

Department of Science and Technology  
Philippine for Industry, Energy and Emerging Technology Research and Development (PCI-EERD)  
Status of Project Implementation (As of December 31, 2014)

	MAJOR PROGRAMS/PROJECTS	DELIVERABLES / OBJECTIVES	DURATION		IMPLEMENTING AGENCY	LOCATION	STATUS	FY 2014 BUDGET
			START	EXPECTED DATE OF COMPLETION				
	<b>KRA 3: Rapid, Equitable &amp; Sustained Economic Growth</b>							
<b>CONCEPTUAL PROJECTS</b>								
1	Establishment and Operation of the Philippine Electronics Product Development Hub	To establish and operate a product development center for the electronics industry	10/1/2012	9/30/2015	Advanced Science and Technology Institute (ASTI)-DOST	NCR	On-Going	34,995,562.00
2	Establishment of the Advanced Device and Materials Testing Laboratory (ADMATEL): Phase 2 - NEW TITLE OPERATIONS OF ADMATEL (PHASE 3)	To improve and sustain the operations of ADMATEL for the semiconductor and electronics manufacturing industries	1/1/2014	12/31/2014	Industrial Technology Development Institute (ITDI) - DOST	NCR	New	15,234,970.52
3	Establishing the Philippine Institute of Integrated Circuits	The primary objective of the center is to aid in enhancing the contribution of the microelectronics industry in the Philippines.	9/1/2013	8/31/2016	Electrical and Electronics Engineering Institute (EEEE), UP Diliman	NCR	On-Going	29,234,452.56
<b>National R&amp;D Program for Natural Rubber Processing and Rubber Product</b>								
4	Integration of Testing Services for Rubber & Rubber-based Products	To have a locally produced and imported rubber and rubber-based products tested comply with local and international standards. Locally manufactured products will become globally competitive.	7/15/2014	7/14/2017	Standards and Testing Division (STD), Industrial Technology Development Institute (ITDI) - DOST	NCR	On-Going	10,067,276.00
<b>Smart Textiles Biopolymer R&amp;D</b>								
5	Photocatalytic Multi-functional Natural Fiber Blended Technical Textile and Materials Program							359,000.00
6	Project 1 - Photocatalytic Multi-functional Natural Fiber Blended Technical Textile and Materials	To develop nanofinishing technology using nano ZnO, nano TiO <sub>2</sub> , nanocomposite for photocatalytic mu-Wunctional natural fiber-blended textiles and materials.	2/4/2014	2/3/2016	Philippine Textile Research Institute (PTRI) - DOST	NCR	On-Going	12,242,676.00
7	Project 2 - Durable and Regenerable Biocidal Hydrantoin-grafted Polyester and Lignocellulosic-fiber containing Textiles	To develop a durable and regenerable biocidal natural fiber-blended woven and nonwoven textiles using 1,3-dimethyl-5,5-dimethyl-hydantoin (DMDMH)	2/4/2014	2/3/2016	Philippine Textile Research Institute (PTRI) - DOST	NCR	On-Going	7,073,576.00
<b>S&amp;T Program for Responsible Mining in Mindanao</b>								
8	S&T Program for Responsible Mining in Mindanao - Project Management							587,136.00
9	Assessment of the Terrestrial Biodiversity in the Selected Key Mining Areas in Mindanao	This project will ultimately assess the biodiversity of terrestrial ecosystems in key mining environs in Mindanao	9/1/2012	4/30/2015	Caraga State University (CSU), University in Southern Mindanao	Mindanao- Caraga, South Cotabato, Northern Minda	On-Going	4,883,499.42
10	Assessment of the Aquatic Biodiversity in Selected Mining Areas and Environs in Mindanao	This project will assess the biodiversity of aquatic ecosystems in key mining environs in Mindanao.	9/1/2012	8/31/2014	Caraga State University (CSU), University in Southern Mindanao	Bukidnon, Cagayan de Oro City, Caraga Region, South Cotabato	On-Going	3,820,969.45
11	Monitoring, Assessment and Profiling of Artisanal and Small-Scale Gold Mining (MAP-ASGM) in Selected Areas in Mindanao	The proposal will cover the following studies: Study 1: Baseline survey of ASGM in the context of responsible mining in the Caraga Region Study 2: Preparation of development strategy and massive information, education and communication campaign to the ASGM communities Study 3: Capacity-building, technology transfer and technical assistance	9/1/2012	8/31/2015	Caraga State University (CSU), University in Southern Mindanao	Agusan del Norte (Santiago, Tubay, Cabadbaran) Agusan del Sur (Rosario, Consuelo, Bunawan) Dinagat Islands (Tubigon, Loreto) Surigao del Norte (Placer, Tubod and Malimono) Surigao del Sur (Barobo and Cagwait)	On-Going	2,667,665.34
12	Contamination Pathway and Pollution Management of Mining in Selected Areas in Mindanao, Philippines	To conduct assessment and massive information, education and communication (IEC) campaign of pollution mitigation measures in ASGM	9/1/2012	8/31/2015	Caraga State University (CSU), University in Southern Mindanao	Surigao del Norte (Claver) Surigao del Sur (Carrascal) Agusan del Sur (Bunawan and Rosario) Misamis Oriental (Opol) Misamis Oriental, Alubhid Gang, Libona, Bukidnon Kematu, Tboli, South Cotabato Kinayaw, Sultan Kudarat	On-Going	3,885,038.21
13	Rehabilitation of Areas Affected by Nickel Mining in Caraga Region Towards Eco-restoration	This proposal will cover the following studies: Study 1. Analysis of rehabilitation efforts in mining areas toward effective eco-restoration program Study 2. Population restoration of key species through assisted natural regeneration (ANR) in key mining areas Study 3. Water Contamination Reduction Through Wetland Restoration	9/1/2012	8/31/2015	Caraga State University (CSU), University in Southern Mindanao	Calver-Carrascal (noventa)	On-Going	708,989.37
14	Alternative Technology for Processing of Chromite and Laterite Ores: Fe-Ni-Cr-C Alloy Production	The proposed direct stainless steel production using raw laterite ore and chromite ore as iron, nickel and chromium source instead of ferroalloys would have a significant decrease in total energy requirements. This will also simplify the overall stainless steelmaking process.	9/1/2012	8/31/2015	Mindanao State University Iligan Institute of Technology (MSU - IIT)	Iligan City	On-Going	866,343.89
15	Development of An Alternative Technologies for Small-Scale Gold Mining in CARAGA and South Cotabato Region	The present proposal is designed to examine the gold processing technologies currently being used by miners in the CARAGA and South Cotabato Region, and identify some alternative mercury- and cyanide-free techniques that can be adopted in said regions.	9/1/2012	8/31/2015	Mindanao State University Iligan Institute of Technology (MSU - IIT)	Caraga Region South Cotabato	On-Going	1,861,513.15
16	ICT for Responsible Mining: Use of GIS, DSS, Datamining in Selected Areas in Mindanao	The project will develop information systems and generate GIS-based threat analysis and assessment of selected mining areas in Mindanao.	9/1/2012	8/31/2015	Caraga State University (CSU), University in Southern Mindanao	Caraga Region Region 10 Sultan Kudarat	On-Going	1,310,336.00
17	R&D Program on Copper, Nickel, Iron, Gold & Chromite for Industrial and Emerging Applications							
23	Trace and Rare Earth Elements Geochemistry of Selected Porphyry-Epithermal Cu-Au Deposits in the Philippines	Provide baseline information by proper characterization of all metallic ores being mined and processed in the Philippines.	3/1/2014	2/28/2015	Ateneo de Manila University, Department of Environmental Science	Nueva Vizcaya	On-Going	1,000,000.00



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35	Information Dissemination and Technology Promotion Program	To promote literacy and appreciation of the industry, energy and emerging technology fields as well as assist in accelerating transfer and commercialization of DOST/PCIEERD-generated technologies.	2014	2016	Philippine Council for Industry, Energy and Emerging Technology Research and Development (PCIEERD) - DOST	NCR	New	3,870,680.00
36	<i>Policy Development, Planning and Advocacy</i>							
37	Support to Policy Development and R&D Management Activities	The program aims to analyze, review, formulate, and recommend policies and regulations to support the development of priority sectors under PCIEERD. Activities are pursued in consultation with industry stakeholders, experts and technology end-user, of the Council.	Continuing		Philippine Council for Industry, Energy and Emerging Technology Research and Development (PCIEERD) - DOST	Nationwide	Continuing	7,400,143.00
	<i>Technology Needs Assessment Related to Biotechnology in Industry and Gender and Development Program</i>							1,129,002.99
38	Support to Regional S&T Consortia	PCIEERD Regional Consortia envisions to sustain the holistic development of the regions' resources through , national networking and collaborations among the member institutions from the academe, government and the private sectors. Each Regional Consortia will develop their respective R&D Agenda addressing their regional concerns.	2014	2017	PCIEERD Regional Consortia	NCR,CAR, I,II,III,IV (A,B), V, VI, VII,VIII,IX,XII	New	6,000,000.00
39	<i>Food Safety and Quality Program for</i> Development of a Dipstick Assay Format for Detection of Salmonella in Food and Feeds	To develop a dipstick assay for detection/monitoring of salmonellae in food and feed samples	3/1/2014	2/28/2015	National Institute of Molecular Biology and Biotechnology (BIOTECH), UP Los Baños	BIOTECH, UPLB	New	1,943,336.00
	<i>Development of Industrial Intermediate Food Products and Ingredients from Local Raw Material Sources</i>							
40	Pilot Scale Standardization of Products & Processes using Drum Drying Technology on Selected Raw Materials (Mango, Banana and Makapuno)	To develop shelf-stable intermediate products using Embryo-Cultured Makapuno (ECM) meat.	4/16/2014	3/31/2015	Industrial Technology Development Institute (ITDI) - DOST	NCR	On-Going	2,461,220.00
	<i>Development of Plasma Technologies for Non-Thermal Sterilization of Food Products, Packaging and Contact Surfaces, and Enhancement of Food Packaging</i>							
42	Development of Plasma Technology for the Sterilization of Food Products, Packaging, and Contact Surfaces in Food Processing	Develop plasma sources and treatment protocols for fast and effective plasma sterilization of food products, packaging, and contact surfaces in food packaging processing	6/1/2014	5/31/2015	UP Diliman	University of the Philippines	New	4,305,959.00
	<i>Program on Enhancing market Potentials and Competitiveness of Oyster and Oyster-based Products</i>							
43	Oyster Extract Powder: A Nutrient-Rich Ingredient for Food and Food Preparation	Develop oyster extract powder as a nutrient-rich dietary supplement that can be incorporated in food and other food preparations	2014	2015	UP Visayas/Miag-ao, Iloilo	Region VI	New	2,015,581.00
	<i>Development of Innovative Food Products from Local Raw Materials (based on current product trends) and Improvement of Existing Local Food Products</i>							
41	Field Testing and Validation Study of Retort Food (Arroz Caldito) as Disaster Mitigation/Relief Food using DSWD's and LGU's Distribution Protocol	To conduct field testing and validation study of shelf stable ready to eat chicken arroz caldo developed by PTD as disaster/mitigation relief food to calamity stricken areas using DSWD's distribution protocols.	8/1/2014	3/31/2015	Packaging Technology Division (PTD) Industrial Technology Development Institute (ITDI) - DOST	NCR	New	1,000,000.00
	<i>Microbial colorants and Bioflavorants</i>							
44	Production, Characterization and Applications of Red Pigment Produced by Monascus purpureus M1018	1. To compare the quality and quantity of Monascus color produced using solid substrate and submerged fermentations; 2. To optimize conditions for large scale colorant production of Monascus purpureus M1018; 3. To optimize downstream processing of the pigment produced.	3/1/2014	2/28/2015	National Institute of Molecular Biology and Biotechnology (BIOTECH), UP Los Baños	Region 4A	New	5,770,592.00

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	<i>Program on Technological Support for the Upgrading of Local Cocoa and Cocoa Industry</i>							
45	Improving the Quality of Solid Cocoa Liqueur Including Molded Cocoa Nibs and Developing the Capability of Small Scale Processors in the Manufacture of Intermediate Cocoa Products/Project Management Cost	1. To review and document traditional and existing practices in the processing of molded cocoa nib (tablea)/solid cocoa block, cocoa butter and cocoa powder; 2. To establish the processing parameters for solid cocoa liquor/molded cocoa nib and improve its hygiene properties and sensory properties ["sandy" mouth feel];	11/15/2012	2/14/2014	Industrial Technology Development Institute (ITDI) - DOST	NCR	On-Going	2,776,704.11
46	Microbial Community and Biochemical Profiling for Microbial Augmentation and Development of Quality Indicators for Cacao Fermentation and Processing	• Determine the microbial community profile involved in fermentation of cacao using molecular methods. • Determine the biochemical profile of cocoa during traditional fermentation, during microbial augmentation, after drying and after roasting isolate.	1/1/2013	12/31/2014	National Institute of Molecular Biology and Biotechnology (BIOTECH), UP Los Baños	Region 4A	On-Going	4,946,651.53
47	Design and Fabrication of Equipment for the Production of Local Cocoa Products	1. To review and document current and traditional equipment used in the production of molded cocoa nibs 2. To design and fabricate appropriate processing equipment for the production of molded cocoa nibs	1/4/2013	1/3/2015	Industrial Technology Development Institute (ITDI) - DOST	NCR	On-Going	2,221,402.05
	<i>Development of Nanosensors and Nanostructured Materials from Agricultural by-products for Enhancement of Food and Agricultural Productivity and for Environmental Sensing and Remediation</i>							
49	Removal of Arsenic from Contaminated Water Using Modified Biopolymer-Silica Nanocomposite Materials	To extend the studies done previously on the remediation of arsenic-contaminated groundwater.	1/1/2013	12/31/2014	UP Los Baños	Region 4A	On-Going	927,034.47
50	Detection and Analysis of Arsenic in Contaminated Water	To utilize nanomaterials from agricultural by-products for arsenic detection and analysis in water samples.	1/1/2013	12/31/2014	UP Los Baños	Region 4A	On-Going	998,563.29
51	Development of Nano-Biosensors for the Detection , Monitoring and Diagnosis of Diseases of Banana and Abaca	To develop field-operable nano-biosensor for the detection, monitoring and diagnosis of plant vital diseases ABTV and AMV in abaca and BBMV in Banana.	1/1/2013	12/31/2014	National Institute of Molecular Biology and Biotechnology (BIOTECH)	Region 4A	On-Going	1,041,653.80
52	Development of a Zinc Oxide Thin Film for Gas Sensing	To develop functionalized zinc oxide thin film as gas sensor.	1/1/2013	12/31/2014	UPLB, Los Baños, Laguna	Region 4A	On-Going	927,034.47
53	Development of Controlled Release Nanoencapsulated Plant Growth Regulators from Locally Isolated Plant Growth Promoting Bacteria (PGPB) for	The long term goal of this project is to develop a nanoencapsulated plant growth regulator for high value crops.	1/1/2013	12/31/2014	National Institute of Molecular Biology and Biotechnology (BIOTECH), UP Los	Region 4A	On-Going	1,194,443.95
54	Optimization and Bench-scale Preparation of a Hemicellulose-chitosan/tripolyphosphate (polyphosphate) Nanocomposite Coating and its Use in the Postharvest-life Extension Papaya (Carica papaya L.) Fruits	To optimize condition for the preparation and bench-scale production of a hemicellulose-chitosan/tripolyphosphate (polyphosphate) nanocomposite coating and evaluate its performance in extending the shelf life of some high value Philippine fruits.	1/1/2013	12/31/2014	Institute of Chemistry, CAS, UP Los Baños	Region 4A	On-Going	2,388,771.61
55	Development of Pectin -Collagen/ Nanocellulose Biocomposite Coatings from Mango Peel and Nata de Coco for the Postharvest-Life Extension of Mango (Mangifera indica L. cv Carabao) and Bell Pepper (Capsicum annum L.)	To prepare bionanocomposite coatings from polymeric materials derived from food processing and agricultural waste and apply these to high-value Philippines fruits to extend their postharvest-life	1/1/2013	12/31/2013	Institute of Chemistry, CAS, UP Los Baños	Region 4A	On-Going	772,380.34
56	Nanotechnology for the Philippine Forest Products Industry: Cellulosic Nanocrystals from Selected Philippine Bamboo Species	The general objective is to develop new products from Philippine bamboo which will improve utilization of these materials for increased productivity and better cost efficiency	1/1/2013	12/31/2014	UP Los Baños	Region 4A	On-Going	688,774.05
57	Performance analysis of nanosilica-in-fluid dispersion (Nanofluid) used as coolant in heat exchanger	The general objective of this study is to analyze the performance of nanosilica-in-fluid dispersion (nanofluid) derived from rice hull ash in a mini heat exchanger.	1/1/2013	12/31/2014	College of engineering and agro-industrial technology, UP	Region 4A	On-Going	744,471.35
58	Characterization and Performance Analysis of Nanosilica Powder Incorporated in Biodegradable Film Based on Cassava Starch for Food Packaging Applications	The general objective of this research is to develop nanosilica powders from rice hull ash and to analyze the effectiveness of biodegradable film based on cassava starch incorporated with nanosilica powder for food packaging application.	1/1/2013	12/31/2014	Department of engineering Science, College of engineering and Agro-industrial Technology, UP Los Baños	Region 4A	On-Going	739,147.42
59	Evaluation of Nanosilica Powder from Rice Hull Ash used as Silicon Fertilizer for Tomato (Lycopersicon esculentum) Plants	The general objective of this research is to evaluate the potential use of nanosilica powder from rice hull ash silicon fertilizer for tomato.	1/1/2013	12/31/2014	Department of engineering Science, College of engineering and Agro-industrial Technology, UP Los Baños	Region 4A	On-Going	761,916.78

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<b>SUSTAINABLE ENERGY</b>								
62	Pilot Testing of Wind Turbine Generator	The project is aimed primarily at pilot – testing the Wind Turbine Generator developed under the DOST Program: “Wind Turbine Generator”	1/1/2013	12/31/2014	Electrical and Electronics Engineering Institute (EEEI), UP Diliman	Looc, Occidental Mindoro	Suspended	315,238.99
63	Wind Resource Assessment for Wind Power Systems	<ul style="list-style-type: none"> <li>• To support the Philippine government efforts to promote the development and utilization of renewable energy resources in the country</li> <li>• To assess wind resource in selected sites</li> </ul>	1/1/2013	12/31/2015	PAGASA-DOST	Siargao, Surigao del Norte Lanusa, Surigao del Sur San Vicente, Palawan General Santos Canavid, Eastern Samar	On-Going	1,092,600.00
	<i>Engineering Design, Modeling, Assessment Tools and Development of a B99 Renewable Energy System</i>							
64	Improvement of Locally Designed Micro Hydro Turbines and Establishment of MHP Test Rig	The project aims to establish a common service facility for the development, testing and optimization of locally developed electromechanical components of micro hydro system. It will also serve as testing center for imported MHP equipment to determine its output against manufacturers specifications.	1/25/2015	12/31/2015	University of Rizal System	URS Tanay Campus, Tanay, Rizal		4,994,736.00
66	Tidal Current Energy Integrated Resource Assessment and Spatial Planning Tool	The goal of this proposed project is to set groundworks for the advancement of ORE development in the Philippines.	4/16/2014	4/15/2016	Department of Geodetic Engineering, UP Diliman	Nationwide (Philippines)	New	14,943,674.00
67	<i>Biojet Fuel Production from Coconut Oil</i>	To produce a cost-effective biojet fuel from coconut oil and used cooking oil by conducting technical study, as well as initial studies on its economic and environmental aspects. This shall determine the potential of the developed biojet production process and is intended to commence the biojet fuel industry in the Philippines.	1/15/2014	12/31/2016	UP Los Baños	UPLB	Suspended	4,573,728.00
	<i>Smart Grid for Filipino Households</i>							
68	Proj. 1 Design and Development of a Smart Home Platform	<ol style="list-style-type: none"> <li>1. to design a smart home platform that could inform the consumers of their energy consumption patterns.</li> <li>2. to deploy the smart home platform in several household to assess its contribution towards achieving energy conservation.</li> <li>3. to incorporate in the design of the smart home the recommendation gathered in the surveys that could maximize its effectiveness</li> </ol>	7/1/2013	6/30/2015	UP	NCR	On-Going	1,787,091.46
69	Proj. 2 - Design and Dev't. of an Advanced Metering Infrastructure Emulator Platform	<ol style="list-style-type: none"> <li>1. to design an emulator that can implement the features of an AMI</li> <li>2. to deploy the emulator over several household to stimulate a small-scale metering infrastructure</li> <li>3. to use emulator to conduct consumer studies with respect to demand response such as prepaid metering</li> </ol>	7/1/2013	6/30/2015	UP	NCR	On-Going	1,897,904.24
70	Proj. 3 Prepaid Metering and Smart Home System: Technology Acceptance and Technology Features	1. to develop a model that describe the factors that determine the consumers' decision to which to prepaid metering	7/1/2013	6/30/2015	UP Diliman	Leyte, Palawan	On-Going	1,200,547.31
	<i>Smart Wire Program</i>							
71	Project 1: Energy Efficient Data Acquisition and Conditioning for the SmartWire Sensor Node Project	The objective of this project is to develop and prototype a multi-channel integrated data acquisition and conditioning circuit, composed of ADCs and filters for the SmartWire sensor node. These circuits must be energy efficient and must be robust and accurate while operating in extremely noisy and harsh environments.	10/1/2012	9/30/2015	UP Diliman	EEEEI-UPD	On-Going	11,218,997.13
72	Project 2: Integrated Energy Harvesting, Storage and Regulation for the SmartWire Sensor Node	The objective of this project is to develop and prototype an integrated energy harvesting subsystem, with the ability to harvest energy from power lines, as well as ambient and/or radiated radio-frequency (RF) energy, that can be used to power a SmartWire sensor node.	10/1/2012	9/30/2015	UP Diliman	EEEEI-UPD	On-Going	4,756,290.55
73	Project 3: Energy Ultra-Low Power Computation and Communication for the SmartWire Sensor Node Project	The objective of the project is to develop and prototype an integrated ultra-low power and robust computation engine, control unit and communications processor for the SmartWire sensor node.	10/1/2012	9/30/2015	UP Diliman	EEEEI-UPD	On-Going	8,042,712.26
74	Project 4: Smartwire Resilient Data Transport	The objective of this project is to design and implement MAC, network, and transport layer protocols for the SmartWire sensor network. These mechanisms must be energy efficient and resilient allowing the sensor network to operate in extremely resource-constrained, noisy and harsh environments.	2014	2015	Electrical and Electronics Engineering Institute (EEEI), UP Diliman	NCR	New	8,974,809.60

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	<i>Program on Fuel Ethanol Production from Lignocellulosic Feedstocks</i>							8,261,783.22
75	Proj. 2 - Evaluation and Optimization of Locally Available and Promising Lignocellulosic Feedstock for Fuel Ethanol Production	To determine the pre-treatment method and conditions that is most suitable to use for selected lignocellulosic feedstock for fuel ethanol production.	9/1/2009	3/31/2015	National Institute of Molecular Biology and Biotechnology (BIOTECH), UP Los Baños	NIMBB UP Los Baños	On-Going	5,541,625.38
76	Proj. 3 - Development of Microorganisms Capable of Utilizing Lignocellulosic Hydrolysates for Fuel	To develop microorganism capable of utilizing lignocellulosic hydrolysates for ethanol fermentation	9/1/2009	9/30/2014	National Institute of Molecular Biology and Biotechnology	NIMBB UP Los Baños	On-Going	1,070,724.40
77	Proj. 4 - Optimization on Saccharification, Fermentation and Purification Processes for Pilot Scale Ethanol Production from Lignocellulosic Materials	To optimize saccharification and fermentation of selected pre-treated lignocellulosic feedstock and to apply recent distillation and dehydration methods for fuel ethanol production.	9/1/2009	6/30/2015	National Institute of Molecular Biology and Biotechnology (BIOTECH), UP Los Baños	NIMBB UP Los Baños	On-Going	1,649,433.44
78	Polymer Electrolyte Systems based on Carrageenan for Solid State Dye Sensitized Solar Cell	The project aim is to develop and fabricate a solid type electrolyte system by investigating the use of carrageenan composites as polymer electrolyte. It will look into the optimization of self-assembly conditions, the impact of carrageenan molecular weight and electrolyte concentrations to achieve better ion transport.	1/1/2013	12/31/2014	De La Salle University Manila	NCR	On-Going	789,763.80
79	Synthesis of Carbon Nanotubes (CNT) - Silicon Heterojunction for the Fabrication and Assembly of a Solar Panel	The main objectives of this project are: 1. Design and build a deposition system for the deposition of single-walled (SW) and double-walled carbon nanotubes (DWCNT) 2. Optimize the growth parameters for the large-scale synthesis of SW and DWCNT 3. Design and assemble solar cell	1/1/2013	5/31/2015	UP Baguio	Region 4A	On-Going	2,002,324.29
80	A Graphene-Based Electrochemical Supercapacitor for Solar Cells	1.) To synthesize a laser-scribed graphene (LSG) electrochemical capacitor (EC) for solar cell applications; 2.) To characterize the energy storing capabilities of the LSG-EC as a single unit and as an array; 3.) To develop and optimize a solar panel (or module) that integrates solar cells with the LSG-EC in one panel	3/1/2014	2/28/2015	UP Baguio	University of the Philippines - Baguio	New	4,995,156.00
81	Synthesis of Metal Nanowires and Their Application in Foldable Transparent Conducting Electrode	(a) To develop a simple and low-cost synthesis method for metal nanowires by chemical reduction at low temperature. (b) To develop an inexpensive yet effective printing process for Ag, Cu, and Cu-Ni nanowires on plastic substrates for the fabrication of metal nanowire transparent conducting electrodes.	1/1/2014	12/30/2014	Department of Metallurgical and Material Engineering (DMME), UP Diliman	NCR	New	6,549,781.00
82	Flexible Nanohybrid Supercapacitor Based on Conducting Polymers and Metal Oxides	The project will focus on the solution route synthesis of conducting polymers and metal oxides. Synthesized materials will then be characterized and assessed their properties as a viable candidate in fabricating a nanostructured electrode for supercapacitor application. These include: structural and optical studies, wettability test and morphological and electrochemical characterizations.	1/1/2014	12/30/2014	Institute of Chemistry, UP Diliman	NCR	New	2,919,248.00
83	Development of Ink Using Carbon from Straight Pyrolysis of Glycerol as Electrodes in Printed Electronics	The project aims to develop an ink formulation using carbon from pyrolyzed glycerol as main component. The ink formulation shall be studied for its physical-chemical properties.	10/1/2014	9/30/2016	School of Science and Engineering, Ateneo de Manila University	NCR	New	3,597,324.00
84	Development of Functional Nanocarbon-Based Catalysts for Biomass Conversion Processes - (e-Asia JRP)	* This proposed multilateral joint research project aims to develop carbon-based catalysts as applied to conversion of biomass to value-added chemicals and biofuels focusing on microalgae, marine and non-edible biomass resources as feedstocks.	11/3/2014	11/2/2017	Chemical Engineering Department, De La Salle University	NCR	New	2,000,000.00
85	Development of a Low-Energy Ion Source System for the Synthesis of Diamond-like Carbon Films	1. Develop a system for the growth of diamond-like carbon thin films using low-energy ions. 2. Investigate and correlate properties of the grown diamond-like carbon films to the synthesis conditions. 3. Identify potential applications to different tools and implements to improve performance, prolong lifetime, and reduce surface wear.	10/1/2014	9/30/2016	Department of Metallurgical and Material Engineering (DMME), UP Diliman	NCR	New	8,700,541.00
86	Fabrication of a Solid-State Rechargeable Li-ion Battery using Li7La3Zr2O12 as solid electrolyte for Energy Storage Applications	To fabricate a rechargeable all-solid-state lithium-ion battery for energy storage and alternative energy applications.	10/1/2014	9/30/2016	UP Diliman	NCR	New	8,008,077.00
87	Development of a Grid Tie Inverter for Philippine Electronics Companies	1. To develop a Grid-Tie Inverter that is designed to be used with Solar Photovoltaic Panels with the basic power range of 2 Kilowatts, 230VAC output at 60Hz. 2. To acquire the tools and equipment needed in developing and testing the Grid Tie Inverter. 3. As a result of the project, we will produce the necessary documentation on the hardware design, software, firmware, test procedures and whatever information are needed so that the recipient can replicate the system.	11/10/2014	11/9/2015	Electronics Industries Association of the Philippines, Inc.		New	8,143,108.00
60	Synthesis, Morphology and Chemical Modification of Fullerene-Based Nanomaterials for Nano-engineered Structural Materials and Optoelectronic Applications	1. Explore the synthesis of fullerenes from locally available carbon-rich 2. Control the morphology of fullerene-based nanomaterials 3. Develop novel optoelectrical and magnetic properties through chemical modifications 4. Explore the utilization of these novel properties in optoelectronic devices	2/15/2014	2/14/2015	Institute of Environmental Science and Meteorology (IESM), UP Diliman	NCR	New	4,922,761.00
	Nanostructured Electrocatalyst Composites for Direct Ethanol Fuel Cell: Preparation, Characterization and Performance Evaluation	To fabricate an efficient anode catalyst for DAFCS.	10/1/2014	9/30/2016	Research Center for the Natural and Applied Sciences, University of Santo Tomas	NCR	New	13,301,952.00

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	MAJOR PROGRAMS/PROJECTS	DELIVERABLES / OBJECTIVES	DURATION		IMPLEMENTING AGENCY	LOCATION	STATUS	FY 2014 BUDGET
			START	EXPECTED DATE OF COMPLETION				
<b>SUSTAINABLE MASS TRANSPORT</b>								
88	Rapid Electric Vehicle Charging (CharM)	The project is aimed at developing and demonstrating a fast charging system which can charge an electric tricycle in less than 30 minutes. We propose a charging system for EV similar to the behavior of a conventional gasoline station such that the EV user would like to replenish the energy in the storage tank as quickly as possible.	1/1/2013	11/30/2014	Electrical and Electronics Engineering Institute (EEEI), UP Diliman	NCR	Completed (Awaiting Terminal Report)	1,195,966.03
	Intelligent Transport System (ITS) Program	The program envisions to provide real-time traffic information, provide quick response to road/train accidents and improve rail safety features.	1/1/2013	12/30/2016	UP - NCTS I ADMU I DLSUI STRIDE	NCR		
89	Advanced Traffic & Pollution Monitoring and Analysis System Based on GPS Trajectory Data, Air Quality and Engine Status Data Collected from Taxis in Metro Manila	To improve traffic mobility in Metro Manila through provision of aggregated behavior of the PUVs to the control management of the PUV and MMDA  To induce efficient traffic flow through provision of public information regarding current and predicted traffic flow on major routes.	11/1/2013	10/31/2015	Department of Information Systems and Computer, Ateneo de Manila University	Metro Manila	On-Going	3,550,676.00
90	Development of A Customized Local Traffic Simulator (localSim)	This project aims to come up with an application for use by local government units for traffic management. The application will have a user-interface that will enable the user to simulate any traffic environment with parameters on the behavior/ tendencies of traffic agents (drivers and pedestrians) that can be set uniformly or can follow some known distribution.	4/1/2014	3/31/2016	National Center for Transportation Studies (UP-NCTS)	EDSA	New	4,489,072.00
91	An Integrated and Optimal Scheduling of a Public Transport System in Metro Manila (PUBFix)	a. To inventory the existing public transport system and determine their service operating characteristics, most especially the city buses that pass and traverse through the EDSA. b. To assess the public transport demand along major roads in Metro Manila. c. To develop a simple methodology on how to optimally schedule the daily operation of city buses especially along EDSA and develop a manual (both English and Filipino) on its use;	2/3/2014	2/2/2016	De La Salle University (DLSU)	EDSA	New	3,922,952.00
	Development of Adaptive, Interactive, SMS Based Modules for English	The broad objective of the project is to address the need for informal literacy training opportunities to all-interested Filipino learners but particularly areas that are underserved by traditional schooling. These include but are not limited to conflict areas in the ARMM. The means by which this will be achieved is through the development of adaptive SMS-based reading modules for English.	2014	2015	Ateneo de Manila University	NCR	New	1,420,636.00
	Stealth Assessment of Student Conscientiousness, Cognitive...	This study has four main objectives: • To model student conscientiousness • To model student cognitive-affective states such as conscientiousness, boredom, and confusion • To correlate these with physics learning • To compare results from the Philippines with results from a parallel study being conducted in the US to determine whether the models generalize across different cultures.	2014	2015	Ateneo de Manila University	NCR	New	1,977,836.00
	Human Hands as Input Device for an Immersive Virtual Reality Experience	The objective of the proposal is to build technologies to use human hands to interact with objects in an immersive virtual reality experience. In year 2, the aim is to build an application to demonstrate interaction using human hands in an immersive VR environment.	2014	2015	EEEI University of the Philippines-Diliman	NCR	New	7,237,664.00

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**Status of Project Implementation (As of December 31, 2014)**

MAJOR PROGRAMS/PROJECTS	DELIVERABLES / OBJECTIVES	DURATION		IMPLEMENTING AGENCY	LOCATION	STATUS	FY 2014 BUDGET	
		START	EXPECTED DATE OF COMPLETION					
<b>KRA 5: Integrity of the environment and climate change mitigation and adaptation</b>								
<b>ENVIRONMENT, CLIMATE CHANGE &amp; DISASTER RISK REDUCTION</b>								
92	Molecularly Imprinted Polymers (MIP) for the Targeted Purification of Natural Product Compounds	1. To use standard extraction, solvent fractionation, and chromatographic purification to isolate the key compounds from the following herbal plants. 2. To perform NMR, MS, IR and other spectroscopic and physical procedures to identify of the compounds;	1/1/2014	12/30/2016	Ateneo de Manila University	NCR	New	4,276,000.00
93	Bench-scale Production of Food-grade Nanoprecipitated Calcium Carbonate from Local Limestone	This project intends to produce food grade nano precipitated calcium carbonate from local limestone.	1/1/2014	12/31/2014	Industrial and Technology Development Institute (ITDI) - DOST	NCR	New	1,094,226.00
95	Development of Eco-Friendly Septic System for Temporary Shelters, Towards Efficient Sanitation Management in Disaster-Affected Areas	The main objective of the study is to provide domestic wastewater treatment and management methodology in disaster-affected areas. This project aims to address the vulnerability and risks caused by sanitation problems in the communities where households are displaced from their private homes due to typhoon, monsoon floods, and other natural calamities and disasters.	6/9/2014	12/8/2014	Adamson University	Temporary Shelters in Palo, Leyte	New	749,206.00
96	Design, Fabrication and Evaluation of Monitoring and Sampling Devices for Particulate Matter	1. To establish the utility of dynamic light scattering for the determination of particle sizes and particle flux in outdoor conditions. 2. To design and fabricate a low maintenance, networkable, and robust device for scalable monitoring and quantification of particle flux and size distribution in ambient outdoor conditions	3/1/2014	2/28/2016	Institute of Chemistry, UP Diliman	NCR	New	6,313,792.00
97	Radiation-induced grafting of nonwoven fabrics for waste water treatment to meet Class C effluent heavy metal standards.	The main objective of this study is to develop a novel adsorbent using electron beam induced grafting for treatment of industrial wastewater to meet standards for Class C water in accordance to DENR Administrative Order No. 35 Series of 1990.	1/1/2014	12/31/2016	Philippine Nuclear Research Institute (PNRI) - DOST	NCR	New	3,300,636.00
98	The Use of Radon in the Monitoring of the Philippine Fault and Valley Fault System and its Implication as an Earthquake Precursors	The project aims to use radon as potential geochemical precursor of earthquake along the northern segment of the PF and VFS, and to contribute in strengthening the monitoring program being undertaken along the northern segment of the PF and VFS.	2/1/2013	1/31/2015	Philippine Nuclear Research Institute (PNRI) - DOST	PNRI, GLSU	On-Going	1,684,903.93
99	Design and Development of Aerial Mapping and Imaging Systems and Standards	The objective of this consortium is to create in the Philippines the capability to engage in aerial remote sensing using UAVs for monitoring the critical infrastructure, precision farming and disaster risk reduction in Luzon and the Visayas.	10/1/2012	12/31/2015	Ateneo Innovation Center	ADMU	On-Going	2,595,970.23
100	e-BAYANHAN: A Nationwide web - mobile based system for participatory disaster management (replaced project title)	• To provide ordinary citizens with a web and mobile based application to report disaster experiences, including: overall status (vulnerability, exposure), needs, emotions sentiments opinions • To create a collection system that will harvest online disaster related information	2/5/2014	2/4/2016	Ateneo de Manila University	ADMU	New	3,957,688.00
<i>Understanding And Communicating Risk for Community-based DRR Program</i>								
101	Voices of Yolanda: Narratives of disaster among the survivors of typhoon Yolanda in Eastern Visayas and Cebu, the Philippines	1. Describe and compare the experiences of people Objectives affected by typhoon Yolanda as well as previous typhoon events in Tacloban City, Guiuan, Eastern Samar and San Francisco, Cebu. 2. Describe the people's understanding of their own risks and vulnerabilities in the face of super typhoon Yolanda and the associated storm surge.	9/1/2014	3/1/2015	UP Diliman		New	2,600,000.00
102	Action Research on Strengthening Community Structures and Mechanisms for Disaster Risk Reduction and Management	1. To describe prevailing institutional arrangements and capacities related to DRRM from the experiences of Yolanda-affected communities in four research sites in Guiuan, Eastern Samar, Palo, Leyte and Camotes Island, Cebu; 2. To identify and describe the different actors involved in DRRM at various levels – barangays, municipal/city levels, provincial and national – including their respective mandate/s, roles, capacities, mechanisms, interactions and relationships;	8/14/2014	4/14/2015	Department of Community Development, College of Social Work and Community Development, UP Diliman	Guiuan, Eastern Samar and Palo, Leyte/Region 8; Camotes Island, Cebu/Region 7	New	2,400,000.00
104	Development of Temporary Shelter System for Disaster Stricken Areas	The project aims to propose a temporary shelter system that can be readily deployed and installed. The objectives include the documentation and review of existing temporary shelter systems and the fabrication of a prototype temporary shelter.	8/15/2014	2/14/2016	UP Building Research Service	NCR	New	2,763,000.00
	<i>Build Back Better - Philippines: The Science and Technology of Designing and Planning Sites and Buildings for Disaster Prevention</i>	The program for "Build Back Better - Philippines" (BBBP) aims to be a scientific platform for defining what it truly means to build better. BBBP will focus on post-disaster rehabilitation based on good practices of environmental planning, structural design and architectural design for residential structures and evacuation centers. The said program is proposed to be undertaken by the University of the Philippines' School of Urban and Regional Planning (UP-SURP), Institute of Civil Engineering (UPICE), and College of Architecture (UPCA).	2014	2016	UP Diliman	NCR	New	13,847,492.00
	Flood Sensor Development, Installation and Monitoring of Urban Flooding in Metro Manila	This project shall develop and install the aforementioned system of urban flood monitoring devices.	11/1/2013	10/31/2015	Advanced Science and Technology Institute (ASTI) - DOST	NCR	On-Going	7,800,000.00
	Development of a Compact Wastewater Treatment System Enhanced with Bioaugmentation Technology for Quick Service Restaurant	Design and develop a compact wastewater treatment system for high organic wastewater from quick service restaurant industry	204	2016	Industrial Technology Development Institute (ITDI) - DOST	NCR	New	221,541.25