

3 IMPACT MANAGEMENT PLAN

The Impacts Management Plan (IMP) presents the mitigation and enhancement principles, practices, and technologies aimed at minimizing and/or eliminating the potential impacts of the existing OMCPC power plant and the proposed additional powerhouse.

The proposed project will inevitably create various impacts, both positive and negative throughout the pre-construction, construction, operations, and abandonment phases.

An analysis of the identified impacts is shown in **Table 3.1**.

Table 3.1. Impact Management Plan of OMCPC for the existing power plant and the additional powerhouse

Project Phase/ Environmental Aspect	Environmental Component Likely to be Affected	Potential Impacts	Enhancement/Mitigating Measures	Efficiency of Measures	Responsible Entity	Commitment/Guarantee
PRE-CONSTRUCTION PHASE						
Application of permits/licenses/clearances from LGUs and national government agencies	PEOPLE	<ul style="list-style-type: none"> Social Acceptance and Support for the project 	<ul style="list-style-type: none"> IEC on additional powerhouse project to inform/update Brgy. Central and San Jose LGU, respective institutions, agencies, offices, bodies and organizations for providing their respective endorsements and/or clearances MOAs with respective bodies 	100% compliance to local and national requirements	<ul style="list-style-type: none"> OMCPC Admin OMCPC ComRel 	<ul style="list-style-type: none"> Non commencement of construction until full compliance and completion of required endorsements and clearances
Site clearing of the proposed ore blend yard area including leveling and surveying	PEOPLE	<ul style="list-style-type: none"> Safety of the workers/staff and contractors within the premises of OMCPC 	<ul style="list-style-type: none"> Fences shall be installed around the perimeter of the project area. Strict use of PPE Notice should be placed to inform about the workers/staff on the PPE zone and dangers of falling debris. Security guards shall be stationed at the entry/exit to prevent unauthorized people from entering the construction site. 	100% compliance to PSC's existing Safety Mgmt. Protocol – zero LTA and Fatal Accident	<ul style="list-style-type: none"> OMCPC Engineering Group and contractor OMCPC Safety Manager 	<ul style="list-style-type: none"> Safety standards management protocol DOLE compliance and safety report PPE
CONSTRUCTION PHASE						
Establishment of access road to the project site	LAND	<ul style="list-style-type: none"> Vegetation removal due to establishment of new 	<ul style="list-style-type: none"> Strategic planning of access road location to minimize vegetation clearing and avoid cutting of mature trees in the vicinity 	100% compliance to PD 705 and	<ul style="list-style-type: none"> OMCPC Engineering 	<ul style="list-style-type: none"> Access road design plan to show potential affected areas

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		access road or widening of existing access road		tree cutting permit conditions if necessary	Group and contractor • OMCPC Envi Team	• Contingency plan for mitigation measures
Establishment of access road to the project site	LAND	<ul style="list-style-type: none"> • Soil erosion and soil compaction 	<ul style="list-style-type: none"> • Preferential scheduling of clearing and excavations works during the drier months or days of the year • Avoidance of cutting of trees within the required legal easements such as rivers, creeks, riparian zones, and other identified restricted areas to development. • Maximize cut-and-fill method of site preparation and road construction • Hauling of spoils to designated run-off-controlled spoil disposal area • Establishment of appropriate erosion control, such as vegetation cover or retaining walls. • Sediment ponds/traps will be constructed to reduce sedimentation in creeks/rivers and other bodies of water. This will be done downstream of the soil stockpile area. Also, siltation ponds will be constructed on appropriate places within the project site. 	100% compliance to the EMP	<ul style="list-style-type: none"> • OMCPC Engineering Group and contractor • OMCPC Environmental Team 	<ul style="list-style-type: none"> • Slope stabilization plan • Rehabilitation plan to include tree planting and landscaping alongside the access roads
Construction of additional powerhouse and ancillary facilities	LAND	<ul style="list-style-type: none"> • Vegetation removal due to construction of powerhouse and ancillary facilities • Threat to existence and/or loss of important local species 	<ul style="list-style-type: none"> • Balling and transplanting of affected trees of appropriate size shall be emphasized if necessary • Establishment of nursery where seedlings shall be intensively cared for reforestation and greening program of the company for Carbon Sink 	100% compliance to the EMP	<ul style="list-style-type: none"> • OMCPC Admin • OMCPC Contractor • OMCPC Envi Team 	• Tree cutting permit if there is cutting of trees

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		<ul style="list-style-type: none"> Threat to abundance, frequency and distribution of important species 	<ul style="list-style-type: none"> Establishment of additional buffer areas and green corridors within the project site No development and cutting of trees within the required legal easements such as the rivers and creeks, riparian zones, and other identified un-developable areas Vegetation clearing kept to a minimum and what is essential 			
		<ul style="list-style-type: none"> Loss of topsoil and occurrence of soil erosion Soil compaction 	<ul style="list-style-type: none"> Preferential scheduling of clearing and excavations works during the drier months (Low rainfall in Type I areas is during the months of November to April). Maximize cut-and-fill method of site preparation and road construction. Minimal topsoil spoils will be generated since excavation will be limited to structural foundations mainly isolated footings. Spoils shall be hauled to designated run-off-controlled temporary spoil holding/storage area Limiting the spoil height to 5m and covering the spoils with tarpaulin especially during rainy months (May to October in Type I areas). 	100% compliance to the EMP	<ul style="list-style-type: none"> OMCPC Admin OMCPC Contractor OMCPC Envi Team 	<ul style="list-style-type: none"> Include in the TOR of the contractor Topsoil storage and management plan SMR
		<ul style="list-style-type: none"> Generation of solid and hazardous waste 	<ul style="list-style-type: none"> Use of existing OMCPC Materials Recovery Facility (MRF) Classification of waste separating hazardous waste from non-toxic wastes Collection of scrap and recyclable materials that can be sold Proper storage of hazardous waste 	100% compliance to OMCPCs EMP and manual in compliance to RA 9003 and RA 6969	<ul style="list-style-type: none"> OMCPC Admin OMCPC Contractor OMCPC Envi Team 	<ul style="list-style-type: none"> Hazardous Wastes Management, Treatment and Disposal Program Hazwaste Generator ID Hazwaste Treater and EMB Certificate of Treatment

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			<ul style="list-style-type: none"> Tapping DENR-accredited waste transporter to dispose hazardous waste 			including Hazwaste Transport Permit
	Water Resources	Degradation of ground and surface water quality from surface run-off that will be generated along construction site	<ul style="list-style-type: none"> Construction of berms and run-off canals along the edge of construction are that will divert surface run-off to a silt pond and prevent run-off from flowing into the irrigation canal Establishment of silt fences if necessary 	100% compliance to OMCPCs EMP in compliance to RA 9275	<ul style="list-style-type: none"> OMCPC Admin OMCPC Contractor OMCPC Envi Team 	<ul style="list-style-type: none"> Include in TOR of contractor OMCPC Run-off Water and Drainage Mgmt. Plan
	Air Quality	Generation of dust	<ul style="list-style-type: none"> Sprinkling of water along exposed areas especially during dry days; Establishment of wind barriers and perimeter fence within the periphery of the construction area; Regulation of vehicle speed should be maintained at 30 kph Tarpaulin covering for haul trucks Regular washing of all hauling truck along designated areas far from existing drainage canals Maintain equipment deployment schedule Regular maintenance of vehicles and construction equipment 	100% compliance to OMCPCs EMP in accordance with RA 8749	<ul style="list-style-type: none"> OMCPC Contractor OMCPC Envi Team 	<ul style="list-style-type: none"> Equipment deployment schedule Perimeter fence and wind barrier plan Contract between OMCPC and contractor to show contingency measure for dust abatement
		Increased noise level	<ul style="list-style-type: none"> Regulation of vehicle speed should be maintained at 30 kph Installation of mufflers Provision of ear plugs to laborers exposed to high noise levels. Orientation of new employees and contractors regarding noise management program Strict observance of speed limit – 30 kph 	100% compliance to OMCPCs EMP in accordance with NEPC standard	<ul style="list-style-type: none"> OMCPC Contractor OMCPC Envi Team 	<ul style="list-style-type: none"> Noise Mgmt. Plan Perimeter fence/wind barrier plan Contract between OMCPC and contractor to show contingency measure for noise management

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	PEOPLE	Occupational hazard awareness	<ul style="list-style-type: none"> The proponent and its contractor will conduct periodic orientation and safety training seminars to all workers A safety program shall be implemented putting primary value on safety; placing of safety signage and warning notices on appropriate and strategic places; and proper observance of environmental sanitation practices. Only qualified and authorized personnel will be allowed to operate any equipment. More specific practices to be employed would include strict adherence of workers to wearing of PPEs and equipment. 	100% compliance to OMCPCs OHS	<ul style="list-style-type: none"> OMCPC Admin OMCPC Contractor OMCPC Safety Officer 	<ul style="list-style-type: none"> OSH Program Emergency Response Program Safety reports
		Employment opportunities	<ul style="list-style-type: none"> Prioritization of locals for hiring Conduct of IEC regarding policy on local prioritization in hiring manpower, contractors and suppliers Provision of Capacity Building and Skills Training Program 	100% compliance to OMCPCs Hiring Plan	<ul style="list-style-type: none"> OMCPC Admin OMCPC Contractor OMCPC ComRel TESDA 	<ul style="list-style-type: none"> Hiring plan and documentation report DOLE report IEC Program
		Possible Adverse Effects on Health and Sanitation	<ul style="list-style-type: none"> The workforce shall be given the basic provisions of clean and potable water, sanitary toilet facilities, and hygienic canteen facilities. Domestic wastes segregation shall be practiced, where recyclable materials shall be collected for re-use or sold to recyclers. Disposal site for the generated spoils will be identified with due consideration to the safety of the people and protection of the environment. 	100% compliance to OMCPCs OHS	<ul style="list-style-type: none"> OMCPC Contractor OMCPC Safety Officer OMCPC Envi Team 	<ul style="list-style-type: none"> Health and Sanitation Plan Waste Management Plan

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			<ul style="list-style-type: none"> The spoils will be hauled on a regular schedule to ensure less impact on traffic and residents. 			
		Increased traffic due to hauling trucks, vehicles and equipment going to and from the site	<ul style="list-style-type: none"> Installation of safety barriers (e.g. fence) and signages. Drafting and implementation of Traffic management plan (including ingress/egress of vehicles at construction site), including properly trained personnel to manage traffic flow. Implement pedestrian walkways near the construction site. Ensure that contractor's vehicles, trucks and equipment are of good working condition through timely inspections. Ensure that the contractor employs properly trained crew and operators, especially drivers of large equipment like cranes and earth moving vehicles. 	100% compliance to OMPCs traffic management plan	<ul style="list-style-type: none"> OMCPC Safety Officer and Security Team 	<ul style="list-style-type: none"> Compliance Monitoring Report Traffic Management Plan
OPERATION PHASE						
Operation of the following: <ul style="list-style-type: none"> Existing Power Plant Additional Powerhouse Ancillary Facilities Logistics Operation 	LAND	Natural Hazards and Calamities such as: <ul style="list-style-type: none"> Seismic Hazards and Earthquake Occurrence Ground Acceleration and Rupture Liquefaction, landslide and settlement hazard Foundation Failure Tsunami Volcanic Hazard 	<ul style="list-style-type: none"> Community awareness thru conduct of IEC activities. Conduct of detailed engineering geological studies Regular structural engineering inspection Provision of safety guidelines/earthquake emergency plans. Conduct of warning/drill such as earthquake simulation by OMCPC in partnership with LGU and other concerned agencies. 	100% compliance to OMPCs Disaster Risk and Management Program	<ul style="list-style-type: none"> LGU MGB-IVB NDRRMC PDRRMO MDRRMO OMCPC Admin 	<ul style="list-style-type: none"> Include in the IEC activities of OMCPC ComRel MOA between LGU, NDRRMC, NGO's and PO's

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		Generation of solid waste and hazardous waste	<ul style="list-style-type: none"> • Periodic re-orientation of workers, laborers and contractors for proper waste segregation and handling of generated waste • Classification of waste and recovery of recyclable materials • Regular collection and proper disposal of solid waste in a dump site/disposal facility • Proper storage and disposal of chemicals used in the power plant • Proper storage and disposal hazardous waste such as busted lamps, used oil, etc. • Tapping DENR-accredited waste treater for hazardous waste • Implementation of Solid Waste Management Pro 	100% compliance to PSCs EMP in compliance to RA 9003 and RA 6969	<ul style="list-style-type: none"> • OMCPC Admin • OMCPC Envi Team 	<ul style="list-style-type: none"> • SMR • Hazwaste Generators ID
	WATER	Change in water quality Potential contamination due to spillage of fuel oil, lubricants and waste oil	<ul style="list-style-type: none"> • Provision of toilet facilities for workers • Periodic inspection and maintenance including siphoning of sludge of septic tanks • Provisions of a spoil's containment/waste disposal area • Provision of a motor pool with oil traps • Installation of bund walls with 110% retaining capacity • Concreting of tank ground farms • Connection of tank farms to oil and water separator • practices putting bins containing saw dust and sand that can be sprinkled in case of accidental spillage of soil in work areas. 	100% compliance to OMCPCs EMP in compliance to RA 9275 and RA 6969	<ul style="list-style-type: none"> • OMCPC Admin • OMCPC Envi Team 	<ul style="list-style-type: none"> • Wastewater Management Plan • Discharge Permit • Oil spill contingency plan

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			<ul style="list-style-type: none"> An existing oil spill management protocol is being implemented by OMCPC and this shall be strictly implemented. OMCPC also has universal spill kits and sorbents as well as oil containment boom that can be utilized for any untoward oil spillage. Good housekeeping measures 			
	AIR	Increase in the amount of air pollutants	<ul style="list-style-type: none"> SOX (as SO₂) emissions are proportional or related to the percentage of sulfur content of the fuel, an appropriate mixture of bunker fuel and diesel fuel ensures compliance with the emission standard for SOX (as SO₂) The stack heights of the proposed gensets should be 15 m at a stack inner diameter of 0.45 m to ensure compliance with the ambient guideline values set for NO₂, including SO₂, NO₂, and TSP Rain caps installed on top of the stacks reduce the air emissions' exit velocities, thus increasing the dispersed ground-level concentrations. Therefore, rain caps should not be used or installed on the stacks Continuous implementation of fuel blending (80% LFO and 20% HFO) for the existing power plant Scheduled repair and maintenance of plant facilities and equipment Use of Euro 4 or Euro 5 fuel for service vehicles. 	100% compliance to OMCPCs EMP in compliance to RA 8749	<ul style="list-style-type: none"> OMCPC Admin OMCPC Mechanical Team OMCPC Envi Team 	<ul style="list-style-type: none"> Maintenance Plan SMR Permit to operate

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			<ul style="list-style-type: none"> Semi-annual monitoring for both ambient and stack emissions Establishment of carbon sink 			
		Noise generation	<ul style="list-style-type: none"> Enclosure construction for noise generating equipment Installation of exhaust silencer and safety bulb during emergency shutdown Periodic re-orientation of workers, laborers and contractors on OMCP's EMP for noise management program including use of ear muffs in noise prone areas Addition of flexible couplings to minimize torsional vibration Noise damping or acoustic materials to absorb noise 	100% compliance to OMCP's EMP in accordance with NEPC standard	<ul style="list-style-type: none"> OMCPC Mechanical Team OMCPC Envi Team 	<ul style="list-style-type: none"> Noise management plan SMR OMCPC OHS

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	PEOPLE	Exposure to Occupational Health and Safety Hazards	<ul style="list-style-type: none"> • OMCPC and its contractor shall conduct periodic orientation and safety training seminars to all workers. It implements a safety program putting primary value on safety; placing of safety signages and warning notices on appropriate and strategic places; and proper observance of environmental sanitation practices. Likewise, only qualified and authorized personnel will be allowed to operate any equipment. More specific practices to be employed would include strict adherence of workers to wearing of protective devices and equipment. • Assignment of safety engineer and provision of first-aid/safety kits • The workforce has clean and potable water, sanitary toilet facilities, and hygienic canteen facilities. • Domestic wastes segregation shall be practiced, where recyclable materials area collected for re-use or sold to recyclers. • Disposal site for the generated spoils shall be identified with due consideration to the safety of the people and protection of the environment. • The spoils will be hauled on a regular schedule to ensure less impact on traffic, commuters and residents 	100% compliance to OMCPCs OHS	<ul style="list-style-type: none"> • OMCPC Envi Team • OMCPC Safety 	<ul style="list-style-type: none"> • OHS and Emergency response program
	PEOPLE	Employment opportunities and economic benefits	<ul style="list-style-type: none"> • Prioritize hiring of local workers • As an enhancement measure, the proponent shall pay the taxes, fees, 	100% compliance to existing	<ul style="list-style-type: none"> • OMCPC Admin and Human Resource 	<ul style="list-style-type: none"> • Local hiring report • DOLE Report • Social Development Plan

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			<p>permits and licenses on time to enable the national government and the concerned LGUs to deliver the basic needs of the residents also on time.</p> <ul style="list-style-type: none"> It is recommended that the proponent utilize the bottom to top planning approach to identify the priority needs of the communities entitled to SDP The company shall conduct consultative meetings to flesh out the details in the formulation of the SDP to ensure that project ideas emanate from the intended beneficiaries. Implementation of social development programs for host community The company will assist the beneficiaries of the SDP in project development and presentation to ensure that these proposals are sustainable and environmentally friendly. The company shall coordinate with training centers and facilities (i.e.TESDA) to upgrade the level of qualifications of residents in the affected barangay to enable them to participate productively in the operational phase of the project Continuous skills training and development and capacity building program for the impact areas 	national and local laws	<ul style="list-style-type: none"> OMCPC ComRel 	<ul style="list-style-type: none"> Corporate Social Responsibility Program ER 1-94
ABANDONMENT						
Dismantling of existing structures	LAND	Generation of squanders and industrial scraps	<ul style="list-style-type: none"> Hiring of an accredited waste collector Disposal site for the spoils will be identified with due consideration to the 	100% compliance to OMCPCs EMP	<ul style="list-style-type: none"> OMCPC Admin OMCPC Envi Team 	<ul style="list-style-type: none"> Abandonment Plan

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			safety of the people and protection of the environment.	in compliance to RA 9003 and RA 6969		
	WATER	Oil and grease leakage from the operation of moving/ hauling vehicles	<ul style="list-style-type: none"> Regular maintenance of hauling vehicles Clean-up of affected areas 	100% compliance to OMCPCs EMP in compliance to RA 9275 and RA 6969	<ul style="list-style-type: none"> OMCPC Admin OMCPC Envi Team 	<ul style="list-style-type: none"> Abandonment Plan
	PEOPLE	Employment for the structure removal activities	<ul style="list-style-type: none"> Local hiring 	100% compliance to existing national and local laws	<ul style="list-style-type: none"> OMCPC Admin OMCPC Envi Team 	<ul style="list-style-type: none"> Hiring plan