



Non-Technical Summary

Yellow Door Energy, Solar Portfolio, Jordan

November 2019

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1. Introduction

Yellow Door Energy Limited ADGM has approached the European Bank for Reconstruction and Development (EBRD) with the request to finance a portfolio of eight solar photovoltaic (PV) power plants (herein referred to as the Portfolio or Project) in Jordan, which, once completed, will sell electricity to five different private customers (also referred as off-takers) under the Wheeling Regulations. The total capacity of the Portfolio will be 48MW.

The EBRD commissioned an Environmental and Social Due Diligence (ESDD) assessment to be undertaken of the Portfolio, which involved a site visit to the various plants and a desk-based review of project information in September 2019.

This document is a Non-Technical Summary (NTS) providing a summary of the Project in non-technical language covering the background and project description, the national Environmental Impact Assessment (EIA) process, the environmental and social benefits/impacts, mitigation and management measures that have been incorporated into a separate Environmental and Social Action Plan (ESAP) and the contact details for communications with a summary of the Stakeholder Engagement Plan (SEP) that includes a grievance mechanism that has also been developed as part of this project.

2. Project Description

2.1. Overview of the Project

Yellow Door Energy Limited Jordan (herein referred as Yellow Door Energy or the Company), who are owned by Yellow Door Energy Limited ADGM (a renewable energy developer and operator incorporated in the United Arab Emirates), are developing a Portfolio of eight solar PV plants in Jordan.

Once operational, the plants will sell electricity to five different private customers under the Wheeling Regulations. The private off-takers include:

- Classic Fashion, a garments manufacturing company;
- Umniah, the third telecom operator in Jordan;
- Taj Mall, a shopping, dining and entertainment centres company;
- Carrefour, supermarket chain; and
- Safeway, also a supermarket chain.

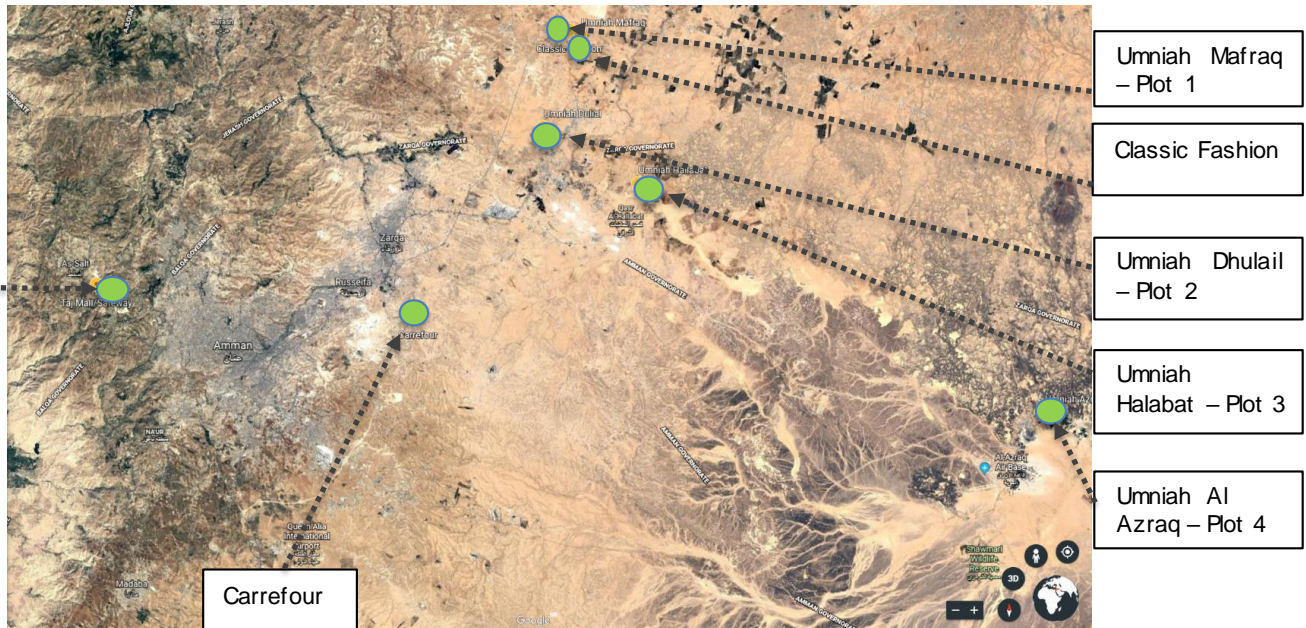
The plants are sited across 8 land plots in the 4 following Governates: Mafrq, Zarqa, Balqa and Amman, as listed below by off-taker:

- Classic Fashion plant, located in Mafrq.
- Umniah plants
 - Plot 1, located in Mafrq.
 - Plot 2, located in Dhulail.
 - Plot 3, located in Halabat.
 - Plot 4, located in Azraq.
- Safeway plant, located in Fuhais.

- Taj Mall plant, located in Fuhais.
- Carrefour plant, located in East Amman.

The location of each plant is shown in the Figure 1 below.

Figure 1 – Location of the PV plants



The eight plants are currently at different stages of development, with 40MW out of a total 48MW already under construction. The Taj Mall and Safeway plants have not yet commenced construction. The Portfolio is expected to be all commissioned by July 2020.

The plants will have associated facilities comprising power lines and substations that are not the responsibility of Yellow Door Energy Jordan. The Company will construct the powerlines, although JEPCO (a Jordanian electricity distribution company) will be responsible for the design and operation of the powerlines. The Engineering, Procurement and Construction (EPC) contractor selected for Umniah Telecom and Classic Fashion Plants will be BELECTRIC. For the remaining plants the EPC contractor has not yet been selected.

3. Background

3.1. Rationale for the Project

There is an abundance of renewable energy sources in Jordan, particularly solar and wind. However, these are currently being under-utilised.

The Jordanian Government has been taking measures to explore the potential of its renewable energy resources and grow the country's renewable energy sector. In 2012 Jordan launched an energy strategic plan which set out a Renewable Energy (RE) target for 2020 for 10% of the country's energy sources to be from renewables. This target was later revised and increased to 20%. In order to achieve this target, the Government has invested in expanding the development of renewable energy projects; the Renewable Energy and Energy Efficiency

Law was approved and an energy efficiency fund was established, alongside other renewable energy schemes.

A Renewable Energy Electric power Wheeling Directive was also issued in 2013 (amended in 2015) which allows an organisation to install a Renewable Energy System for electric power generation from renewable energy sources in a location different to the location of the organisation's premises, which has been a key driver for organisations to design, procure and install such systems.

Growth in the renewable energy sector in Jordan will increase the country's own energy efficiency rates and help to lower emissions from non-renewable sources. It will also help to ensure security of supply.

3.2. Legal Aspects and Compliance

A national Preliminary Environmental Impact Assessment (PEIA) for the eight plants has been developed in accordance with the rules, regulations and standards of the Kingdom of Jordan for the design and construction of solar PV plants.

An independent gap analysis review of the national PEIA and other key documentation has been undertaken against EBRD's Performance Requirements, IFC Performance Standards, EU Directives and international best practice. The gaps identified have been used to develop an Environmental and Social Action Plan (ESAP) for implementation, and a disclosure pack comprising of this NTS and a Stakeholder Engagement Plan (SEP) in English and Arabic.

The SEP provides a framework for consultation activities and project disclosure information including the identification of potential stakeholders, methods used for consultation activities and the records to be kept.

3.3. Environmental and Social Action Plan

Potential environmental and social impacts (including community and occupational health and safety) have been identified and mitigation measures have been developed that are presented within the PEIAs. Further mitigation measures were identified in the gap analysis review which have been included within the ESAP as implementable actions. Yellow Door Energy are committed to ensuring that the ESAP is implemented.

4. EIA Process

3.1. Project Design and Regulatory Compliance

A national Preliminary Environmental Impact Assessment (PEIA) has been completed for each of the plants and approved by the Ministry of Environment. The PEIAs have been reviewed to identify gaps, which have been addressed with an Environmental and Social Action Plan (ESAP) including recommended actions for implementation in order to fully meet EBRD's Performance Requirements, EU standards and international best practice.

The Ministry of Environment has granted conditional approval for the Environmental Permit for the following plants:

- Classic Fashion
- Umniah (plot 1, 2, 3 and 4)
- Safeway
- Taj Mall

The Environmental Permit for the Carrefour Project (located in East Amman) is currently in the process of being obtained. Similarly, a number of other relevant permits, permissions, licenses, approvals, consents, etc have either been obtained or are in the process of being obtained. Those that still need to be obtained for the Project, are referenced in the ESAP as being required to be obtained prior to undertaking activities for which they are required, inclusive of the following for some of the plants:

- Construction permits;
- Energy and Minerals Regulatory Commission (EMRC) approval and Generation License;
- Power Purchase Agreement (if required) as Interconnection Agreements may be sufficient; and
- Approval from the Royal Air Force (if required).

3.2 Consultation with Stakeholders

Under Jordanian national legislation there are no specific requirements with regards to ongoing project public consultation, stakeholder engagement, or stakeholder engagement planning to guide the consultation and engagement process associated with the development of a project.

Overall, some stakeholder engagement has taken place across the Portfolio, although no records of consultations are available. Informal stakeholder discussions were undertaken at some of the plants during the ESDD that was recently undertaken, near the Taj Mall / Safeway site at Fuhais with a local family and at Umniah – Al Azraq with a security guard from a Bedouin community and a local family.

The SEP that has been developed for the project outlines future stakeholder engagement activities that will be implemented by Yellow Door Energy. Further details of the SEP are provided in Section 6 of this NTS.

5. Summary of Environmental and Social Impacts and Mitigation Measures

The key potential environment and social impacts associated with the development of the eight plants, including mitigation measures developed during the construction and operational phases and their duration and reversibility are:

Biophysical Environment	Human Environment
Waste Management Biodiversity and Living Natural Resources Resource Efficiency Landscape and Visual	Land Acquisition and Resettlement Archaeology and Cultural Heritage Occupational Health and Safety including Labour Standards Community Health and Safety Emergency Response

Details of impacts and mitigation measures are summarised below.

Resource Efficiency

The PEIA's do not identify or assess the use of materials for each plant. As Jordan is the second most water scarce country in the world, alternatives to wet cleaning will be investigated, particularly at the Umniah Al Azraq plot as the wetland reserve is less than 10% of its original size. Dry cleaning options such as using a brush trolley and/or a dust broom should be considered.

Effects: Potential impact during operational phase only. Reversible and no impact following implementation of mitigation measures.

Waste Management

Waste management plans were in place for the Umniah plants and the Classic Fashion plant for the construction phase. These help to manage environmental impacts of the plants associated with waste generation. Waste Management Plans aim to reduce the amount of waste produced on construction sites by setting out how building materials, and any resulting waste, will be managed during the construction and life of the plant. The type of waste generated includes domestic waste (such as food, paper, cans etc), hazardous waste (such as paint, chemicals, oil, damaged panels), and construction waste (steel scraps, electrical cables etc).

The Waste Management Plans should be further improved by including additional information with regards to the description of each waste type generated throughout the life of the plant, key personnel and responsibilities for waste management, waste management action for different waste types (reusing, recycling, recovery and disposal) and estimation of the quantity of each different waste type expected to be produced. Additional measures have also been proposed in the ESAP relating to keeping records of waste carrier licenses and waste transfer notes.

Effects: Potential impact during both construction and operational phase. Reversible and no impact following implementation of mitigation measures.

Emergency Response

The PEIAs do not assess the project impacts associated with emergency situations including fire hazards, spills/ contamination, etc. Based on a review of the documentation, a number of measures are required to be implemented for each plant including developing an Emergency

Response Plan, conducting a fire risk assessment at the Umniah Al Azraq, Umniah Mafrag and Taj Mall / Safeway sites and a number of other housekeeping duties which are outlined in the ESAP.

Effects: Potential impact during both construction and operational phase. Reversible if emergency response plans are fully implemented.

Biodiversity and Living Natural Resources

Umniah Plant– Plot 1 Mafrag, Plot 2 Dhulail, Plot 3 Halabat

These plots are not located in biodiversity sensitive areas. Some high-risk impacts in relation to the removal of topsoil in preparation for construction, were identified in the PEIA. However, the topsoil is mostly poor, eroded and of the calcareous or loose type. No mitigation measures are required.

Some trees are required to be removed from Plot 1, Mafrag plant, due to the risk as a result of the proximity of them to the power lines. If possible, the option of replanting the trees will be explored to manage this issue, and the appropriate permissions will be requested.

Umniah Plant– Plot 4 Al Azraq

One of Jordan's two Ramsar sites, Azraq Wetland Reserve is approximately 6 km from Umniah Telecom, Plot 4 Al Azraq plot. There are not expected to be any impacts as a result of the Project due to the distance of 6 km from the Umniah Al Azraq plot. In addition, the transmission line at Al Azraq is short (a 200 metre overhead line), and where this could be an impact best practice features for bird protection can be incorporated.

Shaumari Wildlife Reserve, home to highly varied biodiversity and certain rare species on the IUCN Red List (2015), is located approximately 16 km south-east of Umniah – Plot 4 Al Azraq plot.

Some high-risk impacts in relation to the removal of topsoil were identified in the PEIA; however, the topsoil is mostly poor, eroded and of the calcareous or loose type. Furthermore, some trees are required to be removed due to the risk of them falling onto the PV panels. If possible, the option of replanting the trees will be explored to manage this issue, and the appropriate permissions will be requested.

Taj Mall/Safeway Plant

The potential for some IUCN Red List species to be present (where the proposed Taj Mall/Safeway plants are located) was also identified. Further mitigation measures and actions have been outlined in the ESAP to minimise the impact on biodiversity, this includes a qualified ecologist undertaking a site walkover to allow a fully-informed mitigation strategy to be designed and implemented for the plant.

Carrefour Plant

This plant is not located in a biodiversity sensitive area.

Summary of effects: Potential impact during both construction and operational phase. Reversible and no impact following implementation of mitigation measures. This applies to Umniah Plant – Plot 4 Al Azraq, and Taj Mall and Safeway plants.

Archaeology and Cultural Heritage

Official approval has been received from the Department of Antiquities for the Classic Fashion, Taj Mall and Safeway Plants to continue with the project development and for Carrefour and Umniah Telecom plants, archaeological surveys undertaken for the Preliminary EIA revealed that there are no historic and archaeological monuments or cultural heritage artefacts located within the region of construction sites.

According to the documents reviewed, an independent consultant's site visit, and subsequent meetings, and review of the PEIAs, it can be concluded that no cultural heritage sites are present close to the plants. However, a Chance Find Procedure should be implemented for all sites. However, a Chance Find Procedure should be implemented for all plants.

Effects: Potential impact during both construction phase only. Reversible and no impact following implementation of mitigation measures

Landscape and Visual

The PEIAs for the plants did not assess impacts in relation to glint/ glare or landscape and visual. Glint/ glare and landscape and visual impacts is not considered to be an issue for Classic Fashion, Umniah Plot 2/ Dhulail and Plot 4/ Al Azraq. However, given the relative proximity of residential properties to the north, north-west and west of the site as well as the location of a factory to the south of the Taj Mall/ Safeway plants, a glint/ glare and landscape and visual assessment is required to be undertaken and any additional mitigation measures incorporated into the project design.

Visual Effect: Potential impact during both construction and operational phase. Reversible and no impact following implementation of mitigation measures.

Landscape Effect: Potential impact during both construction phase only. Largely reversible impact following implementation of measures arising from landscape and visual assessment (this applies to Taj Mall and Safeway plants).

Occupational Health and Safety, including Labour and Working Conditions

A Health, Safety and Environmental (HSE) induction is provided by the EPC Contractor to all visitors to the plants. In general, there is good use of Personal Protective Equipment (PPE) across the portfolio of plants. Some isolated cases were observed in which the workforce was not wearing adequate PPE and improvement in the enforcement of PPE usage is required.

There is an opportunity to strengthen health and safety management practices (including management of contractors) in all plants and these are detailed in the ESAP. The key HSE recommendations require the development and implementation of a Construction Phase Environmental, Health, Safety and Social Management Plan (CESMP) and Operational Phase Environmental, Health, Safety and Social Management Plan (OESMP), which will include a number of additional measures to be implemented, such as: use of effective PPE on construction sites, integration of HSE signage across plants, demarcating hazardous areas, improvement of general HSE housekeeping for the storage of materials and facilities to be kept clean and hygienic.

Effects: Potential impact during both construction and operational phase. Reversible and no impact following implementation of mitigation measures.

Land Acquisition and Resettlement

Land acquired for the plants and associated infrastructure reportedly has not led to any involuntary resettlement or economic displacement. The land for the plants is either owned by Yellow Door Energy or is being leased by them for periods of either 10 or 20 years.

Bedouin communities with livestock were noted to be present along the borders of one of the land plots for Umniah – Plot 4/ Al Azraq. Livestock grazing was observed around the plant, although there was an open expanse of land around the plant. As part of the ESAP, a review is required to be undertaken to establish whether the facility will restrict access to local herders and if so measures should be introduced into the design to allow continued animal grazing in

the area, including to allow access to the land or some parts of the land to allow direct access through the plant if required.

For powerlines and substations (as associated facilities), Yellow Door Energy will collaborate with JEPCO to obtain information to confirm that land issues fully comply with national standards and that there will be no affected people due to physical and / or economic displacement prior to their construction and confirm that a Resettlement Action Plan (RAP) and/or compensation plan would not be required.

Effects: Potential impact during both construction and operational phase. Reversible and no impact following implementation of mitigation measures and largely reversible impact on access rights following implementation of mitigation measures (this applies to Taj Mall and Safeway Plants).

Community Health and Safety

The Project is unlikely to result in significant long-term adverse social impacts. However, there is a potential for construction impacts mainly associated with reduced access rights for livestock grazing, dust and noise affecting households living within close proximity to the Safeway and Taj Mall plants. The Project will implement mitigation measures required as part of the ESAP to ensure minimum impact.

During the construction phase, the roads may be busier resulting in an increase in emissions and dust affecting local air quality and amenity. There is also the potential for an increase in the number of accidents particularly on roads that are very narrow and windy such as the Taj Mall/ Safeway Project plants. The ESAP includes a number of requirements to mitigate these potential adverse impacts including the development and implementation of a Traffic Management Plan and Dust Management Plan.

Effects: Potential impact during construction phase only. Reversible and no impact following implementation of mitigation measures.

Other Social Considerations

Ensuring a percentage of the workforce are from the local community helps to ease social conflict and is in line with national Jordanian labour requirements. Yellow Door Energy will need to prioritise local employment opportunities, particularly for women in order to ensure social cohesion.

A new road (funded by Yellow Door Energy) is being constructed between the Classic Fashion and Umniah Telecom land plots in Mafraq as the existing road was not in a good condition. This will have a positive impact on surrounding communities as the existing road is extremely dusty.

Effects: Potential impact during construction phase only. Reversible and no impact following implementation of mitigation measures.

6. Communications

6.1 Stakeholder Engagement Plan

A Stakeholder Engagement Plan (SEP) has been prepared for the Portfolio. The SEP identifies relevant stakeholders for each plant, defines communication channels and engagement activities regarding the construction and operation of the plants.

The SEP aims at summarising the methods, procedures, policies and activities that will be implemented by the Client to inform stakeholders, in an inclusive and timely manner, about the potential impacts of the various plants.

The SEP contains a stakeholder identification table where all relevant stakeholders are identified, detailing the most appropriate communication channels and strategies, information disclosure requirements and grievance processes that will be adopted. If there are stakeholders who are not included in the SEP, they can get in contact with Yellow Door Energy to receive information about the Project and be added to the stakeholder engagement programme.

The SEP includes a programme of immediate consultation and engagement activities required to address current stakeholder concerns, as well as regular consultation and disclosure activities throughout the project life cycle. In addition, the SEP has a grievance mechanism, the details of which are provided in the next section.

6.2 Grievance Mechanism

A grievance mechanism will be implemented to ensure that the Client is responsive to any concerns and complaints particularly from affected stakeholders and communities. Special care will be focused on the training of the designated staff involved in the management of the grievance mechanism. This grievance mechanism covers both employees and non-employees (i.e. affected people and other relevant stakeholders).

Any comments or concerns can be brought to the attention of the company verbally, or in writing (by post or e-mail), or by filling in a grievance form included in the SEP.

All grievances will be:

Acknowledged within 5 working days.

Responded to no later than within 30 working days.

6.3 Contacts

Contact details and responsibilities for SEP implementation are as follows:

Name: Azmi Sallam

Title: VP Project Management

Telephone: Office: +962 655 416 55

Address: Suite 302, Prime Centre 13, Tla'a Al-Ali, Zuhar Street, Amman, Jordan

Email: azmi.sallam@yellowdoorenergy.com

Website: www.yellowdoorenergy.com

The contact for the SEP and the Client Liaison Officer (CLO) will collate any comments and feedback associated with this project and will document these.

All comments received will be reviewed in accordance with the requirements set out in the SEP. All communications will be reviewed for the feasibility to make changes to satisfy the request and interest and the communicator will be informed of the outcome.