CITICORE RENEWABLE ENERGY

Integrated Management System
(Quality, Environment, Health and Safety Management System)

Operational Procedure

Environmental Management Policy

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CITICORE RENEWABLE ENERGY

VERSION HISTORY

Rev. No.	Rev. Date	Description of Change	Author / Originator
00	May 10 2023	Initial Issuance	

	Name	Position	Signature	Date
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Environmental Management Policy

The Philippines, which is located along the Pacific Ring of Fire and a typhoon belt, has experienced a number of major natural catastrophes over the past years, including typhoons, volcanic eruptions, earthquakes, tsunamis, mudslides, fires, droughts, and floods related to El Niño and La Niña weather events, and these are projected to intensify with as the climate changes. With rapid changes in the climate condition, photovoltaic systems are more at risk as these are vulnerable to hail, wind, and extreme temperatures. Solar cell output can start decreasing if the temperature increases above the rated temperature. Cloud cover can cause a dramatic decrease in the solar output. Also, rapid changes in cloud cover can cause rapid fluctuation in the localized voltage, and power quality concerns. Further, high wind speeds can increase dust particle deposits, which decrease solar voltaic cell output. In arid regions, higher wind speeds can also result in panel damage. Further, extreme weather events like typhoon, floods can cause severe structural damage, and cause business interruptions.

CREC business operations are located in the Philippines and vulnerable to the risks caused by these disasters. The Company's revenues are correlated to the amount of electricity generated and sold by the solar power plants operating on the Leased Properties and the Properties to be Acquired, which in turn is dependent upon irradiance and weather conditions generally. Irradiance and weather conditions have natural variations from season to season and from year to year and may also change permanently because of climate change or other factors. The Company carefully selected the Leased Properties based on the long-term historical irradiation data of National Renewable Energy Laboratory (NREL); a national laboratory of the U.S. Department of Energy based in Texas. Further, the Company employed rigorous site selection procedure to minimize the existing climate related risk.

At CREC, we are driven by a clear purpose to play our part in building a sustainable future with less climate related risks. Our strategy is anchored on reducing the environmental damages and driving the sustainability for the wellbeing of our communities and global economy at large.

We are committed to enable a low-carbon and circular economy by a well-crafted focused approach around 3 key pillars of environmental transformation. These pillars as outlined below, brace and uphold our efforts to move towards sustainability ambitions.

1. Climate action – Provide green energy solution to reduce GHG emissions by continuous investment in renewable energy assets, and work towards achieving negligible to zero carbon footprint internally
2. Resource Management – Judicious use of resources by implementing innovative business model and circular economy principle.
3. Ecosystem and bio-diversity –Ensure the highest standard of environmental management and reduce negative environmental impact

1. Climate action

The world is rapidly moving towards a low-carbon economy, to mitigate the risk of climate changes, and safeguard the life of the future generations on the planet. CREC acknowledges its responsibility to respond to the issue of climate change and aims to articulate its strategy and goals to become a regional leader in the global transition to a low-carbon economy. CREC is also committed to comply and satisfy all environmental laws, rules and regulations promoting environmental protection in all areas where CREC or its lessees operate solar plants.

As an energy producer, we are committed to reduce our negative environmental impact and help the society at large in curbing the environmental damage.

We have a two-pronged approach to addressing the risks and opportunities brought about by climate change. The first is to minimize negative impact by reducing our operational GHG emissions, and the second is to enhance positive impact by delivering cleaner and smarter energy choices. Our mission is to play a pivotal role in meeting Philippine's growing energy needs in an efficient, sustainable, and socially responsible manner.

1.1 Enhancing positive impact by focusing on growing our renewable energy portfolio

We are focusing on growing our renewables portfolio, and we aim to add approximately 1,500 megawatts renewable energy capacity by 2025 to create one of the region's leading independent renewable energy players. The investment in additional renewable capacity will help in reducing the GHG emission by improving the energy mix of the Philippines.

To address the challenges of climate change, we recognize that innovation is critical. We will continue to explore new business models, products, and services, and undertake research and development that focus on energy efficiency, digitalization, and new energy solutions.

Performance Management Positive Impact - 2023

Topics	Quantity	Unit
Total renewable energy capacity	284	MWpdc
Target renewable energy capacity addition in next 5 years (2023-2027)	5	GW
Total carbon emission reduction	277,000	Tonnes – CO_2

1.2 Mitigating negative impact by reducing the carbon footprint

We have always been conscious of the energy generated and used by our plant operation as well as other supporting functions and we constantly strive to increase our efficiency of green energy projects. At CREC, it is an endeavor to constantly explore ways to further lower carbon footprint through the optimization of energy use, diversification of our energy portfolio, and investments in newer technology. As a renewable energy company, CREC is well-positioned to further reduce its emissions and help other businesses and governments reduce their carbon footprint.

Performance Management GHG Emission - 2023

Topics	Quantity	Unit
Direct (Scope 1) GHG Emissions[1]	114.7	Tonnes CO2e
Energy indirect (Scope 2) GHG Emissions[2]	1192.2	Tonnes CO2e

Notes:

1. *Direct (Scope 1) GHG Emissions[1] emission covers stationary emission, fugitive emission and mobile combustion emissions.*
2. *Energy indirect (Scope 2) GHG Emission – Covers GHG Emission from purchased electricity (off-solar hours) used at solar site and corporate office.*

2. Resource Management

As an energy player, CREC's activities consume resources such as fuel and water. We will continue to optimize our operational resource consumption to reduce further impact on the environment.

Our three key areas of focus are:

1. Energy Management
2. Water and waste-water management
3. Waste management

2.1 Energy management

CREC has always been conscious of the energy generated and used by it and constantly strives to increase the efficiency of its green energy projects.

Performance Management – Energy Consumption within CREC - 2023

Topics	Quantity	Unit
Energy consumption (gasoline)[1]	990	GJ
Energy consumption (diesel)[2]	628	GJ
Energy consumption (electricity)[3]	1,744,000	kWH

Notes:

1. *Energy Consumption (Gasoline) – to maintain vegetation at Solar Panel and Operating areas*
2. *Energy Consumption (Diesel) – used by the site vehicles and Diesel engine driven water pumps during panel cleaning*
3. *Energy consumption (electricity)- Electricity purchased at solar site for nighttime lighting, protection, and maintenance*

At CREC, it is an endeavor to constantly explore ways to further lower carbon footprint through the optimization of energy use and investments in newer technology. We intend to implement the following measures in nearby future to further reduce energy consumption –

1. Replacement of 10% of grass areas at panel operation floor with Agri-plants to reduce the consumption of gasoline.
2. Use of solar lights for perimeter lighting
3. Use of solar powered electric motor-driven pump to reduce diesel usage

Performance Management – Reduction of energy consumption 2023 (from previous year)

Topics	Quantity	Unit
Energy consumption (gasoline)[1]	90	GJ
Energy consumption (diesel)[2]	20	GJ
Energy consumption (electricity)[3]	4,000	KWH

Notes:

1. *Energy Consumption (Gasoline) – Reduction in Gasoline use by planting turmeric plants replacing grass*
2. *Energy Consumption (Diesel) – Reduction in Diesel use due to dry type cleaning of panel during summer months*
3. *Energy consumption (electricity)- Reduction in electricity consumption during nighttime by using solar powered streetlights*

2.2 Water and wastewater management

Water forms an important resource for CREC as solar plants requires water for cleaning of solar panels. Cognizant of our corporate responsibility to effectively manage the existing water resources and in line with the commitment to United Nations' Sustainable Development Goal SDG-6" Clean water and sanitation" we are working towards achieving water stewardship across operations. In the coming years, we would be working towards further reduction in water consumption in its operations by adopting the latest water conservation techniques. Some of the key measures already adopted include:

1. Use of plain water without any reagents for panel cleaning
2. Channeling water used for solar panel cleaning directly to grass and turmeric plants below solar panel
3. Reducing water leakage by regular inspection of water line

Performance Management – Water consumption within the organization – 2023

Topics	Quantity	Unit
Water withdrawal[1]	650.15	Cubic meters
Water consumption[2]	1.30	Cubic meters
Water recycled and reused[3]	637.15	Cubic meters

Notes

1. *Water withdrawal includes all water extracted for plant operation and maintenance and usage in the administrative offices*
2. *Net water consumption by CREC owned sites and administrative office*
3. *Water reused from panel cleaning to site grass/vegetation watering, CREC does have rain water collector to help reduce the water consumption*

2.3 Waste management

We believe in the principles of reduce, reuse, and recycle at CREC, and actively seek solutions that support a circular economy. We strive to reduce any waste generated from operations and continue to explore means of reducing waste and to move towards a circular economy model. Some of the key measures adopted include:

1. Material recovery facility to facilitate proper segregation of solid waste material
2. Recycling of materials like food containers used by site crews by sending it to local government waste management units
3. No incineration at site
4. No land filling by waste materials
5. Back-to-back use of reusable materials from bond papers
6. Use of grass clippings to prepare compost material

In addition to above measures, we plan to implement the following measures to further improve our waste management practice –

1. Replace incandescent and fluorescent lamps with LED type
2. Purchase of recycled material papers for usage at site
3. Reduce usage of plastic bags by purchasing bags made of bio-degradable material

Waste Management System

All waste will be brought to the Material Recovery Facility (MRF); wherein initial cleaning will be done to those requiring cleaning. After cleaning, all the cleaned wastes – including those that do not require cleaning – will be categorized into hazardous and non-hazardous.

Segregated material will be stored appropriately in the MRF for the non-hazardous and designated contained area for hazardous. Non-hazardous materials and wastes will be segregated into recyclable/reusable and non-recyclable/reusable. Hazardous wastes will either be stored to contained area or facility or will be sent to a third-party offsite treater.

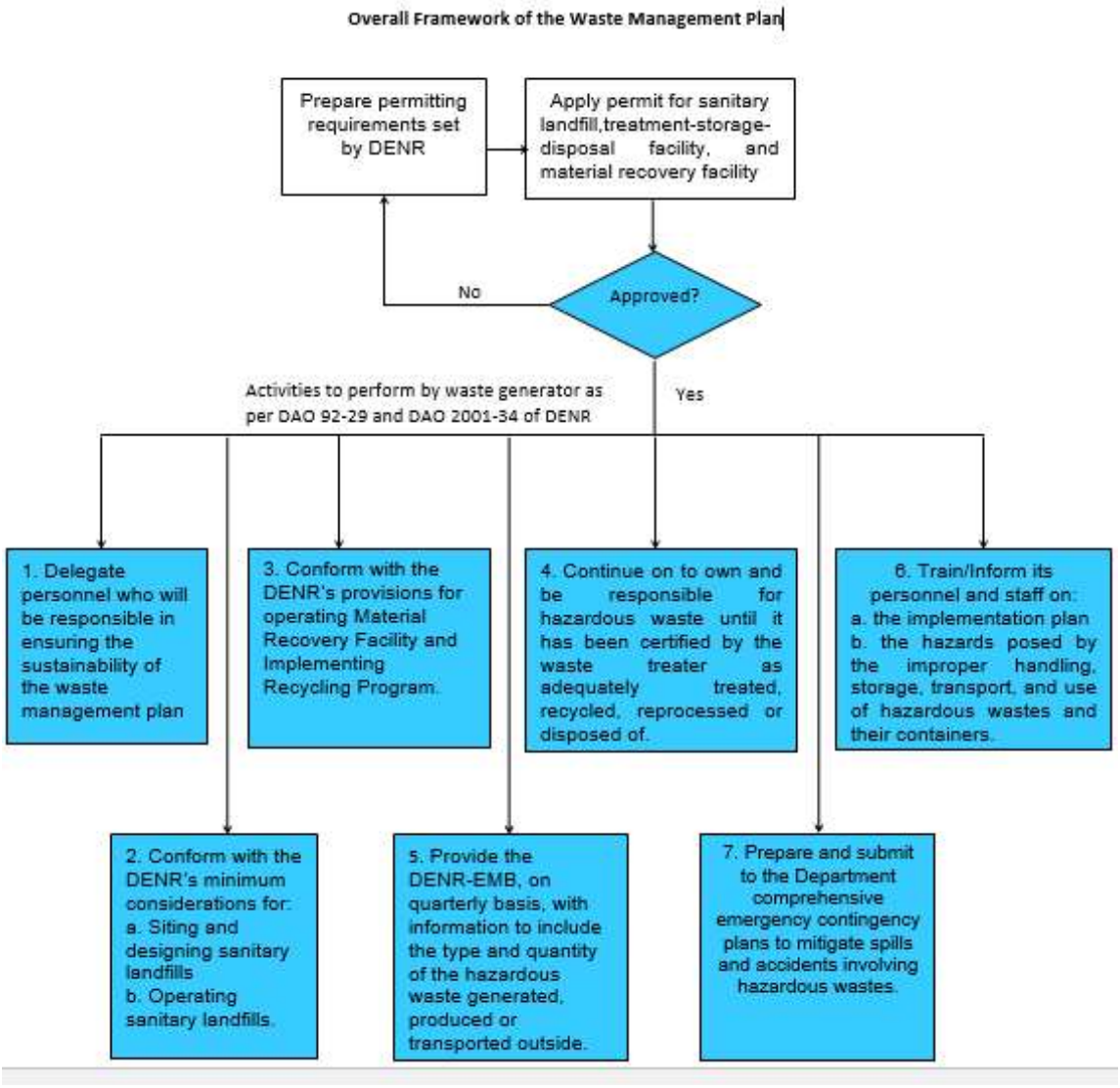
Performance Management – Solid waste - 2023

Topics	Quantity	Unit
Total	28,400	Kg
Reusable	40	Kg
Recyclable	60	Kg
Composted	28,300	Kg
Incinerated	0	Kg
Residuals/Landfilled	0	Kg

Performance Management – Hazardous waste[1] - 2023

Topics	Quantity	Unit
Hazardous waste Generated	0	Kg
Hazardous waste Transported	0	Kg

1. *Hazardous waste includes used oil, e-waste (Solar PV modules, used batteries, fluorescent bulbs, etc.),*
2. *0 transported for disposal since it was upcycled to Eco-Shed and Table*



3. Ecosystem and biodiversity

Given the nature of CREC's operations, there is potential of some biodiversity impact. Considering this, conservation of biodiversity is an important aspect of CREC's commitment to sustainable, long-term growth. Our efforts to safeguard biodiversity stretch beyond regulatory compliances. We have developed strong systems and policies to ensure biodiversity conservation is an integral parameter of our investment decisions.

We believe in the principle of co-existence, and always ensure to follow measures which has minimal or no damage to the eco-system and biodiversity. All project sites are not within or adjacent to national park or any other form of protected areas. Like for instance, Manleluag Spring Protected Landscape, located approximately 42km to the north of the site, is the nearest protected area in Citicore Solar Tarlac 1. There are also no protected areas near the transmission line route.

There are some trees and some bamboo patches on the northern end of the site, near the households and in the natural gully. No trees need to be cut down to make way for the Project. The Department of Environment and Natural Resources (DENR) has inspected the site. There are no wild animals observed to live or frequent the Site apart from some species of birds and insects, which are very common in most parts of the country. Domesticated animals such as cattle, dogs and cats also occasionally use the site. No endangered, threatened or rare species of animals have been identified at the site. Available secondary information indicates that the project sites are not a habitat area for any threatened, endangered, or rare species of animals. Project sites indicated that there are no dipterocarp trees found in the identified primary impact zone. There is relatively low species diversity in the project sites. In addition, for site selections for our future projects, we choose to develop lands that are not identified within areas that are not protected or within environmental critical areas, not serviced by natural irrigation or irrigation facilities; and those lands that are best suited for agricultural purposes.

Performance Management- Local environment protection

Topics	Quantity	Unit
Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	No project sites adjacent to protected areas and areas of high biodiversity value.	N/A
Habitats protected or restored	For collaboration with DENR to adapt a forest program	N/A
IUCN17 Red List species and national conservation list species with habitats in areas affected by operations	No critical wildlife or endangered species have been identified nearby the project sites or along the transmission line. Hence, no species covered in IUCN17 Red List.	N/A