

ESCWA

Regional Training Workshop on: “Renewable Energy project development, finance and business planning”

Financing Renewable Energy Projects – Challenges & Potential Solutions

03/05/2016

Enel Green Power development and financing RE experiences in the Mediterranean and African Region





Record Breaking Investments

Record Breaking Investments

Clean energy Investments 2004-2015



Key evidence of the sector

- After the 2015 record in clean energy investments (US\$ 329 billion) **2016 is expected to be another record year** with a surge in investments dragged by emerging economies **with further strong growth in China and US vs. continued gloom in Europe**
- An additional growth is also expected thanks to the **commitments made by states at COP21 in Paris.**

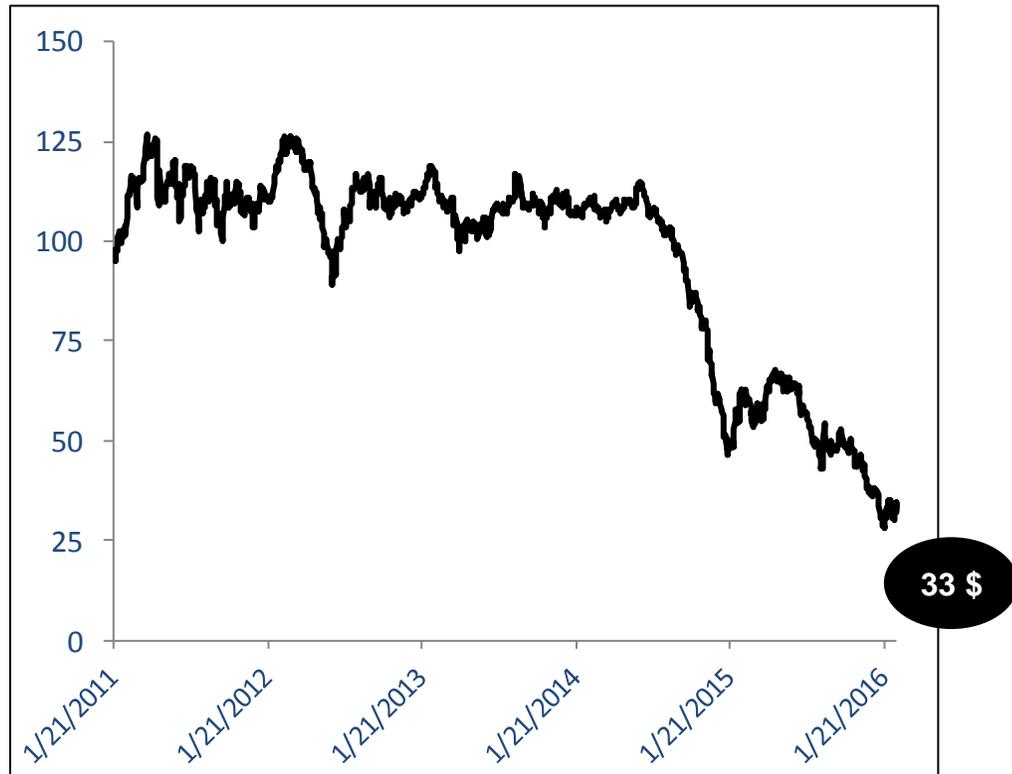
Source: Bloomberg new Energy Finance

A black and white photograph of an offshore oil rig at sea. The rig is a complex structure of steel beams and cranes, supported by several thick legs. The sky is overcast and grey. In the top left corner, there is a white rectangular box. The title text is overlaid on the left side of the image.

Decoupling from fossil fuel prices

Fossil Fuel prices are plummeting

Crude Oil Brent Price

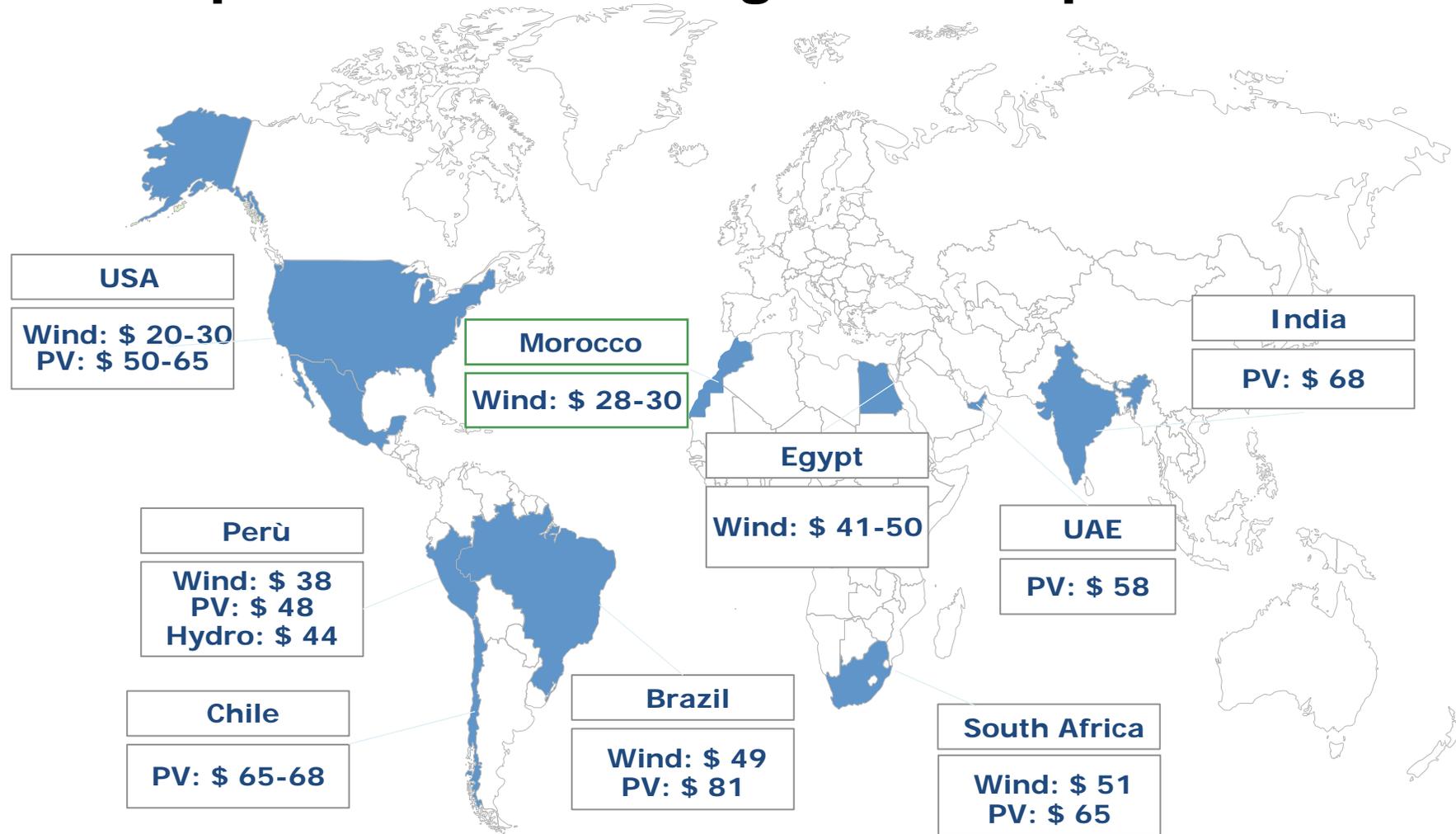


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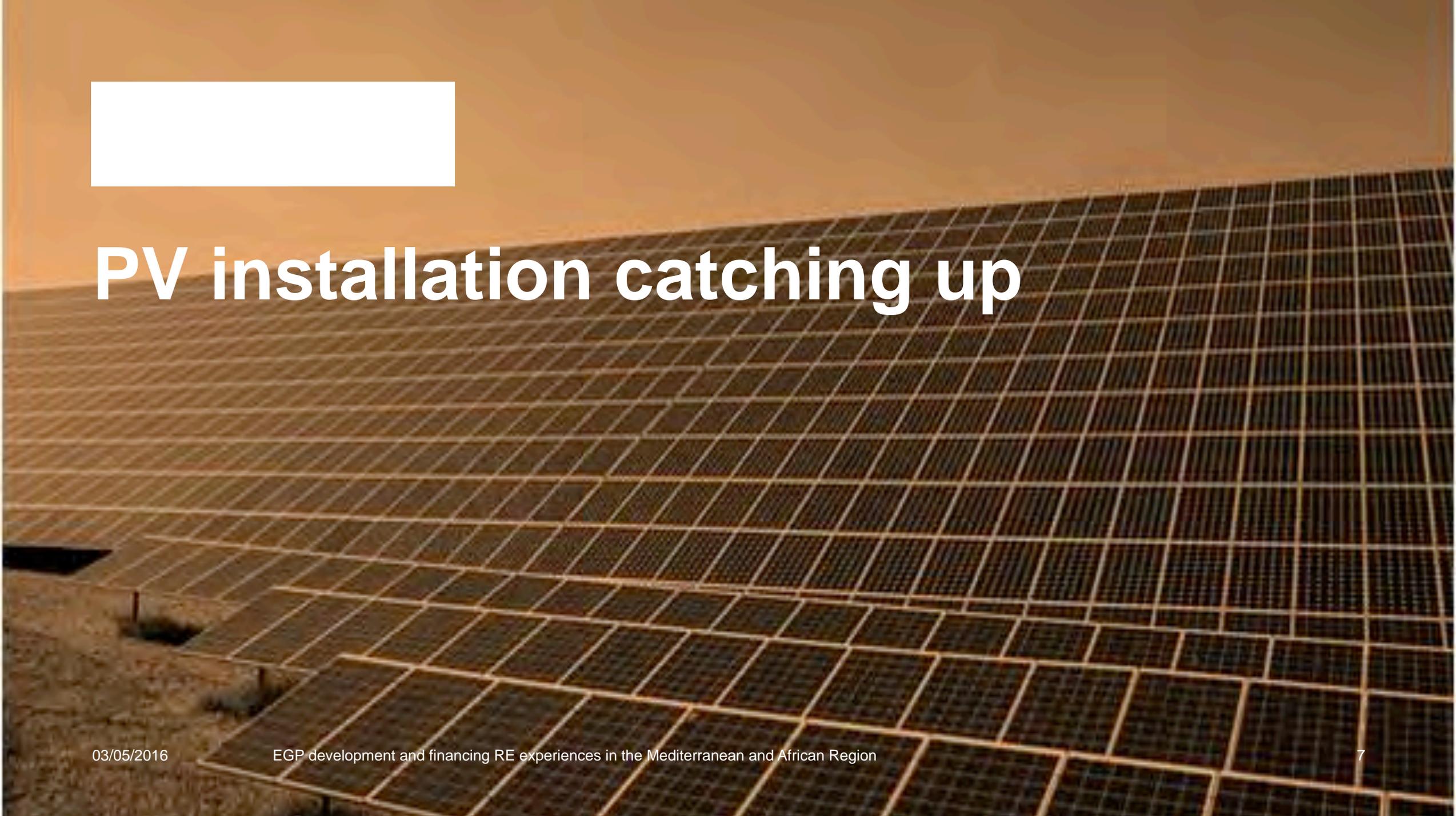
Key evidence of the sector

- In 2015 oil prices plummeted driven by **overproduction and uncoordinated policies within OPEC.**
- The plunge in the oil price of the last 15 months has generally reinforced the idea that **fossil fuels carry high volatility costs**
- **No correlation between fossil fuel price and renewable investments** is the good news for the sector
- In our experience, **the more fossil fuels experience volatility and disruptions, the more countries look at renewables as their preferred source of energy**

Fossil fuel prices not affecting RES competitiveness



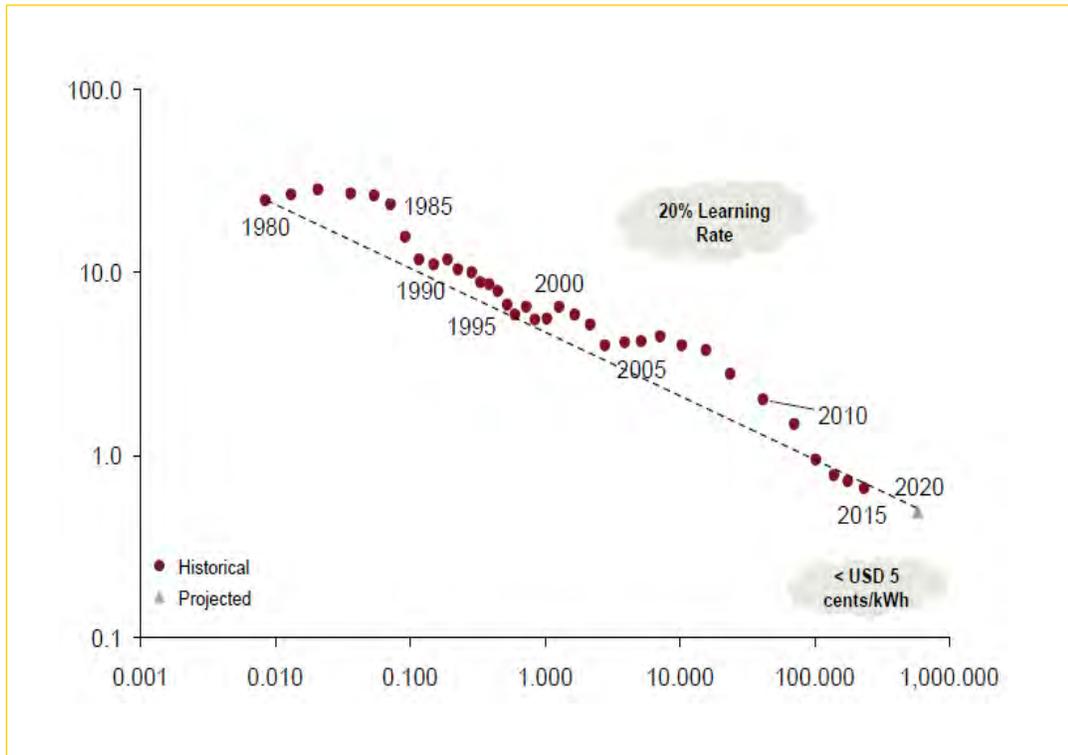
Source: IEA, February 2016
Prices refer to \$/MWh;
Note 1: average values



PV installation catching up

PV installations are catching up

LCOE \$cents/kWh vs. cumulated installed capacity (kW)



Key evidence of the sector

- PV installations are catching up worldwide thanks to the **spectacular cost reduction they have experienced in the last decade: - 78%**
- It is expected in the next decade **solar LCOE at parity with coal LCOE** in most markets
- Around 67 GW of solar capacity addition is expected in 2016

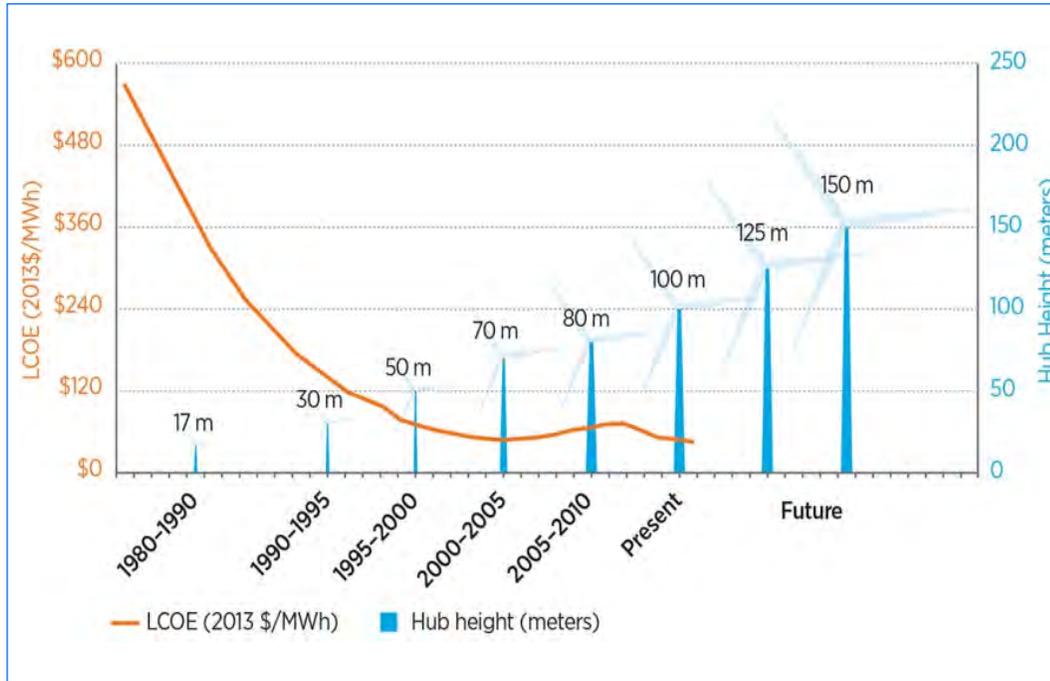
Source: Bloomberg new Energy Finance



Wind keep up momentum

Wind keep up momentum

LCOE \$/MW vs. hub height



Source: Bloomberg new Energy Finance

Key evidence of the sector

- **Onshore wind is now cheaper than coal-fired power** in Europe and gas-fired power in both Asia-Pacific and Europe
- **2016 should be another record year for wind** with the world adding around 63 GW
- We expect cheaper wind turbines with better load factors to **open up the market for repowering in mature markets**



Financing RES in the Mediterranean and African Region

Financing Renewable projects

Project vs Corporate Financing



Corporate Financing

- ✓ The **Borrower** is an **existing firm**;
- ✓ The **loan** is in **Balance Sheet**, affecting firm's liquidity ratios and capital structure;
- ✓ **All cash flows** of existing firm **are potentially used in order to reimburse the new loan**;
- ✓ **Sponsors are liable for their obligations**, with all present and future assets.
- ✓ **"Without recourse"**¹ lenders exposed to risks unrelated to the project.

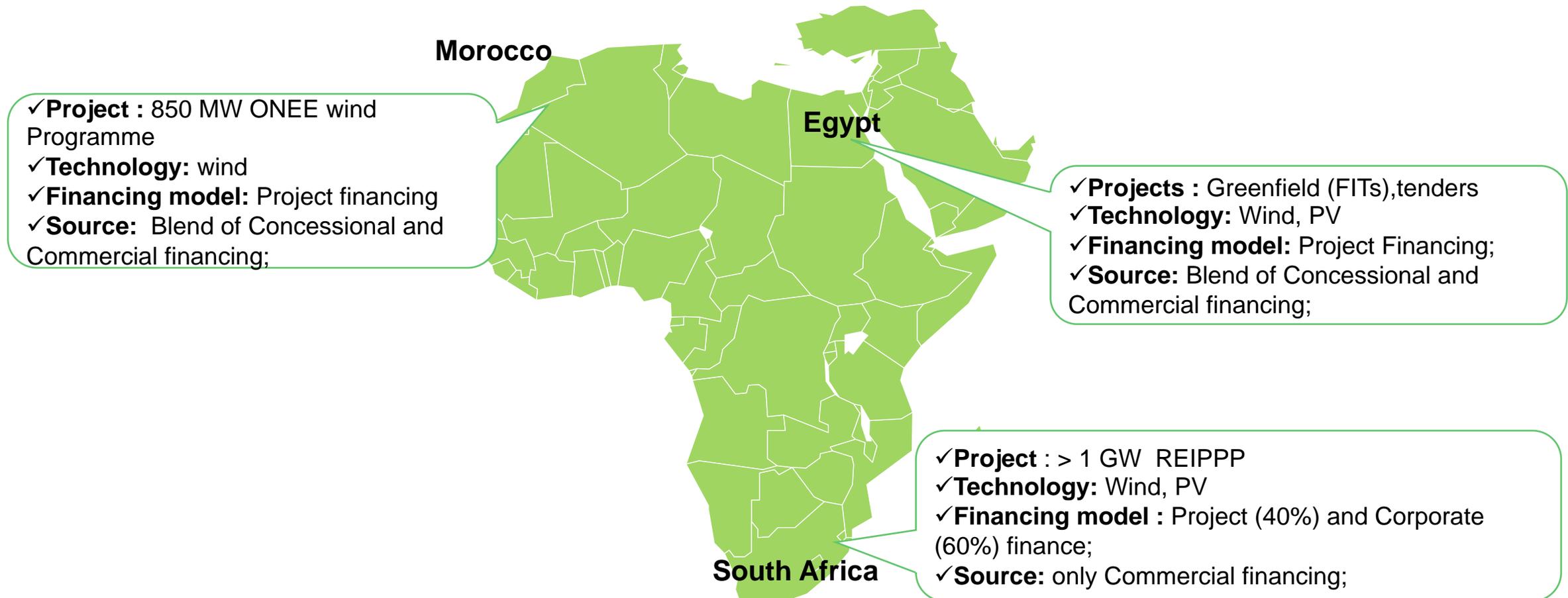
Project Financing

- ✓ A **NewCo (SPV)** is **set up** to develop, build and operate the project, **is the borrower** of the financing;
- ✓ **Loan is off Balance Sheet**, for the Sponsors' existing firm;
- ✓ Existing firm and SPV are separate and **project creditors have no claim on existing firm's assets and cash flows**;
- ✓ **"Without recourse" lenders only exposed to risks related to the project**;
- ✓ **Lenders have limited claim on Sponsors' resources** ("ring fence" + "security package").

¹ Type of loan that is secured by collateral, which is usually property. If the borrower defaults, the issuer can seize the collateral, but cannot seek out the borrower for any further compensation.

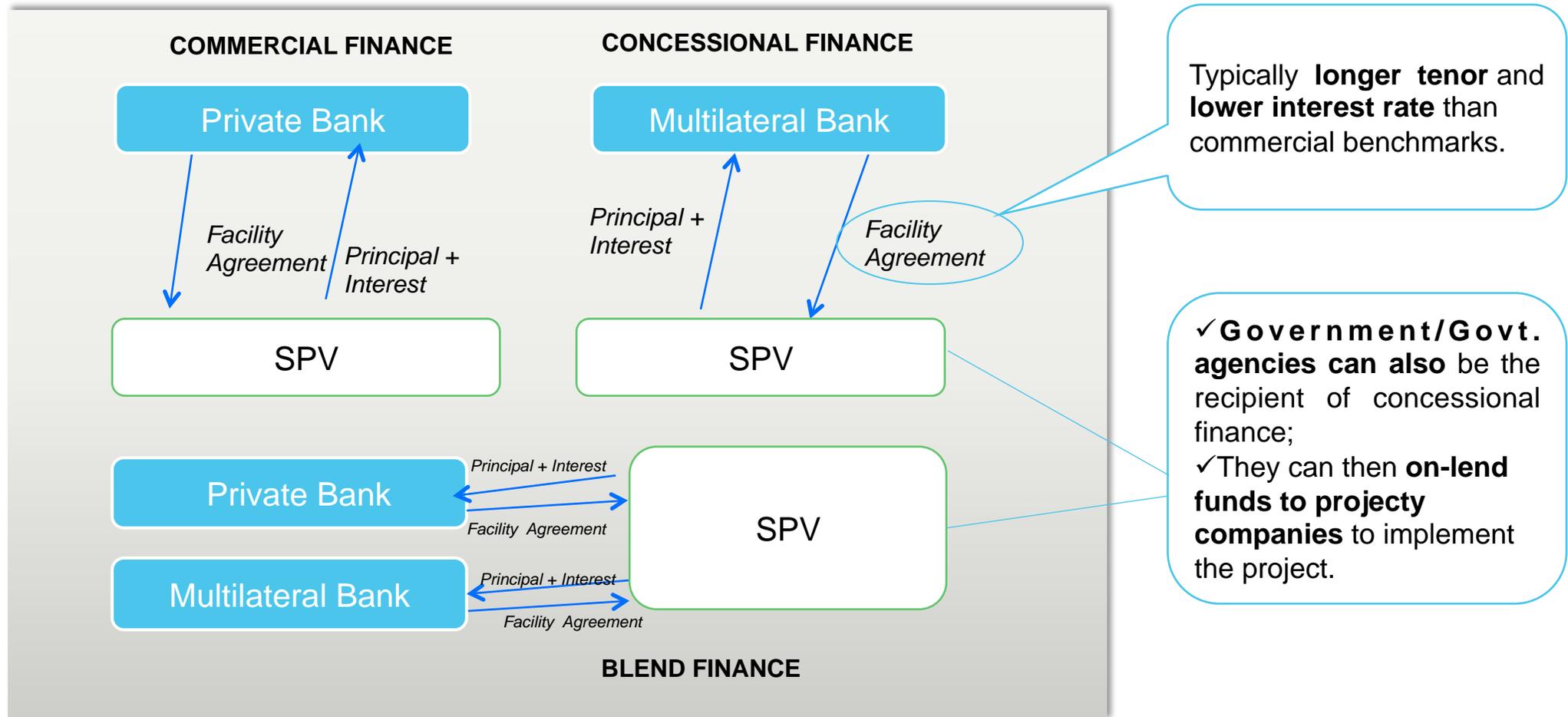
EGP RES project and source of financing

Examples from MENA and Southern African Region



Project financing

Lending Structures and Type of source



Current trend: blend financing

EGP experience in Morocco and Egypt



FIT and tender projects

- ✓ Project being financed through a **combination on concessional and commercial funds** (from both local and international banks);
- ✓ **SPVs sourcing all finance directly;**



850MW ONEE Wind tender

- ✓ Project financed through a **combination on concessional and commercial funds** (from both local and international banks);
- ✓ **Govt. Agencies on lending concessional funds to SPVs;**

Blending financing source as **most suitable** solution given RES project's cost structure;
On lending concessional funds **reduce further financing costs.**

Condition to enable project financing

Key provision to secure bancability of offtake agreements



Key commercial terms

- ✓ Long term contract (20 – 25 years)
- ✓ No revision should apply if not foreseen at signature (e.g. Change in law, tariff adjustments)
- ✓ Take-or-pay provision in case of non delivered energy/curtailment;
- ✓ Direct Agreement with Lenders should be allowed;

Key legal terms

- ✓ Condition precedent clearly defined and non discriminatory;
- ✓ Arbitration clause set to international standards;
- ✓ Offtaking guaranteed through adequate guarantee (e.g. Sovereign)
- ✓ Force Majeure clearly defined, not restrictive



**A success story:
Renewable Energies in Morocco**

03/05/2016

EGP development and financing RE experiences in the Mediterranean and African Region

ONEE 850MW tender

A record-breaking result



✓ On March 9, 2016 **EGP**, in consortium with **Nareva Holding** and **Siemens Wind Power**, has been **pre-awarded** the right to develop, design, finance, construct, operate and maintain **five wind projects in Morocco for a total of 850 MW**.

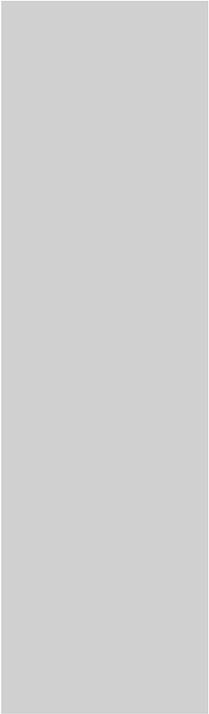
✓ The initiative falls within the 1000 MW PPPs wind programme managed by ONEE (*l'Appel d'Offres n° 40 311*)

✓ The construction of the plants will require a **total investment of approximately 1 billion euros mostly funded through project finance** facilities (both commercial and multilateral)

✓ The energy generated by the five wind farms will be **sold to ONEE** under **20 year-power purchase agreements backed by Government guarantees**.



Carefully designed tender allowed for a record-breaking bid tariff (\$ 28-30/MWh)



Thank you

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