



الشراكة الأردنية الألمانية
في مجال الطاقة
Energiepartnerschaft
DEUTSCHLAND - JORDANIEN



MINISTRY OF ENERGY AND MINERAL RESOURCES

Supported by:



on the basis of a decision
by the German Bundestag



The Jordanian-German Energy Partnership

*Boosting sustainable energy through
bilateral co-operation*

www.energy-jordan-germany.org

giz

The Jordanian-German Energy Partnership Overview



الشراكة الأردنية الألمانية
في مجال الطاقة
Energiepartnerschaft
DEUTSCHLAND – JORDANIEN

H.K.J. National Objectives

Jordan Energy Strategy 2020 – 2030

German Energy Concept and
“Energiewende” framework



Energy Partnership

- Forum for high-level exchange
- Connecting representatives of government, industry, civil society, and academia
- Facilitate innovation in the energy system
- Support an affordable, reliable, and sustainable supply of energy, based on the efficient use of domestic resources
- Support regional and international co-operation in energy policy
- Stimulate private-sector activity and innovation in energy



The Jordanian-German Energy Partnership Timeline



الشراكة الأردنية الألمانية
في مجال الطاقة
Energiepartnerschaft
DEUTSCHLAND – JORDANIEN



Establishment of the Energy Dialogue

October 2016: The cooperation on energy policy between Jordan and Germany was first established in 2016 as an energy dialogue.

Establishment of the Energy Partnership

April 2019: The Jordanian Minister of Energy and Mineral Resources, Eng. Hala Zawati, and the German Federal Minister for Economic Affairs and Energy, Peter Altmaier, signed a declaration of intent of the two governments.

Welcome at the Ministry

September 2020: The Secretariat moved into the Jordanian Ministry of Energy and Mineral Resources and is operational.

2016

2017

2018

2019

2020

The Jordanian-German Energy Partnership

Activities



الشراكة الأردنية الألمانية
في مجال الطاقة
Energiepartnerschaft
DEUTSCHLAND – JORDANIEN

Electricity grid and market development

- TSO exchange of experience
- Smart metering and digitisation policy options

Innovation in the energy sector

- MEMR Innovation Lab
- Hackathon and start-up support

Gender in the energy sector

- Mentoring and networking
- Gender baseline study
- Gender strategy roadmap

Energy efficiency

- German-Jordanian exchange of experience on national energy efficiency plans
- NEEAP implementation governance

Policy foundations

- RE and EE socio-economic impact
- Planning and energy balances
- Evaluation and update of subsidy schemes
- Operation, maintenance, and digitisation of RE facilities
- hydrogen

Boosting employment

- Establishment of the German – Jordanian Energy Academy

German-Jordanian business relations

- Jordanian-German Energy Business Council
- B2B matchmaking
- Support in individual company issues

Contact



الشراكة الأردنية الألمانية
في مجال الطاقة
Energiepartnerschaft
DEUTSCHLAND – JORDANIEN



Johannes Uhl
Head of Secretariat
+49 6196 79 84208
+962 77 0471111
johannes.uhl@giz.de
Amman, Jordan



Bassam Darwish
Advisor
bassam.darwish@giz.de
Amman, Jordan



Hendrik Meller
Deputy Project Director
+49 30 338424-186
hendrik.meller@giz.de
Berlin, Germany



Stephan Franz
Advisor
+49 6196 79-7547
stephan.franz@giz.de
Frankfurt, Germany



POLICY PAPER
**Boost Jordan's Clean Energy Transition Through its
COVID Recovery Plan**



About EDAMA Association

Who we are?

We ensure the establishment and growth of a vibrant energy, water and environment sectors in order to secure positive environmental realities for Jordan.

Our Vision

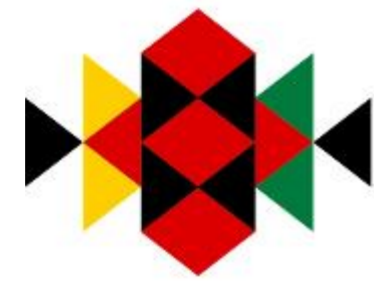
We ensure the establishment and growth of vibrant private Energy and Water sectors reflecting positive environmental realities in Jordan.

Our Members



EDAMA's Main Pillars





الشراكة الأردنية الألمانية
في مجال الطاقة

Energiepartnerschaft
DEUTSCHLAND – JORDANIEN

Supported by:



Federal Ministry
for Economic Affairs
and Energy

on the basis of a decision
by the German Bundestag

“Boosting Renewable Energy Build-up as a Contribution To Jordan’s Post-COVID 19 Recovery”

Post-COVID 19: Addressing a clean and sustainable recovery in Jordan.



SolarPower
Europe

giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH

Section I: Project Overview

Project Title: Boosting Renewable Energy build-up as a contribution to Jordan's post-Covid recovery.

3 working Packages

- Work Package 1: Jordanian EPC and O&M best practice guidelines.
- Work Package 2: Report on Innovations: Digitization, Storage and Mobility.
- Work Package 3: Post-COVID 19: Addressing a clean and sustainable recovery in Jordan.

Duration: 18 Months



الشراكة الأردنية الألمانية
في مجال الطاقة
Energiepartnerschaft
DEUTSCHLAND – JORDANIEN

Supported by:



on the basis of a decision
by the German Bundestag



SolarPower
Europe



Section I:

Post COVID-19: Addressing a Clean and Green Recovery in Jordan

The report studied the effect of COVID-19 on Jordanian renewable energy companies and affects transition toward the clean energy.

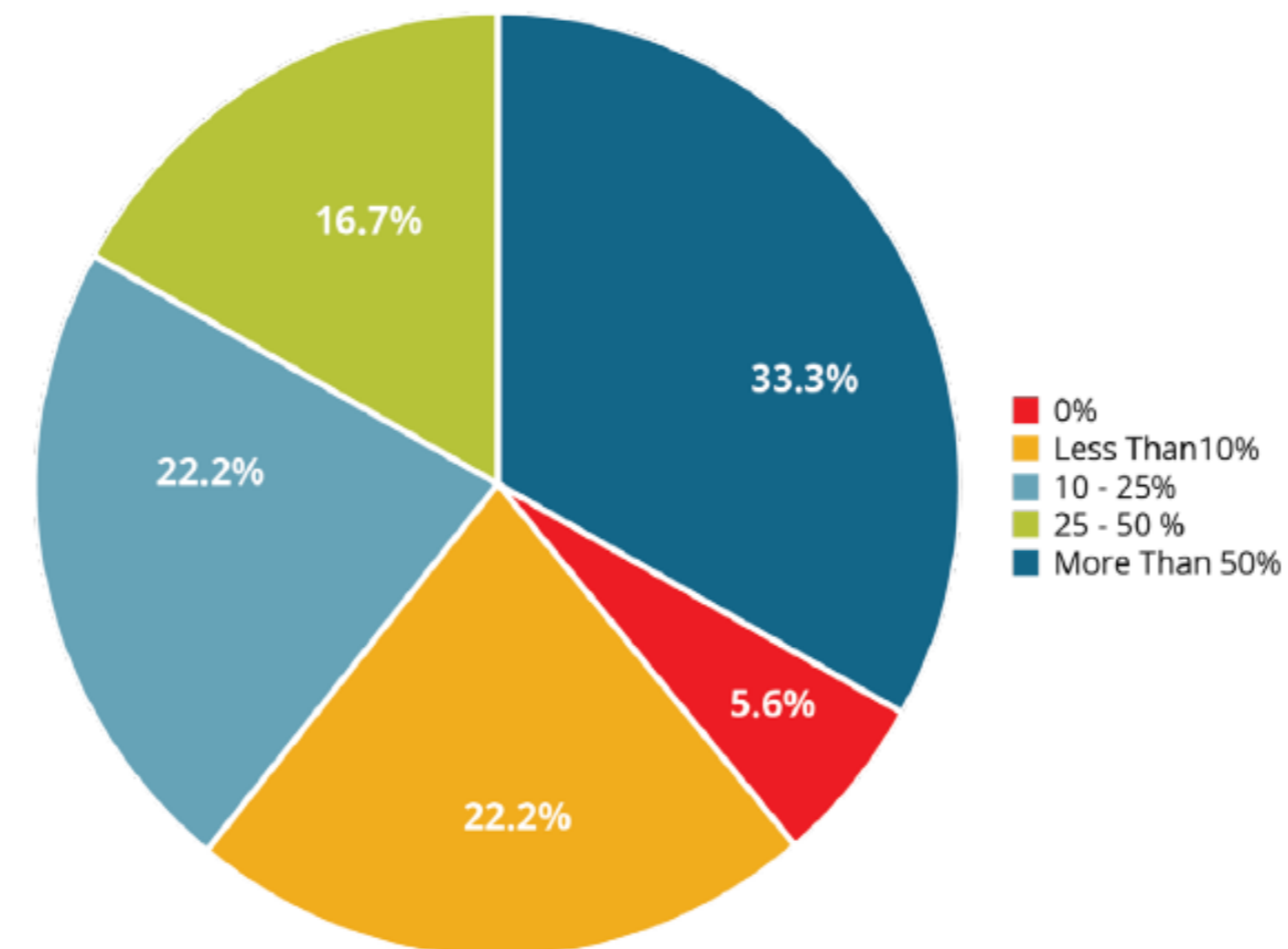
Objectives: Addressing challenges in green recovery such as market demand and access to financing in COVID-19.

Actions: EDAMA Association in collaboration with Jordanian German energy partnership and SolarPower Europe released a policy paper with recommendations to support Jordanian businesses in coping with the effects of COVID-19. The position paper was intended to support Jordanian policymakers establishing green recovery plans.

Section II: Project Overview



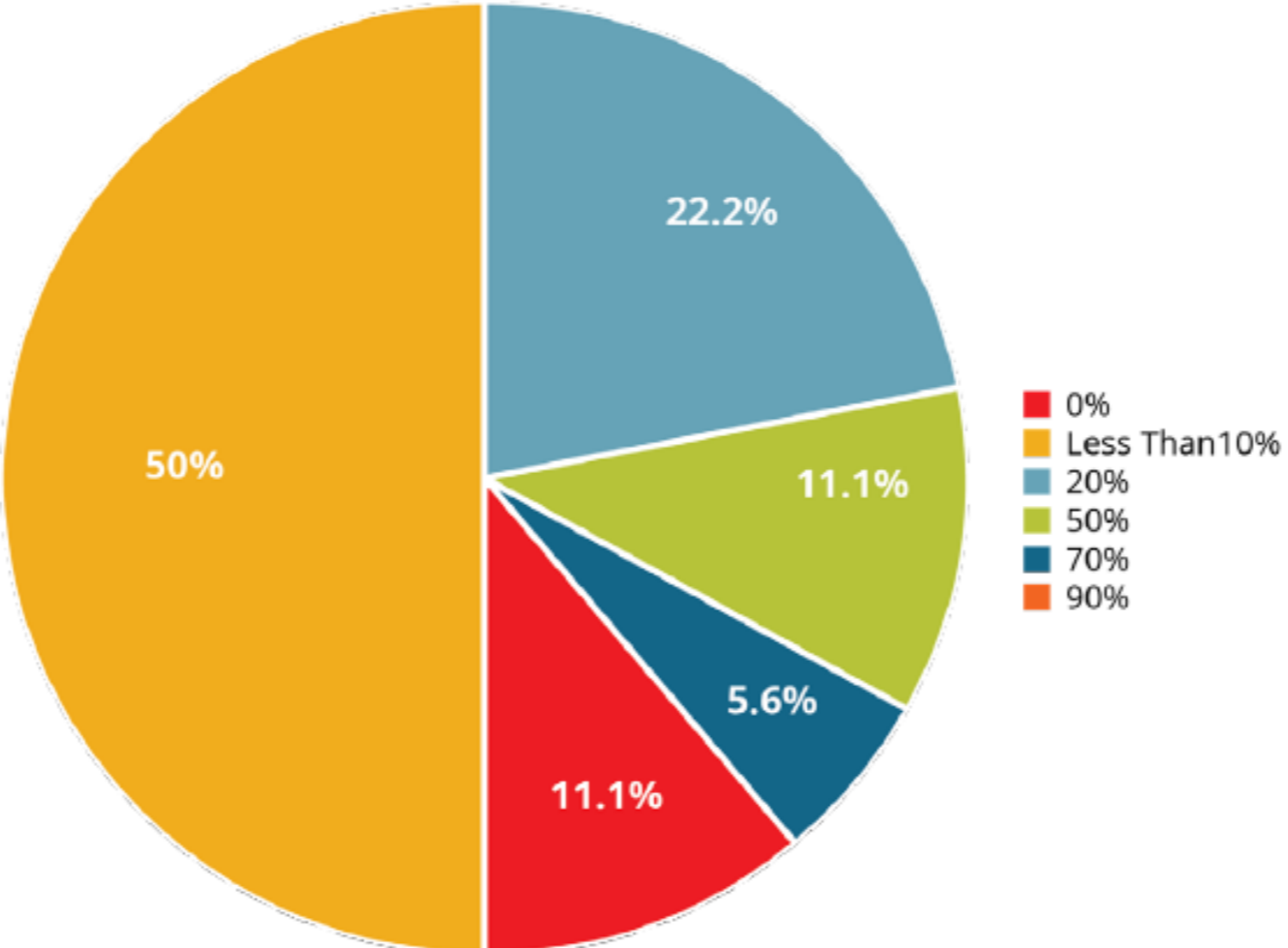
Revenue reduction for renewable energy companies in Jordan following the COVID pandemic



Section II: Project Overview



Percentage of employees who are able to continue working remotely after the pandemic



Boost Jordan's Clean Energy Transition Through Its COVID Recovery Plan

Key Recommendations for Jordan's COVID Recovery Plan

Finance Support
and Incentives

Boost RE Projects

Reform Legislative
and Regulatory
Framework

Create New
Business
Opportunities

Promote Energy
Efficiency in All
Sectors

Support Training
for Employment



Boost Jordan's Clean Energy Transition Through Its COVID Recovery Plan

1. Provide support for Jordan's renewable energy sector

Covid-19 pandemic left many energy companies with weakened financial positions and strained balance sheets.

As a result, spending has been reduced, project workers have been dismissed, planned investments have been delayed, deferred, or suspended and supply chains have been disrupted.

1.1 Introduce specific financing measures and cost-effective incentives for renewable energy companies

1.2 Compensate the owners of renewable energy systems.

Recommendations to boost Jordan's clean energy transition through its COVID recovery plan

Key Recommendations for Jordan's COVID Recovery Plan

Finance Support
and Incentives

Boost RE Projects

Reform
Legislative and
Regulatory
Framework

Create New
Business
Opportunities

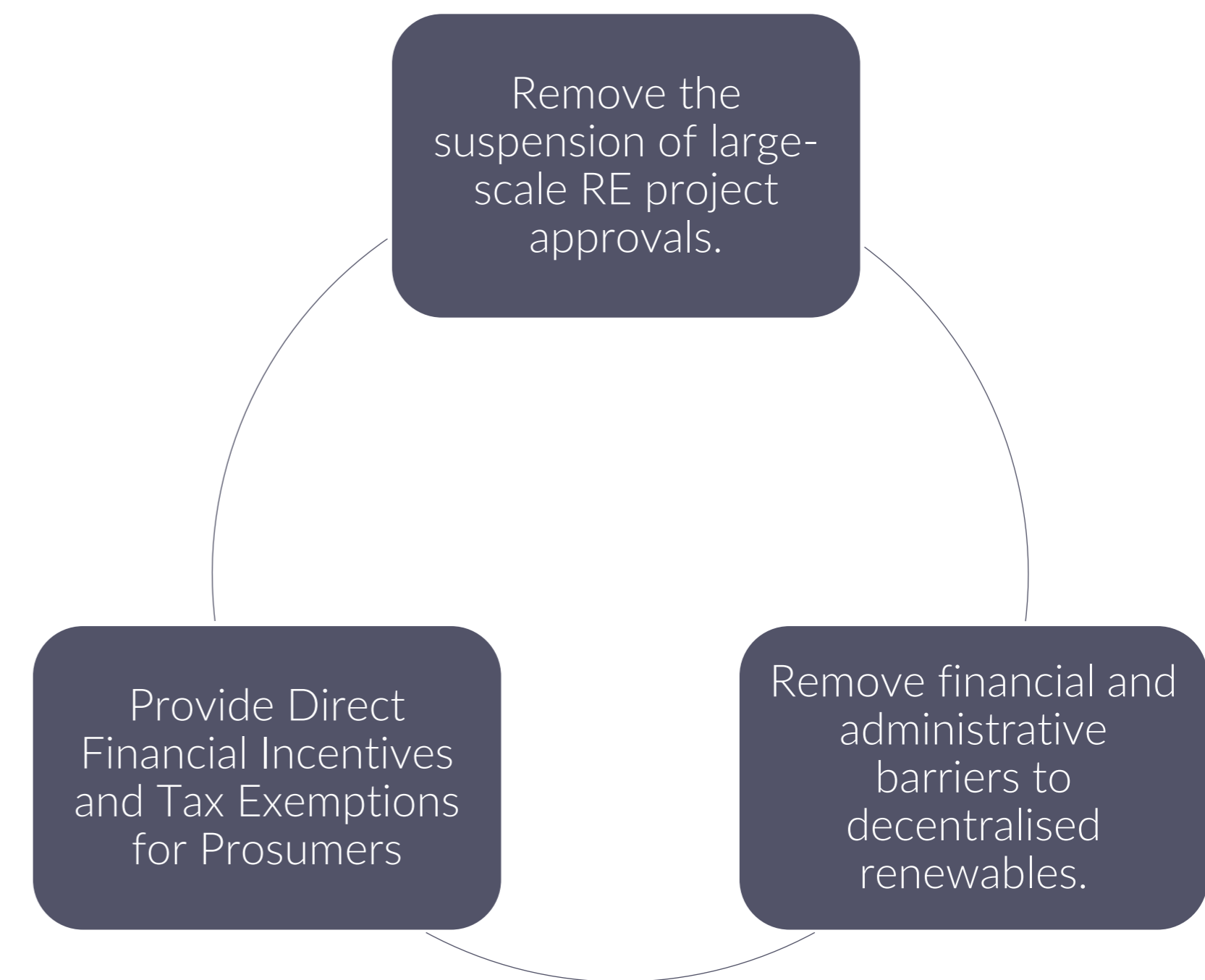
Promote Energy
Efficiency in All
Sectors

Support Training
for Employment

Recommendations to boost Jordan's clean energy transition through its COVID recovery plan

2. Boost the renewable energy project pipeline

Promoting renewable energy through Jordan's recovery plan will be a cost-effective strategy to generate sustainable jobs, promote resilient economic growth, and accelerate the clean energy transition.



Recommendations to boost Jordan's clean energy transition through its COVID recovery plan

Solutions to remove financial barriers

- Develop tools and mechanisms to facilitate financing in Jordanian Dinars and design financial instruments to mitigate risks from interest rate fluctuations
- Provide public financing programs that ensure support provided is sustainable, that are prepared in cooperation with the concerned, and that improve the access to such programs by easing the application process
- Create an electronic platform that compiles information on stakeholders involved in financing of RE in Jordan

Solutions to remove administrative barriers

- Implement a one-stop-shop online application system for the project approval process with the following points: transparency in application-related approvals, applying entities, granted capacities, and open slots on the grid
- Provide simplified application procedures for small and zero-feed-in systems
- Include all the procedures, entities, and costs which an applicant is expected to either go through or incur within the EMRC guidelines
 - Develop practical implementation guidelines of relevant legislation with clear and reasonable deadlines, including coordination with other entities and reduction of the number of permits needed

Recommendations to boost Jordan's clean energy transition through its COVID recovery plan

Key Recommendations for Jordan's COVID Recovery Plan

Finance Support
and Incentives

Boost RE Projects

Reform
Legislative and
Regulatory
Framework

Create New
Business
Opportunities

Promote Energy
Efficiency in All
Sectors

Support Training
for Employment



Boost Jordan's Clean Energy Transition Through Its COVID Recovery Plan

3. Introduce legislations and reforms to the regulatory framework and market structure to foster the growth

3.1 Establish priority dispatch of renewable energy sources over other sources of energy (in order to avoid switch off solar energy projects in the future)

3.2 Improve renewable energy tendering design to avoid curtailment.

3.3 Work on the deployment of flexibility sources for the electrical system.

3.4 Restructure Jordan's Electricity Sector – From single buyer Model to Competitive Market

3.5 Review the Electricity Tariffs

Recommendations to boost Jordan's clean energy transition through its COVID recovery plan

Key Recommendations for Jordan's COVID Recovery Plan

Finance Support
and Incentives

Boost RE Projects

Reform
Legislative and
Regulatory
Framework

Create New
Business
Opportunities

Promote Energy
Efficiency in All
Sectors

Support Training
for Employment



Recommendations to boost Jordan's clean energy transition through its COVID recovery plan

4. Support the sector by creating new opportunities through cross sectoral work

Electrification is an important vector to decarbonise the transport and the heating, ventilation, and cooling (HVAC) sectors and it has a catalysing role in creating new business opportunities in the renewable energy sector.

Indirect electrification, through renewable hydrogen, may support the decarbonisation of hard to abate sectors, such as heavy industry, and provide seasonal storage capacity.

4.1 Provide Incentives to the Electrification of the Transport Sector

4.2 Enforce Electrification of the HVAC

4.3 Promote Electrification of industry

Recommendations to boost Jordan's clean energy transition through its COVID recovery plan

Key Recommendations for Jordan's COVID Recovery Plan

Finance Support
and Incentives

Boost RE Projects

Reform
Legislative and
Regulatory
Framework

Create New
Business
Opportunities

Promote Energy
Efficiency in All
Sectors

Support Training
for Employment

Recommendations to boost Jordan's clean energy transition through its COVID recovery plan



5. Promote energy efficiency across all sectors.

- Promote Energy Efficiency and On-site Renewables in Buildings

Jordan's recovery plan should promote integrated building renovations that combine energy efficiency, on site renewables and demand flexibility improvements

- Apply “Energy Efficiency First” principle

To promote a cost-effective energy transition, Jordan should also ensure the energy efficiency first principle is applied within decision making processes for all energy investments

Recommendations to boost Jordan's clean energy transition through its COVID recovery plan

Key Recommendations for Jordan's COVID Recovery Plan

Finance Support
and Incentives

Boost RE Projects

Reform
Legislative and
Regulatory
Framework

Create New
Business
Opportunities

Promote Energy
Efficiency in All
Sectors

Support Training
for Employment

Recommendations to boost Jordan's clean energy transition through its COVID recovery plan



6. Support TVET in the clean energy industries

- Jordan's recovery plan should promote TVET in clean energy industries. For example, Jordan's recovery funds should be used to provide incentives, both administrative and fiscal, for companies looking to expand their workforce.
- The German government is providing a premium for companies which do not reduce the number of vocational training positions.

Thank you





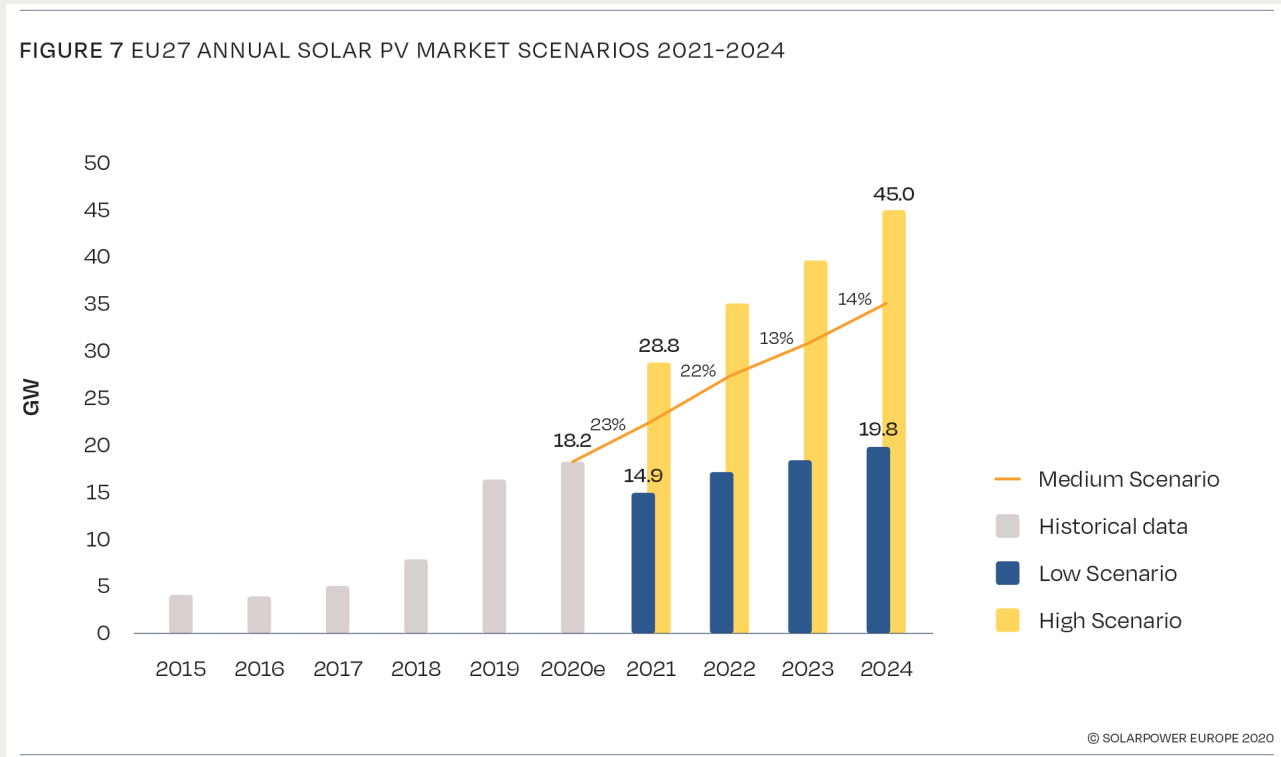
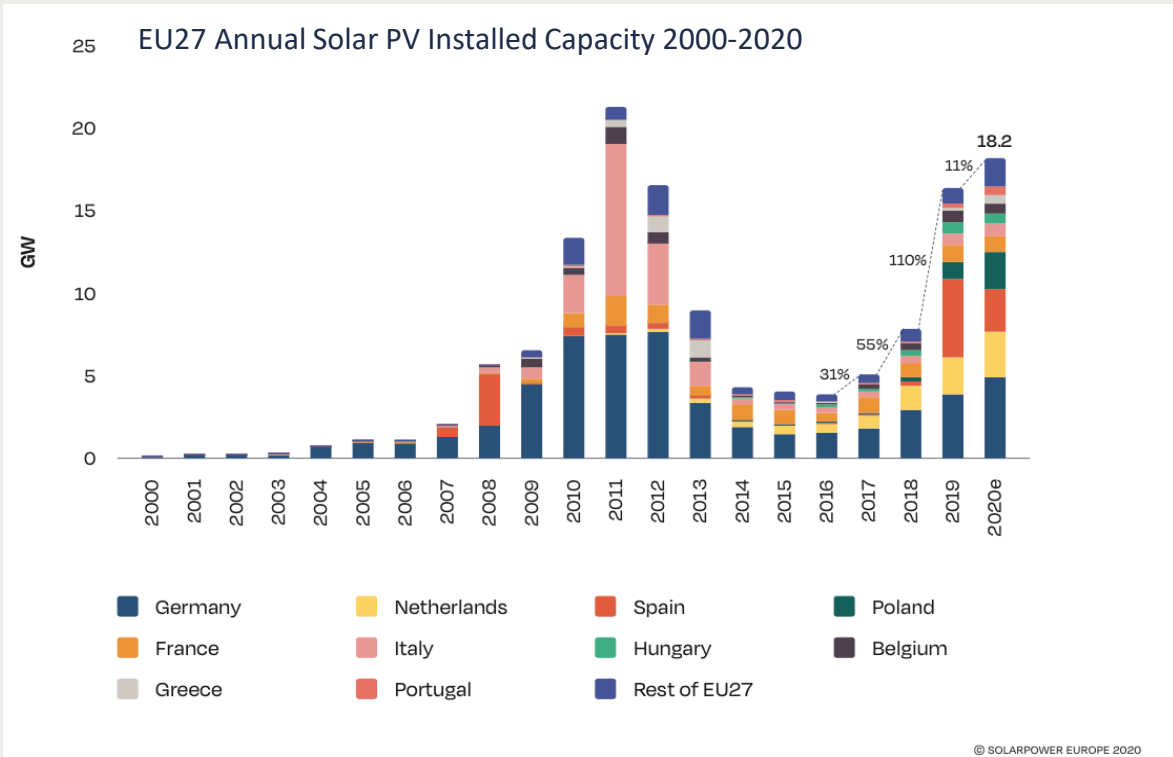
SolarPower
Europe

Green Recovery from the COVID-19 pandemic in the European Union

Launch of “Boost Jordan’s Clean Energy Transition
Through its COVID Recovery Plan” Policy Paper

Miguel Herrero

18 August 2021



The solar PV industry shown resilience despite the COVID-19 crisis: more than 18 GW of solar were deployed in 2020 and double-digit growth is expected in the mid-term.

Multiannual Financial Framework 2021-2027

€1,074 billion

Next Generation EU 2021-2024

€750 billion

What? Temporary recovery instrument embedded in the EU budget

How? Three pillars disbursed as **grants (€390 billion)** and **loans (€360 billion)**

Source: EC borrowing on financial markets

Repayment: via future EU budgets (between 2028-2058) + ETS, Carbon Border Tax, Corporate Tax

Pillar 1: Support MS Investment & Reforms

Recovery and resilience facility - €672.5 bn

Grants (€312.5 bn) and loans (€360 bn)

MS design Recovery and Resilience Plans 37%

Climate Mainstreaming

Just Transition Fund - €7.5 bn

+ €10 bn in MFF

REACT-EU - €47.5 bn

Support key crisis repair actions for a green, digital and resilient recovery (grants)

Pillar 2: Incentivise private investment

InvestEU - €5.6 bn

+ €3.8 bn in MFF

Pillar 3: Lessons learnt

Horizon Europe - €5 bn

+ €79.9 bn in MFF

Focused on health and climate actions

30 % climate mainstreaming across MFF and NGEU = € 547 billion



Recovery and Resilience Facility will boost electrification of supply and end-use sectors



EU Member States have access to €672.5 billion to finance measures and investments that maximise sustainable economic growth.

Minimum 37% of climate-related expenditure in every Recovery and Resilience Plan

7 Flagship areas identified as key investment priorities

POWER UP 

200 GW of RES by 2025

MODERNISE

Digitalisation of public administration

RENOVATE 

Energy efficiency of buildings

SCALE-UP

Data cloud capacities and sustainable processors

RECHARGE AND REFUEL 

1 million charging points by 2025

RESKILL AND UPSKILL 

Boost green skills and jobs

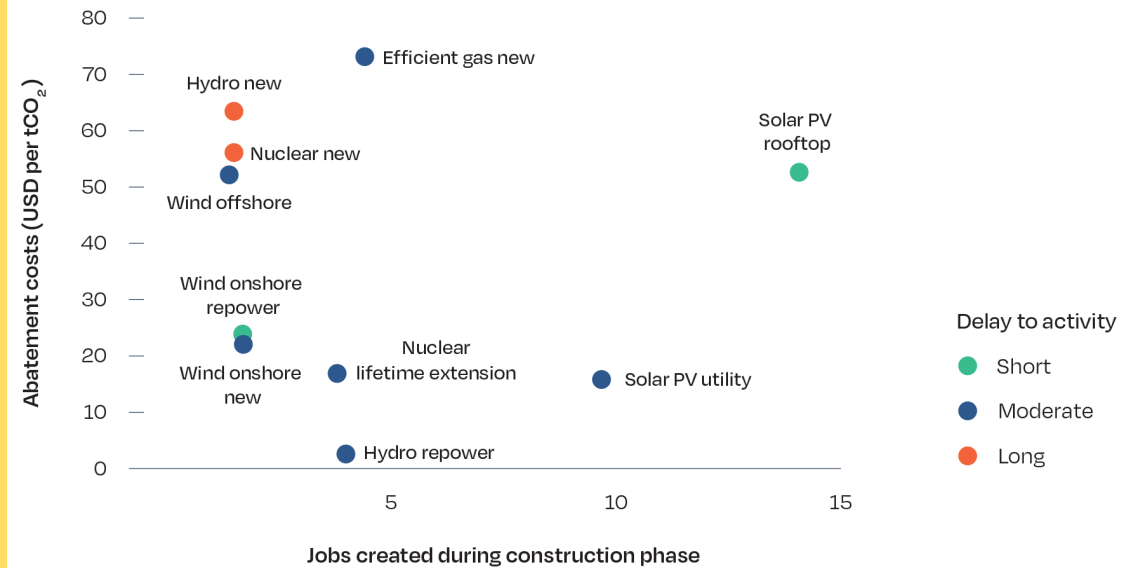
CONNECT

Roll-out of rapid broadband services

Investments into solar PV create the most sustainable jobs

- Investments into solar **offer the highest level of jobs created** of any power generation technology.
- Utility-scale solar offers a **high level of job creation with very low GHG emission reduction cost**
- Rooftop solar **maximises job creation** which can furthermore be **delivered quickly**

JOB CREATION PER MILLION DOLLARS OF CAPITAL INVESTMENT IN POWER GENERATION TECHNOLOGIES AND AVERAGE CO₂ ABATEMENT COSTS



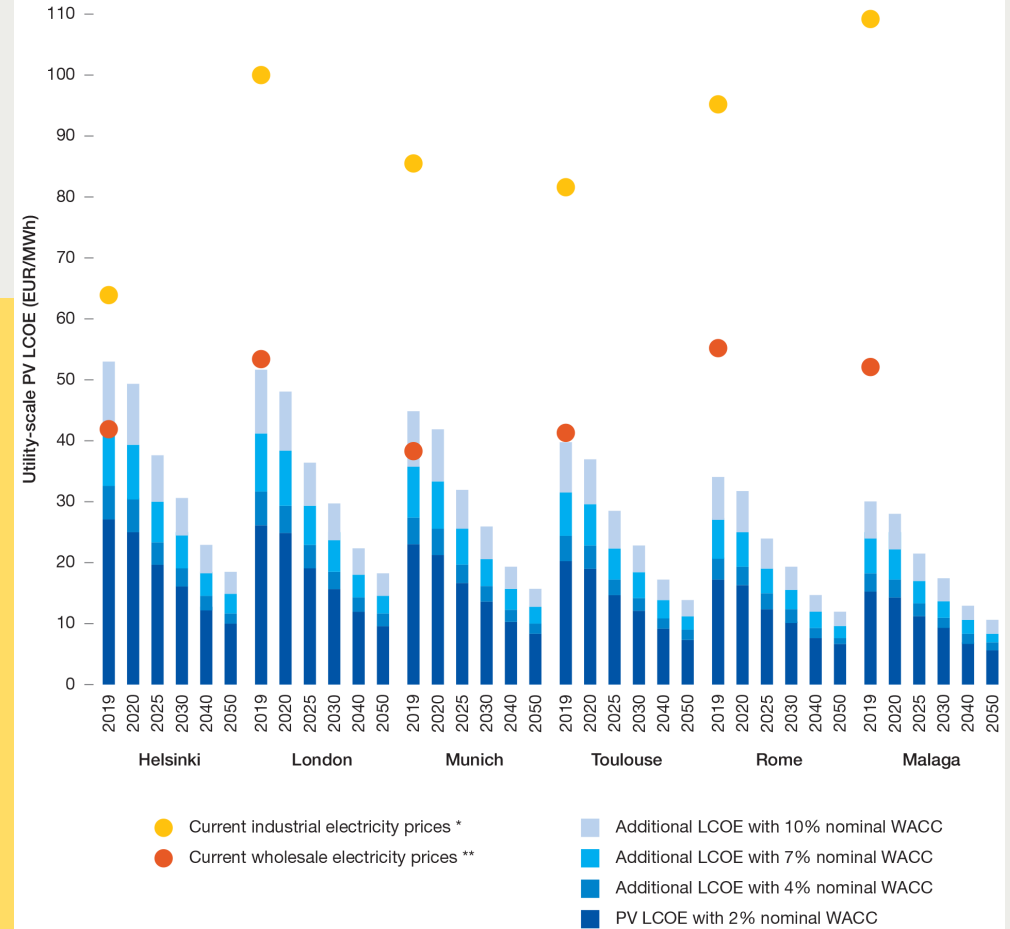
NOTE: Avoided CO₂ emissions calculated based on displacing coal-fired generation, global averages shown. Delay to activity refers to the time required for capital to be invested into power generation technologies. SOURCE: IEA.

Solar contributes to economic resilience and competitiveness

Utility-scale solar is competitive against industrial and wholesale electricity prices across the EU

This is increasingly the case for utility-scale installations combined with storage, which are increasingly competitive with conventional installations at global level (Global market outlook)

PV LEVELISED COST OF ELECTRICITY (LCOE) IN SIX EUROPEAN LOCATIONS, 2019-2050



*: H1 2019 average national price for medium size industrial consumers (without taxes).
 **: H1 2019 average national price for wholesale baseload electricity.
 Source: European Commission (2019); Eurostat (2019); Vartiainen et al. (2019).

EU Member States are investing in solar for their recovery plan

Spain's recovery plan:

- **€3.165 billion** to deploy and integrate additional renewable energy
- **Improvement to regulatory framework** for deployment of renewable energy.
- **New strategy** to promote self-consumption and boost renewable energy communities.

Recovery Plans must:

- Support clean energy industries and boost project pipelines
- Remove administrative, grid connection, and financial barriers to project development
- Plan for the future to ensure resilience following recovery plan implementation





SolarPower Europe Recommendations on Recovery and Resilience Plans

The Recovery & Resilience Plans are a unique opportunity for Member States to invest into solar and boost the clean energy transition, enable sustainable growth, and create green jobs.

To make solar the core of green Recovery & Resilience plans, Solar Power Europe recommends:

1. **Boost utility-scale solar and storage** by financing additional renewable energy tenders, providing public support for renewable energy Power Purchase Agreements ("PPAs"), de-risking finance for projects through budget guarantees, and accelerating permitting procedures for solar projects.
2. **Roll out solar-rooftop and storage programmes** to deploy on-site solar on all suitable rooftops and use recovery funds to support citizens and businesses to deploy on-site solar, including Building Integrated Photovoltaics, and distributed Battery Energy Storage Systems.
3. **Promote electrification** by providing incentives to electrify end-uses, promoting sustainable electrification through renewable energy PPAs, investing in smart grid projects, and integrating large-scale and distributed Battery Energy Storage Systems.
4. **Support the European solar manufacturing sector** by investing in solar research and innovation on solar PV emerging technologies and facilitate the development of new manufacturing projects in Europe.
5. **Reconvert former coal and industrial sites with solar** by deploying utility-scale solar, floating solar and agricultural photovoltaics.
6. **Finance training & re-skilling programs** to support job creation in clean energy industries and provide re-skilling opportunities for fossil fuel workers.

The novel coronavirus pandemic has had a significant impact on the solar industry, notably through supply disruptions caused by the closing of the internal borders of the European Union. The crisis has made access to finance more difficult, with financial institutions delaying project deals or retracting from previous financing conditions.

towards the most efficient, sustainable, affordable, and job-intensive clean energy solutions.

As the lowest cost and most versatile renewable energy technology, solar stands out. As shown by the IEA, solar is the energy source that creates the most jobs per million dollars of capital investment⁶. Furthermore, solar will be central to support the decarbonisation of

Credit guarantees for project developers as well as for PPA off-takers can help de-risk projects and facilitate their access to cost-competitive finance.

Sustained public auctions as well as public support for rooftop PV will provide visibility for investors and boost the solar PV market.

Investment in **energy infrastructure, optimising the use of smart grids and flexibility**, is critical to ensure a cost-efficient and fast connection of new projects to the electricity network.

Prioritise investments to **electrify end-uses**, such as heating and transport to accelerate decarbonisation and energy efficiency

Finance training programmes to ensure the availability of a **skilled workforce**, needed to connect new projects.

Recovery plans are key to accelerate a cost-efficient transition to climate-neutrality



Thanks for listening

Miguel Herrero

Policy Advisor



in

