Derisking Renewable Energy Investment

Cost-effective Interventions for Affordable Renewable Energy

Derisking the Tunisia Solar Plan

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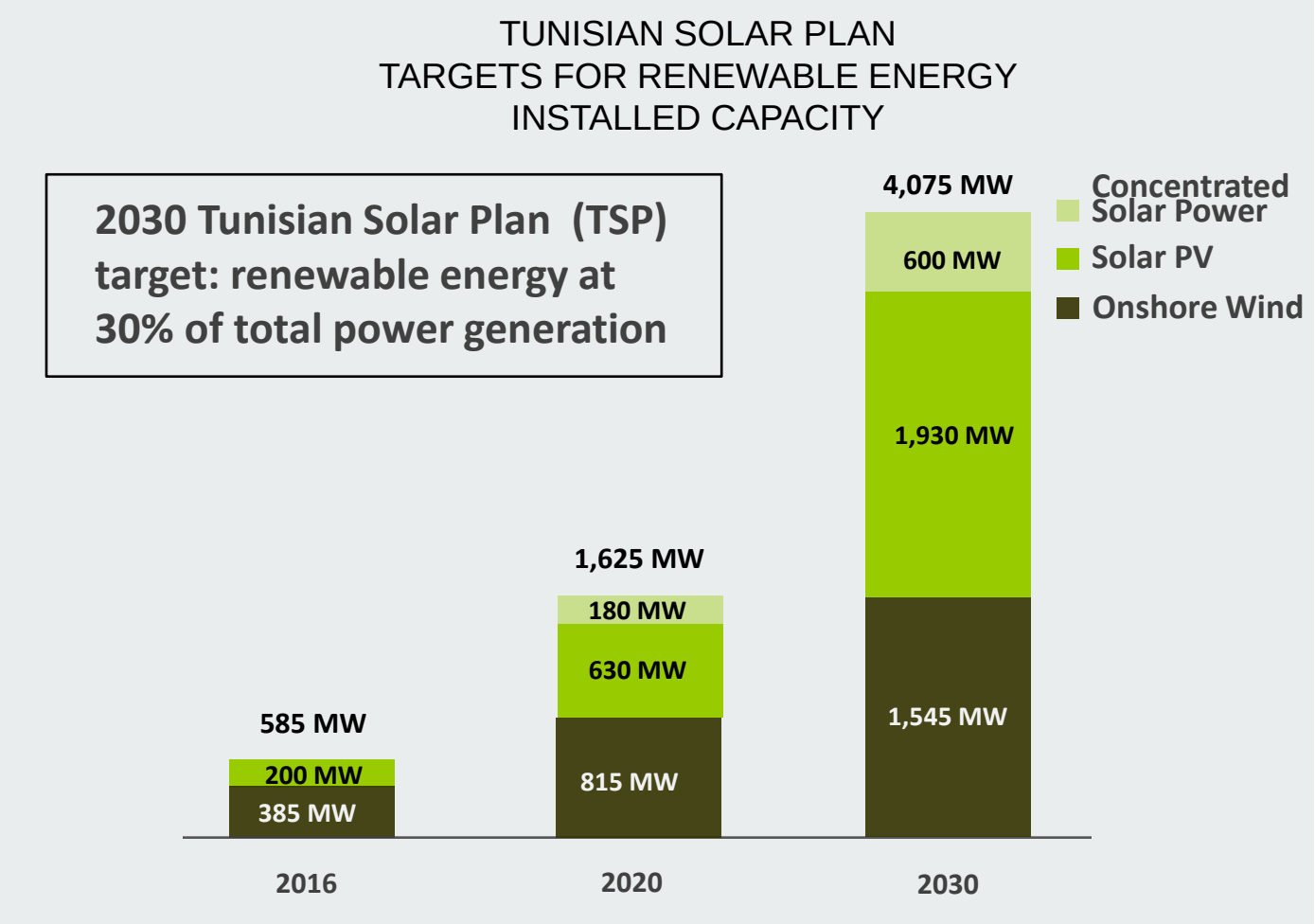
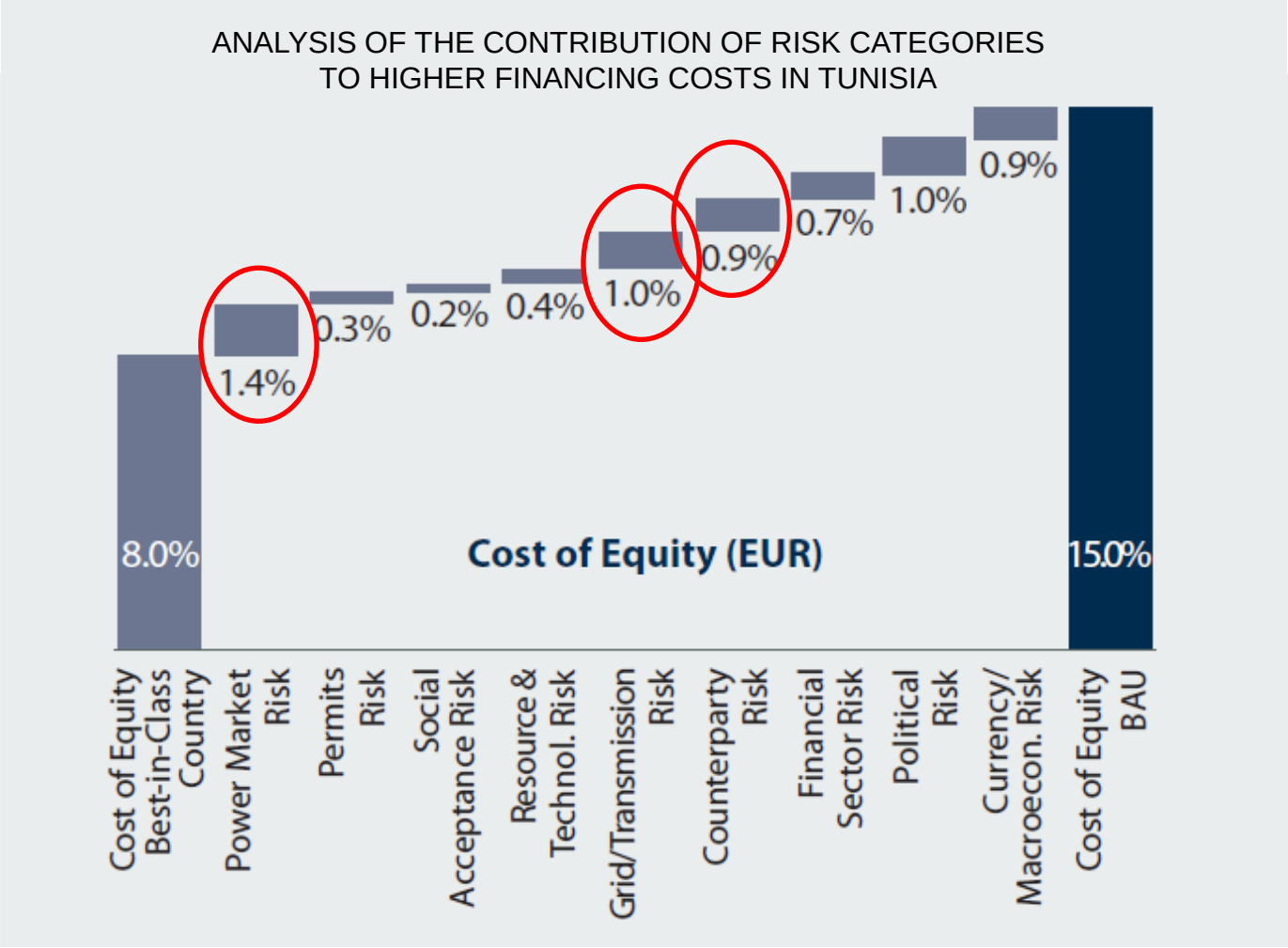
Introduction
The Tunisian Solar Plan



Source: ANME, *Le Plan Solaire Tunisien (Tome II) (2012).*

Derisking the Tunisia Solar Plan
Financing cost waterfall (solar PV)



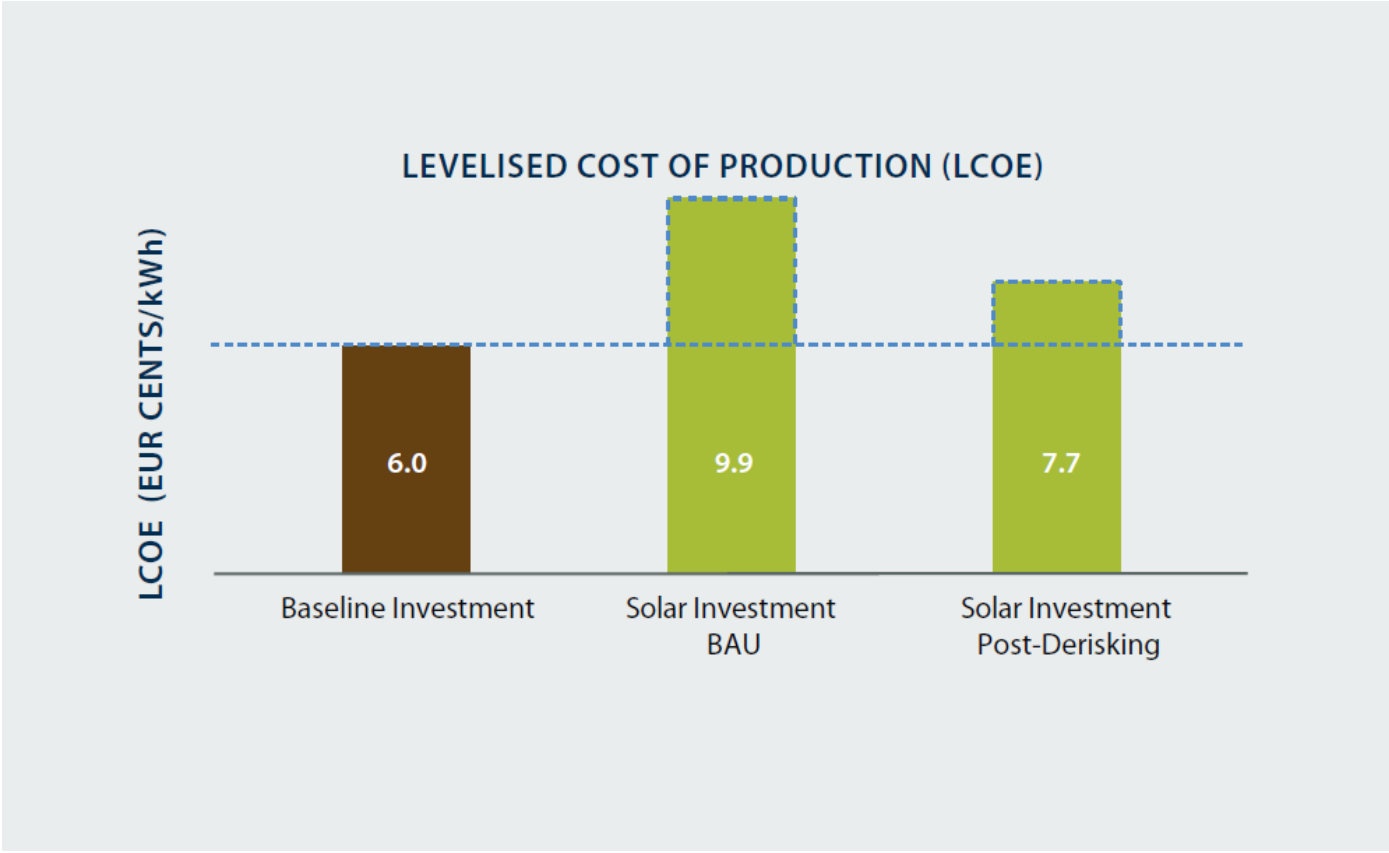
Source: UNDP,/ANME, *Tunisia: Derisking Renewable Energy Investment (2015).*

Derisking the Tunisian Solar Plan
Selecting public instruments (solar PV)

RISK CATEGORY	POLICY DERISKING INSTRUMENTS	FINANCIAL DERISKING INSTRUMENTS
Power Market Risk	• Long term renewable energy targets • Regulatory framework • FIT/PPA tender (standardised PPA) • Independent regulator	NA
Permits Risk	• Streamlined permitting; one-stop shop; recourse mechanism	NA
Social Acceptance Risk	• Awareness-raising campaigns • Promote/pilot community-based approaches	NA
Resource & Technology Risk	• Resource assessment • Technology support (solar PV)	NA
Grid/Transmission Risk	• Transparent, up-to-date grid code • Grid management/planning	• Take or pay clause in PPA[11]
Counterparty Risk	• Strengthen utility's management	• Government guarantee of PPA
Financial Sector Risk	• Domestic financial sector reform	• Concessional public loans to IPPs
Political Risk	NA	NA
Currency/Macroeconomic Risk	NA	• Partial indexing of PPA tariffs to foreign currencies[12]

Source: UNDP,/ANME, *Tunisia: Derisking Renewable Energy Investment (2015).*

Derisking the Tunisian Solar Plan
Measuring impact (solar PV)



Source: UNDP,/ANME, *Tunisia: Derisking Renewable Energy Investment (2015).*

Derisking the Tunisian Solar Plan
Measuring impact (solar PV. 0.7 GW to 2030)

If **EUR 145 million** is invested in public derisking measures to promote solar PV in Tunisia, this can have the following impacts:

Catalysing private sector funding
- EUR 935 million in private sector investment

Generating economy-wide savings
- EUR 359 million in savings over 20 years

Better affordability for end-users
- Wind energy generation costs decrease from EUR 9.9 cents/kWh to EUR 7.7 cents/kWh

Benefit the environment
- Emission reductions of 33Mt CO_2e over 20 years

Source: UNDP,/ANME, *Tunisia: Derisking Renewable Energy Investment (2015).*

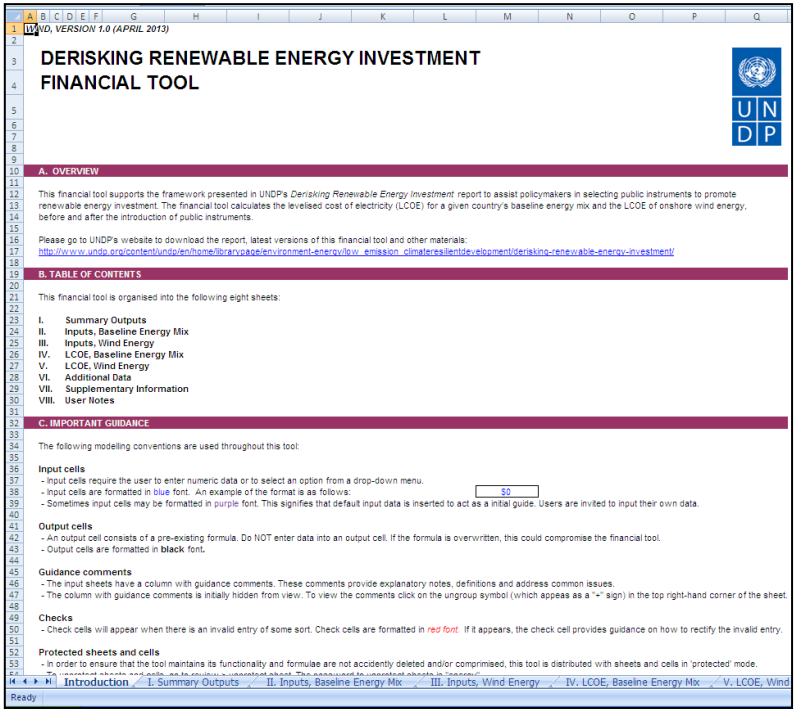
UNDP derisking methodology
Key take-aways

- With technology costs for renewable energy having fallen in recent years, a key opportunity for policymakers is to address the high financing costs for renewable energy in developing countries

- Take-aways from the derisking methodology:
  - The best outcomes occur when policymakers address the risks to renewable energy investment in a systematic and integrated way
  - Even with feed-in tariffs (FiT) and other similar cornerstone instruments in place, there may be residual risks that block investment
  - Investing in derisking appears to be cost effective when measured against paying direct financial incentives, such as a FiT premium

- To date, the derisking approach has been developed for large-scale renewable energy
  - Future applications of the derisking methodology include aggregative models for distributed renewable energy and energy efficiency.

UNDP derisking methodology
Website, reports & financial tools



www.undp.org/DREI