



**The American Chamber  
of Commerce in Jordan**



**CCI FRANCE JORDANIE  
CAFRAJ**

# **Building on the Potential of Renewable Energy Sustainability in Jordan**

**Ambassador Hotel-Amman  
September 5<sup>th</sup> 2022**

**Samer S. Judeh  
Chairman ,AmCham-Jordan**

# About AmCham- Jordan



AmCham-Jordan established in 1999. It is a non-for-profit organization with 23 years of experience in the promotion of bilateral trade and investment between Jordan and the US.



AmCham-Jordan has over 250 members from Jordan and the U.S. through a multi-sectorial approach to issues of interest.



AmCham –Jordan works through an inclusive process of committees and peer groups, where executives from members participate, meet and establish direct links with their counterparts and policy makers in Jordan and in the U.S.



AmCham-Jordan is a proud member of the U.S. Chamber of Commerce in Washington D.C., the largest global and international business organization in the world.



The MENA Council was established in 2005, to foster collaboration and cooperation amongst its Members that comprises the American Chambers of Abu Dhabi, Algeria, Bahrain, Egypt, Jordan, Lebanon, Morocco, Palestine, Tunisia, Qatar and Dubai.

# AmCham- Jordan Activities on Sustainability

**Egypt, 2017**

**“The Private Sector’s Role  
in Implementing the  
Sustainable Development  
Goals”**

The Conference was held with the objective of highlighting new paths for global partnerships and identifying business opportunities in support of the Sustainable Development Goals (SDGs) in the Region.

It shed light on the incorporation of private sector-led initiatives as key drivers of sustainable economic models and inclusive growth.

**U.S.A, 2019**

**"Business H2O:Water  
Innovation Summit"**

The Conference focused on improving water governance to promote industrial and economic growth, public policy and regulatory challenges, water stewardship, sustainable water principles, public-private partnerships and promoting investment in water infrastructure and technologies, and much more.

# AmCham- Jordan Activities on Sustainability

## Jordan, 2022

### **Social Media Supporting Partner – “Why You Should Recycle Campaign”**

**USAID Recycling in Jordan activity deploys a market systems approach to increase commercial sector utilization of recycling services in Amman.**

**“Why You Should Recycle” is a social media campaign on recycling that aims to raise awareness of the commercial and industrial sectors on the importance of recycling.**

## Jordan/ Egypt, 2022

### **Supporting “WALK2COP27 Initiative”**

**Walk2COP27 sets out to accelerate climate action in the run-up to COP27 which will take place on November 6-7 in Sharm Al Sheikh. The initiative purpose is to build mass participation and engagement: bringing people together from different countries, informing and educating, building solidarity, and creating connections.**



## Greening the Economy

**AmCham-Jordan  
&  
EDAMA**

**Are teaming together to  
co-host an event for the  
business community  
supporting COP27**

**AmCham and EDAMA the association for  
Water & Environment, a member of the  
Coalition share a common goal of greening the economy.**

**Energy,  
Tijara**



# A Royal Message

We want a future where we reclaim our leadership in education, advance our economy, and bolster our public sector's efficiency and capacity; a future in which our private sector thrives with opportunities increasing fairly to counter poverty and unemployment, and curtail inequality; a future that empowers our youths to soar in the skies of innovation.

Abdullah II Ibn Al Hussein

January 30, 2022



# Economic Modernisation Vision

Unleashing potential to build the future

## Sustainable Resources

**The ‘Sustainable Resources Driver’ contains two sectors with 18 initiatives. The driver steers the implementation of efforts to optimize the use and enhance the sustainability of Jordan’s natural resources in the areas of energy and water as a precursor to unleashing Jordan’s economic growth and quality of life potential.**



# Economic Modernisation Vision

Unleashing potential to build the future

## Energy: Key achievements and contributions of the energy sector



### Renewable energy Share

Globally recognized increased renewable energy projects in solar and wind owing to favorably diverse terrain and abundance of solar power



### Solid growth momentum

Jordan electricity sector has been growing with a rate of 6.8% p.a. over the last decade consistently despite various socio-economic challenges



### Expanding regional energy demand

Exploiting opportunities by expanding energy interconnectivity with neighboring states due to increasing regional energy demand (KSA, Iraq, Palestine, Lebanon)





# Economic Modernisation Vision

Unleashing potential to build the future

## Energy: Key achievements and contributions of the energy sector



### Inclusive access

100% electricity access across Jordan in rural and urban areas utilizing 4,463 km of transmission lines



### Clean energy uptake

Renewable energy capture has seen significant growth over the past 5 years - currently contributing to over 26% of Jordan's electricity generation



### Efficient transmission

Strong performance of NEPCO with only 1.7% transmission losses, comparable to those found in France, Germany and Turkey



# Economic Modernisation Vision

Unleashing potential to build the future

## Energy Strategic Objectives

### Strategic Goals for the Energy Sector:

**Reduce the cost of energy on the National Economy**

**Increase the energy efficiency use in all sectors**

**Develop the energy sector in Jordan , making it a regional center for energy exchange**

**Increase the share of local resources in the energy mix**

**Diversify energy resources**



# Economic Modernisation Vision

Unleashing potential to build the future

## Energy Initiatives:

- **Including developing an Actionable Energy Transition Roadmap (Renewables, Hydrocarbons, hydrogen, etc...)**

- **Enhancing Energy Infrastructure (Smart power grid, storage handling, Transit Pipelines, etc..)**
- **Promoting Energy cost Reduction Mechanisms**



# Economic Modernisation Vision

Unleashing potential to build the future

## Water Initiatives:

- **Including enhancing water supply and demand management monitoring/control**
- **Promoting Climate-resilient & sustainable water use practices**

- **Launching water desalination projects to enhance water security for Jordanians**
- **Implementing the Non-Revenue Water strategy to reduce losses in the system**



# Economic Modernisation Vision

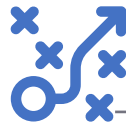
Unleashing potential to build the future

## Energy: Strategic future opportunities and priorities



### Strategic ambitions

Secure reliable, affordable and sustainable energy while building on interconnectivity efforts to enable Jordan's economic growth through diversification, localization, innovation & agility



### Strategic rationale

Increase local resource contribution to secure abundant / low-cost energy to stimulate demand and economic growth



### Strategic focus

Improve energy efficiency, energy transmission / connectivity, and energy generation from renewable sources to support economic growth as a regional energy provider

# RE Projects in Jordan

By end of July 2022

Source: MEMR



**Total Operational**



1912 MW



614 MW

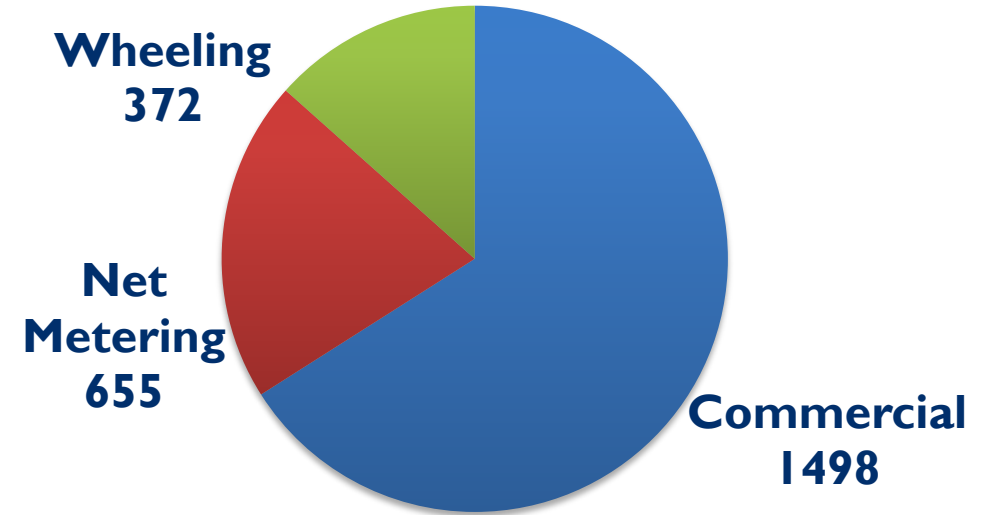
**Excluding under-construction  
Net-metering and Wheeling Projects**

# RE Projects in Jordan

By end of July 2022

Source: MEMR

## Operational RE Capacities per Contract Type



Contracting Type	Capacity (MW ac)
Commercial	1498
Net Metering	655
Wheeling	372
<b>Grand Total</b>	<b>2526</b>

**Jordan Wind Project Company (JWPC)**

**JWPC**  
Jordan Wind Project Company  
شركة مشروع رياح الأردن للطاقة المتجددة



## **Al Tafila Wind Farm: A Success Story!**



**First Commissioned Utility Scale Wind Project in Jordan/ Region**



# Participants: Sponsors and Lenders



## Sponsors



## Lenders

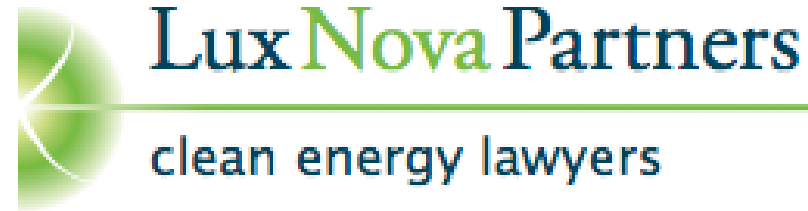


Finance for Development

# Advisory and Service Providers

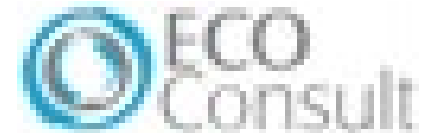
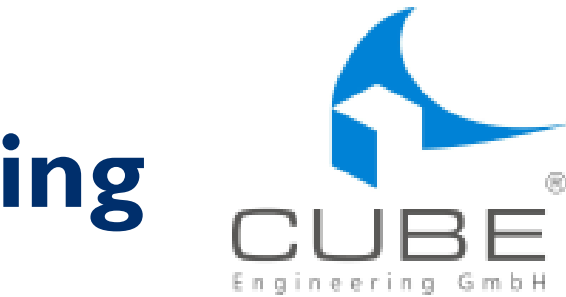


## Legal



Hadidi & Co. Law Firm

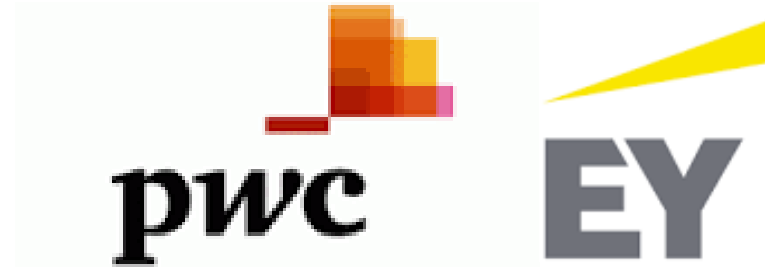
## Engineering



# Advisory and Service Providers



**Accounting  
Tax**



**Account  
Banks**



**Insurance**



# Timeline and Project Cost



**Q2 2011**

**MoU Signed  
with GOJ**

**Q4 2013**

**PPA/ EPC/  
Finance Docs  
signed**

**Q2 2014**

**Commenced  
site works  
(21 month Construction Period)**

**Q1 2015**

**Turbine  
erection  
commenced**

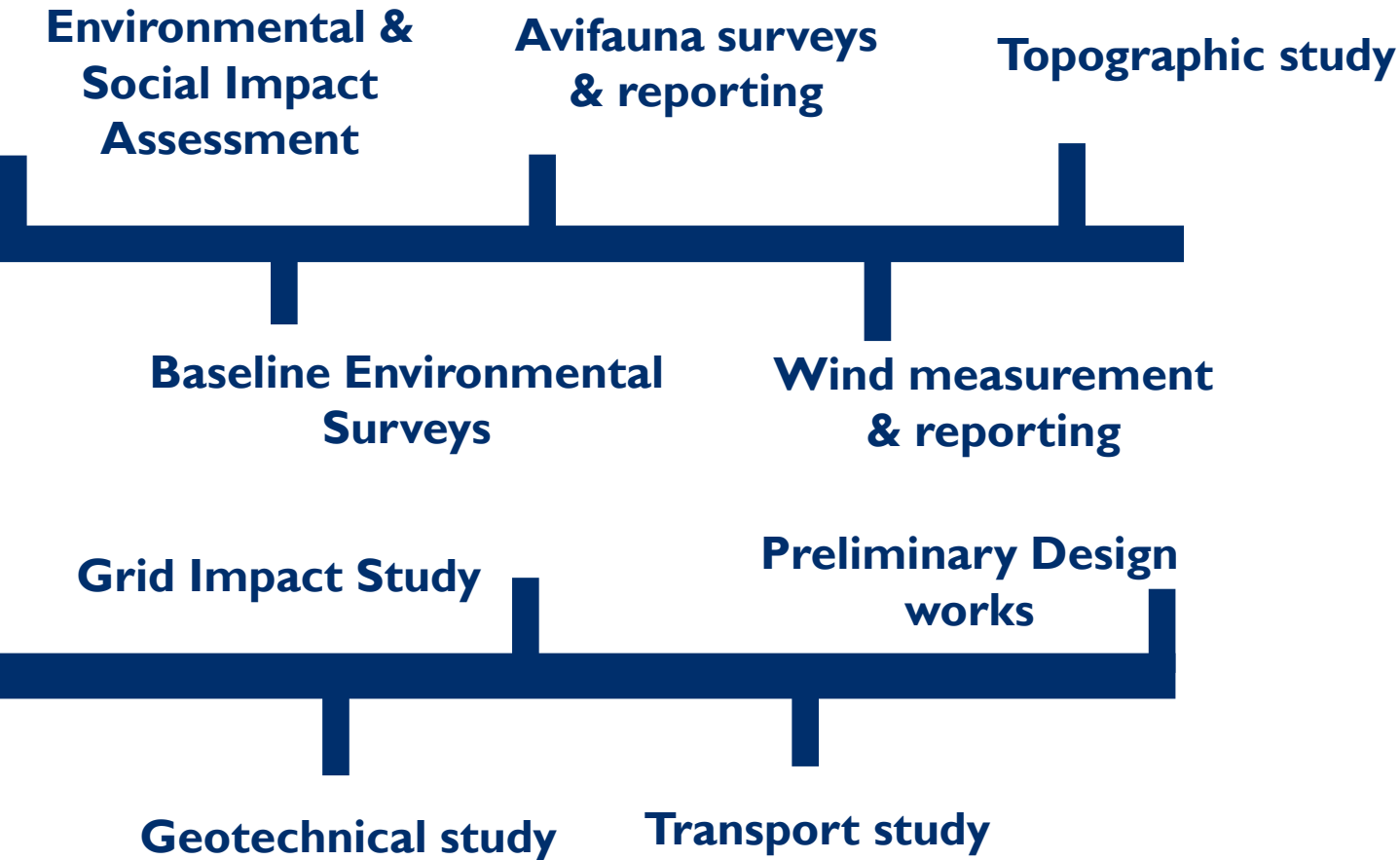
**9/2015**

**Commercial  
Operations Start  
(20 years)**

**Total Project Cost: \$ 287 Million**

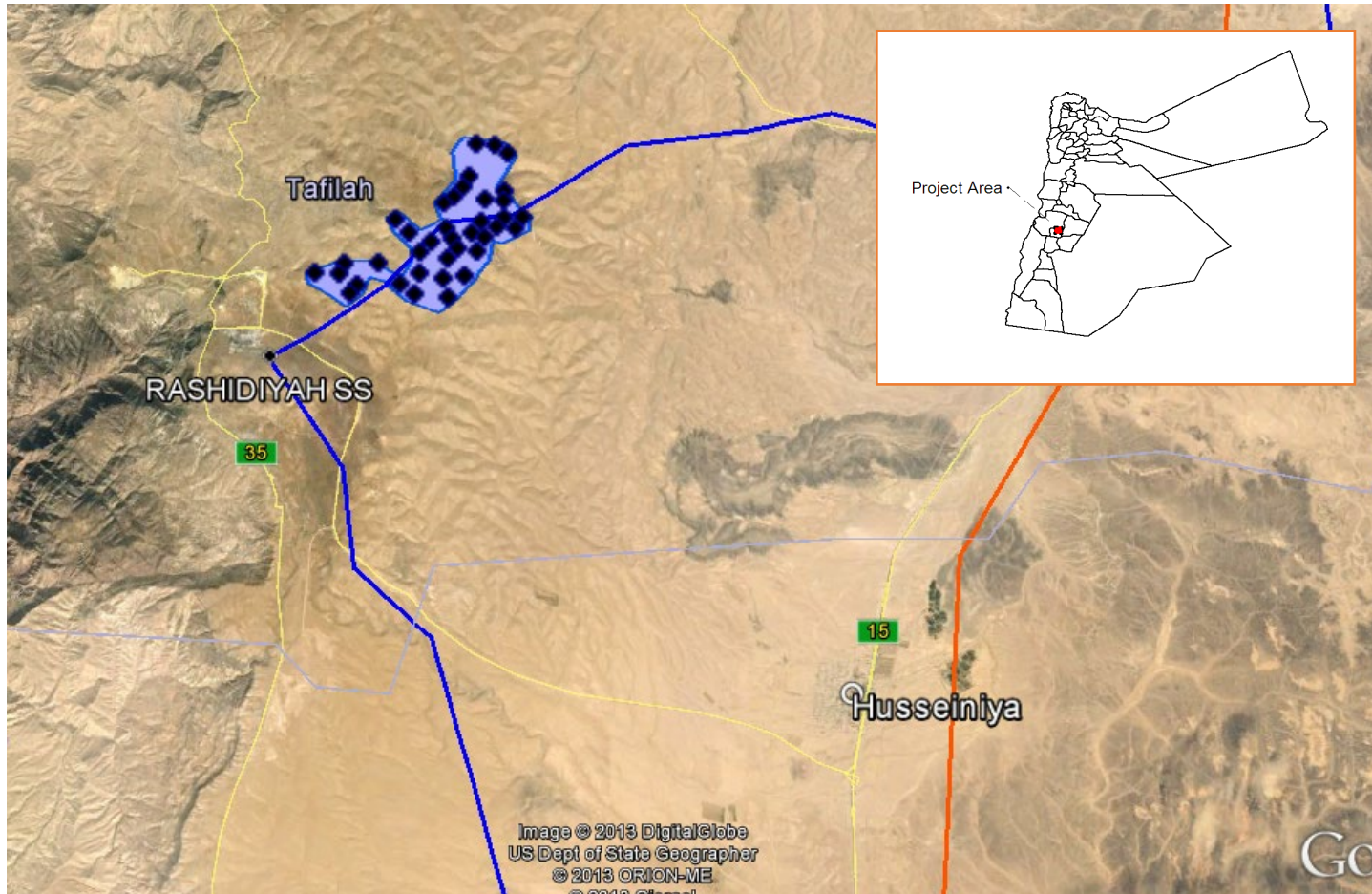
# Development Process

## Required Studies:





# Development/ Implementation Challenges



## Development:

- **Land Acquisition & Title Documentation**
- **Tax Framework**
- **Project Documents**
  - **PPA / TCA**
  - **Financing Docs**
  - **EPC (DBOM) Contract**
- **Environmental (Avian monitoring / risk assessment)**
- **Permitting**

# Accomplishments



**First privately  
Sponsored utility  
scale wind farm in  
the Middle East**

**First non-recourse  
project finance  
renewable deal in  
the Middle East**

**Middle East  
Renewable Deal of the  
Year 2013- Project  
Finance Magazine**

**First utility scale  
renewable plant  
in Jordan**

**First renewable  
PPA and  
Generation  
License in  
Jordan**

**First successfully  
commissioned  
RE project onto  
NEPCO grid in  
September 2015**

**UFM labeled  
project since  
2014**

# Development/ Implementation Challenges



## Construction:

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- **Customs / Importation / Transport**
- **Wind conditions during turbine erection**
- **Crane logistics**



# Project Components



## Unloading & Transport



## Component unloading in Aqaba

# Project Components



**Foundation  
Reinforcement  
works**



**Backfilled Foundation**



**Completed Foundation  
ready for backfilling**

## Foundations



# Royal Inauguration



**HM the King landing at site to inaugurate the wind farm project**

# Royal Inauguration

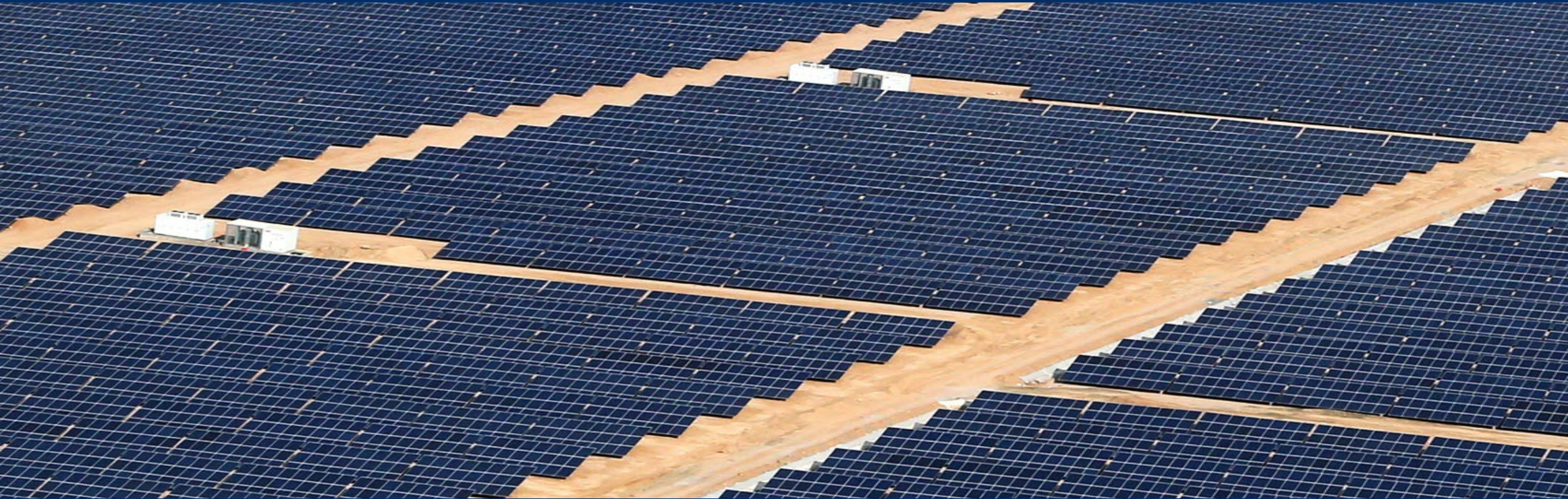




**SHAMSUNA Power Company LLC**



**A Success Story!**



**First Commissioned PV Project to Connect to National Grid in Jordan**



**SHAMSUNA Power Company LLC**



**First Commissioned PV Project to Connect to National Grid in Jordan**

# Accomplishments



**First Solar company to  
obtain a Power Generation  
License in Jordan**

**First utility scale solar plant in  
Jordan to connect to the  
National grid**





**The American Chamber  
of Commerce in Jordan**

**MERCI!**



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