant issues Submit relevant reports Attend meeting as necessitated	Liaise with Audit Committee and IAD on relevant issues. Submit relevant reports. Attend meeting as necessitated	Liaise with Audit Committee and IAD on relevant issues. Submit relevant reports. Attend meeting as necessitated
Performance Management	Maintain a high level of confidence, cooperation and synergy with stakeholders and partners	Support the audit process through increased awareness and exchange of information to our internal and external partners on the audit work	Periodic Presentations and advisories Working paper reviews for all audits conducted Annual Performance Evaluation conducted	Percentage of stakeholders acknowledging objectivity, fairness and quality of the work done by Internal Audit (stakeholders surveys) On-going working papers review Timely preparation and submission of performance appraisals	Disseminate advisories On-going working papers and review	Disseminate advisories Presentation at management meeting On-going working papers and review	Presentation at Unit Staff meetings Disseminate advisories On-going working papers and review	Disseminate advisories On-going working papers and review Preparation and submission of annual performance appraisals for all staff members

SCIENCE

Sector Plans- Science.

The SRC has submitted an Operational Plan with estimated Expenditure of \$484.1 M. The previous year's total was \$410.3M. The increase in the required budget total takes into consideration salary and allowances, adjustments as well as retroactive payments based on the new wage agreement with government for public sector workers. The second contributor is through increases in repairs and maintenance cost of assets of approximately \$4M, infrastructural upgrade approximately \$1.2M, and purchase of capital goods totalling approximately \$44M. This is necessary for the upgrade of the server and replacement of older computers, provision of resources for the waste water unit and the food pilot plant and Tissue Culture, as well as equipment upgrade required to support HACCP certification and the major area of R&D for the nutraceutical, agricultural and development thrust.

The flagship programme for the SRC continue to be the Waste Water Treatment Systems. The SRC also provides extensive services including feasibility studies, surveying site and monitoring, construction and commissioning and reports on existing systems for National Environment and Planning Agency (NEPA). The second major programme is its analytical services for various applications including glycemic index for processed food for external clients and for the development of a nutraceutical and medical marijuana industry. The third major area includes the provision of a whole range of services in food technology services to clients.

The SRC will also continue to pursue and pioneer research in selected areas. These include tissue culture on traditional crops and non-traditional crops to develop a drought resistant strain of ginger, to expand the number of plantlets in Irish Potato, establish a dasheen gene bank and increase the substantially and availability of dasheen and explore cultivars of cassava with economic significance.

The plan will also address growing demand by clients for the services of solar drying, which will entail infrastructure works and maintenance. The programme of integrating S&T in the educational system and society at large will continue in the national innovation programme, school camps and community outreach during the year. These include Student Summer camp during the second quarter to improve the capacity of science teachers and also the capacity of participating students. Summer Attachment Programme to place thirty (30) tertiary students with companies under the INVOCAB Pilot Project, Research Essay, Oratory and Poster Competitions aimed at students in schools for sensitisation on the importance and value of S&T to the nation. Increasing the awareness of S&T in communities through identification of communities and providing SRC's services to match community needs and the National Innovation Awards.

These flagship programmes and projects will be highlighted through the marketing programme, implemented through Marketech through promotion and market research to identify stakeholders and opportunities that will result in business leads for the Anaerobic Waste Treatment Systems, both in Jamaica and overseas, and to also provide sensitization for over five hundred (500) persons in tissue culture and to generate contracts. There will also be the promotion of analytical test services for recreational water and increase awareness of SRC through various media including social media.

The main events planned for the year includes Alternative Energy Expo Jamaica, Denbigh 2016, JMA Tradeshow 2016, Jamaica Horticultural Society, Opportunity Quest, and Caribbean Youth Science Forum 2016.

NATIONAL COMMISSION ON SCIENCE AND TECHNOLOGY

Ministry Policy/Programme Projects Initiative	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	NATIONAL COMMISSION ON SCIENCE & TECHNOLOGY Est. Expenditure \$29.01M			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
	Food safety and security	Determine the Inorganic chemical content of Jamaican foods by Instrumental Neutron Activation Analysis. Development of sustainable approaches for use in the remediation of cadmium and other potentially toxic trace elements in Jamaican soils.	Data on the elemental content of Jamaican foods and greater understanding of Cd isotope fractionation in plants: cycling and uptake	# of elements determined, # of food types measured, # of conferences, # of publications,	<i>Field trips for the collection of samples</i> J\$5,507,284	Preparation of samples for analysis J\$5,507,284	Analysis of samples J\$8,260,926	Data interpretation and reporting J\$8,260,927
	Production of medical marijuana	Analysis of various strains under the researcher license for Medical Marijuana Regulatory Framework	Data on the elemental content of marijuana	# of elements determined, # of marijuana samples measured, # of conferences , # of publications,	Field trips for the collection of samples J\$3,557,706	Preparation of samples for analysis J\$3,557,706	Analysis of samples J\$2,371,804	Data interpretation and reporting J\$2,371,804

Ministry Policy/Programme Projects Initiative	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	NATIONAL COMMISSION ON SCIENCE & TECHNOLOGY Est. Expenditure \$29.01M			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
Supporting framework for the integration of science and technology in national development	To develop and implement new Science, Technology and Innovation Policy 2016-2030	Develop the new science and technology and innovation policy as a tool for sustainable national development	New Science and Technology and Innovation Policy - Contract consultant and facilitators to assist with drafting and reviewing stages of the policy document - Minimum four (6) public consultation exercises island wide	<ul style="list-style-type: none"> ■ Increase collaboration among and between S&T entities and industry ■ Improvement in the scientific literacy of the people of Jamaica ■ Outline of a fiscal mechanism to support greater investments in scientific research in critically relevant areas in industry and to the society 	<ul style="list-style-type: none"> ■ Contract consultant Public consultations for the development of the ST&I policy	Public consultation for the development of the ST&I policy	Finalization of first draft	National ST&I policy

Ministry Policy/Programme Projects Initiative	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	NATIONAL COMMISSION ON SCIENCE & TECHNOLOGY Est. Expenditure \$29.01M			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
	<p>To reduce information gap on the availability of R&D indicators and up-to-date information on the performance of the sector</p> <p>Overcome challenges impacting the systematic collection of statistical data and information on R&D and S&T activities employing methodologies consistent with international standards and comparisons</p> <p>Contribute to the development of local institutional capacity for systematic measuring of R&D inputs in the public and private sectors</p>	<p>1. Design and execute a pilot project for the measurement of R&D in support of GoJ effort to incorporate R&D in the national accounting</p> <p>i. Constitute oversight committee to govern the Systematic collection of ST&I data to drive decision-making and improve the mechanism by which stakeholders are advised on the implication of S&T to Jamaica's development</p> <p>Strengthening of the capacity for S&T institutions to adopt appropriate metrics for the collection, reporting and analysis of science and technology indicators</p>	<p>a) Two (2), three (3) days Capacity building workshop on ST&I indicators with technical assistance from UNESCO/RICYT</p> <p>b) National R&D survey executed for public and private sector entities</p> <p>c) Signed MOU agreement between relevant agencies responsible for collection and reporting of data – standardized data collection and reduction in duplicity</p>	<ul style="list-style-type: none"> Consultant procured/Project Manager Capacity assessment Report on institutional gaps as it relates to human resources, and hard/soft wares etc. Implementation plan (with budget) based on preliminary assessments of resources and capacity for survey Pilot survey Cooperation agreements for data collection, analysis and management among the relevant MDAs <p>Three (4) National stakeholder consultations to gain buy-in – public and private entities</p>	<ul style="list-style-type: none"> Constitute oversight committee Identify consultant/Project Manager Development of Pilot Survey Consultation and development of cooperation agreements Stakeholder workshops 	<ul style="list-style-type: none"> Database development Capacity building workshops Dissemination and collection of data instruments <p>Data entry</p>	<ul style="list-style-type: none"> Verification and calculation of data <p>Compilation of results</p>	<ul style="list-style-type: none"> Survey report presented and launched

Ministry Policy/Programme Projects Initiative	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	NATIONAL COMMISSION ON SCIENCE & TECHNOLOGY Est. Expenditure \$29.01M			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
Infrastructure development to improve and attract returns on public spending	<ul style="list-style-type: none"> Implementation of recommendations emerging from the 2015 Audit of the Hope Gardens Laboratories To develop a framework that promotes collaborative research and development initiatives among the S&T entities <p>To promote greater investments in research and development</p>	<ul style="list-style-type: none"> Support the enhancement of the physical infrastructure <ul style="list-style-type: none"> Inter-institutional steering committee Engage decision makers in providing support for accreditation of facilities to improve operational and services deliveries and overall organizational development <ul style="list-style-type: none"> Set up ST&I Liaison channel with MoF 	<ul style="list-style-type: none"> Project Manager Contracted Work plan developed Constituted inter-institutional steering committee Project Management training for key staff Engage JAANAC in the hosting of accreditation Pre-assessment workshop (s) <p>Appointments of the ST&I Liaison group</p>	<ul style="list-style-type: none"> Status report on work plan implementation Staff enrollment and completion of Project Management Training Workshop reports Assessment reports of each organization 30% of stakeholders generate plan towards ISO 17025 accreditation Minutes of discussions and meeting with MoF 	<p>Development of work plan</p> <p>Contract Project Manager/coordinator</p> <p>Stakeholder engagement workshop</p> <p>Stakeholder pre-assessment workshop with JAANAC</p>	<p>implementation of work plan</p> <p>stakeholder consultations and follow-up</p> <p>Facilitate the establishment of ST&I Liaison group</p> <p>Collate report on the assessment process</p>	<p>Implementation of work plan</p> <p>Training of key staff in project management</p> <p>Coordinate meeting with MoF</p>	<p>Implementation of work plan</p> <p>Stakeholder engagement and follow-up</p> <p>Monitor progress of programme</p>
Formalize the establishment of the National Nutraceutical Industry (NNI) and the development of supporting	Established the framework for a functional national Nutraceutical industry (including a drug trial locus for Jamaica)	<ul style="list-style-type: none"> Review and amendments proposed changes to the National Food and Drug Act (FDA) for the inclusion of nutraceuticals as a special class of products requiring appropriate regulatory considerations for public health and safety Assessment of the state other NNI in Jamaica 	<ul style="list-style-type: none"> Proposed amendment to MOH submitted to Published report on the state of the NNI in Jamaica with recommendations for its development Establish registry of practitioners currently involved 	<ul style="list-style-type: none"> Promulgation of new National FDA Development of a study to assess the state of the NNI Established database of nutraceutical practitioners Publications and 	<p>Drafting of instructions to CPC</p> <ul style="list-style-type: none"> Designing of the study Engage database development expert Staff training to use and manipulate database Public consultations 	<ul style="list-style-type: none"> Introduction of Bill into Parliament Implementation of study Collection and entering of practitioner information in database Public sensitization 	<ul style="list-style-type: none"> Compilation of study results Updating of Practitioner Database Capacity 	<ul style="list-style-type: none"> Publish results of study with recommendations Public sensitization

Ministry Policy/Programme Projects Initiative	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	NATIONAL COMMISSION ON SCIENCE & TECHNOLOGY Est. Expenditure \$29.01M			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
		<ul style="list-style-type: none"> Maintain close collaborative relationship with relevant MDAs and stakeholders for the development and adoption of the framework Stakeholder sensitization/education and consultation initiatives 	<ul style="list-style-type: none"> in the industry Public education campaign At least 2 Public outreach initiatives 	website publishing of relevant information Public engagement workshops /consultations/ seminars/lectures etc.	for the collection of data on practitioners Public sensitization		building workshops for practitioners •	
	Food safety and security	Determine the Inorganic chemical content of Jamaican foods by Instrumental Neutron Activation Analysis. Development of sustainable approaches for use in the remediation of cadmium and other potentially toxic trace elements in Jamaican soils.	Data on the elemental content of Jamaican foods and greater understanding of Cd isotope fractionation in plants: cycling and uptake	# of elements determined, # of food types measured, # of conferences, # of publications,	<i>Field trips for the collection of samples</i> J\$5,507,284	Preparation of samples for analysis J\$5,507,284	Analysis of samples J\$8,260,926	Data interpretation and reporting J\$8,260,927
	Production of medical marijuana	Analysis of various strains under the researcher license for Medical Marijuana Regulatory Framework	Data on the elemental content of marijuana	# of elements determined, # of marijuana samples measured, # of conferences , # of publications,	Field trips for the collection of samples J\$3,557,706	Preparation of samples for analysis J\$3,557,706	Analysis of samples J\$2,371,804 •	Data interpretation and reporting J\$2,371,804 •
	Climate change	Continuous monitoring and assessment of soil-atmospheric CO ₂ fluxes the most important variable in the study of global	Understanding how sources and sinks for CO ₂ vary in both time and space can be important in evaluating	# of elements determined, # of air samples measured,	Preparation of experimental plots and setting up of air sampling stations	Development of plots and moving of air samplers	Development of plots and moving of air samplers	Data analysis and analysis of air filter samples

Ministry Policy/Programme Projects Initiative	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	NATIONAL COMMISSION ON SCIENCE & TECHNOLOGY			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
		climate change. Trace Elements in the Jamaican Environment: Air Quality Monitoring (Trace Elements, Particulate matter, CO ₂ mapping).	the potential impacts of different land covers and management practices on the environment and human health. Data on air quality.	# of data points generated, # of conferences, # of publications,	J\$7,478,906	J\$4,985,937	J\$4,985,937	J\$7,478,906

SCIENTIFIC RESEARCH COUNCIL

Programme- Scientific Services \$

Ministry Policy/Programme Project Initiative	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	Scientific Research Council Estimated Expenditure \$453.31M			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
<p>Vision 2030 - National Strategy 10-1: Diversify the energy supply;</p> <p>National Outcome #11: A Technology enabled Society.</p> <p>National Outcome #11-1: Integrate S&T into all areas of development.</p> <p>The mandate of SRC as under the SRC Act of 1960.</p>	<p>Customer productivity is increased and the quality of their goods and services is improved through the provision of S&T solutions</p>	<p>Provision of services in surveying (site plan) and monitoring of wastewater treatment systems</p>	<p>Reports to customers.</p> <p>Projected income of at least J\$1.5 M by March 2017.</p>	<p>Services in surveying (site plan) and monitoring of wastewater treatment systems are provided to satisfy customer demands</p>	<p>Acquire monitoring and surveying instruments</p>	<p>Acquire monitoring and surveying instruments</p>	<p>Execute monitoring and surveying services</p>	<p>Execute monitoring and surveying services</p>

Ministry Policy/Programme Project Initiative	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	Scientific Research Council Estimated Expenditure \$453.31M			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
	Customer productivity is increased and the quality of their goods and services is improved through the provision of S&T solutions	Provision of services in surveying (site plan) and monitoring of wastewater treatment systems	Anaerobic wastewater treatment system in the region	Construction of at least one anaerobic wastewater treatment system in the Region (Haiti) by March 2017 and others in fulfilment of contractual arrangements.	<ul style="list-style-type: none"> Finalize contractual agreement with JB Haiti based on Feasibility Stud 	<ul style="list-style-type: none"> Execute project Conduct assessment and complete feasibility study	<ul style="list-style-type: none"> Execute project Patent filing in Antigua and St Lucia 	<ul style="list-style-type: none"> Execute project Follow-up on possible business leads in Antigua and St Lucia
		Feasibility studies for construction of wastewater treatment systems	Reports Income of at least J\$1.3M	At least 13 feasibility studies for construction of wastewater treatment systems are completed as requested by March 2017, meeting quality objectives	<ul style="list-style-type: none"> Receive and respond to requests Conduct assessments Complete documentation Submit reports to clients	<ul style="list-style-type: none"> Receive and respond to requests Conduct assessments Complete documentation Submit reports to clients	<ul style="list-style-type: none"> Receive and respond to requests Conduct assessments Complete documentation Submit reports to clients	<ul style="list-style-type: none"> Receive and respond to requests Conduct assessments Complete documentation Submit reports to clients

Ministry Policy/Programme Project Initiative	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	Scientific Research Council Estimated Expenditure \$453.31M			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
		Construction and commissioning of anaerobic wastewater treatment systems	Anaerobic wastewater treatment system in Jamaica. Income of at least J\$15M by March 2017	Construction and commissioning of five existing wastewater treatment systems and at least nine new systems (including six coffee projects) are commenced as per contracts, within time and budget, earning.	<ul style="list-style-type: none"> Finalize construction of existing systems and commission systems Finalize new contracts Implement and commission systems	<ul style="list-style-type: none"> Finalize construction of existing systems and commission systems Finalize new contracts Implement and commission systems	<ul style="list-style-type: none"> Finalize construction of existing systems and commission systems Finalize new contracts Implement and commission systems	<ul style="list-style-type: none"> Finalize construction of existing systems and commission systems Finalize new contracts Implement and commission systems
		Monitoring of five existing NEPA regulated anaerobic wastewater treatment systems	Reports Income of at least J\$2.3M by March 2017	Consultancy contracts for the monitoring of five existing NEPA regulated systems are completed as agreed meeting quality objectives. At least one new contract is secured by Dec 2016	<ul style="list-style-type: none"> Conduct biweekly assessment and sampling Complete analysis of samples Prepare and submit reports to NEPA	<ul style="list-style-type: none"> Conduct biweekly assessment and sampling Complete analysis of samples Prepare and submit reports to NEPA	<ul style="list-style-type: none"> Conduct biweekly assessment and sampling Complete analysis of samples Prepare and submit reports to NEPA	<ul style="list-style-type: none"> Conduct biweekly assessment and sampling Complete analysis of samples Prepare and submit reports to NEPA

Ministry Policy/Programme Project Initiative	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	Scientific Research Council Estimated Expenditure \$453.31M			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
		Provide services in the acquisition of NEPA permits and licences to clients	Reports income of at least J\$1.5M by March 2017	Services in the acquisition of NEPA permits and licences are provided to at least 6 clients, meeting quality objectives and earning income of at least J\$1.5M by March 2017.	<ul style="list-style-type: none"> Receive request Prepare response to include costing for service Get approval and payments from Client Complete documentation and submit to NEPA	<ul style="list-style-type: none"> Receive request Prepare response to include costing for service Get approval and payments from Client Complete documentation and submit to NEPA	<ul style="list-style-type: none"> Receive request Prepare response to include costing for service Get approval and payments from Client Complete documentation and submit to NEPA	<ul style="list-style-type: none"> Receive request Prepare response to include costing for service Get approval and payments from Client Complete documentation and submit to NEPA
		Provision of chemical and microbiological Analytical Services	Analytical test reports; Increased customer satisfaction levels; Income	<ul style="list-style-type: none"> At least 450 water, food and wastewater samples are analysed each month for microbiological and chemical parameters. At least 80% of requests are satisfied within 10 working days of receipt of requests.	<ul style="list-style-type: none"> Receive and analyze samples Prepare analytical reports Analyze QO and report monthly Implement / monitor calibration programme	<ul style="list-style-type: none"> Receive and analyze samples Prepare analytical reports Analyze QO and report monthly Implement / monitor calibration programme	<ul style="list-style-type: none"> Receive and analyze samples Prepare analytical reports Analyze QO and report monthly Implement / monitor calibration programme	<ul style="list-style-type: none"> Receive and analyze samples Prepare analytical reports Analyze QO and report monthly Monitor calibration programme
			Reduced outsourcing of tests; improved income stream;	Improved online inventory system to prevent stock-out of reagents and preventive maintenance contracts for all equipment	<ul style="list-style-type: none"> Establish three-month order pattern Re-order reagents Set up maintenance	<ul style="list-style-type: none"> Re-order reagents Monitor & evaluate the maintenance reports 	<ul style="list-style-type: none"> Re-order reagents Monitor & evaluate the maintenance 	<ul style="list-style-type: none"> Re-order reagents Monitor & evaluate the maintenance reports

Ministry Policy/Programme Project Initiative	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	Scientific Research Council Estimated Expenditure \$453.31M			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
					contracts and schedules		reports	
			Expanded laboratory capacity (human & physical) to support workload; Expanded scope of accreditation	Resources acquired: Autoclave for Microbiology labs and AA lamps (for Iron, Chromium and Nickel) for Chemistry labs by December 2016; HR increased	<ul style="list-style-type: none"> Prepare and submit requisitions Review layout of labs Business plan finalised	<ul style="list-style-type: none"> Follow –up Implement approved physical changes to labs. 	<ul style="list-style-type: none"> Implement approved physical changes to labs. Install equipment Increase the pool of trained analysts to assist during heavy workload.	Increase the pool of trained analysts to assist during heavy workload.
			Expanded laboratory capacity (human & physical) to support workload; Expanded scope of accreditation	Accreditation scope of the Analytical laboratories to ISO/IEC 17025:2005 is expanded.	<ul style="list-style-type: none"> Determine tests to be added to scope and associated costs Maintain current accreditation	<ul style="list-style-type: none"> Review data for tests to be added to scope Maintain current accreditation	<ul style="list-style-type: none"> Review data for tests to be added to scope Maintain current accreditation	<ul style="list-style-type: none"> Review data for tests to be added to scope Maintain current accreditation
		Provision of Analytical Services for the support of the nutraceutical industry	Expanded facility; Test reports	Approved TWAS-funded project implemented as agreed	<ul style="list-style-type: none"> Project activities implemented Procure accelerated humidity/stability chamber.	<ul style="list-style-type: none"> Project activities implemented 	Conduct pilot testing of products	Conduct pilot testing of products
			Certificates of analysis; Income	Generation of at least 14 requests for certificates of analyses (COA) for plant extracts and other materials are satisfied, meeting quality objective.	<ul style="list-style-type: none"> Procure reagents and other related consumables Promote services Complete at least four	<ul style="list-style-type: none"> Procure reagents and other related consumables Complete at least four requests for COA	Complete at least four requests for COA	Complete at least two requests for COA

Ministry Policy/Programme Project Initiative	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	Scientific Research Council Estimated Expenditure \$453.31M			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
					requests for COA			
			Certificates of analysis; Income	Testing services for cannabinoids (THC, CBD and CBN) are developed and provided to clients	<ul style="list-style-type: none"> Acquire standards Review test methods Identify gaps	Develop testing protocols for marijuana using HPLC and GC	<ul style="list-style-type: none"> Develop testing protocols Evaluate	Evaluation and roll out of services
			Technical reports	Determination of GI values for processed foods developed as a service by March 2017	<ul style="list-style-type: none"> Determine Glycemic index and load for select food products Identify manufacturing partners	Complete determination of Glycemic index and load	Obtain ethical clearance from the MoH.	Fine tune protocols for services
		Provision of food technology Services to clients	Reports Exported food products; income	Use of food pilot plant by SMEs to successfully introduce food-based products on the market is increased by at least 20% by March 2016	<ul style="list-style-type: none"> Process client requests Respond to and fulfil requests	<ul style="list-style-type: none"> Process client requests Respond to and fulfil requests	<ul style="list-style-type: none"> Process client requests Respond to and fulfil requests	<ul style="list-style-type: none"> Process client requests Respond to and fulfil requests
			Reports; Exported food products	<p>At least 35 Customers are assisted in food processing related services as listed below by March 2017:</p> <ol style="list-style-type: none"> FDA filing – 5 customers; Plant layout; process improvement/ development – 2 customers; GMP/ HACCP – two customers ; Vent scheduling - 4 	<ul style="list-style-type: none"> Process client requests Respond to and fulfil requests	<ul style="list-style-type: none"> Process client requests Respond to and fulfil requests	<ul style="list-style-type: none"> Process client requests Respond to and fulfil requests	<ul style="list-style-type: none"> Process client requests Respond to and fulfil requests

Ministry Policy/Programme Project Initiative	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	Scientific Research Council Estimated Expenditure \$453.31M			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
				customers; e. Schedule processing - 4 customers; f. Retort inspection - 18 customers; Packaging - 2 customers				
				Infrastructural work completed for HACCP (ISO 22000) Certification; Precertification Audit completed by December 2016 pending availability of funds	<ul style="list-style-type: none"> Review material list Acquire quotes for the different tasks	<ul style="list-style-type: none"> Acquire quote Select Suppliers Get quotes for Precertification Audit Select Supplier for Audit	<ul style="list-style-type: none"> Execute tasks Execute Audit	<ul style="list-style-type: none"> Finalize Tasks
		Provision of Training Services	Training certificates (NCTVET); Income	Training in following topics and timeframes: a. Meat Processing - 2 nd quarter b. Sauce processing – 4 th quarter c. Biogas technology - 4 th quarter d. Tissue Culture training and regional course in Meat/ Juice, Jams and Jellies, as requested	Tissue Culture and Regional course in Meat/ Juice, Jams and Jellies: <ul style="list-style-type: none"> Get formal request Do costing based on request Inform Client of costing For Meat Processing course: <ul style="list-style-type: none"> Prepare training 	<ul style="list-style-type: none"> Execute Meat processing course ii. Execute Tissue Culture Course Make contact with regional entities such as CDB	Tissue Culture and Regional course in Meat/ Juice, Jams and Jellies: <ul style="list-style-type: none"> Get formal request Do costing based on request Inform Client of costing. For Sauce Processing and	<ul style="list-style-type: none"> Execute Sauce Processing Course Execute Biogas Technology Course Execute regional course Execute Tissue Culture course

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					Major Tasks, Targets, Resources			
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					schedule, course materials Advertise courses		Biogas course • Prepare training schedule, course materials Advertise courses	
				Conduct at least four wellness workshops by March 2017	Identify proposed date for workshops and subjects to be targeted	Conduct two workshops	Conduct Body Wash Workshop	Conduct Body Lotion workshop
		Provision of services in Biotechnology to farmers and other clients	Tissue-cultured plantlets	At least three new customer contracts are finalised by June 2016 for production of tissue-cultured plantlets; at least 90 % of plantlets are delivered to satisfy customer requests, meeting quality objectives	<ul style="list-style-type: none"> Process and finalize client requests Prepare plantlets for delivery Deliver plantlets	<ul style="list-style-type: none"> Execute contract/s Prepare plantlets for delivery Deliver plantlets	<ul style="list-style-type: none"> Execute contract/s Prepare plantlets for delivery Deliver plantlets	<ul style="list-style-type: none"> Execute contract/s Prepare plantlets for delivery Deliver plantlets
		Research in Biotechnology	Drought tolerant species	Plant breeding programme to increase yields and improve drought tolerant crops	Identify and select economically important crops with poor yields due to drought	<ul style="list-style-type: none"> Identify and select crops Explore irradiation treatment options with ICENS/ IAEA	<ul style="list-style-type: none"> Explore irradiation treatment options with ICENS/ IAEA Treat crops with irradiation	<ul style="list-style-type: none"> Treat crops with irradiation Multiply to the 4 th generation
			Fusarium-resistant strains of ginger; Technical report	IAEA project - development of Fusarium-resistant strains of ginger is completed by 2017	<ul style="list-style-type: none"> Development of inoculum on large scale Inoculation of irradiated	Observation of inoculated plants and data collection	Observation of inoculated plants and data collection	Commence selection of possible resistant

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					ginger plants and control			plants into 2016-17
				Research on the adaptation of round leaf yellow yam and Irish potato to field conditions is completed by March 2017	<ul style="list-style-type: none"> Collect data and complete multiplication of planting materials Identify farmers and prepare field trial schedule 	<ul style="list-style-type: none"> Collection of data Established and monitor field plots Collection of data 	<ul style="list-style-type: none"> Continue to monitor field plots Collection of data	<ul style="list-style-type: none"> Continue to monitor field plots Collection of data
			Dasheen gene bank	Establishment of dasheen gene bank	<ul style="list-style-type: none"> Collect, initiate and multiply dry land dasheen cultivar. Development of passport. Continue collaboration with UWI and MoAF on dasheen resuscitation initiative. 	<ul style="list-style-type: none"> Hardening and handover of tissue culture dasheen to Bodies for phenotypic characterization and field trial. Data collection Continue collaboration with UWI and MoAF	<ul style="list-style-type: none"> Maintenance of cultivars in gene bank Field data collection. Continue collaboration with UWI and MoAF	<ul style="list-style-type: none"> Maintenance of cultivars in gene bank. Field data collection Continue collaboration with UWI and MoAF
			Cassava gene bank	Expansion of the cassava gene bank	<ul style="list-style-type: none"> Identify cultivars of economic importance. Initiate new cultivars Develop passport descriptors	<ul style="list-style-type: none"> Multiplication and initiation of cultivars Develop passport descriptors	<ul style="list-style-type: none"> Multiplication and initiation of cultivars. Develop passport descriptors	<ul style="list-style-type: none"> Multiplication and initiation of cultivars. Develop passport descriptors
			Ganja gene bank	Establishment of a ganja gene bank	<ul style="list-style-type: none"> Develop concept paper Acquire starting materials to 	<ul style="list-style-type: none"> Development of passport descriptors Initiation and Multiplication of	<ul style="list-style-type: none"> Initiation of plantlets Multiplication of plantlets 	<ul style="list-style-type: none"> Initiation of plantlets Multiplication of plantlets

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					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
					generate mother stock Development of passport descriptors	plantlets	Hardening of Plantlets	<u>Hardening of Plantlets</u>
			Technical reports	Increased accessions in gene-bank. (yam, sweet potato, ginger, Irish potato, pineapple etc.)	Preparation of monthly report	Preparation of monthly report	<ul style="list-style-type: none"> Preparation of monthly report Collaborate with JAMPRO for demand push of local sweet potato in the UK 	<u>Preparation of monthly report</u>
			Project documents	Collaborative projects with NEPA are completed as scheduled, meeting design objectives and terms of MoU	<ul style="list-style-type: none"> Continue initiation, multiplication, hardening and reintroduction of endemic plants identified by NEPA Generate passport 	<ul style="list-style-type: none"> Continue initiation, multiplication, hardening and reintroduction of endemic plants identified by NEPA Generate passport 	<ul style="list-style-type: none"> Continue initiation, multiplication, hardening and reintroduction of endemic plants identified by NEPA Generate passport 	<ul style="list-style-type: none"> Continue NEPA projects according to MoU. Generate passport

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			Project documents	Projects with Nature Preservation Foundation (NPF) completed as scheduled, meeting design objectives and terms of Agreement	Propagate and handover plants to NPF according to agreement.	Propagate and handover plants to NPF according to agreement.	Propagate and handover plants to NPF according to agreement	Propagate and handover plants to NPF according to agreement.
			Molecular characterization of at least one Jamaican plant	Molecular characterization of at least one Jamaican plant of economical or medicinal importance is initiated by March 2017.	<ul style="list-style-type: none"> • Identification of plants • Acquisition of mother stock Literature Review	<ul style="list-style-type: none"> • Extraction of DNA material for both plants Commence AFLP for one plant (A)	<ul style="list-style-type: none"> • Continue AFLP for plant A Commence AFLP for plant "B"	<ul style="list-style-type: none"> • Complete AFLP for plant "A" • Continue AFLP for plant "B"
		Research in wastewater treatment and alternative energy supply	Portable low-cost waste water treatment systems	Design and agreement signed for the development of at least two portable low-cost waste water treatment systems for small entities and single households by July 2016	<ul style="list-style-type: none"> • Re-establish linkages with possible suppliers Conduct meeting to discuss partnership	<ul style="list-style-type: none"> • Formalize partnership Supply designs	Establish prototypes	Establish prototypes
			Technical reports; Technologies	Research work on project for additional use of biogas is finalized by November 2016 and implemented as approved	<ul style="list-style-type: none"> • Discuss project with external stakeholders • Conceptualize project • Finalize design and acquire material for research Conduct research	Conduct research	<ul style="list-style-type: none"> • Finalize research Collate data	Implement pilot projects

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					Major Tasks, Targets, Resources			
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		R&D projects to drive national economic growth and development; through grant funding	Project Proposals submitted for funding	Grant funding proposal/s on building human and physical capacities to support the nutraceutical industry, SMEs, Agriculture and Food Processing sector is/are developed by June 2015	<ul style="list-style-type: none"> Brainstorm and prepare concept paper/s and project proposal/s Identify Grant Funders 	<ul style="list-style-type: none"> Identify Grant Funders Submit proposal/s 	<ul style="list-style-type: none"> Monitor progress regarding project submission Implement approved project/s 	Implement approved project/s
			Technical reports	<p>Implementation of proposal on GI study submitted to the World Diabetes Foundation in December 2015.</p> <p>Development of new proposal for submission in June 2016 and implemented as approved.</p>	<ul style="list-style-type: none"> Brainstorm Prepare concept paper and project proposal by June 2016 Implement approved project 	<ul style="list-style-type: none"> Monitor progress regarding the submission Continue to fine tune proposal Implement approved project 	<ul style="list-style-type: none"> Monitor progress regarding the submission Implement approved project/s 	<ul style="list-style-type: none"> Monitor the progress regarding the submission Implement approved project/s <p><u>Project closeout activities</u></p>
		Research in Natural Products	Formulations and prototypes; Increased technical competence and knowledge	Research on ganja for pain management and anti-inflammatory potency.	Collection and extraction of the selected varieties	Determine anti-inflammatory potency of extracted fractions	Determination of anti-inflammatory potency. Commence formulation of topical personal care	Continue formulation of topical personal
			Formulations and prototypes; Increased technical competence and	Research, development and standardisation for production of Nutraceutical capsules by March 2018	<ul style="list-style-type: none"> Review previous work done in the unit Identify the bioactive to be used in the study 	<ul style="list-style-type: none"> Identify Gaps and Devise strategy to address gaps Confirm findings from previous study Identify and 	<ul style="list-style-type: none"> Implementation of Strategies Confirmation of findings from 	<ul style="list-style-type: none"> Implementation of Strategies Development of formulation

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					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
			knowledge		Identify possible collaborators	characterise potential carriers (starches)	previous study Characterise potential carriers	of prototype
				Research Study on the Phytochemical and Toxicity of selected plant materials and cocktails	<ul style="list-style-type: none"> Concept paper drafted and reviewed Plants are identified and Experimental plan are signed off Collaboration with South Africa's Science Research Council	<ul style="list-style-type: none"> Collection and extraction of plant materials Evaluation of phytochemical properties 	<ul style="list-style-type: none"> Collection and extraction of plant materials Evaluation of phytochemical properties Design of cocktail 	<ul style="list-style-type: none"> Design of cocktail and commence toxicity evaluation
		Food Product Research and Development	Formulations and prototypes	Value- added products are developed for the Private Sector for Private branding	<ul style="list-style-type: none"> Identify value-added products suitable for private branding Identify approach to be used in the engagement of Private sector. 	Design experimental plan for the development of protocol	Implementation of experimental plan	<u>Continue with the execution of implementation plan</u>
			Solar dryer for food-based materials	An efficient food solar drying model is developed and commissioned for use at the food pilot plant by March 2017, funds permitting.	Review data and design of Solar Dryer in Clarendon	<ul style="list-style-type: none"> Design Dryer for SRC Acquire materials for dryer 	<ul style="list-style-type: none"> Acquire materials for dryer Construct dryer 	<ul style="list-style-type: none"> Finalize construction of dryer <u>Commission dryer</u>
		Satisfaction of Client requests for Product Research and	Food formulations and prototypes;	The current customer contracts are completed	Complete customer	Complete customer	Complete customer	Complete customer

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					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
		Development to drive national economic growth and development	income of at least J\$2M	meeting quality objectives.	contracts meeting quality objective	contracts meeting quality objective	contracts meeting quality objective	contracts meeting quality objective
				At least 30 new contracts or contracts to the value of \$2 m for the development of food-based products are completed, meeting quality objective.	<ul style="list-style-type: none"> Completed sensory evaluation of Prototypes Draft Formulation document (FD within 15 working days of acceptance Complete FD within 4 weeks of acceptance 	<ul style="list-style-type: none"> Completed sensory evaluation of Prototypes Draft Formulation document (FD within 15 working days of acceptance Complete FD within 4 weeks of acceptance 	<ul style="list-style-type: none"> Completed sensory evaluation of Prototypes Draft Formulation document (FD within 15 working days of acceptance Complete FD within 4 weeks of acceptance 	<ul style="list-style-type: none"> Completed sensory evaluation of Prototypes Draft Formulation document (FD within 15 working days of acceptance <u>Complete FD</u>
			Natural Products formulations and prototypes; income	At least eight customer requests for development of personal care and wellness products are satisfied meeting quality objective.	Complete at least two customer requests for development of personal care and wellness products	Complete at least two customer requests for development of personal care and wellness products	Complete at least two customer requests for development of personal care and wellness products	Complete at least two customer requests for development of personal care and wellness products
			Biotechnology protocols; income	At least two new customer requests for plant initiation and multiplication Protocols are satisfied as agreed	Complete customer contracts meeting quality objective	Complete customer contracts meeting quality objective	Complete customer contracts meeting quality objective	<u>Complete customer contracts meeting quality objective</u>

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	The utilization of technologies is increased in the productive sector¹	Increase awareness and stimulate demand for SRC products (goods, technologies and services).	Develop and implement marketing strategies to include: mass promotion; events marketing; trade shows & exhibitions; strategic alliance/ partnerships; direct marketing and inbound Marketing	Marketing plans for focus areas – wastewater, tissue culture technology, analytical services (recreational water) and food services are generated by June 2016 and implemented as planned	<u>Review and update marketing plans for focus areas</u>	Mass promotion of SRC products and services to target entities	Mass promotion of SRC products and services to target entities	<u>Mass promotion of SRC products and services to target entities</u>
					<u>Direct Marketing - presentations to target groups/entities</u>	<ul style="list-style-type: none"> Presentations to target groups/entities Board room presentations 	Presentation s to target groups/entities –	<u>Presentatio ns to target groups/entities –</u>
					<ul style="list-style-type: none"> Participate in Alternative Energy Expo (Jamaica). Plan for Denbigh 2016 Identify and engage target partners <u>Coordinate participation in JMA Tradeshow 2016 and Jamaica Horticultural Society Expo</u>	<ul style="list-style-type: none"> Planning and coordination of SRC's participation in Denbigh 2016 	Participate in Trade Shows and Fairs	<ul style="list-style-type: none"> Participate in Trade Shows and Fairs <u>Participate in the Hague Agricultural Show</u>
		Sale of formulations and contract for new product development; product	Marketing and promotion of food services	At least six new leads /prospective clients monthly and contracts to the value	<ul style="list-style-type: none"> B2B Meeting – Opportunity Quest promotion of 	<ul style="list-style-type: none"> Host Public Lecture on development on nutraceutical industry 	<ul style="list-style-type: none"> Public Forum Review 	<ul style="list-style-type: none"> Agro-Forum Sampling Sessions

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		improvement/ standardization and technology transfer		of J\$2M for food obtained by March 2016	personal care product to target stakeholders along value chain.	Seek partnership to undertake PRD and transfer technology to said partner.	marketing strategies <ul style="list-style-type: none"> Product sampling Commence work for the hosting of B2B event Execute activities towards hosting of event	<ul style="list-style-type: none"> Plan and execute B2B event
	Continual sensitisation on the importance and value of S & T to the nation, region and internationally	Services of the Science and Technology Education Unit	<ul style="list-style-type: none"> Improved competence of science teachers; 	One student SUMMER CAMP is conducted with at least 40 students and 5 teachers participating.	<ul style="list-style-type: none"> Seek and secure sponsorship. Promote Camp	<ul style="list-style-type: none"> Execute camp Host Closing Ceremony Conduct post event evaluation		
			<ul style="list-style-type: none"> Improved capacity of participating students in Science Reports 	At least 30 tertiary level students are placed in SUMMER ATTACHMENT PROGRAMME	<ul style="list-style-type: none"> Develop criteria for student and company selection Source companies for Programme participation Invite students to apply Match students with companies. Confirm agreements with companies and students	<ul style="list-style-type: none"> Place students Student Reporting Host Closing Ceremony Conduct post event evaluation and close-out activities	<ul style="list-style-type: none"> Source sponsorship of the 2017 Programme Confirm participation from companies 	<ul style="list-style-type: none"> Invite students to apply Match students with companies. Confirm agreements with companies and students

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				2016 CARIBBEAN YOUTH SCIENCE FORUM	<ul style="list-style-type: none"> Seek sponsorship for students travel Secure funding Identify participants and finalise travel arrangements.	Conduct post event evaluation		
			<ul style="list-style-type: none"> Reports Awards 	Research essay and oratory competitions are conducted	<ul style="list-style-type: none"> Review components of the competition Source sponsorship Confirm participation from companies	<ul style="list-style-type: none"> Secure funding Plan and promote event Invite schools to participate Select judges and shortlist entries Contact schools shortlisted	<ul style="list-style-type: none"> Execute competition and host Awards Ceremony Conduct post event evaluation and close-out activities	
				Poster competition is held		<ul style="list-style-type: none"> Determine theme for the competition Source sponsorship Confirm participation from companies	<ul style="list-style-type: none"> Secure funding Plan and promote event Invite schools to participate Select judges and shortlist entries Contact schools shortlisted	<ul style="list-style-type: none"> Execute competition and host Awards Ceremony Conduct post event evaluation and close-out activities

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				At least 20 companies and 100 students participate in SCHOOL TOURS during S&T MONTH		<ul style="list-style-type: none"> Identify and approach companies to participate in program Confirm participation of companies and students Liaise with schools re transportation and other logistics 	<ul style="list-style-type: none"> Execute tours Conduct post event evaluation and close-out activities 	
			<ul style="list-style-type: none"> Reports Awards 	At least four SSTS bulletins are produced annually	<ul style="list-style-type: none"> Determine content for newsletter Prepare and disseminate bulletin 	<ul style="list-style-type: none"> Determine content for newsletter Prepare and disseminate bulletin 	<ul style="list-style-type: none"> Determine content for newsletter Prepare and disseminate bulletin 	<ul style="list-style-type: none"> Determine content for newsletter Prepare and circulate newsletter
			Schools Science and Technology Society reports	At least four (4) new SSTS launches are initiated.	<ul style="list-style-type: none"> Identify at least four prospective schools for club launches Identify clubs for induction ceremony Send invitations for launch and induction ceremony to identified schools/clubs 	<ul style="list-style-type: none"> Follow up with invitations sent to schools Provide schools with the information required for the launch/ induction ceremony 	<ul style="list-style-type: none"> Launch two new clubs Complete two inductions 	<ul style="list-style-type: none"> Launch two new clubs Complete two inductions
				At least 12 existing clubs are serviced and	<ul style="list-style-type: none"> Complete three club visits 	<ul style="list-style-type: none"> Complete one club visits 	<ul style="list-style-type: none"> Complete four club 	<ul style="list-style-type: none"> Complete four club

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					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
				maintained	Promote club paraphernalia (shirts/badges) during visit.	Promote club paraphernalia (shirts/badges) during visit.	visits Promote club paraphernalia (shirts/badges) during visit.	visits Promote club paraphernalia (shirts/badges) during visit.
		Services of the Caribbean Energy Information Systems Unit	Publications and databases	Twelve online issues of <i>Caribbean Petroleum Update</i> Publication are prepared and disseminated	Three publications prepared and disseminated to clients.	Three publications prepared and disseminated to clients.	Three publications prepared and disseminated to clients.	Three publications prepared and disseminated to clients.
				Six issues of Caribbean Energy Ministers Bulletin (CEMB) are prepared and disseminated	One publication prepared and disseminated to clients	One publication prepared and disseminated to clients	One publication prepared and disseminated to clients	One publication prepared and disseminated to clients
				Prepare and disseminate Caribe Energy Pulse 2014 Series.	First issue of Caribe Energy Pulse 2014 developed and at least one sale of the first series realized	Second issue of Caribe Energy Pulse 2014 developed and at least one sale of the second series realized	Third issue of Caribe Energy Pulse 2014 developed and at least one sale of the second series realized	Fourth issue of Caribe Energy Pulse 2014 developed and at least one sale of the second series realized
				Twelve issues of <i>CEIS Happenings</i> newsletter prepared and disseminated to National Focal Points (NFPs)	Prepare and disseminate three monthly issues of CEIS Happenings.	Prepare and disseminate three monthly issues of CEIS Happenings.	Prepare and disseminate three monthly issues of CEIS Happenings.	Prepare and disseminate three monthly issues of CEIS Happenings.

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				PETSTATS database updated and maintained to provide energy information and solutions to eighteen (18) Caribbean countries in support of planning and decision making	Collect, analyse, validate and update 2014 & 2015 PETSTATS data from eighteen (18) National Focal Points.	Collect, analyse, validate and update 2014 and 2015 PETSTATS data from eighteen (18) National Focal Points Acquire Funding and develop new online PETSTATS Database.	Collect, analyse, validate and update 2014 and 2015 PETSTATS data from eighteen (18) National Focal Points	Collect, analyse, validate and update 2014 and 2015 PETSTATS data from eighteen (18) National Focal Points.
			Websites and platforms	Information on all CEIS Websites (CEIS, CIPORE, CIPPET and CEEBIP) are updated regularly to share/disseminate information	Update online platforms with news, events, projects, articles and other content.	Update online platforms with news, events, projects, articles and other content.	Update online platforms with news, events, projects, articles and other content.	Update online platforms with news, events, projects, articles and other content.
				Energy for Young Minds (EFYM) To improve Caribbean Secondary School Students access to Caribbean Energy Information	Gather organize and update EFYM website with relevant content.	Gather organize and update EFYM website with relevant content.	Gather organize and update EFYM website with relevant content.	Gather organize and update EFYM website with relevant content.
			Network Expansion: Membership & Partnerships	Membership increased annually by 20	<ul style="list-style-type: none"> Membership subscription and renewal activities are implemented At least five (5) members signed up per quarter. 	<ul style="list-style-type: none"> Membership subscription and renewal activities are implemented At least five (5) members signed up per quarter. 	<ul style="list-style-type: none"> Membership subscription and renewal activities are implemented At least five (5) members 	<ul style="list-style-type: none"> Membership subscription and renewal activities are implemented At least five (5) members

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							signed up per quarter.	signed up per quarter.
				Media Partnerships: at least five partnership agreements are renewed and five new ones obtained.	<ul style="list-style-type: none"> Solicit and sign media partnerships as necessary. Follow through with activities as per agreement Update media partnerships page on CIPORE	<ul style="list-style-type: none"> Solicit and sign media partnerships as necessary. Follow through with activities as per agreement Update media partnerships page on CIPORE	<ul style="list-style-type: none"> Solicit and sign media partnerships as necessary. Follow through with activities as per agreement Update media partnerships page on CIPORE n media partnerships as necessary. 	<ul style="list-style-type: none"> Solicit and sign media partnerships Follow through with activities as per agreement Update media partnerships page on CIPORE a partnerships as necessary.

HUMAN RESOURCE MANAGEMENT AND ADMINISTRATION DIVISION

Ministry Paper 56/2002 Government at your Service Public Sector Vision and Strategy 2000-2012 was laid before Parliament on September 12, 2002. It sets out the vision and strategy for the public sector over a ten (10) year period. It significantly establishes the link between the modernisation process in the civil service and the attainment of national goals. It also established a mission and vision and strategic objectives to be attained in the public service.

The vision is an open and impartial public sector that puts the public interest first and in which valued and respected professionals deliver high quality services efficiently and effectively. Among the strategic objectives is the delivery of high quality services at reasonable cost, secure performance improvements through the establishment of a performance culture in the civil service, value public servants and make sure they are motivated and properly equipped to meet these challenges; to secure performance improvements through a performance culture in the civil service, re-affirm the values of the public service stressing integrity, objectivity and accountability and managing through mechanisms that reflects the government of Jamaica's priorities.

As part of the practical application of this strategic direction MSET has been pursuing these objectives, including attempts at changing the culture to adapt to the requirements and expectations of stakeholders and the wider society through a change management process. This is to some extent driven by clearer definition of roles and job functions in a broader framework of organizational objectives and targets as well as a progression to increased accountability in service delivery and task assigned to staff. The use of such tools as PMAS and Performance Monitoring and Evaluation System –PMES are currently a key part of the change management strategy.

MSET is currently pursuing these objectives through the Operational Plan. The Human Resource Management and Administration Division is commencing with sensitization of the staff to PMAS and plans to introduce the PMAS through a Pilot in April 2016. During the year the organizational structure will also be reviewed, the development of an in-house policy framework to address disciplinary matters consequent with the approval of revised staff orders and public service regulations and ensuring training matches improvements in performance on the job through evaluation of training. The implementation of PMAS is expected to be continued into the second year and forward in the three year Strategic Plan. Below are details of the HRMA's Operational Plan for 2016-17 highlighting the PMAS, Training, Office Services and Procurement.

Ministry Policy/Programmes Project Initiative	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	Human Resource Management and Administration Est. Expenditure \$157.14M			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
<i>Vision 2030 – National Outcome 6: Effective Governance</i> <i>Ministry Paper No. 56 - Government at Your Service</i>	To provide a policy framework to address succession planning	Draft Succession Planning Strategy for at least one Division	Succession Planning Strategy for one Division Finalized Change Management Plan (Communication Plan and Training Plan)	Accessible pool of qualified staff to fill critical positions in one Division 100 % of critical positions filled within three (3) months of being vacant	Develop and review Succession Planning Strategy	Seek approval for implementation from the Permanent Secretary and review if required	Sensitize Divisional Directors Implement Succession Planning Strategy	Review and make changes as required
<i>Public Sector Modernisation Vision and Strategy 2015 – 2018</i> <i>Vision 2030 – National Outcome 6: Effective Governance</i>	To create a performance culture that is results driven, develops and rewards staff and takes other corrective action in an effort to enable the Ministry to achieve its goals	Implement Performance Management and Appraisal System (PMAS)	Implementation of PMAS Recognition and Rewards Committee Recognition and Rewards Committee Process Output Focused Job	100 % staff aware of PMAS, their of roles, and responsibilities within the organization 100% Divisional Heads/Senior Managers within Head Office and external Divisions trained in the Management of PMAS By the end of the 2016/2017 financial year 100 % of personal files have a copy of signed output focused job description	Commence PMAS sensitization Implementation of PMAS on April 1, 2016 as a pilot in one (1) Division and Recognition and Rewards Committee and Process consequent on approval by the Permanent secretary	n July remind staff about documenting changes , providing feedback, doing interim evaluations	In October receive and review interim evaluations	In December remind staff about documenting changes, providing feedback, doing interim evaluations, timelines for conducting final appraisals and submitting work plans for the next financial year

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<i>Vision 2030 – National Outcome 6: Effective Governance</i> <i>Ministry Paper No. 56 - Government at Your Service</i>	To ensure that staff are appraised, feedback provided and corrective action taken as required	Maintain Performance Evaluation Report Database	Individual Work Plans PMAS related sensitization/training sessions Change Management Team Performance Evaluation Reports received Recognition and Rewards	Timely request of performance evaluation reports 100 % of performance evaluation reports submitted 100% implementation of recommended corrective action Increase in the number of staff and managers informed of requisite interventions and subsequent action taken	Receive and review Work Plans Competence Continue to review and update job descriptions	Monitor implementation of development interventions Continue to review and update job descriptions	Monitor implementation of development interventions Continue to review and update job descriptions	To conduct annual review/appraisal and setting targets for the new financial year, including those in relation to training and development. Receive and review final appraisals and make recommendations In March 2017 , process appeals, initiate formal recognition and reward process

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<i>Vision 2030 – National Outcome 6: Effective Governance</i> <i>Ministry Paper No. 56 - Government at Your Service</i> <i>Public Sector Modernisation Vision and Strategy 2015 – 2018</i> <i>Vision 2030 – National Outcome 6: Effective Governance</i>	To improve accountability, and organizational effectiveness	Submit to MoFP proposal for the review of Divisions, creation of new posts and review of existing posts	New posts Reclassified posts New structure	Number of Divisional targets met Increased human resource capacity Increased knowledge of factors hampering organizational effectiveness	Conduct SWOT analysis of Divisions Review Divisional org. charts and job descriptions In conjunction with Divisional Directors, prepare proposals for submission to MoFP	Conduct SWOT analysis of Divisions as required Review Divisional org. charts and job descriptions In conjunction with Divisional Directors, prepare proposals for submission to MoFP	Conduct SWOT analysis of Divisions as required Review Divisional org. charts and job descriptions In conjunction with Divisional Directors, prepare proposals for submission to MoFP	Conduct SWOT analysis of Divisions as required Review Divisional org. charts and job descriptions In conjunction with Divisional Directors, prepare proposals for submission to MoFP

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<i>Vision 2030 – National Outcome 6: Effective Governance</i> <i>Ministry Paper No. 56 - Government at Your Service</i> <i>Public Sector Modernisation Vision and Strategy 2015 – 2018</i> <i>Vision 2030 – National Outcome 6: Effective Governance</i>	To identify and address the training and development needs of staff that are required to meet the Ministry's mandate	Conduct Training Needs Analysis in collaboration with respective Divisional Heads Prepare Training Budget	Training Needs Analysis Training Budget	Number of staff to be trained in relevant areas on the job and at suitable institutions in alignment with Divisions' goals and objectives and availability of funds	Review Training Needs Analysis, plans and determine strategies as required for 2016/2017	Review Training Needs Analysis and implement strategies as required for 2016/2017 Request Training Needs from Divisional Heads for 2017/2018 Review, provide feedback and finalize Training Needs Analysis for 2017/2018 Prepare Training Budget for 2017/2018	Review Training Needs Analysis and implement strategies as required for 2016/2017 Review, provide feedback and finalize Training Needs Analysis for 2017/2018 Prepare Training Budget for 2017/2018	Review Training Needs Analysis and implement strategies as required for 2016/2017 Review, provide feedback and finalize Training Needs Analysis for 2017/2018 Prepare Training Budget for 2017/2018

FINANCE AND ACCOUNTS DIVISION

Programme \$

Ministry Policy /Programmes Projects initiative	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	Finance and Accounts Estimated Expenditure \$41.38M			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
Vision 2030 – National Outcome 6: Effective Governance	Optimize the Ministry's capacity to realize corporate objectives through efficient management of its financial resources	Work with the divisions and agencies to ensure the timely and accurate processing of payments. Investigate and prepare responses to audit queries issued by Internal Audit and the Auditor General	Payment to suppliers for goods and services Audit Report	Accounts payable days All audit queries answered satisfactorily within stipulated deadline.	All properly authorized bills processed within 3 days of receipt and dispatched to the Accountant General for settlement. Queries answered as per deadline stipulated	All properly authorized bills processed within 3 days of receipt and dispatched to the Accountant General for settlement. Queries answered as per deadline stipulated	All properly authorized bills processed within 3 days of receipt and dispatched to the Accountant General for settlement. Queries answered as per deadline stipulated	All properly authorized bills processed within 3 days of receipt and dispatched to the Accountant General for settlement. Queries answered as per deadline stipulated
		Ensure Financial Reports are done in accordance with FAA Act and other pertinent guidelines	Completed Financial Statements and Appropriations Account	Accurate and timely submission of monthly financial statements and Annual Appropriations Accounts	Monthly Financial Statements completed and submitted within deadline	Monthly Financial Statements completed and submitted within deadline Complete and submit annual Appropriations Account	Monthly Financial Statements completed and submitted within deadline	Monthly Financial Statements completed and submitted within deadline

Ministry Policy /Programmes Projects initiative	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	Finance and Accounts Estimated Expenditure \$41.38M			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
		Ensuring accurate timely computations of payroll, payment of salaries, deductions and filing returns.	Employees paid and relevant deductions paid over. Annual returns completed and submitted	Employees paid on time Payroll and statutory deduction and returns processed on time	Monthly and fortnightly payroll completed as per MOF and OSC guidelines	Monthly and fortnightly payroll completed as per MOF and OSC guidelines	Monthly and fortnightly payroll completed as per MOF and OSC guidelines	Monthly and fortnightly payroll completed as per MOF and OSC guidelines Annual tax returns compiled and filed
		Coordinate and analyze expenditure budget submissions (annual and supplementary) from Divisions and Agencies Coordinate and analyze Non Tax Revenue budget submissions from Divisions and Agencies Analyze annual and other financial reports the various companies within the Ministry's portfolio	Budget prepared and submitted Reports Reports	Annual budget aligned with Ministry's priorities and submitted on time as stipulated in the Budget Call from the MOF Non Tax Revenue budget submitted on time as stipulated in the Budget Call from the Accountant General Timely analysis of reports and submission of findings to Policy Division	Budget submitted as per established deadline issued by the MOF. Assist in realigning Ministry's Operational Plan with Approved Estimates of Expenditure Submit budget as per established guidelines issued by the MOF	Review of budget execution. Review collections against projections and recommend changes as necessary Findings communicated within 10 days of receipt of the actual report	Conduct continuous review of budget execution. Review collections against projections and recommend changes as necessary Findings communicated within 10 days of receipt of the actual report	Conduct continuous review of budget execution. Review collections against projections and recommend changes as necessary Findings communicated within 10 days of receipt of the actual report

Ministry Policy /Programmes Projects initiative	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	Finance and Accounts Estimated Expenditure \$41.38M			
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		Lead and motivate staff to achieve the planned outputs – ensure all objectives of the Division are reflected in the work plans and are agreed to by staff.	Productive Staff Work Plans/Reports	Continuous training needs assessment done and training facilitated. Motivated Staff	Appraisals completed	Continuous performance assessment. Training needs assessed and facilitated	Continuous performance assessment. Training needs assessed and facilitated	Continuous performance assessment. Training needs assessed and facilitated

COMMUNICATIONS UNIT

Programme \$

Ministry Policy/Programmes Projects Initiative	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	Communications Unit Estimated Expenditure \$10.91M			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
To increase public awareness of the Ministry's policies, programmes and activities	Increased visibility of the Ministry across all media platforms	Liaise with the Executive, Divisional Heads and Directors in order to determine the main policy areas that require public attention	Brochures, posters handbooks and other items created on MSET policy areas Distribution of collateral material to MDAs and stakeholder entities	The number of public relations and communications activities that are held	Public Education on: ▪ STEM portfolio areas to include website, social media and face to face communications	Produce brochures, posters handbooks and other items created on major policy areas	Produce brochures, posters handbooks and other items created	Brochures produced and disseminated on respective focus areas
		Working in close contact with the responsible group/ person spearheading the policy, organise consultations, stakeholder meetings and other activities/ fora to engage the public	Expos and exhibitions held Production of: <ul style="list-style-type: none">• News releases• Speeches• Messages Stories uploaded to the MSET website and social channels	Publication and dissemination of material on the Ministry's subject areas and policies	Brochures, posters handbooks and other items created on biofuels as well as the areas of the sub-policy	News Releases on the work of the MSET Participate in Exhibitions and Expos	News Releases on the work of the MSET Participate in Exhibitions and Expos	

Ministry Policy/Programs Projects Initiative	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	Communications Unit Estimated Expenditure \$10.91M			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
To increase competencies and professionalism of the Communications Unit					<p>News Release on the work of the MSET</p> <p>Participate in Exhibitions and Expos</p> <p>Monthly/Daily Activities:</p> <ul style="list-style-type: none"> - Speeches & Messages - News Releases - Fact Sheets - Media 	<p>Monthly/Daily Activities:</p> <ul style="list-style-type: none"> - Speeches & Messages - News Releases - Fact Sheets - Media Monitoring/Issues 	<p>Monthly/Daily Activities:</p> <ul style="list-style-type: none"> - Speeches & Messages - News Releases - Fact Sheets - Media <p>Monitoring/Issue</p>	
	Improved efficiency and staff competencies	<p>Professional training in photography, video recording and audio recording and editing</p> <p>Revise staff structure with a view to increasing staff complement:</p> <ul style="list-style-type: none"> • A/V Technician (manoeuvre photo and video equipment and software), • Social Media Specialist • Graphic Artist/ Desktop Publishing 	<p>Staff trained in photography, and audio visual recording, editing and production</p>	<p>Improved photo and video images that can be included in releases, meet appropriate web standards and used in social channels</p> <p>More focused activity/production of staff. Great levels of delivery and improved performance across all levels</p>	<p>Train staff in photography and videography techniques</p> <p>Procure adequate video recording and editing equipment as well as photo editing software</p>	<p>Establish a digital library Record, edit and upload at least 2 MSET activities</p>	<p>Record at least 2 MSET activities</p>	<p>Record at least 2 MSET activities</p>

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Pursue new avenues of engagement	Greater levels of engagement with our audiences with stronger emphasis on new media	Increase the use of new media channels as regular forms of communication with stakeholders	Social media team established Social channels updated regularly New avenues of engagement with target audiences created	MSET has an active social media presence and is able to engage new audiences	Identify and organize a reliable team of persons who are responsible for social media engagement Re-vamp FB Page MSET Twitter account Updated frequently	Populate YouTube channel with weekly updates; host live and recorded presentations of MSET	Continued updates of all new media	Continued updates of all new media
Integrated communications programme between the Ministry, its agencies and departments	More cohesive and structured approach to the Communications programme of the Ministry and its agencies	Collection and collation of communications plans from agencies MSET Communications document collated incorporating the plans from all agencies' public relations/communications departments	Integrated communications plan produced and presented to the Permanent Secretaries and Heads of agencies Documentation of meetings held	Presentation of integrated communications plan More cohesive and targeted approach across agency and ministerial communication	Collect all agency plans by January 2016 Preparation of joint communications plan before the start of the financial year	Quarterly Meeting with Agencies Integrated Quarterly plan developed and submitted by mid-July	Quarterly Meeting with Agencies Integrated Quarterly plan developed and submitted by mid-October	Quarterly Meeting with Agencies Integrated Quarterly plan developed and submitted by mid-January

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	Strategic alignment of the Agencies and Divisions' (Public education and media) Plans Clear direction and guidance of agencies	Quarterly meetings with communications personnel from the agencies Creation of communication forms/ documents arising from quarterly meetings - that outline the direction and programme for each entity Outline of agencies/ Ministry plans for each quarter Agency links created and regular agency updates posted to MSET's website and agencies link from their websites to MSET	Website links created Updates from agencies posted to MSET and vice versa Joint releases issued and joint programmes held	Website alignment between the MSET agencies and divisions	First quarter meeting with the agencies One document arising from each meeting outlining the plans/initiatives across all agencies within the Ministry Website links created by end of first quarter 2016			

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Stronger Internal Communications/ Greater awareness of staff on the Ministry's activities	Improved communication internally and externally (staff are better aware of issues, Ministry's activities etc.) and are better able to share these information	Receive weekly updates from Divisional heads on activities Provide frequent/ weekly updates to staff on issues and activities involving the Ministry Internal newsletters Agency newsletter Staff updates / News in brief –	Staff Updates Quarterly Newsletter Agency Bulletin Weekly News in Brief	Improved communication internally and externally (staff are better aware of issues, Ministry's activities etc.) and are better able to share these	Quarterly distribution of the internal newsletter – June Weekly News in brief (Synopsis of Ministry in the news on a weekly basis)	Quarterly distribution of the internal newsletter – Sept Weekly News in brief (Synopsis of Ministry in the news on a weekly basis) Agency newsletter (July	Quarterly distribution of the internal newsletter – December Weekly News in brief (Synopsis of Ministry in the news on a weekly basis)	Quarterly distribution of the internal newsletter – March Weekly News in brief (Synopsis of Ministry in the news on a weekly basis) Agency Newsletter (January)

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SCIENCE Promotion of science, technology and innovation.	Recognition of the role of science, technology and innovation by Jamaicans as viable options for employment and entrepreneurship More persons becoming involved in the sector	Provide support for the work of the SRC and NCST to promote ST&I in schools, among farmers, small and medium sized enterprises, and entrepreneurs Attending events and providing support services, including photo and media coverage Participating in expos Provide support for the execution of the programmes alongside the two implementing agencies (Eg: Media advisories, providing Photographic support, website and social media posts and speech writing for Ministry personnel, assisting with drafting messages for PSAs etc.	Media advisories Photos taken, captured and posted online and distributed News stories prepared and disseminated	Number of exhibitions Number of events, for which support has been provided	Participate in, promote and provide support services for at least 6 events for the year	Assist with the preparation and planning for Science and Technology Month, including the Innovations Awards and other public awareness initiatives	Assist with the implementation of PR and Communication activities for S&T month – website updates, posts etc.	

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Promotion of Government's activities in ICT	<p>Greater visibility of MSET ICT portfolio</p> <p>Greater integration across Government</p> <p>Reduced aversion to technology across GOJ</p> <p>Greater efficiencies across Government</p>	<p>Use of traditional and new media to promote the Government's ICT agenda and successes</p> <p>Partnerships with other Government MDAs (Utilize Government communications network , for example)</p> <p>JIS programmes</p> <p>Partner with ICT Division to create stronger linkages across Government</p>	<p>Media promotions – news stories and features, website and social media posts</p> <p>Radio features</p> <p>Media interviews</p> <p>Newspaper articles</p> <p>JIS Think Tank session</p>	<p>Media promotions – news stories and features, website and social media posts</p> <p>Programmes produced, stories issues and published and aired</p>	<p>At least 2 new posts in the electronic spaces per month</p> <p>At least 1 JIS feature on their radio and television programme to be aired at least per quarter</p>	<p>At least 2 new posts in the electronic spaces per month</p> <p>At least 1 JIS feature on their radio and television programme to be aired at least per quarter</p>	<p>At least 2 new posts in the electronic spaces per month</p> <p>At least 1 JIS feature on their radio and television programme to be aired at least per quarter</p>	<p>At least 2 new posts in the electronic spaces per month</p> <p>At least 1 JIS feature on their radio and television programme to be aired at least per quarter</p>
<p>Increase the security of electronic communication</p> <p>Cyber Security Strategy</p>	<p>To have more persons aware of ICT security measures.</p>	<p>Promote the Cyber Security Strategy</p> <p>Design and implement a GOJ component - public education programme on the Strategy</p> <p>Partner with the private sector for the implementation of the public awareness campaign</p>	<p>Public education campaign launched</p> <p>Collateral material</p> <p>Advertisements</p> <p>Think Tank sessions and media interviews</p>	<p>Partnership established with the private sector for the implementation of a public education programme for Cyber Security strategy</p> <p>Public Education programme designed and implemented</p>	<p>Public education plan designed and approved</p>	<p>Roll out of the plan targeting all stakeholders</p>	<p>Continued roll out of the plan – to aggressively target media interviews, appearances, promotions online etc.</p>	<p>Scaled back implementation of the plan (as more persons become more aware, there will be reduced intensity of the campaign)</p>

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ICT Awareness of ICT Policies and initiatives	To have ICT recognized as a vital and vibrant contributor to Jamaica's economy	Support the work of the Government's CIO Office by supplying updates on the activities and achievements Promote the work of Government in the ICT sector by highlighting achievements in the Youth Employment in Digital and Animation Industries (Start Up Jamaica ,	Workshops News Releases Web updates Social media engagement, Op-eds Press conferences and media briefings					
	To implement initiatives in an effort to increase awareness and understanding of ICT policies and legislations and foster greater transparency between government and ICT Users/Stakeholders	Information dissemination, organization of activities, preparation of material training sessions etc. Supporting media campaign for major ICT initiatives, such as Open Data initiative, Observance of special ICT days and months. Promotion of ICT/ related activities by other entities & Workshops - News Releases Web updates social media engagement, op-eds, press conferences and media briefings	Collateral material Programmes prepared for special events Audio visual material of events Stories and posts of various activities and events	Number of promotional materials produced Level of awareness by stakeholders in the sector Updates on the various activities Events coordinated for each special activity	Support all major workshops by the ICT team ITU- World Telecoms Day (May 17) Special activity – promoted, planned and executed giving publicity to the Government's role in ICT Print at least 200 brochures, flyers and other information material (\$100,000)	At least 2 new posts in the electronic spaces per month	Special activity for: Women and Girls in ICT Day (October) Hour of Code (December)	At least 2 new posts in the electronic spaces per month

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	To increase visibility of the Ministry's	Design and facilitate a systematic series of dialogue sessions to build awareness on energy Distribution of supplements, brochures, pamphlets, etc. Partnership with JIS Website and social media News stories Coordination of activities such as launches, Expos/ exhibitions/ seminars	Communication Plan (to detail projects and national energy programme) Supplements produced News articles written Website and social media posts Brochures/ posters/ Media interviews arranged E-magazine platform purchased and designed Publication of e-magazine	Number of updates to website, social media posts, re-tweets, likes etc. Number of articles written and published Number of energy related activities/opportunities (expos, launches, supplements etc.) during the period Number of media interviews arranged/ hosted Number of media events arranged Publication of e-magazine	At least 2 new posts in the electronic spaces per month JIS Think Tank session (By end of June) 2 newspaper articles (written and published) At least 1 expo 300 brochures (\$300,000) At least 10 social media posts per week Alternative Energy Expo Published data on website and social channels	JIS Think Tank session (By end of September) Newspaper advertisement by end of September 2 newspaper articles (written and published) 300 brochures (\$300,000) At least 1 expo At least 10 social media posts per week Published data on website and social channels	1 Newspaper Supplement during Jamaica Energy Week (2nd week of November) 2 newspaper articles (written and published) 300 brochures (\$300,000) At least 1 expo At least 10 social media posts per week o Published data on website and social channels	JIS Think Tank session (By end of March) Newspaper advertisement by end of December 1 E-magazine published at the end of the year 2 newspaper articles (written and published) 300 brochures (\$300,000) At least 10 social media posts per week Published data on website and social channels

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Raise Awareness of Energy Efficiency and Conservation as well as Renewable Energy among	Greater awareness amongst Jamaicans about the importance of Energy Conservation and Efficiency, Renewable Energy and other priority areas of the Energy Division	Partner with stakeholder entities to raise awareness Communication Plan (to incorporate projects and national energy programme) Supplements produced News articles written Website and social media posts	Communication Plan (to incorporate projects and national energy programme) Supplements produced News articles written Website and social media posts	Increased awareness of persons about energy efficiency and conservation measures Reduced energy consumption by public sector entities, schools and other organizations	Establish partnership with at least 2 stakeholders in the sector Discuss and design a joint communication programme with the energy partners (from above) Joint Sponsorship of at least 1 radio programme (\$300,000)	Build on the established partnership to execute the awareness campaign Continuation of radio programme Q1 Weekly Social media posts with tips Internal messages to staff and agencies on how to access loans etc.	Weekly Social media posts with tips Internal messages to staff and agencies on how to access loans etc.	media posts with tips Internal messages to staff and agencies on how to access loans etc.
	To Promote awareness of energy options (eg: credit, lease financing arrangements for Renewables, options for small farmers etc.	Robust media campaign to increase public awareness, particularly in the public and private sectors ,Partnership with JIS Website and social media , News stories Supplement and coordination of activities, launches , Expos	Programme sponsorships Website and social media posts promoting the energy options Brochures and other public education material	Number of updates to website, social media posts, re-tweets, likes etc. Number of articles written and published Number of energy related activities/opportunities (expos, launches, supplements etc.) during the period	Weekly Social media posts with tips Internal messages to staff and agencies on how to access loans etc.			

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	Promotion of financing options among households for the purchase of energy saving technologies and renewable energies	Greater engagement with stakeholders and partners in the sector - Liaise with energy partners, such as DBJ, NHT, etc. Place information on the websites, social media pages and in brochures Programme sponsorships	Internal messages to staff and agencies on how to access loans etc. Staff presentations by partners to MSET staff on Energy financing	Number of persons sensitized Increase in persons utilizing the options Stronger linkages with energy partners	1 staff presentation by partners to MSET staff on Energy financing At least 50 persons sensitized yearly			

INFORMATION AND COMMUNICATIONS TECHNOLOGY

ICT has been identified as an area with great potential for the country and economy. The e-readiness or degree to which the society and Jamaica is poised to take advantage of the benefits from ICT is usually tracked by the Global Information Technology Report and the ICT Development Index. The indices track ten (10) parameters, including access to computers, internet access, broadband development, mobile phone subscriptions, the availability of e-government services, and innovation among others. Jamaica is rated satisfactorily but needs to increase its overall performance with most of these indices. The baseline index in 2007 was 5.05 and was forecasted at 6 in 2015.

The Operational Plan from an ICT perspective focuses on building out of a national broadband map critically for developing an overall picture of hot spots and servicing these areas; thus attracting investment. Increasing penetration of ICT through further increases to Community Access Points, the usage of ICT as a learning aid through the Tablets in School Project, is to be continued during the year.

In addition a national Cyber Security Strategy has been adopted which provides a framework for boosting cyber security. This strategy is expected to extend across the GOJ.

The milestones for the year from the ICT Division includes: the design and implementation of the Computer Incident Response Team (CIRT) , 2D and 3D Animation Training Programmes developed during 2016-17 with 700 youth trained in 2D animation and 10 start-up companies established. The Division will also be pursuing the implementation of transition Plan to a Single ICT Regulator and a revised ICT Policy and Broadband Policy.

E-government is expected to improve service and convenience to the public, to increase information and data access within Government Ministries, Departments and Agencies (MDAs). eGovJa is the main entity responsible for driving the implementation of a wider range of ICT services including GOJ validation web services, data centre hosting, infrastructure design and deployment, ICT consultancy and a range of software services including software development, acquisition and quality assurance.

In its Operational Plan for 2016-17 eGovJa's 131-Fiscal Policy and Management includes the administrative cost of eGovJa, support to GOJ initiatives including frontline projects such as National Identification System (NIDS), Human Capital Management System (HCM), Enterprise Contact Management (ECM) and Government Network (GovNet); as well as project oversight and management of GOJ investment in ICT and its assets. The activity will also support the maintenance of critical ICT infrastructure particularly in revenue collection and service access of MDAs with interfaces, and advice and quality assurance in the acquisition and usage of ICT software and hardware.

In keeping with its mandate eGovJa is requesting a recurrent budget of \$1.865 billion to be allocated to three (3) categories of projects, including Systems in Maintenance, New or upcoming projects and Projects currently underway to a total allocation of \$1.67B. The purchases of capital equipment a total of \$127.6M to replace ageing equipment at eGovJa and acquire needed software and network equipment to support GOJ's information systems.

Over the 2016-2020 planning period it is anticipated that eGovJa will continue to build capacity in an efficient manner in order to effectively address the high cost of ICT in government, revenue leakage, strengthening of maintenance, network communication, software quality assurance and testing, application hosting and technical support.

The entity will be increasing its human resource capacity to match the widening of its mandate. The staff complement is expected to rise by 50 additional staff, from a Human Resource Plan of 326. The economic challenges have resulted in a phased addition to the staff complement over a three (3) year period. The budget request for the operating year 2016-17 is \$901.61M in comparison to \$715.766M in the previous financial year.

INFORMATION AND COMMUNICATIONS TECHNOLOGY DIVISION

Estimated Expenditure: J \$

Ministry Policy/Programmes Project Initiative	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	Information and Communication Technology Estimated Expenditure \$49.19M			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
	Improve efficiency and security of internal business processes	Implement new website which facilitates the provision of e-services to internal and external stakeholders	Website that promotes the use of e-services by the Ministry's stakeholders	20% increase in the number of users of the Ministry's website achieved by the end of FY 2016/2017	5% increase in the number of users of the Ministry's website	10% increase in the number of users of the Ministry's website	15% increase in the number of users of the Ministry's website	20% increase in the number of users of the Ministry's website
		Develop a schedule for the maintenance and/or replacement of Information and Communications Technology (ICT) infrastructure	ICT infrastructure maintained and/or replaced	ICT equipment maintained in accordance with schedule 25% of end of life ICT infrastructure replaced by the end of FY 2016/2017	ICT equipment maintained in accordance with schedule	ICT equipment maintained in accordance with schedule 10% of end of life ICT infrastructure replaced	ICT equipment maintained in accordance with schedule	ICT equipment maintained in accordance with schedule 25% of end of life ICT infrastructure replaced
	Improve monitoring and administration of the use of Microsoft Software within Ministries, Departments and Agencies (MDAs)	Implement policy on self-reporting of Microsoft license acquisitions by MDAs	Self-reporting of licence acquisitions by MDAs	35% of MDAs self-reporting licence acquisitions by the end of FY 2016/2017	N/A	Issue self-reporting survey to all MDAs	35% of MDAs self-reporting licence acquisitions	N/A

Ministry Policy/Programmes Project Initiative	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	Information and Communication Technology Estimated Expenditure \$49.19M			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
	Improve legal and regulatory framework for the ICT Sector	Establish a single ICT Regulator	Single ICT Regulator	Transition Plan to Single ICT Regulator implemented by the end of FY 2016/2017	Recruitment of Transition Manager	Development of Transition Plan to single ICT Regulator	Implementation of Transition Plan to single ICT Regulator	Implementation of Transition Plan to single ICT Regulator
	Improve legal and regulatory framework for the ICT sector	Review ICT Policy	A Policy that promotes modernization and competition within the ICT sector	New ICT Policy developed by end of FY 2016/2017	N/A	Commence review of ICT Policy	Continue review of ICT Policy	Recommendations for amendments to the policy submitted to Cabinet for approval
		Develop a Spectrum Management Policy	A policy that provides for efficient spectrum planning, allocation and assignment in accordance with international best practices, protocols and standards	Spectrum Management Policy developed by the end of FY 2016/2017	N/A	Draft Green Paper prepared and circulated for stakeholder consultation	Green Paper submitted to Cabinet for tabling in Parliament Green Paper tabled in Parliament Draft Regulations to guide the management of the Spectrum Developed	White paper prepared and tabled in Parliament Regulations for the management of the Spectrum gazetted

Ministry Policy/Programmes Project Initiative	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	Information and Communication Technology Estimated Expenditure \$49.19M			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
		Develop a Postal Sector Policy	A Policy that provides for the development of a modern postal services sector.	Postal Sector Market Study conducted by the end of FY 2016/2017 to inform the development of Postal Services Policy	Procurement of Consultant to undertake market study	Data collection and analysis undertaken	Data collection and analysis undertaken	Postal Sector Market study report prepared
		Promulgate a new ICT Act	An ICT Act that provides for a modern framework for licensing and regulation and the establishment of a single ICT regulator	ICT Act tabled in Parliament by the end of FY 2016/2017	ITU Consultant engaged and stakeholder consultations on proposed amendment to existing legal and regulatory framework conducted	Review of report and drafting instructions prepared by Consultant	Cabinet approval sought to issue drafting instructions to CPC Drafting Instructions for ICT Bill prepared Draft Bill prepared for review	Stakeholder Consultation on Bill conducted Bill tabled in Parliament
	Improve legal and regulatory framework for the ICT sector	Promulgate Data Protection Act	A Data Protection Act that provides for the protection and privacy of personal data and prescribes how this data is to be handled	Data Protection Act promulgated by the end of FY 2016/2017	Stakeholder Consultation on Bill conducted	Bill tabled in Parliament	Bill reviewed by Parliamentary Committee	Data Protection Act promulgated Preparatory work for establishment of Data Commissioner commenced

Ministry Policy/Programmes Project Initiative	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	Information and Communication Technology Estimated Expenditure \$49.19M			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
	Improve the integration and delivery of public services using ICTs	Development of an Open Data Policy	An Open Data Policy	Open Data Policy developed by end of FY 2016/2017	Draft Green Paper prepared and circulated for stakeholder consultation	Green Paper submitted to Cabinet	White paper prepared and tabled in Parliament	Open Data Policy approved.
	Increase security of ICT infrastructure and electronic communication	Implementation of the National Cyber Security Strategy which is aimed at pursuing activities to address technical, measures, legal and regulatory framework, human resource and capacity and public education and awareness, by: a. Identifying national critical infrastructure (NCI), including critical information systems	National capability for ensuring timely and effective response to cyber incident established A robust national response and recovery capability for IT and critical infrastructure systems	Staffing of the Cyber Incident Response Team (CIRT) List of NCI, including critical information systems, prepared	Recruitment of Manager and Analyst Draft list of NCI, including critical information systems, prepared and stakeholder consultation conducted Meetings conducted with Government operated NCI and private owners or operators of critical information system	List of NCI approved/agreed	N/A	N/A
	Increase security of ICT infrastructure and electronic communication	b. Engaging private sector owners and operators of NCI and critical information systems	A robust national response and recovery capability for IT and critical infrastructure systems	# of meetings conducted with Government operated NCI and private owners or operators of critical information systems	information system	N/A	Meetings conducted with Government operated NCI and private owners or operators of critical information system	N/A

Ministry Policy/Programmes Project Initiative	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	Information and Communication Technology Estimated Expenditure \$49.19M			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
	Increase security of ICT infrastructure and electronic communication	Implementation of the National Cyber Security Strategy which is aimed at pursuing activities to address technical, measures, legal and regulatory framework, human resource and capacity and public education and awareness, by: a) Robust legislative framework b) Identifying public and private sector partners c) Initiating dialogue with public and private partners encouraging signing of MOC with P/P partners	Legislative framework that supports assessment of cyber security issues with a view of identifying gaps and recommending measures to fill these gaps Key public-private partnerships developed	Ad-hoc committee established List of legislation prepared that can be impacted by cyber security issues. Review of identified legislation commenced # and type of partners identified # of meetings held/communications exchanged with potential partners # and content of MOCs signed with partners	Identify partners and meetings held/communications exchanged with potential partners	Identify partners and meetings held/communications exchanged with potential partners	Identify partners and meetings held/communications exchanged with potential partners	Identify partners and meetings held/communications exchanged with potential partners
	Improving the regulatory framework governing the use of the Internet	Development of a framework on Internet Governance	A framework which outlines the norms and principles necessary to shape the evolution and use of the Internet	Draft framework for Internet Governance developed by the end of FY 2016/2017	N/A	Establishment of Taskforce to <i>inter alia</i> consider framework for Internet Governance	Internet Governance Forum held Formal launch of Internet Governance Task Force	Draft framework for Internet Governance developed
		Development of policies and	A policy that provides	A policy that provides	Stakeholder	Stakeholder	ccTLD	Policies and

Ministry Policy/Programmes Project Initiative	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	Information and Communication Technology Estimated Expenditure \$49.19M			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
		procedures for the administration and technical management, registration and promotion of Jamaica's Country Top Level Domain (.jm ccTLD)	for the administration and technical management, registration and promotion of .jm ccTLD)	for the administration and technical management, registration and promotion of .jm ccTLD) developed by the end of FY 2016/2017	consultations regarding operations and functioning of the ccTLD held	consultations regarding operations and functioning of the ccTLD continued	administrator identified and engaged	procedures for the registration and promotion of the ccTLD Domain Name reviewed and upgraded as appropriate
	Ensure proper administration of the telecommunications sector	Prepare and issue all licences for which recommendations have been received from the Regulators	Licences prepared and issued	Licences prepared and issued within one (1) month of receipt of recommendations	Licences prepared, negotiated and issued	Licences prepared, negotiated and issued	Licences prepared negotiated and issued	Licences prepared, negotiated and issued
		Prepare requisitions for members of the Telecommunications Tribunal and ICT Advisory Council and submit same to the Accounts Department for payment	Requisitions for members of the Telecommunications Tribunal and the ICT Advisory Council prepared	Requisitions prepared for the Accounts Department to make payment to members of the Tribunal thirty days prior to due date and to the ICT Advisory Council fifteen days after the end of each quarter	Requisitions prepared and submitted for payment Telecommunications Tribunal - \$300,000 + \$21,000 for admin support ICT Advisory Council - \$375,000	Requisitions prepared and submitted for payment Telecommunications Tribunal - \$300,000 + \$21,000 for admin support ICT Advisory Council - \$375,000	Requisitions prepared and submitted for payment Telecommunication s Tribunal - \$300,000 + \$21,000 for admin support ICT Advisory	Requisitions prepared and submitted for payment Telecommunications Tribunal - \$300,000 + \$21,000 for admin support ICT Advisory

Ministry Policy/Programmes Project Initiative	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	Information and Communication Technology Estimated Expenditure \$49.19M			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
							Council - \$375,000	Council - \$375,000
	Ensure proper administration of the telecommunications	Monitor compliance by Regulators and Agencies with the Public Bodies Management and Accountability Act and other relevant legislation	Review Plans/Reports from Portfolio Agencies	Comments on Plans/Reports forwarded to Policy Division within two (2) weeks of receipt of Plans/Reports	Comments submitted to Policy Division.	Comments submitted to Policy Division	Comments submitted to Policy Division	Comments submitted to Policy Division
	Ensure technical and policy input provided to MDAs regarding government ICT initiatives and the interest of Jamaica as appropriate advanced in ICT related regional and international fora	Participate in consultation; provide comments on legislative, policy and other government initiatives	Comments provided on consultation documents	Consultation objectives are addressed in document Consultations are timely representative and comprehensive	Participate in consultation(s) Comments provided on legislative, policy and other government initiatives	Participate in consultation(s) Comments provided on legislative, policy and other government initiatives	Participate in consultation(s) Comments on legislative, policy and other government initiatives	Participate in consultation(s) Comments provided on legislative, policy and other government initiatives
		Review and prepare technical submissions for participation in ICT regional and international fora	Technical submissions and contributions Reports on decisions taken and/or approved	Technical submissions/ contributions provided within the agreed timeframe Reports from meetings/conferences submitted within one (1)	Reports/Briefs reviewed and technical submissions/ contributions prepared Reports from	Reports/Briefs reviewed and technical submissions/ contributions prepared Reports from	Reports/Briefs reviewed and technical submissions/ contributions prepared Reports from	Reports/Briefs reviewed and technical submissions /contributions prepared Reports from

Ministry Policy/Programmes Project Initiative	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	Information and Communication Technology Estimated Expenditure \$49.19M			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
				month of return from meetings/conferences	meetings/conferences submitted	meetings/conferences submitted	meetings/conferen ces submitted	meetings/confer ences submitted
		Facilitate the processing of invoices for the payment of fees and contract price	Prepared invoices	Invoices submitted to Accounts Department within two (2) days of receipt	Prepare invoices for submission to Accounts Department	Prepare invoices for submission to Accounts Department	Prepare invoices for submission to Accounts Department. Microsoft Agreement - \$151,250,000 Universal Postal Union - \$1,000,000	Prepare invoices for submission to Accounts Department

OFFICE OF THE CHIEF INFORMATION OFFICER

	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
	Continue ICT Transformation process through consultancies and provide direction to the process.	Review and prepare subsequent strategic actions to further elaborate on each of the five action streams	CIO Office will make submissions to the PS Board on a regular basis on each of the five action streams and particularly on the new ICT Department realization.	Assessment of all progress on the action streams and all consultancies as to on time and on budget performance	Initiation of: •Training Strategy •Open Data technical support •Security Architecture Continuation of: •GoJ Portal design and implementation	Initiation of: •Business Continuity /Disaster Recovery Strategy •Organization assessment Continuation of: •Training Strategy •Open Data technical support •Security Architecture	Initiation of: •Unified Communication plan Continuation of: •Business Continuity /Disaster Recovery Strategy •Organization assessment	Initiation of: Enterprise Architecture design Continuation of: •Unified Communication plan
		Communicate the progress of the ICT transformation across the government of Jamaica	Develop executive summaries from all the consultancies to share the outcome from these consultancies with the executives	dashboard report completed as required on a monthly basis to show progress	CIO Bulletin #3 (Initiation of implementation of the re-designed ICT dept. of Govt.	CIO Bulletin #4 Communication across GoJ	CIO Bulletin #5 Communication across GoJ	CIO Bulletin #6 Communication across GoJ

ELECTRICITY DIVISION

Programme \$

	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	Electricity Division Estimated Expenditure \$139.43M			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
To ensure that all electrical installations are done in accordance with the governing electrical standards and the Electric Lighting Act.	To maintain the integrity of electrical installations as it relates to the existing standards (JS21) and the Electric Lighting Act and reduce or possible eliminate the number of electrical related accidents or incidents.	Stimulate public awareness of good installation practices and the governing regulations. To encourage tertiary institutions to train high quality licensed Electricians to become efficient and effective Electrical Inspectors	Inspections	Reduction in the number of substandard jobs submitted for inspection by Licences Electrician to zero. Increase the average number of jobs inspected from 225 per day to 300 per day	Number of substandard Jobs at 13%. \$5.5 M Daily average Number of jobs inspected is 250	Number of substandard Jobs at 12.5% \$5.9 M (travelling Daily average Number of jobs inspected are 260	Number of substandard Jobs at 12% \$6.3M Daily average Number of jobs inspected is 280	Number of substandard Jobs at 11% \$6.5 M Daily average Number of jobs inspected is 300
To ensure that petroleum facilities are constructed and operated in accordance with governing Petroleum standards and regulations.	To maintain the integrity of Petroleum facilities as it relates to the existing standards (Petroleum landing and storage act & and the petroleum quality control act) and reduce or possibly eliminate the number of petroleum related accidents or incidents.	Stimulate public awareness of good and safe practices in the transportation, storage, distribution and use of petroleum products.		Reduction in the number of faulty situations found during inspection of such facilities and reduction in the number of accidents related to the use of petroleum.	\$2.8 M Less than seven (7) petroleum related accidents reported	\$3.8 M Less than six (6) petroleum related accidents reported	Less than five (5) petroleum related accidents reported	\$1.5 M Less than three (3) Petroleum related accidents reported

	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	Electricity Division Estimated Expenditure \$139.43M			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
To prevent loss of life and property in accordance with the Electrical Lighting Act, the Petroleum Landing and Storage act and the Petroleum Quality Control Act.	Reduction in the number of electrical and Petroleum reported accidents/fires to zero annually.	Educate the public on the safe use of electricity and Petroleum and the requirements of the Electric Lighting Act, the Petroleum Storage and Landing Act and the Petroleum Quality Control Act. Testing of all electrodes for acceptable earth resistance readings	# of interventions #of readings	Reduction in the number of electrical related accidents/fires to zero Reduction in the number of electrical related accidents/fires to zero	Less than seven (7) accidents/fires reported. \$2.9 M (traveling & subsistence) Maximum earth resistance reading is 19 ohms	Less than five (5) accidents/fires reported. \$3.2 M (Travelling & subsistence) Maximum earth resistance reading is 19 ohms.	Less than three (3) accidents/fires reported. \$3.8 M (Travelling & subsistence) Maximum earth resistance reading is 16 ohms.	No accidents/fires reported. \$4.4 M (Travelling & subsistence) Maximum earth resistance reading is 16 ohms.
	To ensure that existing installations and petroleum facilities are kept at the level as required by the current standards. To reduce processing time of applications from an average of 21 days to 12 days.	To effect a zero-tolerance approach to sub-standards electrical installations and petroleum facilities. On-line access to all electrical and Petroleum certificates/reports		60 % of Service stations approved after the very first inspection. Less than five (5) electrical/petroleum related accidents/fire reported/occurred. Reduction in the times required for the processing of applications, responding to applications and resolving queries.	40% of service stations granted fitness certification Less than seven (7) electrical/petroleum related accident/fire reported/occurred. \$86 M Steps taken by MSET to modernize GEI	45% of service stations granted certification of fitness Less than six (6) electrical or petroleum accidents or fire reported	50% granted certification of fitness Less than six (6) electrical or petroleum related accidents or fires reported	60% granted certification of fitness Less than five (5) electrical or petroleum accidents or fire reported IT-based system being developed to improve process efficiency

	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	Electricity Division Estimated Expenditure \$139.43M			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
		<p>Installation of a computer network linking the offices of the Division by December 2018.</p> <p>Computerization of filing system of the Division to maintain records of jobs submitted by Electricians and data on petroleum facilities.</p> <p>Improve the deployment and supervision of Electrical and Petroleum Inspectors</p>	<p>Work group set up</p> <p>Inspections</p> <p>Trained staff</p>	<p>Work group successfully implements GEI modernization project.</p> <p>More than 33,000 inspections conducted annually.</p> <p>Capacity of at least 6 staff members developed and utilized effectively</p>	<p>Work Group to Implement AMANDA System</p> <p>Jobs inspected</p> <p>Three (3) members of staff sent on training courses.</p> <p>\$120,000.00</p>	Jobs inspected	Jobs inspected	<p>Jobs inspected</p> <p>Three (3) members of staff sent on training courses.</p> <p>\$120,000.00</p>
	To privatise the operations of the Electrical Inspectors and establish an Electrical Regulator.	<p>Increase the number of licensed inspections</p> <p>Pass the required legislation</p>	Number of licensed electrical inspectors	Legislation and budget in respect of the privatisation of electrical inspectors developed and awaiting government's approval.	Ministry developing legislation and budget			

LEGAL SERVICES DIVISION –

Programme \$

	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	Legal Services Estimated Expenditure \$13.82M			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
Vision 2030: National Outcome #6- Effective Governance	To provide sound and timely legal advice and support to the Ministry, its agencies and departments	To develop reporting standards for matters with significant legal implications.	To develop a Reporting Policy for the division	Implementation of the Reporting policy.	Develop a Reporting Policy/Guide			
		To consult with the various departments of the Ministry to obtain the relevant instructions to generate the legal advice	Legal Opinions and advice provided within a reasonable timeframe.	General legal advice provided within twelve (12) working days of request; Advice on moderately complex matters provided within twenty (20) working days of request; Complex legal matters addressed within thirty (30) working days of request	Advice rendered within the stipulated timeframes			

	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	Legal Services Estimated Expenditure \$13.82M			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
Vision 2030: National Outcome 6: Effective Governance	To strengthen accountability mechanisms for the management of properties owned/occupied by the Ministry and its departments.	Liaise with National Land Agency (NLA) to have properties valued and property agreements reviewed; Develop database of lease agreements	Current valuations for properties owned/occupied produced Lease agreements produced. Database of lease agreements	Valuations for properties leased, obtained by at least 2 months prior to the expiry of the current Lease Agreement for each property. Lease agreements produced by end of each financial year Electronic database produced by end of financial year 2016-2017.	Template for database developed which will indicate the term of the Lease as well as the renewal dates			

	Objectives	Strategies	Output	Performance Measures/ Outcome indicators	Legal Services Estimated Expenditure \$13.82M			
					Major Tasks, Targets, Resources			
					First Quarter April – June Cost \$	Second Quarter July – Sept. Cost \$	Third Quarter Oct - Dec. Cost \$	Fourth Quarter Jan. – Mar. Cost \$
Vision 2030: National Outcome 8: An Enabling Business Environment	To ensure that the process of negotiation and conclusion of contracts adhere to GOJ guidelines.	To consult with the Ministry's procurement committee to verify GOJ procedures followed for contracts.	Contracts emanating from the Procurement Committee are to be sent to the Legal Division with a Memorandum outlining the approval of that Committee.	Contracts for the provision of standard services to be reviewed/ drafted within two (2) weeks	Contracts provided within the stipulated timeframe.			
Vision 2030- National Outcome #10: Energy Security and Efficiency	To ensure a robust legislative framework	To review and update the Petroleum (Landing and Storage) Act	Tabling and Passage of a revised Petroleum (Landing and Storage) Act	Cabinet Submission to be prepared outlining the proposed amendments and approval for the issuing of drafting instructions to the Chief Parliamentary Counsel. Preparation of Drafting instructions Tabling of Draft Bill in Parliament	Cabinet Submission prepared and circulated for comments	Drafting Instructions to be prepared	Draft Bill circulated for comments and submitted to Legislation Committee	

APPENDIX A

LEGISLATIVE PROGRAMMES

NO	NAME OF LEGISLATION	PURPOSE OF LEGISLATION	CATEGORY	PROGRESS	PRIORITY
	ICT				
1.	The Data Protection Act	The Act will provide for the protection of privacy of individuals in relation to personal data and to regulate the collection, processing, storing, use and disclosure of personal data.	7	. Drafting instructions are being prepared for CPC.	High
2.	Information and Communications Technology Act (Telecommunications Act Repeal)	To provide the ICT sector with an adequate legislative and regulatory framework which addresses: <ul style="list-style-type: none"> the establishment of a converged stand-alone ICT Regulator current trends and emerging technologies competitiveness consumer protection. 	7	Cabinet Submission to be prepared seeking approval for drafting instructions to be issued.	High
3.	Postal Services Act [Post Office Act (Repeal)]	Review of the Post Office Act and other legislation with a view to aligning same with policy initiatives to: <ul style="list-style-type: none"> Licence and regulate all operators providing postal services outside of a policy and legislative framework by inter alia; Repealing the Post Office Act; and creating a statutory body. 	5	The draft Postal Services Bill to be reviewed in order to ensure its currency and alignment with new policy thrust.	Medium
4.	Regulations to the Telecommunications Act	To outline the fixed penalties applicable in respect of offences promulgated under the Act as amended in May 2012.	7	To be addressed in the overall review of the Telecommunications Act and the consideration of the ICT Act mentioned at 2 above.	High
	ENERGY				
10.	The Electricity Act	To replace the Electricity Act of 1890 with a modernised	1		

NO	NAME OF LEGISLATION	PURPOSE OF LEGISLATION	CATEGORY	PROGRESS	PRIORITY
		<p>Electricity Act. Consequent on the imminent completion of the Electricity Policy for Jamaica, a modernised Act will include:</p> <ul style="list-style-type: none"> • Introducing more competition in the sector; • Modernised infrastructure, including but not limited to smart grid deployment; • Regulatory clarification of the rules for competition, self-generation, net billing, net metering and power wheeling in the electricity market; • Regulatory provisions for the treatment of renewables, waste to energy and other alternative energy forms; • Appropriate tariffs for energy, differentiated by source; • Standardised power purchase agreements; and • Provisions for appropriate rates for electrical inspections. 		The Electricity Act was passed in the Houses of Parliament and came into operation on August 17 2015.	
11.	The Petroleum (Landing and Storage) Act	To modernise and update the legislation.		. The Chief Parliamentary Counsel is finalizing the said amendments.	High
12.	Promulgate the Gas Act	To provide for the proper legislative and regulatory framework for the gas market. It is contemplated that gas will be introduced to Jamaica.		Assistance is being sought from the Commonwealth Secretariat.	Very High
13.	The Petroleum (Quality Control) Act	<ul style="list-style-type: none"> • To review and amend the current licensing mechanisms and penalties associated with the Act, to ensure appropriate enforcement of safety standards for the petroleum sector; • To provide for appropriate charges for the inspection of petroleum facilities; • To establish standards and regulations for ultra-low sulphur diesel; and • To establish standards and regulations for biodiesel. 		The Chief Parliamentary Counsel is finalizing the final draft Bill.	High

APPENDIX B

MONITORING AND EVALUATION PLAN

MONITORING AND EVALUATION

The ministry intends to increase the rigour of its monitoring and evaluation programme to track and grade its performance, including that of its portfolio agencies. This will be accomplished through established mechanisms of reporting and performance reviews to ensure an audit and reconciliation of the entities' work plans against their achievements³.

The mechanisms which can be employed to ensure an efficient monitoring and evaluation programme include:

- A Monitoring and Evaluation Plan,
- Quarterly reviews of performance of the ministry and its agencies. Heads of Divisions and Chief Executive Officers will be required to report on actual achievements against plans and to also provide explanations for deviations and revise plans to meet targets,
- Assignment of agencies to Desk Officers in the Division,
- Tabling of annual reports to Parliament and submission of periodic reports to Cabinet,
- Representation of the ministry on the agencies' Boards of Directors,
- Regular reports to the Permanent Secretary,
- Analysis of work programme against achievements and periodic audits.
- Face to face meeting with Heads of Divisions, Departments and Agencies to get updates and discuss strategies

PROGRAMME/POLICY INITIATIVE: ENERGY SECURITY AND EFFICIENCY

Description: This programme is a vital component of the ministry's mandate and is geared at ensuring the country can meet its current and long term energy needs, reduce its vulnerability to disruptions in energy supplies, and reduce its dependence on imported fossil fuels. It is envisaged that the contributions from renewable energy sources such as wind, hydro, bio fuels and solar will become an increasing percentage of the energy mix. A second component of the programme is the more efficient utilization of energy.

MINISTRY'S STRATEGIC OUTCOME	BASELINE DATA (2008)	MONITORING AND EVALUATION FREQUENCY		MONITORING AND EVALUATION ASSESSMENT METHOD
		YEAR 2016/2017		
		MONITOR	EVALUATE	
Energy Security and Efficiency through security of supplies, fuel diversification to LNG and increase in renewables to 14.5% in 2015.	5.6% renewable in energy mix	Annually	Mid-term and after completion of implementation	- Reports - Statistical data - Models participants' evaluation
Reduction of the energy intensity of the economy to 12700 BTU in 2015.	15392 BTU /US\$1			

Programme/Policy Initiative: A Technology Enabled Society

Description: This Programme is also a critical component of the Ministry's mandate and is also linked to Vision 2030 to influence the national outcome of a Technology Enabled Society. The programmes are

³ The absence of the required staff presents a threat to achieving this objective.

PROGRAMME/POLICY INITIATIVE: ENERGY SECURITY AND EFFICIENCY				
Description: This programme is a vital component of the ministry’s mandate and is geared at ensuring the country can meet its current and long term energy needs, reduce its vulnerability to disruptions in energy supplies, and reduce its dependence on imported fossil fuels. It is envisaged that the contributions from renewable energy sources such as wind, hydro, bio fuels and solar will become an increasing percentage of the energy mix. A second component of the programme is the more efficient utilization of energy.				
MINISTRY’S STRATEGIC OUTCOME	BASELINE DATA (2008)	MONITORING AND EVALUATION FREQUENCY		MONITORING AND EVALUATION ASSESSMENT METHOD
		YEAR 2016/2017		
		MONITOR	EVALUATE	
designed to include science at the centre of driving economic growth and development through knowledge based and trained society. The main sub-programme includes a finalized National Science and Technology Policy, E-learning applications, ICT Development and Spectrum Management Policy, and establishment of a national broadband framework.				
Science and Technology integrated into all areas of national development Electronic learning widespread in education including secondary and primary levels. An advanced ICT sector that is globally competitive and driven by private sector investments.		Annually	Mid-term and after completion of implementation.	-
Description: Agencies, divisions and departments’ annual work plans.		Quarterly monitoring: i. Reports, and ii. Quarterly review meetings		-
Description: Agencies’ annual reports.		Submit Cabinet Note on each annual report to Cabinet with a request for the report to be tabled in Parliament.		-

APPENDIX C

AUDIT PLAN 2016-2017

Dept./ Division	Internal Audit					
Vision	To be recognized for excellence and professionalism in internal audit services and be seen as leaders in the implementation of continuous improvement in government stewardship and performance					
Mission	The mission of the internal Audit Unit is to add value to the operations of the Ministry, its external divisions and portfolio agencies by promoting a controlled environment through open communication, professionalism, expertise and trust, while performing audit services of the highest standards.					
Ministry's Outcome Indicators	Improved governance, overall efficiency and accountability in the Ministry of Science, Energy & Technology and its portfolio agencies. Reduction in the level of Auditor General's queries and appearances before the Public Accounts Committee of Parliament.					
Priority Policy	Strategic Objectives	Strategies	Key Output	Performance Indicator/Targets	Current Performance %	Cost (\$M)
	<p>To add value through the delivery of high quality assurance and consulting services to the Ministry, its external divisions and portfolio agencies in assessing and determining the level of compliance with:</p> <p>i. The F.A.A. Act and Instructions, The PBMA ACT</p> <p>ii. Directives from Ministry of Finance & Planning.</p>	<p>Contribute to the effective and efficient performance of the Ministry, its external divisions and portfolio agencies by conducting independent analysis, reviews and evaluation of existing activities and procedures.</p> <p>Examine, analyse, test and evaluate systems in place by: Conducting frequent independent inspections of the Ministry's head office and the various entities under its portfolio.</p>	<p>Quality audit reports with practical recommendations for the control of risks, the safeguarding of assets, and compliance with relevant rules, laws and regulations.</p>	<p>Ten (10) audits conducted</p> <p>Percentage of audit recommendations accepted and implemented by Management.</p> <p>Stakeholders' satisfaction with the quality and usefulness of IA reports.</p>		
	<p>iii. Other statutory regulations</p>	<p>Reviewing and assessing the effectiveness of risk management, control and governance processes.</p> <p>Communicate findings and</p>	<p>Risk assessment conducted for all audit reviews</p> <p>Timely and accurate audit reports</p>	<p>Improved governance and efficiency 93% reduction in the level of Auditor General's queries and appearances before the PAC within the Ministry and external divisions and 75% within portfolio agencies</p>		

Dept./ Division	Internal Audit					
Vision	To be recognized for excellence and professionalism in internal audit services and be seen as leaders in the implementation of continuous improvement in government stewardship and performance					
Mission	The mission of the internal Audit Unit is to add value to the operations of the Ministry, its external divisions and portfolio agencies by promoting a controlled environment through open communication, professionalism, expertise and trust, while performing audit services of the highest standards.					
Ministry's Outcome Indicators	Improved governance, overall efficiency and accountability in the Ministry of Science, Energy & Technology and its portfolio agencies. Reduction in the level of Auditor General's queries and appearances before the Public Accounts Committee of Parliament.					
Priority Policy	Strategic Objectives	Strategies	Key Output	Performance Indicator/Targets	Current Performance %	Cost (\$M)
	Strengthening the capacity of the Internal Audit Unit Creating a cadre skilled of highly skilled and competent staff.	observations to relevant stakeholders in a timely manner. Recruitment of qualified and competent personnel to fill vacant positions. Identifying and exploring relevant training options and ensure training of all staff members.	on all audited activities. Increase staff compliment by at least Five (5) new positions. All members of staff exposed to external and in house training.	Reports issued for at least 85% of audits conducted Increased level and quality of output. At least 3 new positions filled 100% staff participation in at least 2 external and/or in-house training courses.		
		Continued Education through personal initiatives. Assess performance of unit through quality assurance and on-going reviews.	Certification in relevant qualification and training. Completion of quality assurance reviews. Performance appraisals conducted	Periodic reviews in Conformance with IA Standards Performance appraisals done in a timely manner.		

APPENDIX D
LIST OF PUBLIC BODIES WITHIN MSET

NAME OF ENTITY	PURPOSE	CEO	CONTACT	INCOME	EXPENDITURE	FUNDING
				(\$'000)	(\$'000)	(\$'000)
Petroleum Corporation of Jamaica (PCJ)	To undertake the development and promotion of Jamaica's energy resources.	Mr. Winston Watson	36 Trafalgar Road, Kgn. 10 Tel: 929-5380 Winston.Watson@pcj.com	1,391,683	1,038,472	Commissions, rent and interest income
Petrojam Limited	To refine and supply petroleum products at internationally competitive prices and quality, acting in the best interest of Jamaica.	Mr. Winston Watson	96 Marcus Garvey Drive Kingston Tel: 923-8611 wlw@petrojam.com	Refinery Gross Margin US\$103,374	US\$94,067	
Petrojam Ethanol Limited (PEL)	To produce, export and sell ethanol.		96 Marcus Garvey Drive Tel: 934-6682 ron@petrojam.com	5,418,353	5,295,570	Profits and inventories
Wigton Windfarm Limited (WWL)	To provide and or facilitate increased wind power and other renewable technologies to generate electricity, thereby diversifying Jamaica's energy mix.	Mr. Earl Barrett	36 Trafalgar Road, Kgn. 10 Tel: 960-3994 Earl.barrett@wwfja.com			
Spectrum Management Authority Limited (SMA)	To ensure the efficient management of Jamaica's radio frequency spectrum in keeping with international best practices.	Dr. David McBean	13-19 Harbour Street Kingston Tel: 92-28884 dmcbean@sma.gov.jm	271,575.9	Recurrent: 266,821.5 Capital: 155,139.6	Profits and reserves 266,821.5 155,139.6
E-Learning	To facilitate web-based learning, computer-based learning and virtual classrooms utilizing information and communications technology.	Ms. Avrill Crawford	36 Trafalgar Road, Kgn. 10 Tel: 929-4044 Avrill.crawford@e-ljam.net	1.4 billion	1.4 billion	Universal Service Fund
Universal Service Fund Limited (USF)	To facilitate the provision of universal access to internet services by stimulating and accelerating the deployment of broadband and related services island wide.	Mr. Everal Simms (Acting)	36 Trafalgar Road, Kgn. 10 Tel: 926-1727 esimms@usf.gov.jm	998,800	3,915,977	Consolidated Fund: 1,700,000
Postal Corporation of Jamaica (PostalCorp)	To commercialize and modernize the postal service.	Mr. Michael Gentles	Central Sorting Office South Camp Road, Kgn. 4 pmgoffice@jamaicapost.gov.jm mgentles_jmpost@hotmail.com	116,992	114,823	Self-financed
eGov Jamaica Limited	To implement information and communications technology (ICT) projects across the Government of Jamaica (GOJ).	Mr. Herman Athias	235B Old Hope Road, Kgn. 6 Tel: 927-1125-8 hathias@egovja.com			

APPENDIX E
LIST OF PUBLIC SECTOR ENTERPRISES FINANCED THROUGH THE CENTRAL GOVERNMENT'S BUDGET

NAME OF ENTITY	PURPOSE	CEO	CONTACT	INCOME	EXPENDITURE	FUNDING
				(\$000)	(\$000)	(\$000)
Post and Telecommunication Department (PTD)	To provide efficient and cost effective postal and related services to its customers.	Mr. Michael Gentles	Central Sorting Office South Camp Road, Kingston 4 pmgoffice@jamaicapost.gov.jm			
Government Electrical Inspectorate (GEI)	To ensure that electrical installations in the country are safe and effected consistent with the Jamaica Standards Regulations.	Mr. Solomon Burchell	18 Parkington Plaza, Kingston 10 Tel:929-4070-3 gei@cwjamaica.com			
Scientific Research Council (SRC)	To foster the development of scientific research for the benefit of all of Jamaica.	Dr. Cliff Riley	Old Hope Road, Kingston 6 Tel : 702-4025 cliffr@src-jamaica.org			
International Centre for Environmental and Nuclear Sciences (ICENS)	To enhance the quality of life in Jamaica by maintaining: an accessible scientific information baseline for the environment; interdisciplinary STI capabilities; chemical analysis of environmental media and foodstuff using nuclear and atomic spectroscopy.	Mr. Charles Grant	University of the West Indies Tel:927-1777 charles.grant@uwimona.edu.jm	1,500	75,387	Subvention/ grant funding 73,887
National Energy Solutions Limited (NESol) formerly Rural Electrification Programme Limited (REP)	To expand electricity supply to rural communities to assist in regularizing urban supplies and to facilitate the increased use of renewable source of energy.	Mr. Garfield Daley	113 Washington Boulevard, Kgn. 20 Tel: 933-0631 gdaley@rep.gov.jm	488,025	488,000	GOJ: 461,705 AIA: 26,320
Board of Examiners (BoE)	To licence electricians, renew licence and revoke licences where electricians operate contrary to the laws.	Mr. Oswa;d Dennis-Chairman	113 Washington Boulevard Kingston 20 Tel: 934-6496 Email: boelicense@cwjamaica.com	440,000	8,718	Subvention for the MOF through the MSET.
eGov Jamaica Limited	To implement information and communications technology (ICT) projects across the Government of Jamaica (GOJ).	Mr. Herman Athias	235B Old Hope Road, Kgn. 6 Tel: 927-1125-8 hathias@egovja.com			