هيئة كهرباء ومياه دبي
Dubai Electricity & Water Authority

MASDAR

EDF renouvelables

# DEWA SOLAR PHOTOVOLTAIC (PV) PHASE III RESTORATION PROJECT

# ADDENDUM EIA NON-TECHNICAL SUMMARY

**NOVEMBER 2025**

Dome

Prepared by:

**Dome International Safety & Environmental Consultants**

**Dome International Safety & Environmental Consultants**
107, Spectrum Building, Al Qataiyat Road,
P.O. Box 24652, Dubai, UAE
Tel: +971 4 3366144
Fax: +971 4 3359434
E-mail: hse@domeint.com
Website: www.domeint.com

| | | | | | |
|---|---|---|---|---|---|
| **Client:**<br>Abu Dhabi Future Energy Company (Masdar)<br>EDF Power Solutions | | | **Project No:**<br>ED24.110 | | |
| **Report Summary:**<br>Addendum EIA for DEWA Solar Photovoltaic (PV) Phase III Restoration Project – Non-Technical Summary | | | **Date:**<br>10th November 2025<br>**Document No:**<br>ED24.110_EIA NTS | | |
| | | | | | |
| | | | | | |
| 0 | Issued for Review | NT/SN | MM/NR | HA | 10-11-2025 |
| **Revision** | **Description** | **Originator** | **Reviewed** | **Approved** | **Date** |
| *The preparation of this report by Dome has been undertaken within terms of the Brief using all reasonable skills and care. The report has been prepared in accordance with the relevant UAE laws and regulations for review by the appropriate designated authorities. Dome accepts no responsibility for data provided by other bodies and no legal liability arising from the use by other persons of data or opinions contained in this report.* | | | Distribution<br>☒Official<br>☒Public<br>☐Confidential | | |

# NON-TECHNICAL SUMMARY

## E.1 Project Overview

The Dubai Electricity and Water Authority (DEWA), under the direction of the Government of Dubai, is spearheading the development of the Mohammed Bin Rashid Al Maktoum Solar Park (MBR Solar Park). As the world's largest single-site solar energy project developed under the Independent Power Producer (IPP) framework, the park is set to achieve a total generation capacity of 5,013 megawatts (MW) by the year 2030. Currently, it has an installed operational capacity of 2,863 MW and is being constructed in progressive stages.

The MBR Solar Park was launched by the Government of Dubai in January 2012 as part of the Dubai Integrated Energy Strategy 2030. Phase I, involving a 13 MW photovoltaic (PV) plant, began in 2012 with an approved Environmental Impact Assessment (EIA) by DECCA (formerly known as DM-ESD) on 02nd August 2012. Phase I was completed and operational by October 2013.

In 2013, a separate EIA was conducted for the full park's development, originally planned for 1,000 MW, with approval for the entire project granted until December 2020. Phase II, initially set for 100 MW, was expanded to 200 MW, requiring a new EIA and receiving Environmental Clearance (EC) in July 2015.

Phase III, developed by Masdar and EDF, involved an 800 MW PV plant, increasing the overall project capacity from 1,000 MW to 3,000 MW and the land area from 40.45 km² to 76.6 km². A new EIA update was completed, and a revised EC was issued for the expanded 3,000 MW MBR Solar Park.

Phases IV and V of the MBR Solar Park were subsequently implemented without requiring an EIA update from DECCA (formerly known as DM-ESD). The Environmental Clearance (EC) for the entire park (Ref. No.: EPBI-221123-00794) was last renewed on 26th Jan 2024 and remains valid until 25th January 2026.

Masdar (Abu Dhabi Future Energy Company) and EDF Power Solutions (EDF) was selected by DEWA as the partner responsible for the construction and ongoing operations of the facility. Financial close for the project was successfully achieved in June 2017. Commercial operation dates (COD) for the major implementation phases are as follows:

- Phase A: Commissioned in May 2018
- Phase B: Operational since August 2019
- Phase C: Commenced in April 2020

However, in recent years, the solar park has experienced some damage due to extreme weather conditions, affecting the solar panel structures and installations. As a result, some behind the fence restoration works will need to be conducted at Phase IIIA, Phase IIIB and Phase IIIC. As part of the updated design, considering current market components, the restoration works will also introduce an improvement in the plant capacity to enhanced it up to 1,200 MWp. This upgrade, which will not occupy any more land than was authorized initially, and will remain within the fenced project, will involve the integration of new equipment with the existing infrastructure, including advanced PV modules (620 Wp), solar trackers, inverters, and PV-side balance-of-system components

The development of the MBR Solar Park is aligned with the overarching goals of the Dubai Clean Energy Strategy 2050, which seeks to establish Dubai as a global leader in clean energy and sustainable economic growth. The strategy sets forth ambitious clean energy targets:

- 7% of Dubai's energy mix from renewable sources by 2020
- 25% by 2030

- 75% by 2050

Once fully realized, the MBR Solar Park is projected to offset over 6.5 million tons of carbon emissions annually, playing a critical role in the emirate's transition to a low-carbon, sustainable future

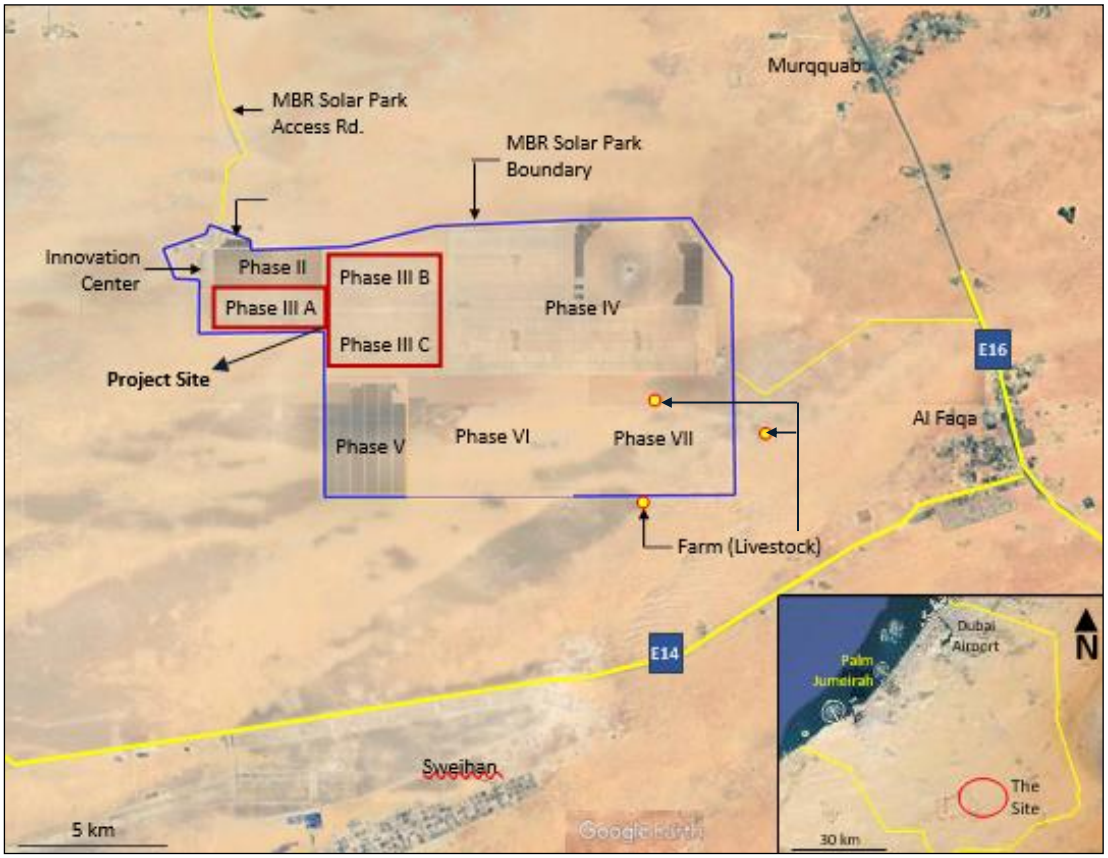


**Figure E.1 – Location of the DEWA Solar PV Project and Surroundings**

## E.2 Scoped In-Out Exercise

The scope of the required environmental aspects (scoped in or out) was determined based on DECCA-ESD requirements (i.e., DECCA-ESD Guidance on the Environmental Clearance (EC) requirements for Development, Infrastructure and Industrial Projects in the Emirate of Dubai (2024)), nature of the Project and the potential environmental impacts, and the availability of existing data. The details of Scoped in and scoped out environmental resources are presented in below Table E.1.

**Table E-1 – Scoped In and Scoped Out Details**

| Environmental Resource | Justification | |
|---|---|---|
| | Scoped In | Scoped Out |
| Climatic Conditions, Climate Change and Air Quality | To identify potential sources of air emissions from the proposed project and determine the characteristics and impacts. | -- |
| Noise and Vibration | To identify potential sources of noise emissions from the proposed project and determine the characteristics and impacts. | -- |

| Environmental Resource | Justification | |
|---|---|---|
| | Scoped In | Scoped Out |
| Geology, Hydrogeology and Geomorphology | | As previously noted, the proposed project involves the restoration and replacement of damaged photovoltaic (PV) panels and associated infrastructure within the existing and operational Phase III solar facility, located inside the MBR Solar Park.<br>The activity is confined entirely within an already developed footprint, with no new extension of the project boundary.<br>Also, the Project site is not located within or near to Groundwater Protection Zones and there are no significant geological features on the site. The proposed activities will not pose any risk of contamination or alteration of groundwater quality or flow.<br>Hence, a detailed groundwater or hydrogeological assessment is not required as part of this EIA. |
| Land Uses, Soil and Groundwater | Considering the nature and location of the proposed Project (i.e., only restoration work within existing operational Phase III facility), the impacts are primarily associated with unintentional releases such as accidental spills, equipment leaks, or improper waste handling. Although the project will not involve large-scale excavation, dewatering, or permanent infrastructure development, certain support activities such as equipment installation, temporary storage, and maintenance may pose localized risks if not properly managed.<br>The Project will not involve any direct discharge into the ground during both construction and operation that poses direct risk to groundwater. It should be noted that appropriate mitigation measures are already presented in the EIA to address this aspect. | - |
| Water Uses, Water and Sediment Quality | -- | No impacts are anticipated on marine water & sediment quality as the Project site is more than 50 km away from the coastal area of Dubai. Thus, this aspect is scoped out in this EIA report. |

| Environmental Resource | Justification | |
|---|---|---|
| | Scoped In | Scoped Out |
| Oceanography, Hydrodynamic Regime, Coastal Processes | -- | No impacts are anticipated on marine environment as the Project site is more than 50km away from the coastal area of Dubai. Thus, this aspect is scoped out in this EIA report. |
| Aquatic Ecology and Nature Conservation | -- | No impacts are anticipated on aquatic ecology as the Project site is more than 50km away from the coastal area of Dubai. Thus, this aspect is scoped out in this EIA report. |
| Terrestrial Ecology and Nature Conservation | To identify the biodiversity and habitat, define the conditions and assess the potential impacts on terrestrial ecology in the Project area. | -- |
| Archaeology and Cultural Heritage | -- | The proposed Project works within Phase III in the approved boundary of the MBR Solar Park and been in operational since 2020. Thus, there are no archaeological or cultural sites within Project areas and impacts are scoped out in this EIA report. |
| Visual/Amenity | -- | The proposed Project is situated within existing Phase III facility at the MBR Solar Park. Given its location, it will remain largely out of public view. As mentioned earlier, the solar park is a flagship sustainability initiative by the Dubai Government, so visual impact is not anticipated to be a significant issue. |
| Waste generation and management | To address the waste control and management associated with implementation of the Project. | |
| Utilities and Infrastructure | To identify demand/consumption of natural resources associated with implementation of the Project. | |
| Sustainability | To address the proposed sustainability management systems associated with implementation of the Project. | |

## E.3 Environmental Baseline Conditions

The MBR Solar Park is located in Seih Al Dahl area in the Emirate of Dubai, about 55 km south of Dubai City (see Figure E.1). The Phase III component within the park shares its eastern

boundary with Phase IV and its southern boundaries with Phase V and Phase VI. The proposed location for the Project is within the existing allotted and approved site for the MBR Solar Park. As previously noted, the Project will mainly involve restoration works within the existing operation area of Phase III and will not involve any additional land-uptake.

Importantly, it should be noted that the entire solar park is within the Al Marmoum Conservation Reserve. However, the proposed Project activities is not expected to pose any direct impacts to the existing conservation programs within this reserve. In regard to nearby residential areas, the closest communities to the project location are Al Murqquab and Al Faqa both known for their agricultural character located approximately 14.4 km to the northeast and 16.3 km to the southeast, respectively (refer to Figure E.1). Additionally, the wider vicinity of the MBR Solar Park includes several livestock farming establishments, particularly near the E14 highway. The nearest livestock facility lies roughly about 10.8 km to the southeast, just beyond the MBR Solar Park's boundaries. A further cluster of farms can be found around the Sweihan area (area in Abu Dhabi Emirate), located about 10.5 km to the south of the proposed development site (see Figure E.1).

Given the brownfield nature of the Project, being located within an already developed and operational solar power facility with limited environmental and social interface, the baseline surveys conducted as part of the Phase III (project-specific) ESIA are considered sufficient. The use of this existing baseline information, including the defined scope and survey methodology, in this Addendum EIA Report was agreed upon with DECCA as per the EBS Scope Document (Ref. No. ED24.110 Baseline Scope_Rev1, September 2025).

Table E.2 provides a summary of existing physical and environmental conditions within and in the immediate surrounding areas of the project site.

**Table E.2 – Summary of Baseline Environmental and Social Conditions**

| Aspect | Brief Description |
|---|---|
| Climate and Meteorology | The recorded ambient temperature in the station was in the range 4.3 °C to 51.4 °C. The mean relative humidity is comparable with similar inner desert areas, which ranges from 38% to 65%. Rainfall recorded in the area is very limited, ranging from 0.1 to 17.8 mm. Prevailing wind is blowing from north-west directions. |
| Ambient Air Quality | The results of the ambient air quality monitoring showed that 24-hours averaging time concentrations of the measured pollutants are within their relevant DECCA/UAE limit (see Table 6.2). |
| Ambient Noise Levels | The results of the monitoring showed that existing ambient noise levels within the Project site and its surrounding areas were within the allowable DM/UAE noise limits (Table 6.4). |
| Soil Analysis | The results of the laboratory analysis of the soil samples (see Table 6.6), showed that the concentrations of all the parameters are not exceeded the relevant Dutch standards (Soil Remediation Circular, 2013) |
| Terrestrial Ecology | The survey findings indicated that floral communities in the project area were generally less diverse, with low natural vegetation cover. In the project area, *Zygophyllum qatarense, was* the dominant species, with a higher frequency index compared to other species. *Zygophyllum indicum* was the second most common/abundant species, followed by frequent species like *Salsola imbricata, Leptadenia pyrotechnica, Arnebia hispidissima, Cyperus conglomeratus,* and *Stipagrostis plumosa.* A total of four (N=4) mammal species were recorded during the survey period. The species observed were Arabian sand gazelle (*Gazella marica*), (Arabian Red Fox (*Vulpes vulpes arabica*), Arabian Hare (*Lepus capensis*), and Cheesman's gerbil (*Gerbillus cheesmani).* In addition, a total of two (N=2) reptile species were recorded during the survey period in the Project area. The species |

| Aspect | Brief Description |
|---|---|
| | includes Leptien's Spiny-tailed Lizard (*Uromastyx aegyptia leptieni*), Hadramaut sand lizard (*Mesalina adramitana*). Spiny-tailed Lizard is the only species reported from the project area categorized as 'Vulnerable' in both UAE National and IUCN Red Lists. A total of seven (N=7) avifauna species were recorded during the survey, and all the reported avifauna species are Least Concern according to The Abu Dhabi Red List of Species, UAE National, and IUCN Red Lists. |

## E.5 Description of Significant Environmental Impact

*Key Environmental Impacts*

During restoration works, potential impacts will include dust and gaseous emissions, noise generation and waste generation, etc., which are typical and can be managed through standard measures and best site practices. The key environmental concern associated with the development is its potential ecological impact, mainly due to the location of the park within a conservation reserve and presence of terrestrial fauna within the general area.

Given the extent and nature of the proposed restoration works to be conducted within the already developed and fenced facility, actual impacts are not expected to be significant. Nonetheless, it should be noted that faunal species (including gazelles, Arbian Red Fox, Arabian Hare, and individual species of spiny tailed lizard) have been observed within the Project areas during the terrestrial survey.

Although no new habitat is being disturbed, the presence of these species within the operational area required immediate action. In coordination with DM-NRS, both individuals were relocated from the site by DM-NRS as a precautionary ecological management measure in consistent with ongoing environmental obligations under the existing environmental management framework (being implemented by Masdar and EDF) for the solar park including Phase III operation.

Based on the above, to ensure that impacts to terrestrial fauna will be minimized, it is essential that animals that have accidentally entered the Project areas be allowed to move out and that fenced shall be repaired prior to start of any site activities. Detailed mitigation measures, monitoring/ surveys to be carried out during fence repair works is provided in Table 6.13 and Table 7.1 & Table 7.2 respectively.

Given that no new habitats are being impacted, and that appropriate action has been taken to address the presence of sensitive fauna, the potential ecological impact from the current project scope is not significant.

In terms of terrestrial habitat and flora, considering that the proposed Project will not involve new land-uptake, no significant impacts are expected. Ongoing implementation of the site's approved Environmental and Waste Management Plans, in addition to coordination with DECCA (formerly known as DM-ESD), will ensure continued protection of ecological values within Project site and the Al Marmoom Desert Conservation Reserve.

The restoration works at Phase III will remain within the project fenced area. No additional land nor activities will take place outside of the perimeter of the project. Consequently, the incremental environmental impacts arising from these activities are expected to be minor and localized. Given that all work will take place within the existing area and under established operational controls, no significant impact on the surrounding environment or nearby communities is anticipated.

Within the conservation reserve, the presence of the solar park is not expected to generate any negative visual impacts, as the development aligns with the broader sustainability objectives supported by the Government of Dubai. The Mohammed bin Rashid Al Maktoum

Solar Park (MBR) is positioned as a leading initiative in promoting renewable energy and environmental stewardship within the region.

It is recommended that the project proponent continue strict adherence to the existing environmental management system (EMS) and all applicable regulatory consents and permits governing Phase III operations.

Overall, the proposed modifications are assessed to be environmentally sustainable, with no significant adverse impacts expected, provided that preventive maintenance, and regular monitoring practices are consistently implemented.