

FY 2014: Ongoing Locally-Funded Projects

As of 4th Quarter 2014

Project Title	Implementing Unit	Description	Objective/s	Outputs	Accomplishments
1. Detailed Resource Assessment of Low Enthalpy Geothermal Areas	Geothermal Energy Management Division – Renewable Energy Management Bureau (GEMD-REMB)	<p>The project will be implemented in four (4) years starting 2011.</p> <p>The project is related to the locally-funded project entitled "Resource Assessment of Low Enthalpy Geothermal Resource in the Philippines", which started in 2007 until 2011 but was terminated in 2009 due to budget constraints.</p> <p>The project will focus on three (3) potential geothermal areas previously identified for further exploration:</p> <ol style="list-style-type: none"> 1. Banton Island, Romblon 2. Balut Island, Davao del Sur 3. Maricaban Island, Batangas <p><u>Project Cost:</u> Total Project Cost: Php 63,046,454.00</p>	<p>The project aims to conduct a detailed assessment of three (3) potential low enthalpy geothermal areas identified in previous field appraisals particularly for power generation application in the remote areas hosting the resource. These resources may be developed for power generation, and yield other uses in the tourism and agricultural sector.</p>	<ol style="list-style-type: none"> 1) Identify the factors needed in the development of low enthalpy geothermal resources for power generation that will serve as the template for future similar projects; 2) Additional geoscientific data gathered on the Philippine low-enthalpy geothermal resources; and, 3) By the end of the geological, geochemical and geophysical surveys, drilling targets and the drilling of slim holes should be done on the most promising geothermal area. 	<p><u>As of 4Q 2014:</u></p> <ol style="list-style-type: none"> 1. Rig mobilization to proposed drilling site commenced on Dec. 2014. 2. Certificate of Non-Overlap (CNO) from NCIP was issued on 01 Oct. 2014. 3. Certificate of Non-Coverage (CNC) from DENR was issued on 01 Sep. 2014. 4. Resolution of support by the municipality of Tingloy, Batangas was issued on 01 Sep. 2014. 5. Diamond Drilling Corp. of the Philippines (DDCP) has conducted inception workshop / technical presentation to DOE staff on 19 Aug. 2014. 6. Contract-out Slimhole Drilling Services was awarded to DDCP on 04 August 2014. 7. FDS have submitted the Final Resource Assessment and Geothermal Modeling in Maricaban Island on 31 July 2014. 8. Issuance of NOA and NTP to DDCP for the Contract-Out Slimhole Drilling Services on 14 and 28 July 2014, respectively. 9. BAC has approved the Resolution recommending for the Approval by the Secretary the Award of Contract thru Public Bidding the Procurement of Services for the Contract-out Slimhole Drilling Service to DDCP on 19 June 2014.

FY 2014: Ongoing Locally-Funded Projects

As of 4th Quarter 2014

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		FY 2012 Approved Budget: Php 20,288,000.00 (FY 2012 cum: Php 1,403,000.00) FY 2013 Approved Budget: Php 10,144,000.00 (FY 2013 (BP 202): Php 30,438,000.00) (FY 2014 (BP 202): Php 30,220,000.00)			10. Submitted the Final Resource Assessment and Geothermal Modeling in Banton and Balut Islands on 30 May 2014. 11. Completed Contract-out services for integrated geoscientific survey by FEDs in the three (3) candidate areas: Banton, Balut, and Maricaban Islands on 16 April 2014. To date, DDCP has scheduled a core logging lecture to GEMD technical staff on 20 Jan. 2015 and spud-in of Well No. 1 will be next.

FY 2014: Ongoing Locally-Funded Projects

As of 4th Quarter 2014

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<p>2. Household Electrification Program (HEP) in Off-Grid Areas Using Renewable Energy</p>	<p>Solar and Wind Energy Management Division – Renewable Energy Management Bureau (SWEMD-REMB)</p>	<p>The project will be implemented in seven (7) years in line with the objective of achieving a 90 percent household electrification level by 2017.</p> <p><u>Project Cost:</u> Php 111,799,655.00 (PV-SHS) Php 17,000,000.00 (Micro-hydro)</p> <p><u>Project Duration:</u> April 2014-April 2015 (PV-SHS) July 2014-December 2015 (Micro-hydro Power System)</p>	<p>The HEP serves as one of the strategies of the National Government to provide house lighting in off-grid sitios which cannot be viably connected to the conventional grid by the distribution utilities or electric cooperatives. With about 4 million potential house connections to be energized until year 2017, the HEP is expected to augment the rural electrification program target of realizing 90% house connection-level electrification by 2017.</p> <p>The HEP involves the energization of off-grid households using mature renewable energy technologies such</p>	<p>1) Institutionalize community organizing through enhanced capability of Barangay Power Associations (BAPA) in project management and operation and maintenance of RE systems; 2) Rehabilitate in-operational RE installations; and, 3) Extend services to scattered households in far flung sitios.</p>	<p><u>As of 4Q 2014:</u></p> <p>1) Installed and commissioned the remaining 258 and 1,666 Solar Home Systems under Amended HEP 2011 (100% completed) and HEP 2012-2nd Batch (100% completed), respectively;</p> <p>2) Facilitated the issuance of Notice of Award, Procurement Contract and the corresponding Notice to Proceed for HEP 2014 (Lot 1);</p> <p>3) Conducted four (4) PV Technician's Training for beneficiary Electric Cooperatives and Local Government Units;</p> <p>4) Drafted and facilitated the signing of Memoranda of Agreement with Cebu Technological University and Western Philippines University-Affiliated Renewable Energy Centers for the implementation of MHP Systems Projects in the Provinces of Negros Occidental and Palawan, respectively;</p> <p>5) Conducted technical inspection and physical inventory of completed PV-SHSs in the Provinces of Rizal, Palawan,</p>

FY 2014: Ongoing Locally-Funded Projects
As of 4th Quarter 2014

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			<p>as photovoltaic solar home systems (PV-SHS), photovoltaic streetlights and micro-hydro systems.</p> <p>While promoting judicious utilization of RE technologies for rural electrification, house beneficiaries as well as beneficiary LGUs and ECs are likewise appropriately capacitated on the technical and social (management and organizational) aspects of solar PV and MHP systems.</p>		<p>Northern Samar;</p> <p>6) On-going processing of Memorandum of Agreement (MOA) with Pampanga Agricultural College – Affiliated Renewable Energy Center (PAC-AREC) for the installation of one (1) meteorological mast in the Province of Zambales; and,</p> <p>7) Maintenance of wind database.</p>

FY 2014: Ongoing Locally-Funded Projects

As of 4th Quarter 2014

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3. Detailed Wind Resource Assessment Project (WRAP)	Solar and Wind Energy Management Division – Renewable Energy Management Bureau (SWEMD-REMB)	<p>The project is targeting 40 sites in 20 provinces to be accomplished within eight (8) years. The project commenced in 2013 and will end in 2020.</p> <p>The DOE is jumpstarting a detailed wind resource assessment activity in selected areas with potential resources and no existing wind development initiatives. The activity aims to address the gaps of the country's wind database which would be utilized by project developers/ investors in conceptualizing, designing and evaluating wind energy projects.</p> <p><u>Project Cost:</u> Total Project Cost: Php 39,182,000.00</p> <p>FY 2013:</p>	<p>Generally, the project aims to identify viable sites for wind power development in the country.</p> <p>Specifically, it aims to:</p> <ol style="list-style-type: none"> 1) Undertake and sustain the conduct of detailed wind resource assessment in potential sites of the country 2) Update the national wind database containing resource data that are necessary in planning, design and implementation of wind energy projects 3) Build local capability/ expertise on various activities of wind resource 	<p>The project will enhance the identification of viable sites that are ready for the development and implementation of commercial wind power projects that can be at both on-grid and off-grid or on-shore and off-shore areas thereby mitigating the adverse effect of global warming through the reduction of FHF emissions.</p> <p>It will also create local capability that would eventually contribute to the reduction of the costs of developing wind power projects in the country.</p> <p>40 identified sites: 1) Nueva Ecija (10 sites) 2) Nueva Vizcaya (4 sites) 3) Pampanga (7 sites)</p>	<p><u>As of 4Q 2014:</u></p> <ol style="list-style-type: none"> 1) Conducted on-site monitoring and maintenance of three (3) meteorological masts (met-masts) in the following sites: <ul style="list-style-type: none"> • Brgy. Malasin, San Jose City, Nueva Ecija; • Brgy. Fatima, Pantabangan, Nueva Ecija; and • Brgy. Pobiacion East, Pantabangan, Nueva Ecija. 2) Conducted desk study to identify potential sites for micro-siting; 3) Conducted repair and troubleshooting of two (2) met-masts installed in the Province of Nueva Ecija; 4) Processed Amendments to the Memorandum of Agreement (AMOA) with CLSU-AREC for the provision of additional funds needed in the procurement of replacement parts of met-masts installed in Nueva Ecija. Ongoing processing of corresponding disbursement voucher; 5) Submitted set of requirements and

FY 2014: Ongoing Locally-Funded Projects

As of 4th Quarter 2014

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		Php 4,130,000.00 FY 2014: Php 5,255,000.00 FY 2015: Php 5,781,000.00 FY 2016: Php 6,359,000.00 FY 2017: Php 6,994,000.00	assessment as well as in the development of wind power projects 4) Offer to prospective wind developers the identified viable wind areas for commercial development and implementation pursuant to RA 9513	4) Bulacan (2 sites) 5) Ifugao (5 sites) 6) Kalinga (5 sites) 7) Bohol (2 sites) 8) Samar (5 sites) Expected outputs: 1) Installation of one (1) met-mast 2) Maintenance of three (3) met-masts; and, 3) Collection and processing of wind data.	attended meetings of Bids and Awards Committee (BAC) for the procurement of Scientific and IT equipment; Office Equipment; and Office Supplies. Conducted the post-qualifications of prospective suppliers of Scientific and IT Equipment; 6) On-going processing of Memorandum of Agreement (MOA) with Pampanga Agricultural College – Affiliated Renewable Energy Center (PAC-AREC) for the installation of one (1) meteorological mast in the Province of Zambales; and, 7) Maintenance of wind database.

FY 2014: Ongoing Locally-Funded Projects

As of 4th Quarter 2014

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4. Biofuels Program	Biomass Energy Management Division – Renewable Energy Management Bureau (BEMD-REMB)	<p>This project aims to promote the use of biofuels (biodiesel and bioethanol) as cleaner alternative fuel, develop the national biofuels development plan, to conduct techno-economic and viability study for expanded utilization of biodiesel (power generation, marine transport and industries) and to conduct vehicle performance testing for higher biofuel-blends and resource assessment of other viable biofuel feedstocks.</p> <p><u>Project Cost:</u> Total Project Cost: Php 176,612,000.00</p> <p>FY 2012 Approved Budget: Php 16,824,000.00 (FY 2012 cum; Php 88,568,000.00) FY 2013:</p>	The project aims to implement the Biofuels Law, Biofuels Manufacturing Plants Inspection and Monitoring and to conduct Sectoral Meetings, Consultations and IEC Activities.	<p><u>Expected Outputs for 2014:</u></p> <ol style="list-style-type: none"> 1) Status/Updates on various biofuels and biomass for existing facilities and proposed projects including issuance of Notice to Proceed; 2) Promote biofuels program; 3) Data/Information on the effect of higher biofuel blends using brand new test vehicles; 4) Data/Information on the utilization of biofuel using alternative feedstock; 5) Promote biogas technology and produce skilled biogas technician in Mindanao area; 6) Information on new/emerging biofuel technologies; and, 7) Purchase of office equipment. 	<p><u>As of 4Q 2014:</u></p> <p>A. Continuing conduct of monitoring, inspection / site visit and evaluation of existing and proposed biofuels / biomass projects and facilities nationwide.</p> <ol style="list-style-type: none"> 1. 21 Biofuels Production Facilities / Projects: <ul style="list-style-type: none"> • Accredited: Biodiesel – 11 Bioethanol – 8 (Accredited 3 bioethanol plants for the 4th Quarter 2014 – Far East Alcohol Corporation, Kooil Company, Inc., and Universal Robina Corp.) • Registered with Notice to Proceed: Bioethanol – 1 (Kooil Company, Inc.) 2. 72 Biomass Facilities / Projects <ul style="list-style-type: none"> • BREOC – 44 Awarded 1 BREOC for the 4th quarter 2014 – Grass Gold Renewable Energy Corporation) • Certificate of Registration – 25 • Fabricators – 3 (Pending Applications – 4) 3. 11 Biodiesel and 8 Bioethanol Facilities were inspected and

FY 2014: Ongoing Locally-Funded Projects

As of 4th Quarter 2014

Project Title	Implementing Unit	Description	Objective/s	Outputs	Accomplishments
		Php 35,892,000.00 FY 2014: Php 10,065,000.00 FY 2015: Php 19,506,000.00 FY 2016: Php 19,506,000.00		collateral materials, and laboratory supplies.	monitored for compliance to PNS (biofuel projects were monitored twice a year for PNS Compliance) Biodiesel: <ul style="list-style-type: none"> • Golden Asian Oil International, Inc. (2) • Phil Biochem Products, Inc. (3) • Pure Essence International, Inc. (3) • Chemrez Technologies, Inc. (4) • Tantuco Enterprises, Inc. (3) • JNJ Oleochemicals, Inc. (2) • Mt. Holly Coco Industrial Co., Ltd. (2) • Bioenergy 8 Corporation (2) • Freyvonne Milling Services (2) • Econergy Corporation (2) • Phoenix Petroleum Phil., Inc. (1) Bioethanol: <ul style="list-style-type: none"> • Leyte Agri Corporation* (2) • San Carlos Bioenergy, Inc. (2) • Balayan Distillery* (3) • Green Future Innovations, Inc. (1) (note: 2nd monitoring and sampling of ethanol product in Green Future Innovations, Inc. was postponed due to no production operation) • Roxol Bioenergy Corporation (2) • Far East Alcohol Corporation* (1) • Kool Company, Inc.* (1)

FY 2014: Ongoing Locally-Funded Projects

As of 4th Quarter 2014

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					<ul style="list-style-type: none"> • Universal Robina Corporation* [1] *Site inspection / validation was conducted for accreditation / registration 4. 72 Biomass Projects / Facilities inspected and monitored B. Continuing implementation of MOA with Philippine Information Agency (PIA) for IEC Campaign and Advocacy Plan for the National Biofuels Program. C. Purchase of office supplies, collateral materials, and laboratory equipment. D. Preparatory activities for the development of test protocol and conduct of actual on-road and performance testing using brand new vehicles for higher biofuels blends (biodiesel / bioethanol) E. Continuation of implementation of MOA with Technological University of the Philippines (TUP) on the testing of 5% and 20% biodiesel blends for in-use vehicles, validation road test. F. Continuation of implementation of biofuels projects using alternative feedstock (esterified used vegetable oil,

FY 2014: Ongoing Locally-Funded Projects

As of 4th Quarter 2014

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					<p>sweet sorghum, cassava, and microalgae).</p> <ol style="list-style-type: none"> 1. Mariano Marcos State University (MMSU) – “ Village Scale Production of MMSU Hydrous Ethanol as Foodstock for R&D in Biofuel Trials and Anhydrous Ethanol Production” 2. University of the Philippines Visayas Foundation Inc. (UPVFI) – “Bioethanol Production from Macroalgae and Socio-ecological Implications” 3. Xavier University – “Bioethanol Production Potential of Different Cassava Varieties under Northern Mindanao Condition and Development of a Pilot-scale Cassava Bioethanol Plant” <p>G. Continuation of implementation of 2 MOAs with Cavite State University:</p> <ol style="list-style-type: none"> 1. Biogas Technology Assessment in the Philippines 2. Hands-On Training on the Construction of Biogas Digester in General Santos City <p>H. Attended training program on Potable Automotive Emission Analyzer</p>

FY 2014: Ongoing Locally-Funded Projects

As of 4th Quarter 2014

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5. Ocean Energy Potential Resource Assessment	Hydropower and Ocean Energy Management Division – Renewable Energy Management Bureau (HOEMD-REMB)	<p>The project envisions to attain the following general objectives:</p> <ol style="list-style-type: none"> 1) Advance research and development of open-ocean current, wave tidal and thermal energy systems through capability building; 2) Make available first hand data for potential ocean area for development to interested stakeholders and counterparts; and, 3) Be able to advance the operational readiness and awareness of ocean energy technology in the country. <p><u>Project Cost:</u> Total Project Cost: Php 13,325,000.00</p>	<p>The specific objectives of the project are:</p> <ol style="list-style-type: none"> 1) To develop technical capability of HOEMD personnel in the identification of potential Philippine ocean territory area, in the evaluation of project proposals, and in providing technical assistance to stakeholders for ocean energy development through a capability training program; 2) To conduct resource assessment of identified areas within the PEP; 3) To familiarize with the operation of technology and equipment; 	<p>The expected outputs/ deliverables are:</p> <ol style="list-style-type: none"> 1) Ocean resource inventory 2) Ocean energy potential sites database 3) Promotion of ocean energy potentials (IEC) 4) Training program 5) Procurement of equipment <p>At the end of the project, it would have:</p> <ol style="list-style-type: none"> 1) Trained HOEMD staff for resource assessment; 2) Acquired geophysical equipment and database equipment; and, 3) Set-up a database system; 4) Identified potential sites for energy development; and, 5) Posted at least 40 sites on the web or 	<p><u>As of 4Q 2014:</u></p> <p>Awaiting the award of contract for the winning bidder.</p>

FY 2014: Ongoing Locally-Funded Projects
As of 4th Quarter 2014

Project Title	Implementing Unit	Description	Objective/s	Outputs	Accomplishments
			4) To develop and maintain a database; 5) To establish collaboration and strategic partnership with various government agencies and academe; and, 6) To conduct extensive IEC program to stakeholders.	published in a newspaper of general circulation.	

FY 2014: Ongoing Locally-Funded Projects

As of 4th Quarter 2014

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6. Alternative Fuels for Transportation and Other Purposes	Alternative Fuels and Energy Technology Division – Energy Utilization Management Bureau (A-FETD-EUMB)	<p>The project aims to reduce dependence on imported oil, to contribute to energy security through fuel diversification and to provide more environment-friendly alternatives to fossil fuels.</p> <p><u>Project Cost:</u> Total Project Cost: Php 118,476,000.00</p> <p>FY 2012 Approved Budget: Php 9,597,000.00 FY 2013 Approved Budget: Php 20,340,000.00 FY 2014: Php 17,420,000.00 FY 2015: Php 24,942,000.00 FY 2016: Php 24,942,000.00</p>	<p>The following items are the project's objectives:</p> <ol style="list-style-type: none"> 1) Program implementation on the use of Compressed Natural Gas in the transport sector initially through the pilot project; 2) Promotion of the diversification of the country's fuel resources in the transport sector; development of standards; 3) Carrying out information, Education, and Communication (IEC) nationwide on the use of Liquefied Petroleum Gas in transport; and 4) Research study on the potential of hydrogen as energy source for the transport, 	<ol style="list-style-type: none"> 1) Natural Gas Vehicle Program for Public Transport (NGVPPT) (Duration: October 16, 2002-2018) <ul style="list-style-type: none"> - 200 commercially operating CNG bus units by 2015 - Two (2) units of Modular CNG Stations to be located in Biñan, Laguna and Batangas City - Annual Average Reduction of CO₂ Emission: 26,872 Metric Tons 2) AutoLPG <ul style="list-style-type: none"> - Converted/ retrofitted LPG vehicles in major cities monitored - Government procedures for the utilization of LPG as transport fuel harmonized - Tests on the use of LPG for public utility jeepneys 	<p><u>As of 4Q 2014:</u></p> <p>Alternative Fuels:</p> <ol style="list-style-type: none"> 1. Conducted IECs in Luzon (8), Visayas (5), and Mindanao (5) 2. New MOA with Development Academy of the Philippines for the completion of the Alternative Fuel Roadmap signed (P5,000,000.00) 3. New MOA with DILG-BFP for the formulation of emergency response protocol for alternative fuels vehicles <p>NGVPPT: (Year-end status)</p> <ol style="list-style-type: none"> 1. Seven (7) accredited CNG bus operators, 61 CNG buses acquired by Accredited Bus Operators, 32 units with valid franchise, 29 units awaiting issuance of franchise by LTRFB 2. Stop operation of PSPC's Mampalasan Station due to frequent failure of the safety relief valves of cylinders inside the Mobile Accumulator Transport System (MATS) 3. DOTC Secretary has yet to reply to DOE's letter of request for intervention on the issuance of franchises for the 168 CNG buses. 4. Requalification Standards for CNG Tanks adopted as Philippine National Standards 5. PNOC-EC's award of procurement for related works and equipment for the

FY 2014: Ongoing Locally-Funded Projects
As of 4th Quarter 2014

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			industrial, and commercial sectors/hydrogen	conducted - Enhanced inspection protocol for auto-LPG in transport developed - Annual Average Reduction of CO ₂ Emission: 223,390 Metric Tons 3) Introduction of emerging technology (e-vehicles)	two new CNG station on hold, pending the commitment of DOTC to issue the franchises for the remaining 168 CNG buses. Other Accomplishments: 1. Evaluated, assessed, and issued one (1) certificate of accreditation. 2. Inspected 32 CNG buses in coordination with BFP for compliance with the Fire Safety requirements 3. Entered into cooperation with BFP for establishing an Emergency Response Protocol for Alternative Fuel Vehicles (AFVs) 4. Entered into cooperation with DILG-BFP for the formulation of emergency response protocol for alternative fuel vehicles 5. Conducted 48 Stakeholder's forum and IEC activities 6. Participated / attended CNG / LNG related training, workshops and forum Auto-LPG Program: (year-end status 1) Total of 9,957 auto-LPG taxis and 218 dispensing stations nationwide 2) New MOA with UP NEC for the conduct of Phase 2 of on-road and laboratory performance test signed 3) Draft Joint Administrative Order for the implementation of guidelines and standards for use of LPG in vehicles

FY 2014: Ongoing Locally-Funded Projects

As of 4th Quarter 2014

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					<p>(DOE, DTI-BPS, DTI-CPAB, DOTC-LTO, DCTC-LTRFB, DENR-EIMB, DILG-BFP, DCH) passed the review of partner agencies)</p> <p>4) Establishment of Auto LPG Technical Working Group on-hold pending the approval of JAO</p> <p>5) Entered into cooperation with Cavite State University and University of Southeastern Philippine for the establishment of Auto LPG course and laboratory training shop (p1,000,000.00 each)</p> <p>6) MOA with Cebu Technology University on-hold pending the appointment of the University's president</p> <p>7) Entered into cooperation with DILG-BFP for the formulation of emergency response protocol for alternative fuels vehicles</p> <p>8) Review, update of PNS 05:1983-Code of Practice Auto LPG in Internal Combustion Engines (ICE) for consideration by DTI-BPS technical committee</p> <p>9) Enhanced Auto LPG Vehicle Inspection Protocol drafted and reviewed by Partner Agencies</p> <p>Other Accomplishments:</p> <p>1. Completion of Phase 1 of on-road and laboratory performance test conducted by UP</p>

FY 2014: Ongoing Locally-Funded Projects

As of 4th Quarter 2014

Project Title	Implementing Unit	Description	Objective/s	Outputs	Accomplishments
					2. Conducted 48 stakeholders' forum, Focused Group Discussion and IEC activities nationwide in collaboration with Field Officers.

FY 2014: Ongoing Locally-Funded Projects

As of 4th Quarter 2014

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7. National Energy Efficiency and Conservation Program	Energy Efficiency and Conservation Division – Energy Utilization Management Bureau (EECD-EUMB)	<p>This program aims to make energy efficiency and conservation (EE&C) a way of life. Specifically, the program aims to cushion the impact of increases in prices of petroleum products and electricity through the implementation of energy efficiency and conservation measures, promote cost avoidance/savings on fuel and electricity without sacrificing productivity, get firm savings commitments from identified sector groups and help protect the environment.</p> <p><u>Project Cost:</u> Total Project Cost: Php 179,361,000.00</p> <p>FY 2012 Approved Budget: Php 12,302,000.00</p>	<p>The project aims to further strengthen and promote energy efficiency and conservation in the commercial, industrial, residential, transport, agricultural, and power industry sectors.</p> <p>The following are the specific objectives of the project:</p> <ol style="list-style-type: none"> 1) To help contribute in achieving the energy reform agenda of the government in the aspect of ensuring energy security; 2) To help cushion the impact of oil price volatility to the economy; 3) To help mitigate effect of climate change through reduced carbon 	<p>Energy saving equivalent to 10% of the annual final energy demand consumption (2011 - 2030)</p> <ul style="list-style-type: none"> ✓ Energy Savings = 69,100 KTOE (3,455 KTOE/yr) ✓ Deferred Capacity = 6,780 Mwe (339 Mwe/yr.) ✓ CO2 Reduction = 178,980 KTCO2 (8.949 KTCO2/yr) 	<p><u>As of 4Q 2014:</u></p> <p>A. Recognition Award</p> <ol style="list-style-type: none"> 1. Don Emilio Abello Energy Efficiency Awards <ul style="list-style-type: none"> • Plant visits were conducted in 25 manufacturing industries and commercial establishments to verify significant savings generated and the implementation of energy efficiency and conservation programs in their respective firms. • 92 establishments and 50 energy managers received honors for their remarkable support and dedication to energy efficiency and conservation during the awarding ceremony held on 06 Dec. 2014 at the Dusit Thani in Makati City <p>B. Accreditation of Energy Service Companies (ESCOs)</p> <ul style="list-style-type: none"> • Four (4) ESCO applications for ESCOs, namely: Philippine Integrated Energy Solutions, Inc., Edward Marcs Philippines, Inc., Design Science and Schneider Electric Phils., Inc.; were

FY 2014: Ongoing Locally-Funded Projects

As of 4th Quarter 2014

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		(FY 2012 cum: Php 75,509,000.00) FY 2013: Php 25,000,000.00 FY 2014: Php 21,000,000.00 FY 2015: Php 25,000,000.00 FY 2016: Php 25,000,000.00	<p>dioxide emissions as a result of judicious and efficient utilization of energy;</p> <p>4) To promote and rationalize energy consumption through aggressive promotion of EE&C in government, industrial, commercial, residential, transport, and electric power industry sectors; and,</p> <p>5) To promote energy efficiency and conservation as a way of life.</p>		<p>accredited by DOE to engage in any energy efficiency-related performance contracting project.</p> <p>C. Consultative Meeting on the Final Draft of the Roadway Lighting Guidelines was conducted to communicate with the attendees / stakeholders the current contents of the final draft of the Roadway Lighting Guidelines, specifically, the inclusion of section on LED road lighting and finalize the draft guidelines and decide for its publication</p> <p>D. Provided technical assistance to Sugar Regulatory Administration (SRA) energy audit team in the conduct of boiler efficiency test in three (3) sugar mills located in Negros Occidental in line with SRA's energy audit project in sugar mills for the crop year 2014-2015. These were the First Farmers Holding Corporation, Hawaiian Philippines Company, and Sagay Central, Inc.</p> <p>E. Government Energy Management Program</p> <ul style="list-style-type: none"> 19 Energy Audit Spot Checks were conducted at the following government agencies: UP Manila Campus, Philippine Normal University

FY 2014: Ongoing Locally-Funded Projects

As of 4th Quarter 2014

Project Title	Implementing Unit	Description	Objective/s	Outputs	Accomplishments
					<p>and Technological University of the Philippines in Metro Manila; regional offices of the Department of Trade and Industry; National Housing Authority; Philippine Maritime Academy; Philippine Export Processing Zone; Home Development Mutual Fund; Department of Social Welfare and Development; Department of Tourism; Department of Public Works and Highways; Department of Interior and Local Government; Land Transportation Office; Land Transportation and Franchising Board; National Statistics Office; Professional Regulatory Commission; Social Security System; and National Telecommunications Commission in Cordillera Autonomous Region</p> <ul style="list-style-type: none"> • Issued 17 Certificate of Savings to National Power Corporation (NPC) Offices / Plant Installation for the year 2013. These include: NPC-Mindanao Generation; NPC-SPUG Luzon; NPC-APD; - Sucat Thermal Power Plant; NPC-Mamburao Diesel Power Plant; NPC-Pulang Lupa Diesel Power Plant; NPC-SPUG Visaya Operations Department; NPC-Angat Hydroelectric Power Plant; NPC - Boac Diesel Power

FY 2014: Ongoing Locally-Funded Projects
As of 4th Quarter 2014

Project Title	Implementing Unit	Description	Objective/s	Outputs	Accomplishments
					<p>Plant; NPC-Gen. Santos Diesel Power Plant; NPC-SPUG Mindoro-Romblon Division; NPC-Basco Diesel Power Plant; NPC-Sabtang Diesel Power Plant; NPC-Sibuyan Diesel Power Plant; NPC-SPUG Tablas Diesel Power Plant and the DOE for the year 2012-2014.</p> <ul style="list-style-type: none"> 74 respondents out of 189 survey forms on air-conditioning unit, generators and lighting system were received from government agencies. This survey refers to the probability of replacing existing non-inverter air-conditioning unit with inverter-type ACUs in government office buildings. <p>F. Promotion of EE&C through DOE Field Offices Alternative Fuels and DOE-GAD IEC Campaign activities.</p> <ul style="list-style-type: none"> 8 Seminars conducted on Energy Efficiency and Conservation in connection with the celebration of the 2014 Consumer Welfare Month bearing the theme, "Sapat na Impormasyon: Susi sa Wastong Paggamit ng Enerhiya" in partnership with the Department of Trade and Industry regional offices

FY 2014: Ongoing Locally-Funded Projects

As of 4th Quarter 2014

Project Title	Implementing Unit	Description	Objective/s	Outputs	Accomplishments
					<ul style="list-style-type: none">• 8 Seminars conducted on Energy Safety Practices and Efficiency Measures organized by DOE Gender and Development program• 2 in-house briefings on EE&C and 1 seminar on alternative fuels conducted by the Bureau.

FY 2014: Ongoing Locally-Funded Projects

As of 4th Quarter 2014

Project Title	Implementing Unit	Description	Objective/s	Outputs	Accomplishments
8. Oil Industry Deregulation Management Program	Oil Industry Management Bureau (CIMB)	This program is basically earmarked to ensure effective enforcement of Executive Order 377 providing for the smooth coordination among all government agencies concerned in the implementation of RA 8479. It will provide guidance and assistance to new industry participants, and undertake activities that will contribute in strengthening consumer protection. It will continually educate and inform the public and key sectors of society on the benefits of deregulation in the oil industry and provide technical support to the programs and activities of the LPG and Liquid Fuels Task Forces.	<p>The main objective of the project is to successfully implement the Downstream Oil Industry Deregulation Law.</p> <p>The specific objectives of the project include:</p> <ol style="list-style-type: none"> 1) Advocate compliance of industry players standards on quality, quantity, safety and environment; 2) Espouse consumer protection by reducing trade violations in the liquid fuels and LPG industry; 3) Promote awareness of the different stakeholders, i.e. industry players, LGUs, concerned 	<ol style="list-style-type: none"> 1) No. of focused inspections conducted; 2) No. of information dissemination activities conducted; 3) No. of capacity-building for LGUs conducted; 4) No. of coordination and consultation meetings conducted; and, 5) No. of IECs conducted in the academe. 	<p><u>As of 4Q 2014:</u></p> <p>A. OICMD conducted three (3) IECs, as follows:</p> <ol style="list-style-type: none"> 1. Baliwag University (BU), Baliwag, Bulacan – 16 October 2014 2. University of Southeastern Philippines (USEP), Obrero, Davao City – 26 Nov. 2014 3. University of Mindanao (UM), Matina, Davao City – 27 Nov. 2014 <p>Note: Only UM and BU were funded by the Oil Dereg Fund. USEP was charged under NGMD's regular fund.</p> <p>B. Four (4) TCPA Meetings conducted:</p> <ol style="list-style-type: none"> 1. B100 / Specification / Rationalization – 13 Nov. 2014 2. CME Producers Re: Presentation of Test Results on Flakes Formation – 04 Nov. 2014 3. Inter-laboratory Correlation – 29 Oct. 2014 4. CME Producers Meeting: CME Aging Test on Flakes Formation Issue – 09 Oct. 2014 <p>C. Four (4) TCPPF Meetings conducted:</p> <ol style="list-style-type: none"> 1. Auto-LPG Dispensing Stations – 11 and 25 Nov. 2014 2. LPP in Retail Outlets – 18 and 25 Nov.

FY 2014: Ongoing Locally-Funded Projects

As of 4th Quarter 2014

Project Title	Implementing Unit	Description	Objective/s	Outputs	Accomplishments
		Project Cost: Total Project Cost: Php 142,921,000.00 FY 2012 Approved Budget: Php 9,908,000.00 (FY 2012 cum.: Php 83,324,000.00) FY 2013: Php 12,060,000.00 FY 2014: Php 10,380,000.00 FY 2015: Php 17,121,000.00 FY 2016: Php 17,121,000.00	government agencies, etc. on the rules and regulations governing the oil industry; 4) Espouse consumer awareness through the publication of press releases and primer on oil price updates; 5) Harmonize fuel quality to international standards pursuant to the Philippine Clean Air Act of 1999; 6) Promote retail competition through provision of capital assistance and conduct of management and skills training program for interested investors in the gasoline business;		2014

FY 2014: Ongoing Locally-Funded Projects
As of 4th Quarter 2014

Project Title	Implementing Unit	Description	Objective/s	Outputs	Accomplishments
			and, 7) Conduct studies/ researches relative to the improvement of the downstream oil industry.		

FY 2014: Ongoing Locally-Funded Projects

As of 4th Quarter 2014

Project Title	Implementing Unit	Description	Objective/s	Outputs	Accomplishments
9. Health, Safety, Security and Environment (HSSE) Program for Natural Gas Facilities in the Philippines	Natural Gas Management Division – Oil Industry Management Bureau (NGMD-OIMB)	<p>The project will be implemented for two and a half (2.5) years starting April 2013 and will end on September 2015.</p> <p>The anticipated increase in number of projects for natural gas calls for an urgency to establish an HSSE standard and program in support to the policy direction of the government. Gas industry networks and their associated technologies are fundamentally dependent on industry standards to ensure consistency and continuity among all the various elements. Standards are used to establish procedures and properties relevant to processes and requirements. The Health, Safety, Security, and Environmental</p>	<p>Main Objective: To fully develop standards and management programs on Health, Safety, Security, and Environment (HSSE) for the existing and incoming natural gas facilities in the Philippines.</p> <p>Specific Objectives: 1) To develop local standards for the natural gas facilities (CNG station, LNG terminal/ hub, regasification facility, pipeline and other ancillary facilities) in the Philippines 2) To identify, assess, manage and minimize HSSE risks in natural gas facilities during construction, operation and maintenance 3) To come up with</p>	<p>1) Hiring of qualified consultants contracted out to undertake the implementation and/or realization of the objectives of this project proposal 2) Inventory and accounting of local and international HSSE best practices on natural gas facilities which can be locally adopted in the HSSE manual for compliance of operators of natural gas facilities 3) Established local standards for the natural gas facilities 4) Drafted the HSSE manual covering but not limited on procedures, audit items, risk assessment and management, corrective/ preventive actions, emergency</p>	<p>As of 4Q 2014:</p> <ol style="list-style-type: none"> 1. Consultancy service has been awarded to EOil & Gas Co., Inc., the sole bidder for the HSSE Project in Dec. 2014, waiting release of the Resolution and signing of the Secretary for the Notice of Award (NOA) to proceed awarding of contract to the Consultant 2. Finalized contract for the Consultant to be signed by the Parties, namely DOE and EOil & Gas Co., Inc. 3. Integrated the inputs from the member of the agencies to the MOU on the proposal to organize an HSSE inspection and Monitoring Team

FY 2014: Ongoing Locally-Funded Projects

As of 4th Quarter 2014

Project Title	Implementing Unit	Description	Objective/s	Outputs	Accomplishments
		<p>standards to be established will provide assurance in safety, increase efficiency in operations, and strengthen the implementation of the regulatory function of DOE, through NGMD, on the construction, operation, and maintenance of existing and incoming gas facilities and ensured compliance of safety in the facilities and operations within the gas chain.</p> <p><u>Project Cost:</u> Total Project Cost: Php 5,552,160.00</p> <p>FY 2013: Php 160,000.00 FY 2014: Php 4,430,000.00 FY 2015: Php 2,282,000.00</p>	<p>a HSSE manual covering but not limited to the detailed procedures, standards, audit items, risk assessment and management, corrective/preventive actions that will enable proper implementation/management of HSSE programs by operators of natural gas facilities</p> <p>4) To have a Department Circular institutionalizing the technical standards provided in the HSSE manual that would become the basis for enforcement and compliance of operators/ owners of natural gas</p>	<p>response programs for stakeholders and government regulators and approval</p> <p>5) Established and institutionalized HSSE Management Team that will oversee the continuous improvement of the natural gas facilities HSSE manual, plans and programs</p> <p>6) Drafted the Department Circular for approval that will institutionalized the technical standards provided in the HSSE manual that would be the basis for enforcement and compliance among operators of natural gas facilities</p> <p>7) Training needs assessment report highlighting the</p>	

FY 2014: Ongoing Locally-Funded Projects

As of 4th Quarter 2014

Project Title	Implementing Unit	Description	Objective/s	Outputs	Accomplishments
			facilities 5) To conduct inventory of local and international HSSE best practices on natural gas facilities that will form part in the HSSE manual 6) To organize a team that enable continual improvement of the HSSE standards and system 7) To identify and design training programs that will effectively address the needs and implement a continuous capacity building for regulators	identified skills needed to effectively implement the HSSE standards and regulation for the natural gas industry and matrix of designed training program for the regulators 8) Training reports of relevant trainings participated on HSSE standards and regulation 9) HSSE Implementation Plan and Program	

FY 2014: Ongoing Locally-Funded Projects

As of 4th Quarter 2014

Project Title	Implementing Unit	Description	Objective/s	Outputs	Accomplishments
10. Capacity Building on Regulatory and Technical Framework for Pipeline Systems	Oil Industry Standards and Monitoring Division – Oil Industry Management Bureau (OISMD-OIMB)	<p>The project will be implemented for one (1) year.</p> <p>Through the project, OISMD-OIMB personnel will participate in series of extensive courses and technical trainings, site visits and operations hands-on as introduction to technical and regulatory concepts, frameworks and actual field applications of established pipeline systems. Emphasis shall be given on ensuring public safety and efficiency in pipeline service guided by acceptable technical standards and codes of practice.</p> <p>Lecture series of the project will be in Metro Manila and Batangas; while case studies will be conducted in Thailand, South Korea and USA.</p>	<p>Objectives:</p> <p>1) To support the conduct of classroom-type lectures and trainings from experts coupled with field and on-site exposures/visits and hands-on experiences on the design, operation and regulation of networked pipeline systems</p> <p>2) To improve the existing capacity of the DOE-OIMB to address, implement and support the technical and regulatory aspect for pipeline monitoring and regulation</p> <p>3) Draft policy instruments and regulations supportive of pipeline development in</p>	<p>1) As a comprehensive capacity and capability upgrading program, it is expected that the OIMB staff shall:</p> <p>a) Undergo a series of academic/technical trainings through classroom-type of lectures/seminars</p> <p>b) Participate in field exposure and familiarizations exercises of pipeline systems</p> <p>c) Observe application of technical standards and codes of practice to existing pipeline systems, both in the Philippines and in selected countries known for operating extensive pipeline</p>	<p>As of 3Q 2014:</p> <p>Implemented the DOE-OIMB's Capacity Building Program for the Regulatory and Technical Framework for Pipeline Systems through the Technical Familiarization visit for the case studies and Field Exposure in the United States with two participants from the OIMB last August 19-23, 2014. Some of the highlights suggested to DOE are as follows:</p> <ul style="list-style-type: none"> • Consider the setting-up of a government agency / unit which will have an oversight function to regulate, monitor and supervise the industry; and • DOE should widen and/or strengthen its linkages with relevant institutions to beef up its database and to be constantly apprised with best practices in the industry. Linkages and strong relationship with the local government and the community are very important and necessary channels that should be maintained by the DOE and industry players in ensuring safety for the pipelines systems. <p>The project was completed in October 2014.</p>

FY 2014: Ongoing Locally-Funded Projects

As of 4th Quarter 2014

Project Title	Implementing Unit	Description	Objective/s	Outputs	Accomplishments
		<p><u>Project Cost:</u> Total Project Cost: Php 2,974,664.00</p>	<p>the Philippines 4) Identification of and compilation of relevant regulations and technical standards for pipeline design, construction, operation and maintenance and code of practice.</p>	<p>systems for the transport of petroleum products d) Establish membership to professional organizations 2) Establish professional relationships or network with experts, both technical and legal, through direct meetings, orientations or participation in conferences and seminars related to pipeline systems and operations 3) Achieve improvement in the office equipment and capability supportive of the expanded role of the OIMB 4) Design a working draft Philippine pipeline regulations including pipeline</p>	

FY 2014: Ongoing Locally-Funded Projects

As of 4th Quarter 2014

Project Title	Implementing Unit	Description	Objective/s	Outputs	Accomplishments
				<p>system</p> <p>5) Design an IEC program and implementation support mechanism including approaches to encourage private sector investment or public-private partnership to expand pipeline systems in the country</p> <p>As such, a core group of in-house pipeline experts will be formed from the OIMB aside from the generalists or support technical staff upon the completion of the project.</p>	

FY 2014: Ongoing Locally-Funded Projects
As of 4th Quarter 2014

Project Title	Implementing Unit	Description	Objective/s	Outputs	Accomplishments
11. Establishment of Technical Capability on Quality Testing of LPG Autogas as Alternative Fuel	Geoscientific Research and Testing Laboratory – Energy Research Testing and Laboratory Services (GRTL-ERT.S)	<p>The project will be implemented for two (2) years, from 2013 to 2014.</p> <p>The project aims to address the pressing concerns on the Auto LPG fuel quality in the Philippines. The DOE laboratory has the technical capability and qualified analysts to analyze the physical and chemical requirements of Auto LPG but the laboratory is not equipped with scientific equipment for the analysis. Procurement of analytical equipment shall be used to ensure product compliance to quality standards under PNS/DOE QS 005:2005. The establishment of this technical capability would be the first of its kind.</p>	<p>This project aims to enable DOE-Oil and Gas Section, GRTL to be equipped to carry out detailed physical and chemical analyses of the AutoLPG being supplied to the market to ensure adherence to the parameters set under the Bureau of Product Standards (BPS), DOE and Technical Committee on Petroleum Products and Additives (TCPPA). In doing so, quality and safe AutoLPG will be available to the public.</p> <p>Specific Objectives: The project intends to meet the following objectives: 1) To procure/acquire scientific and analytical</p>	<p>1) Acquired scientific equipment that will establish the technical capability and equip the DOE Oil and Gas Section to conduct fuel quality testing of AutoLPG</p> <p>2) Methods/ parameters/ protocols scientifically tested and validated applicable for the implementation of PNS for AutoLPG</p> <p>3) Manual of procedures on optimum working parameters for the highly specialized AutoLPG tests using the prescribed equipment</p> <p>4) Strict compliance to ensure quality and safe AutoLPG</p>	<p>As of 3Q 2014:</p> <ol style="list-style-type: none"> 1. Collected five (5) samples from Unioil Station in Kalentong Auto-LPG refilling station 2. Conducted fieldwork in Cebu and collected 14 autogas samples from three (3) dispensing stations (Pryce Gas, Petron and Petronas) on August 11-15, 2014. 3. Validated / verified five (5) ASTM Methods using samples collected from refilling stations and prepared report 4. Prepared four (4) operating instructions for the following equipment <ul style="list-style-type: none"> • Reid Vapor Apparatus • Wickbold Apparatus • Pressure Hydrometer for Relative Density • Copper Corrosion Apparatus 5. Conducted one (1) foreign training on the operation and troubleshooting of Gas Chromatograph which was held in Taiwan on August 25-29, 2014.

FY 2014: Ongoing Locally-Funded Projects

As of 4th Quarter 2014

Project Title	Implementing Unit	Description	Objective/s	Outputs	Accomplishments
		<p>Project Cost: Total Project Cost: Php 23,802,000.00</p> <p>FY 2013: Php 23,570,000.00 FY 2014: Php 230,000.00</p>	<p>equipment that will fully equip the GRTL-DOE Oil and Gas Section in the analysis of detailed chemical and physical compositions of AutoLPG.</p> <p>2) To validate the prescribed PNS international test methods set by BPS, DOE and TCPPA for the analysis of AutoLPG</p> <p>3) To build database for Philippine AutoLPG quality parameters</p> <p>4) To complement DOE's program on the use of AutoLPG as alternative fuel and to put in place the PNS set by the DOE, BPS and TCPPA</p>		

FY 2014: Ongoing Foreign-Assisted Projects

As of 4th Quarter 2014

Project Title	Fund Source	Description	Objective/s	Components	Accomplishments
1. Philippine Industrial Energy Efficiency Project (PIEEP)	UNIDO and Co-financing of the DOE, Land Bank, Bank of Philippine Islands and Development Bank of the Philippines	The project will train Filipino national experts in both the optimization of steam, compressed air and pumping systems and in energy management while at the same time introducing these concepts to participating industrial enterprises that will directly benefit from the project implementation. Outputs will include greenhouse gas emission reductions from savings in the use of fuel and electricity attributable to systems improvements undertaken by the participating industrial enterprises. The project will also build capacity for	The project aims to introduce ISO 50001 energy management system along with system optimization approach for improvement of industrial energy efficiency of the Philippines.	The components of PIEEP are as follows: 1) Energy Management (Integration of Energy Management System/ ISO50001) 2) Systems Optimization (Steam, Compressed-air, Pumping Systems) 3) Enhancement of Financial Capacity (EE Financial Criteria) 4) Project Management 5) Monitoring and Evaluation	As of 4Q 2014: 1. The following trainings were conducted, as follows: <ul style="list-style-type: none"> • Energy Management System (EnMS) <ul style="list-style-type: none"> a. ISO 50001 Auditor Technical Training for Certifying Bodies - 1 (22 participants) b. Experts Training 2nd batch - (25 Participants) • Systems Optimization (SO) <ul style="list-style-type: none"> a. Pumping System Optimization - 2 (Users Training -36 participants and Vendors Training - 10 participants) b. Certified National Expert on Compressed Air SO - 6 experts c. Certified National Expert on Steam Systems Optimization - 4 experts 2. Walk-thru audit were conducted in three (3) factories, namely: RAMCAR Technology, Inc.; SMYPC Rightpak Plant; San Miguel Yamamura Asia, Corporation

FY 2014: Ongoing Foreign-Assisted Projects

As of 4th Quarter 2014

Project Title	Fund Source	Description	Objective/s	Components	Accomplishments
		<p>industries in order to introduce an energy management standard – ISO 50001 – an international energy management standard published early 2011. Compliance with this new ISO standard will provide an incentive for continuous attention to improved energy use efficiency.</p> <p><u>Project Cost:</u> Total Project Cost: US\$ 27,166,065.00</p> <p>UNIDO-GEF: US\$ 3,166,065.00 Co-financing: US\$ 24,000,000.00 (National Commercial Banks – US\$ 20,000,000.00; Department of Energy – US\$ 4,000,000.00)</p>			

FY 2014: Ongoing Foreign-Assisted Projects

As of 4th Quarter 2014

Project Title	Fund Source	Description	Objective/s	Components	Accomplishments
		<p>renewable energy resources such as solar, hydropower or geothermal.</p> <p><u>Project Cost:</u> US\$ 504 million (Php 21.672 billion)</p> <p><u>ADB Loan:</u> US\$ 300 million (Php 12.9 billion)</p> <p><u>CTF Loan:</u> US\$ 100 million (Php 4.3 billion)</p> <p><u>Gov't Counterpart:</u> US\$ 99 million (Php 4.257 billion)</p> <p><u>CTF Grant:</u> US\$ 5 million (additional US\$ 4 million out of the US\$ 5 million CTF Grant shall be allocated for Solar Charging Facilities) (Pnp 215 million)</p> <p><u>Duration:</u> Five (5) years</p>	made energy-efficient e-trikes.	<p>mobilization, and technology transfer.</p> <p>Output 1: E-Trike units. The project will deliver 100,000 complete E-Trike units to selected cities and areas to replace ICE tricycles. The supply contract will include a standard warranty on mechanical and technical performance of the E-Trikes and after-sales services. The risk performance period (5 years or 80,000 km whichever comes first) will be borne by the battery manufacturer. All E-Trikes will be clearly</p>	<p>deployment in the area</p> <p>4. Policy directive and formulation of standards</p> <ul style="list-style-type: none"> • Meetings on the redevelopment of the project • E-Trike Project Inception Mission Kick-off meeting and inception mission meeting with NEDA, DOF, and ADB scope of the E-Trike Project regarding the implementation arrangements, project updates on the procurement, and forthcoming activities

FY 2014: Ongoing Foreign-Assisted Projects

As of 4th Quarter 2014

Project Title	Fund Source	Description	Objective/s	Components	Accomplishments
		<p><u>Schedule of implementation</u> Yr. 1: 3,000 units Yr. 2: 17,000 units Yr. 3: 30,000 units Yr. 4: 30,000 units Yr. 5: 20,000 units</p>		<p>marked with a "battery supplied by" (similar to "intel Inside" in computers) label to make consumers aware of the brand and obligations of the suppliers under the project.</p> <p>Output 2: Battery supply chain. The project will initiate creation of a lithium-ion battery supply chain in the Philippines by creating an initial substantial market. The transformation objective is to attract reputable international suppliers that</p>	

FY 2014: Ongoing Foreign-Assisted Projects

As of 4th Quarter 2014

Project Title	Fund Source	Description	Objective/s	Components	Accomplishments
				<p>have supplied at least one large global vehicle brand.</p> <p>Output 3: Solar charging stations. The project will establish (1) on a pilot basis five off-grid solar charging stations – 200 kilowatts each – either as a cluster or stand-alone and (2) certain number of grid connected charging station. The solar charging stations will be sufficient to support the electricity needs of 1,000 E-Trikes. Some pilot solar charging stations will be in island locations</p>	

FY 2014: Ongoing Foreign-Assisted Projects

As of 4th Quarter 2014

Project Title	Fund Source	Description	Objective/s	Components	Accomplishments
				<p>that are easily accessible and will adopt large number of E-Trikes under the project, for example, Puerto Princesa. In all areas, certain number of grid-connected charging stations will be included to reduce the "range anxiety" of drivers. Private sector will be encouraged to invest in solar charging stations and in some cases, where feasible, the aggravated demand of the drivers will be converted into an equivalent 5-year power purchase agreement to</p>	

FY 2014: Ongoing Foreign-Assisted Projects

As of 4th Quarter 2014

Project Title	Fund Source	Description	Objective/s	Components	Accomplishments
2. Market Transformation through Introduction of Energy Efficient Electric Vehicle Project	Asian Development Bank	Energy efficient electric vehicles are a new technology with the promise to transform the way energy is used by today's internal combustion engine (ICE) vehicles. For net energy importing countries, such as the Philippines, electric vehicles can dramatically reduce the country's dependence on imported energy resources, which in turn will reduce short term price volatility and improve long term energy security. This technology has also created the opportunity to transition into an environment, where vehicles no longer generates harmful air and noise pollution and can be powered by indigenous	<p>Objectives:</p> <ul style="list-style-type: none"> - On a macro-level, project aims to reduce transport sector's annual petroleum consumption by 2.8% (based on 20 million barrels per year consumption in 2010) or an equivalent of 89.2 million liters per year; and, - Avoided CO₂ emissions is estimated at 259,008 tons per year by shifting to 100,000 electric tricycles. <p>Impact Outcome: The impact of the project will be sustainable energy use by the transport sector, and the outcome will be the transformation of the tricycle industry through large-scale adoption of locally</p>	<p>The project has five outputs:</p> <ol style="list-style-type: none"> 1) Complete e-trike units delivered to LGUs accompanied by a standard 5-year warranty and after sales services; 2) Lithium-ion battery supply chain with associated support services established; 3) Solar charging stations pilot on selected areas; 4) Material recovery from internal combustion engine (ICE) tricycles and used batteries; and, 5) Successful communication, social 	<p>As of 4Q 2014:</p> <ol style="list-style-type: none"> 1. Rebidding for the procurement of e-trike goods (Package 1): <ul style="list-style-type: none"> • Modified requirements under the rebidding document • Meeting with DOE Bids and Awards Committee • Publication of an invitation for Bids (IFB) for the supply and delivery of electric tricycles and 6 Bid Bulletins • Training on goods procurement involving single-stage, two-envelope process 2. Meeting to facilitate availment of participation in the project: <ul style="list-style-type: none"> • Global Mobility regarding its request to be an e-trike distributor • Intramuros Administration, TIEZA, DSWD, and DTI to participate in the project • LMP Mindanao Island Cluster attended by almost 200 municipal mayors 3. E-trike market build-up through consultations: <ul style="list-style-type: none"> • Conducted one (1) IEC in Luzon, Central Luzon State University • Conducted profiling survey in Intramuros to determine the viability of possible

FY 2014: Ongoing Foreign-Assisted Projects

As of 4th Quarter 2014

Project Title	Fund Source	Description	Objective/s	Components	Accomplishments
				<p>reduce off-take of potential private investors. In addition, existing electric utilities will be encouraged to establish charging stations as commercial operation.</p> <p>Output 4: Material Recovery. The Project will ensure that mechanism for the collection and disposal of existing tricycles to be replaced with the E-Trikes supplied under the Project in each participating city or municipality (a) follows the requirements</p>	

FY 2014: Ongoing Foreign-Assisted Projects

As of 4th Quarter 2014

Project Title	Fund Source	Description	Objective/s	Components	Accomplishments
				<p>under the CDM guidelines of United National Framework Convention on Climate Change (UNFCCC); and (b) is acceptable to DOE, ADB and the respective LGU. Used batteries (lead-acid ones from ICE tricycles and lithium-ion ones from E-Trikes) will also be recovered.</p> <p>Output 5. Communication , social mobilization, and technology transfer. All stakeholders will be educated about the project – its benefits, technical</p>	

FY 2014: Ongoing Foreign-Assisted Projects

As of 4th Quarter 2014

Project Title	Fund Source	Description	Objective/s	Components	Accomplishments
				parameters, costs, and market potential of E-Trikes. This includes specific training of the drivers on use and maintenance of E-Trikes and technical training to other stakeholders to develop local human resources to support local industry development.	
3. <i>Mini-Hydropower</i>	Japan International	The Provincial	The main objective is	Project	As of 4Q 2014:

FY 2014: Ongoing Foreign-Assisted Projects

As of 4th Quarter 2014

Project Title	Fund Source	Description	Objective/s	Components	Accomplishments
Development Project in the Province of Ifugao	Cooperation Agency	<p>Government of Ifugao (PGI) has a pending application for the development of proposed Likud Hydropower Project. Since the LGU of Ifugao has no financial and technical capability to implement the project and as no concrete plans where to get fund for the implementation of said project, the assistance of JICA, through this project, would achieve the purpose of preserving the Rice Terraces, provide job opportunities, and help stabilize the power supply in the area.</p> <p><u>Project Cost:</u> DOE: Php 1,329,000.00 JICA: US\$ 3,934,000.00</p>	<p>the construction and development of proposed Likud Hydropower Project to sustain Rice Terraces Conservation Fund and Prevent Removal of the Ifugao Rice Terraces from the List of the UNESCO World Heritage in danger.</p> <p>The specific objectives of the project are as follows:</p> <p>1. To further develop the technical capability of HOEMD staff in the preparation and evaluation of comprehensive Feasibility Study as well as the basic and detailed design of Civil Structures and Electro-Mechanical</p>	<p>Activities:</p> <ol style="list-style-type: none"> 1. Review the feasibility study, engineering design, plans, drawings, and preparation of bidding documents in cooperation with JICA; 2. Facilitate the issuance of necessary permits and contract relative to the development of project; 3. Conduct of monitoring activities during civil construction, installation and commissioning of Electro Mechanical Equipment; 	<p>Six (6) Technical Staff participated in the Basic of Hydropower and Maintenance for Mini-hydropower Training.</p> <p>On-going construction (66.04%)</p>

FY 2014: Ongoing Foreign-Assisted Projects

As of 4th Quarter 2014

Project Title	Fund Source	Description	Objective/s	Components	Accomplishments
		<p>The DOE will provide necessary counterpart personnel for the project including the office space for the dispatched expert.</p> <p>JICA, on the other hand, will provide the following inputs:</p> <ol style="list-style-type: none"> 1. Dispatch of expert to the Philippines 2. Training and study tour abroad 3. Project promotion meeting or seminar in the Philippines <p>The project will be implemented from February 2013 to November 2015.</p>	<p>Equipment;</p> <ol style="list-style-type: none"> 2. To develop technical skills in the supervision and monitoring of ongoing construction of hydropower projects in the country; 3. To accelerate and promote the development of hydropower resources in the province of Ifugao; and, 4. To encourage the Municipal LGU's and the private sector to actively participate in the development of hydropower resources in the province of Ifugao. 	<ol style="list-style-type: none"> 4. Study tours and trainings for HOEMD personnel on hydropower technology; and, 5. Conduct an extensive IEC program for all stakeholders to achieve sustainability of hydropower projects 	
4. <i>Mini-Hydropower</i>	Japan International	With the	Generally, the		As of 4Q 2014;

FY 2014: Ongoing Foreign-Assisted Projects

As of 4th Quarter 2014

Project Title	Fund Source	Description	Objective/s	Components	Accomplishments
Development Project in the Province of Isabela	Cooperation Agency	government's thrust of accelerating hydropower development, the potential of hydropower along existing irrigation systems throughout the country is being envisioned as a major source for small capacities. And in the light of the implementation of the National Irrigation Sector Rehabilitation and Improvement Project (NISRIIP) by the National Irrigation Administration (NIA) covering the period 2012 to 2018, a parallel study to determine the hydropower potential of the 39 irrigation systems as well as the selection of the most feasible sites and the construction of a demonstration or	project aims to study the potential as to the technical feasibility and economic viability of hydropower projects along irrigation canals administered by the National Irrigation Administration (NIA) to support the hydropower development program of the DOE and help attain its "Renewable Energy Policy Framework" target. Specifically, the project aims to: 1. Preparation of a study to determine the feasibility of hydropower development in irrigation systems throughout the country; 2. To strengthen the technical		Operational

FY 2014: Ongoing Foreign-Assisted Projects

As of 4th Quarter 2014

Project Title	Fund Source	Description	Objective/s	Components	Accomplishments
		<p>pilot plant was deemed feasible and recommended.</p> <p><u>Project Cost:</u></p> <p><i>Phase I</i> DOE: Php 198,000.00 JICA: US\$ 25,000.00</p> <p><i>Phase II</i> DOE: PHP 814,000.00 JICA: US\$ 464,000.00</p> <p><i>Phase III</i> DOE: Php 609,000.00 JICA: US\$ 640,000.00</p> <p><i>Phase IV</i> DOE: Php 1,640,000.00 JICA: US\$ 5,124,000.00</p> <p>The project will be implemented from</p>	<p>capability of the HOEMD staff in the conduct of hydropower resource assessment and the preparation of feasibility study that will also enhance their capability to evaluate hydropower projects technically, financially and economically;</p> <p>3. To accelerate hydropower energy development in the Philippines to ensure energy security towards energy self-sufficiency;</p> <p>4. To acquire technical capability in the supervision and monitoring of the implementation and construction</p>		

FY 2014: Ongoing Foreign-Assisted Projects

As of 4th Quarter 2014

Project Title	Fund Source	Description	Objective/s	Components	Accomplishments
		January 2013 to December 2017.	<p>of a hydropower plant;</p> <p>5. To acquire or enhance skills in the Operation and Management of hydropower system installed along irrigation canal; and,</p> <p>6. To promote hydropower development scheme along irrigation facilities.</p> <p><u>Outputs:</u></p> <p>1. Pre-feasibility, feasibility and detailed studies of hydropower sites along irrigation systems nationwide</p> <p>2. Database of potential and feasible hydropower development sites along National Irrigation Systems of the country</p> <p>3. One (1)</p>		

FY 2014: Ongoing Foreign-Assisted Projects

As of 4th Quarter 2014

Project Title	Fund Source	Description	Objective/s	Components	Accomplishments
			Hydropower Demonstration Plant along a selected irrigation canal		
5. <i>Philippine-Japan</i>	Japan Grant Aid	The project shall	The project aims for	Solar PV	As of 4Q 2014

FY 2014: Ongoing Foreign-Assisted Projects

As of 4th Quarter 2014

Project Title	Fund Source	Description	Objective/s	Components	Accomplishments
Project for Introduction of Clean Energy Using Solar Power Generating System		<p>demonstration of the effectiveness and efficiency of net metering-connected solar photovoltaic power systems under Republic Act No. 9513</p> <p><u>Total Project Cost:</u> (grant): 600 Million Yen</p>	the adaptation to and mitigation of climate change as well as on the improvement of access to clean energy	Generating Facility	<p>1. A kick-off meeting among the DOE, Project Consultant, Beneficiary sites (National Power Corporation, Lung Center of the Philippines and Rizal Park), Kanematsu and its Partners (Contractor), and the Takashio Power Inc. (Local Contractor). The meeting was held at the REMB Conference Room to discuss the Implementation Plan and present the detailed engineering design per site of the Contractors as well as the schedule of visit of the Local Contractor on the said sites.</p> <p>The DOE and the Consultant requested the Contractors to visit the Philippine National Police and conduct evaluation and design at the proposed sites (Center of Law Enforcement Studies and Sports Complex).</p> <p>2. The Contractor conducted visit of the sites for final evaluation in preparation for manufacturing of various electrical equipment, sizes and capacities of PV modules and structural supports in Japan.</p> <p>3. The two contractors visited the PNP sites to conduct evaluation and design and to identify the potential capacity to be installed. The design will be subjected to the approval of the Consultant while the capacity will be based on the available fund after the cancellation of the Mall of Asia site.</p>

FY 2014: Ongoing Foreign-Assisted Projects

As of 4th Quarter 2014

Project Title	Fund Source	Description	Objective/s	Components	Accomplishments
					<p>4. The DOE and the Consultant presented the Project Concept and basic design to the Officials of the PNP. The detailed engineering design will be prepared and submitted by the Contractor subject to the approval of the Consultant.</p> <p>5. The Local contractor conducted series of activities at the sites such as power quality test and evaluation at Rizal Park, meeting with the NPC to present the revised design in order to minimize the land leveling by the NPC, meeting with MERALCO Business Centers in preparation of Net-Metering Application requirements, and conducted survey and marking/staking in each sites. Marking/staking at PNP site was temporarily put on hold awaiting the signed</p>