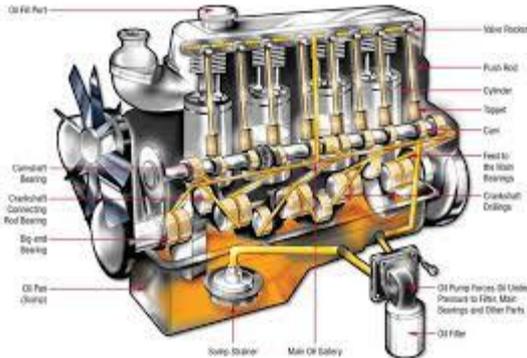


**Environmental Impact Statement (EIS)
Summary for the Public
for the
Proposed Modular Diesel Power Plant
Ancillary Project**

August 2018

Isabel Ancillary Services Co. Ltd. (IASCL)

A. PROJECT DESCRIPTION

Project Name	Proposed Modular Diesel Power Plant Ancillary Project
Project Location	Leyte Industrial Development Estate, Barangay Libertad, Isabel, Leyte
Project Type	Modular Diesel Power Plant
Major Components of the Project	<ul style="list-style-type: none"> Modular Diesel Generator It is a combination of a diesel engine with an electric generator (often an alternator) to generate electrical energy.  <ul style="list-style-type: none"> Air Intake System Supplies the correct amount of air needed to increase the combustion and the efficiency of an engine. Exhaust Gas System The exhaust system consists of the exhaust ducting, exhaust silencer complete with spark arrestor and rain cap assembly. Fuel Supply System The proposed Project will have fuel tank installed on a bunded plinth. Lubrication System The engine oil lubrication system includes pump, strainer and sump all fitted internally within the engine block.  <ul style="list-style-type: none"> Cooling System Aggreko engine cooling system uses cooling fluid where flow to the radiator is controlled by thermostat.

	
Project Area	1.934 hectares
Project Capacity	<ul style="list-style-type: none"> • 40MW regulating reserve with an initial dispatch of 20MW at the start of the interval hour or based on system requirement and/or NGCP's dispatch instruction. Such output will then change if there will be fluctuations of system frequency in the Visayas Grid. • 30MW contingency reserve with an initial dispatch of 1.5MW at the start of the interval hour or based on system requirement and/or NGCP's dispatch instruction. Such output will then change if there will be an outage of a large generator or a loss of transmission line in the system. • In summary, 70MW plant capacity is available to the grid in cases of emergencies.
Project Technology	<p>High Speed Diesel Engines that use Automotive Fuel Oil, a 4-stroke diesel engine technology.</p> <div style="text-align: center;">  </div>
Resource Utilization	<p>(1) WATER Construction Phase: Water supply during construction phase will be taken from the nearest water source/ provider. Operation Phase: Water supply will be sourced from the potable water supply system of LMC Pumping Stations. The water requirement will be primarily used as process water, make-up water, service water, potable water, and other necessary water consumptions. Around 50 m³/month will be allocated for the domestic use at the plant facilities and administrative building.</p> <p>(2) FUEL Construction Phase: Approximately 50,000 liters/day of diesel will be used for the heavy equipment, transport and service vehicles. Operation Phase: Approximately 150,000 liters/day of automotive diesel oil will be used for the generators and service vehicles. The Automotive Diesel Oil will be sourced from the existing Petron depot located approximately 2km from the proposed Project site via dedicated fuel delivery trucks for the proposed Project owned by Petron</p>
Project/Investment Cost	PhP 1,750,000,000.

B. PROJECT LOCATION

The proposed Project of Isabel Ancillary Services Co. Ltd. (**ASCL**) will cover an area of about 1.934 hectares (ha) within the Leyte Industrial Development Estate (**LIDE**) in Barangay Libertad, Isabel, Leyte. **Table 1** and **Figure 1** present the technical description and geographical location of the proposed project, respectively.

Table 1. Geographical Coordinates of the Proposed Project Site

Points	Latitude	Longitude
1	10°53'52.58"N	124°26'35.87"E
2	10°53'52.54"N	124°26'38.48"E
3	10°53'51.36"N	124°26'38.38"E
4	10°53'50.72"N	124°26'38.67"E
5	10°53'50.26"N	124°26'39.26"E
6	10°53'49.21"N	124°26'40.97"E
7	10°53'48.66"N	124°26'41.61"E
8	10°53'47.83"N	124°26'41.96"E
9	10°53'45.38"N	124°26'42.54"E
10	10°53'45.35"N	124°26'35.47"E



Figure 1. Geographical Location of the Proposed Modular Diesel Power Plant Project

C. PROJECT PROPONENT

Name of Proponent : **Isabel Ancillary Services Co. Ltd.**
 Proponent's Address : Lot 2-A-1-B and Lot 2-A-1-D, Leyte Industrial Development Estate, Libertad, Isabel, Leyte
 Authorized Signatory/ Representative : Gen Takahashi Vice President
 Contact Details : (632) 552 8009

D. PROJECTED TIMEFRAME OF THE PROJECT IMPLEMENTATION

The projected timeframe for the implementation of the proposed Project is presented in **Figure 2**. The construction will start upon securing all the needed regulatory requirements. The project is expected to operate by the end of May 2019.

Project Phase	2018				2019			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Construction								
Operation								

Figure 2. Project Timeframe

E. SUMMARY OF MAJOR IMPACTS AND RESIDUAL EFFECTS AFTER MITIGATION

Table 3 presents the summary of major environmental impacts caused by the project and residual impacts after mitigation.

Table 3. Summary of the Environmental Impacts, Mitigating and Enhancement Measures, and Residual Impacts

Environmental Component Likely to be Affected	Potential Impact	Prevention/Mitigation/ Enhancement Measures	Residual Effects
CONSTRUCTION PHASE			
LAND			
Land use and Classification	<ul style="list-style-type: none"> Change/ Inconsistency in Land Use 	<ul style="list-style-type: none"> The Project site is an industrial area and consistent with the general land use of Isabel Municipality and therefore there is no issue with the change in land use. 	None
Geology/ Geomorphology	<ul style="list-style-type: none"> Change in surface landform/terrain/ slope Change in sub-surface 	<ul style="list-style-type: none"> Strict conformance to the recommendations of the geotechnical study Since the area is already developed, the possibility of 	None

Environmental Component Likely to be Affected	Potential Impact	Prevention/Mitigation/Enhancement Measures	Residual Effects
	<p>underground geomorphology</p> <ul style="list-style-type: none"> • Inducement of subsidence, liquefaction, landslides, mud/debris flow 	<p>experiencing landslides and/or mud/debris flow is nil.</p>	
Pedology	<ul style="list-style-type: none"> • Soil erosion 	<ul style="list-style-type: none"> • When necessary, construction of soil erosion control measures either by engineering structure or planting of grasses/trees. • Placement of excavated soil materials in appropriate stockpile areas with avoidance of stockpiling along drainage ways/creeks. • The soil stockpiles will be covered with plastic sheets/geotextile, or planted with grasses/ small shrubs for erosion control. 	None
Terrestrial Ecology	<ul style="list-style-type: none"> • Vegetation removal and loss of habitat 	<ul style="list-style-type: none"> • Since the site is already developed, the construction of the proposed Project will not cause significant loss of habitat. 	None
AIR			
Air Quality and Noise	<ul style="list-style-type: none"> • Degradation of Air Quality 	<ul style="list-style-type: none"> • Every main haul road shall be paved with concrete, bituminous materials; keep the road clear of dusty materials; spray the road with water so as to maintain the entire road surface wet; and immediately before leaving a construction site, every vehicle shall be washed to remove any dusty materials from its body and wheels; • Truck loaded with dusty construction materials shall be covered entirely by clean impervious sheeting to ensure that the dusty materials do not leak; • Periodic watering of aggregates storage piles or covering or enclosure if material is especially dusty. • Ambient air (TSP) monitoring 	Minimal degradation of air quality, confined only to construction site and away from sensitive receptors

Environmental Component Likely to be Affected	Potential Impact	Prevention/Mitigation/Enhancement Measures	Residual Effects
	<ul style="list-style-type: none"> Increase in ambient noise level 	<ul style="list-style-type: none"> Scheduling certain high noise emitting works to more acceptable times of day Use of the most environmentally acceptable equipment which is properly maintained and silenced Proper instruction and supervision of staff Defective equipment/parts with abnormal noise and/or vibration will be either repaired replaced All employees working on site will be provided with proper ear protectors Conduct noise level monitoring 	Minimal increase in ambient noise levels, confined only to construction site and away from sensitive receptors
PEOPLE			
Local residents	<ul style="list-style-type: none"> Increase in local employment 	<ul style="list-style-type: none"> Priority employment for qualified local residents without discrimination to gender and age 	Increased income of the local residents with consideration to gender equality and vulnerable group
Local community	<ul style="list-style-type: none"> Improvement in infrastructures and social services 	<ul style="list-style-type: none"> Diligent payment of taxes/revenues 	Increased income of the host LGUs
OPERATION PHASE			
LAND			
Geology	<ul style="list-style-type: none"> Subsidence and Liquefaction 	<ul style="list-style-type: none"> Structural monitoring of facilities especially after each earthquake Formulation of detailed Emergency Preparedness and Response Plan 	None
Pedology	<ul style="list-style-type: none"> Soil contamination 	<ul style="list-style-type: none"> Regular monitoring of possible oil spills Implementation of Emergency Preparedness and Response Plan 	None
Terrestrial Ecology	<ul style="list-style-type: none"> Possible off-site impacts Generation of power plant emissions 	<ul style="list-style-type: none"> IASCL shall plant native species for vegetation, as these would be expected to have good survival rate. 	Increased number of trees
AIR			
Air Quality	<ul style="list-style-type: none"> Degradation of Air Quality 	<ul style="list-style-type: none"> Use of automotive diesel oil, which is a clean fuel Built-in smokestacks for efficient dispersion of plant's emission Conduct ambient air quality monitoring and stack emissions testing 	Minimal degradation of air quality since predicted GLCs of all parameters are below CAA limits and away from sensitive receptors

Environmental Component Likely to be Affected	Potential Impact	Prevention/Mitigation/Enhancement Measures	Residual Effects
Noise Quality	<ul style="list-style-type: none"> Increase in ambient noise level 	<ul style="list-style-type: none"> All generators will be enclosed; Conduct noise level monitoring 	None
PEOPLE			
Local residents People's health and safety	<ul style="list-style-type: none"> Increase in local employment 	<ul style="list-style-type: none"> Priority employment for qualified local residents without discrimination to gender and age 	Increased income of the local residents with consideration to gender equality and vulnerable group
	<ul style="list-style-type: none"> Introduction of disease between migrant and local workers 	<ul style="list-style-type: none"> Clean bill-of-health as a condition for employment Medical missions shall be part of the CSR program of IASCL Provision of potable water, sanitary facilities and garbage bins for workers Provision of a safety officer to monitor safe working conditions Provision of Medical/First Aid kits in all work places 	Accidents may still occur, but the safety and health guidelines in place will significantly lower the exposure of workers to hazards.
	<ul style="list-style-type: none"> Fire hazard 	<ul style="list-style-type: none"> Provision of fire suppression systems, fire detections systems, fire hose stations and portable fire extinguishers 	

F. IDENTIFIED STAKEHOLDERS

The following are the identified stakeholders of the proposed Project:

- LGUs of the host municipality: Isabel
- LGUs of the host barangay: Brgy. Libertad
- Sectoral Representatives (Education, Health, Livelihood, Religious, Business, Senior Citizens, Women) at the host LGUs
- Non-Government Organizations at the host LGUs
- Leyte Industrial Development Estate (LIDE)
- EMB-DENR Region 8
- Department of Social Welfare and Development (DSWD) Region 8
- Philippine Institute of Volcanology and Seismology (PHIVOLCS) Region 8
- *Department of Social Welfare and Development (DSWD) Region 8*
- Department of Energy (DOE) Regional Office-Visayas

G. STATEMENT OF COMMITMENT AND CAPABILITY TO IMPLEMENT NECESSARY MEASURES TO PREVENT NEGATIVE IMPACTS

The IASCL as the Proponent commits to provide overall policy and guidance with regards to implementation of the Project. IASCL shall ensure that all necessary mitigating measures including budgets and agreements with other concerned national and local government agencies are included in all contracts to prevent and/or minimize the negative impacts of the project and enhance the positive impacts.

H. INFORMATION WHERE TO GET COPY OF THE EISR

The draft Environmental Impact Statement Report (EISR) and this ESP will be posted in the EMB website (www.emb.gov.ph) at least 20 days before the public hearing. After the review process, the final EISR of the proposed Modular Diesel Power Plant Ancillary Project will be available at the following:

Municipal Government of Isabel Isabel Municipal Hall	Environmental Management Bureau DENR Compound, Visayas Ave, Diliman, Quezon City, 1116 Metro Manila Contact No: (02)920-2240
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For more information about the proposed project, the following people may be contacted:

Proponent: Mr. Gen Takahashi Vice President Isabel Ancillary Services Co. Ltd. Lot 2-A-1-B and Lot 2-A-1-D, Leyte Industrial Development Estate, Libertad, Isabel, Leyte Telephone No: (632) 552 8009 E-mail: gen.takahashi@teamenergy.ph	EIA Preparer: Engr. Leticia T. dela Cruz Managing Director Geosphere Technologies, Inc. 19D Eisenhower Tower, Eisenhower St., Greenhills, San Juan City Tel: (02) 724-5665/67 E-mail: gti0722@geospheretechnology.com
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