



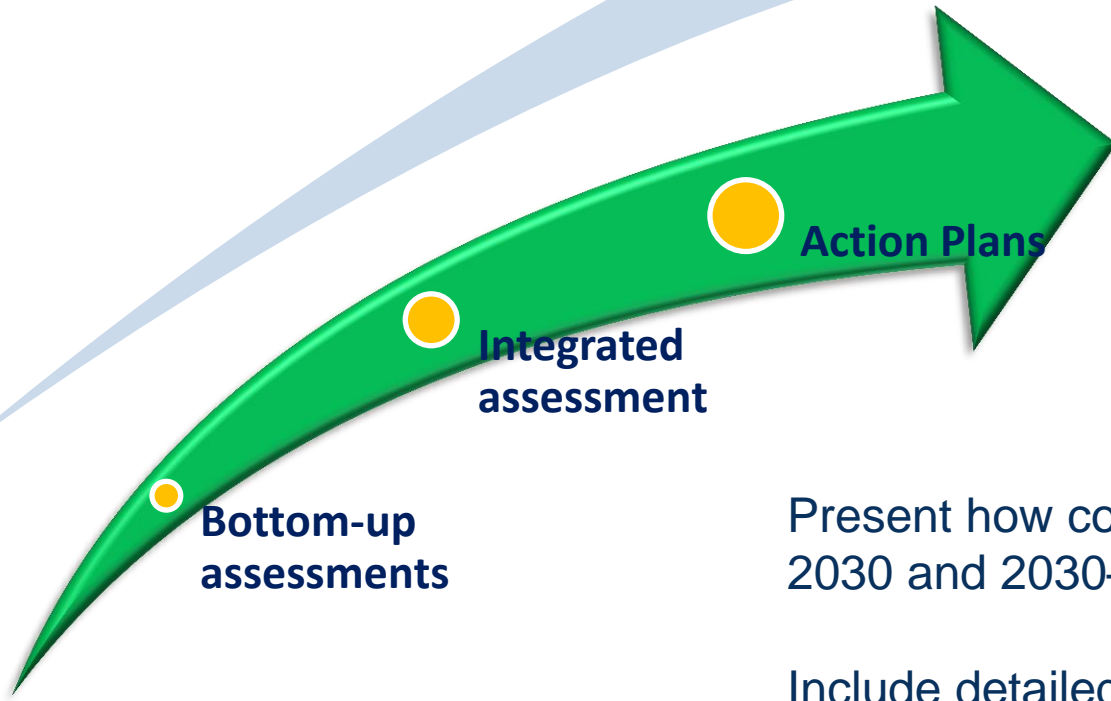
BETTER Roadmap for enhanced cooperation between EU and third countries – Policy Recommendations

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Energy Research Centre of the Netherlands (ECN)**

**EU Parliament workshop
on 'EU-Third Country Cooperation on Renewable Energy'
Brussels, 3 March 2015**



Roadmap Approach



Present how cooperation can take place in 2020–2030 and 2030–2050 time frames

Include detailed policy measures and implementation guidelines on cooperation mechanisms with neighbouring countries

→ **Synthesis report of all the work in the BETTER project**

Roadmap Vision, Mission and Goals



VISION

Enhanced renewable electricity (RES-E) cooperation between Europe and neighbouring regions (North Africa, Turkey and Western Balkans) in the time frame to 2030 (2050)

MISSION

To facilitate
(1) RES-E expansion in the neighbouring regions, and
(2) a framework that ensures the implementation of mutually beneficial joint projects, which result in RES-E import to the EU

GOALS

3-4% share of EU RES-E demand by 2030 through import from neighbouring regions

33 -38 % less support expenditures in EU per year (2021-2030 average) to reach the 27% target

Yearly revenues for neighboring countries sum up to over 1 billion € (average 2021-2030)

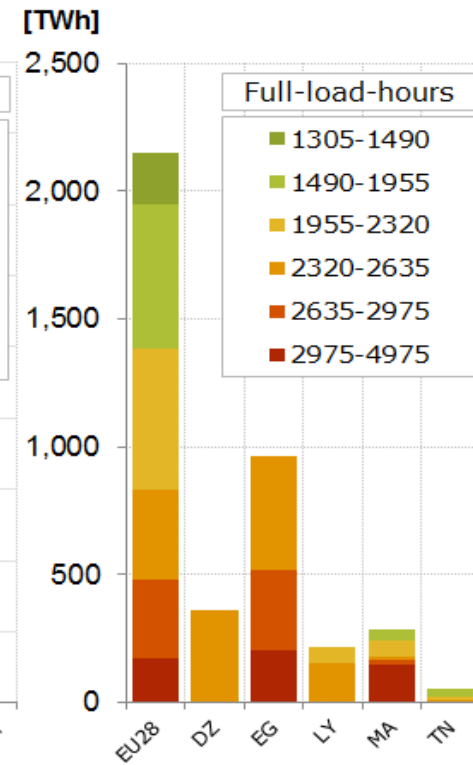
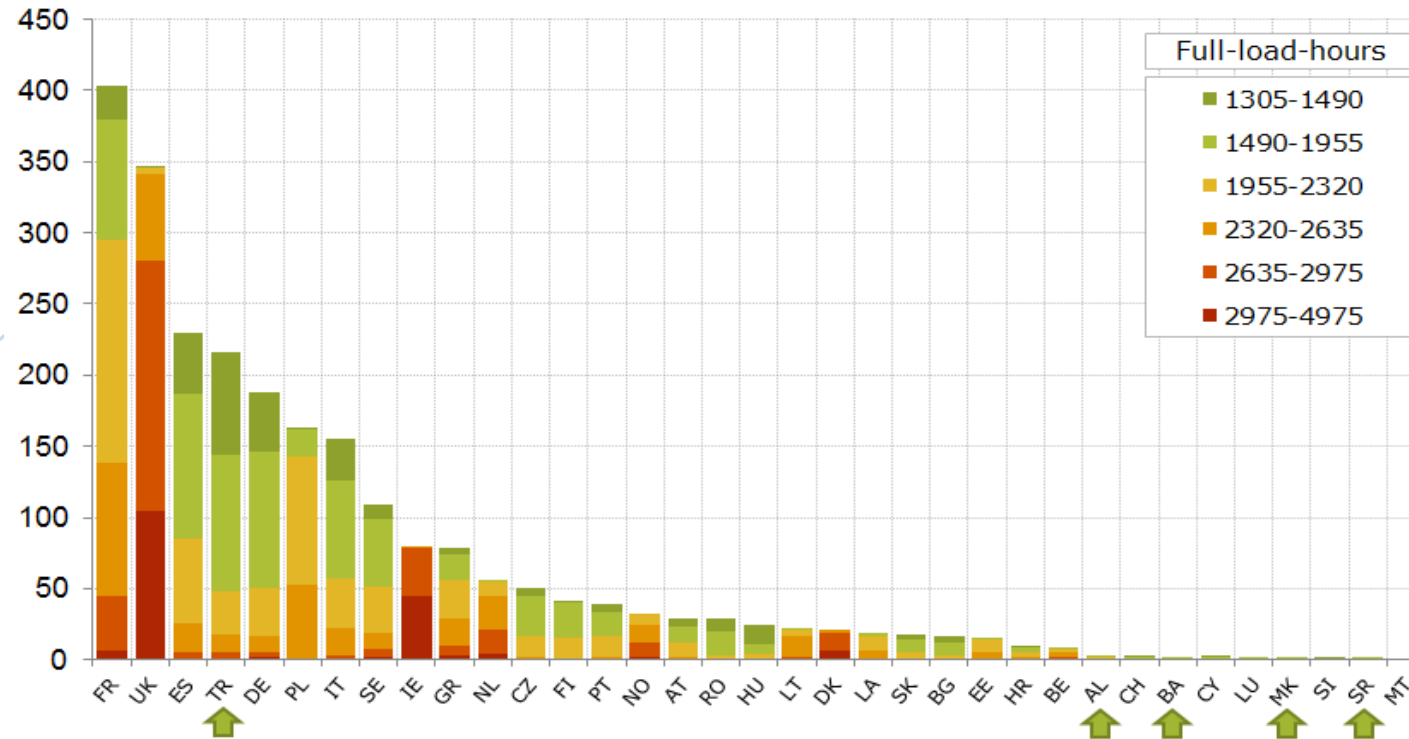
Many new jobs created in the neighbouring/exporting countries

Point of Departure: Different RES potentials



EXAMPLE: ONSHORE WIND

Technical potential of wind onshore [TWh]



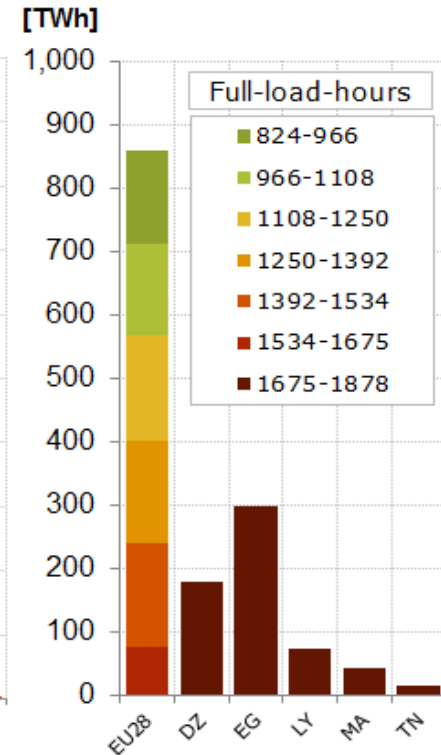
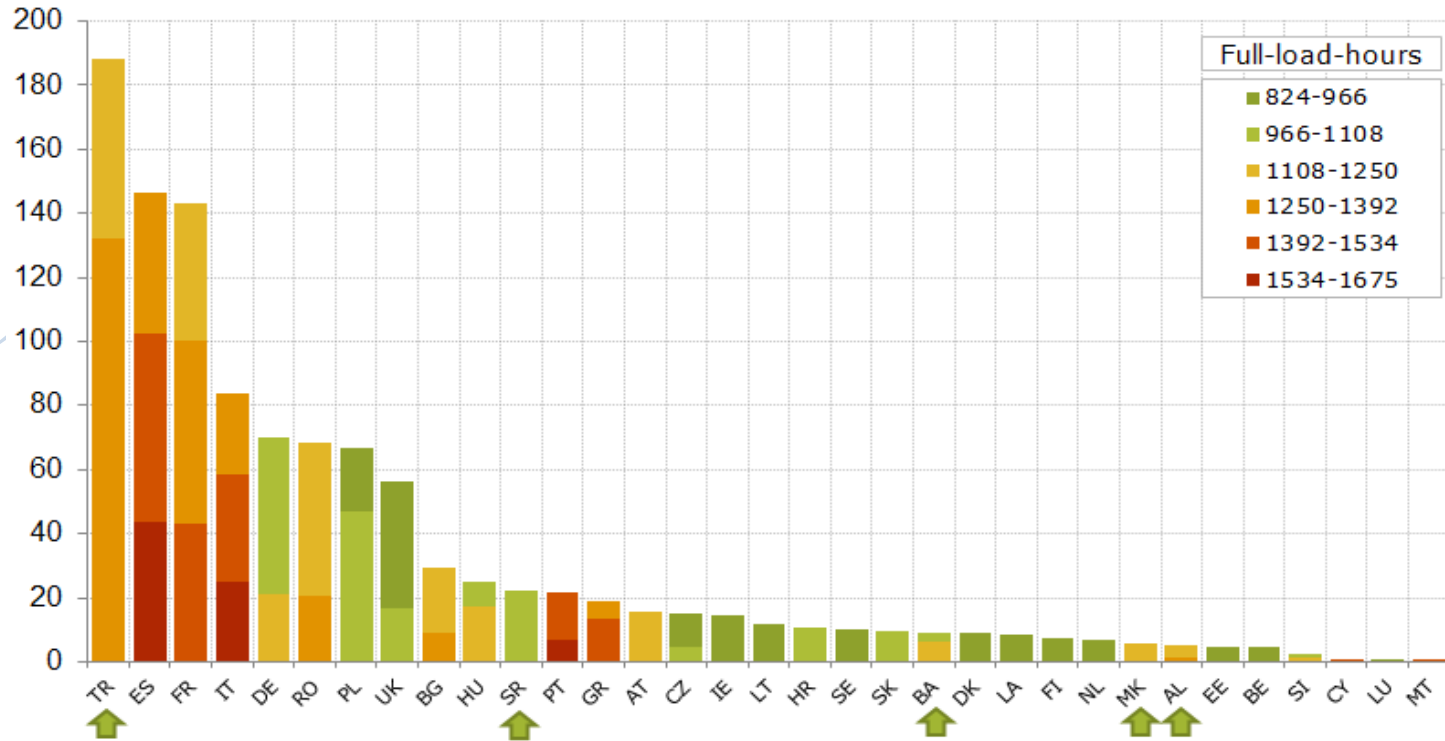
excellent wind conditions in Egypt are in the size of all available locations of same quality within the EU28

Point of Departure: Different RES potentials



EXAMPLE: SOLAR PV

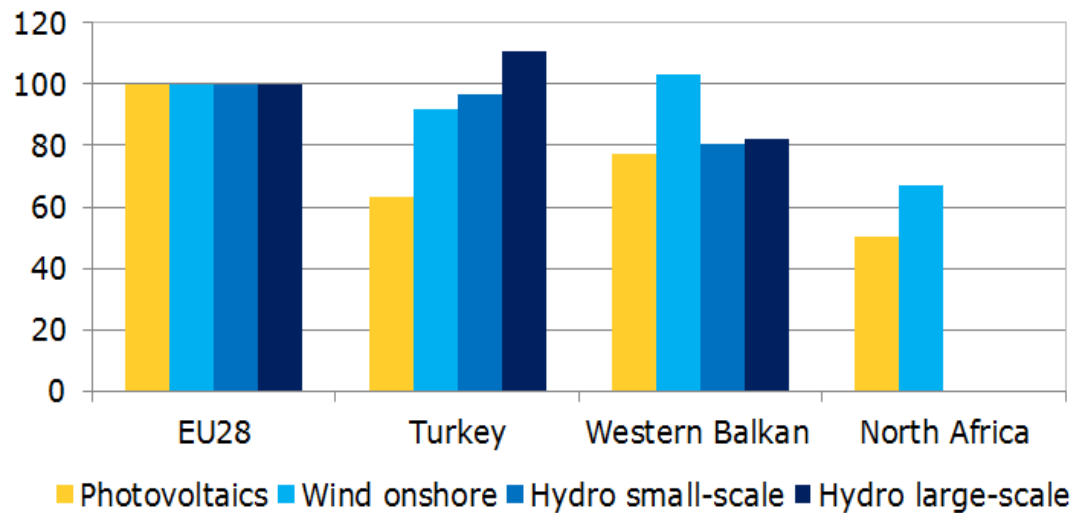
Technical potential of solar PV [TWh]



Point of Departure: Comparative advantage

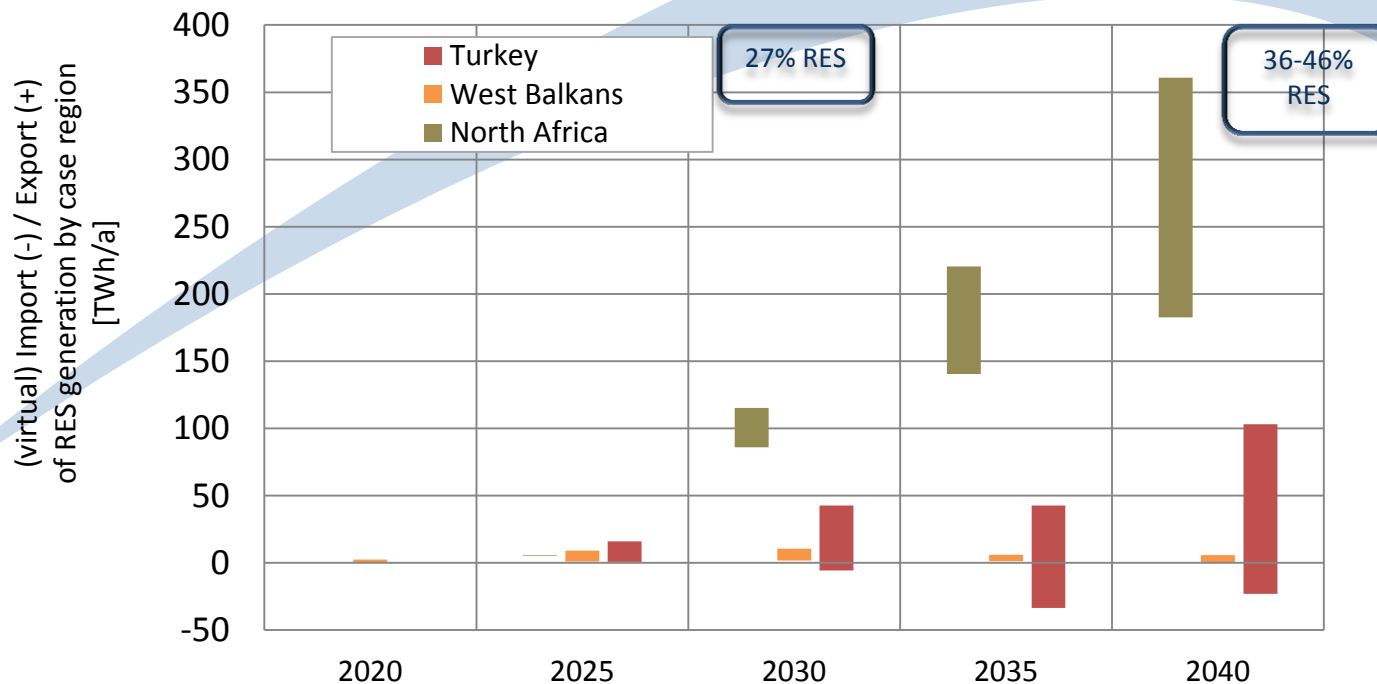


Fixed costs per unit relative to EU28 average in [%]



- The costs of installing PV panels are on average around 20 to 50% lower than within the EU28.
- Cost comparison is mainly based on differences in resource qualities.

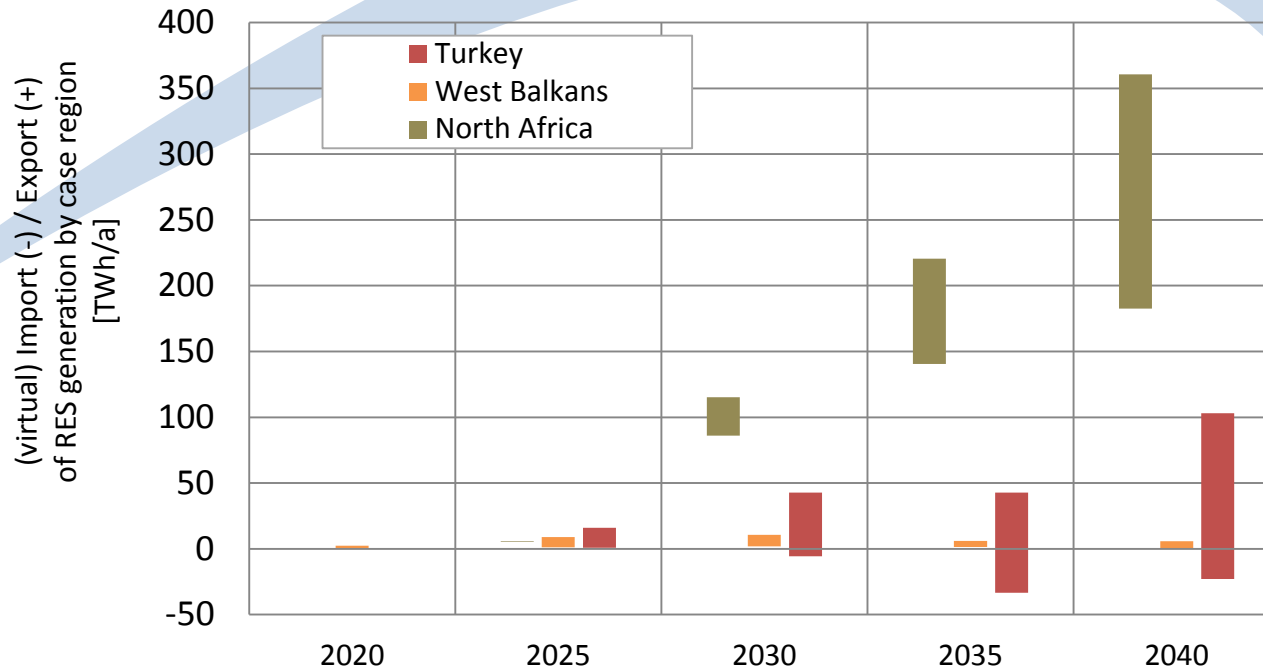
Looking ahead: Opportunities



Impacts to EU

- RE-E imports are 3-4% of EU28 RES-E demand in 2030
- This contributes to support expenditure savings of 3.8 – 4.4 billion €/year for 2021-2030 average (33 -38 % less than the reference)
- **Share of imports could increase to 18% of 2040 RES-E demand and save around 30 billion €/year (2031-2040)**

Looking ahead: Opportunities



Economic benefits at Neighbouring region level

(revenues on average per year)

	N. Africa	Turkey	W. Balkans
Average per year (2021-2030)	750-1000	5-350	90-120
Million €			

Prerequisites for enhanced RES cooperation (1)



Generic:

- **Political willingness and commitment**, including clear and transparent strategies in both EU/EU MS (off-take countries) and neighbour countries (host countries)
- Democratic and participatory processes: **Creating public acceptance** (including communication strategy)
- **Legal and regulatory frameworks**, which are attractive for investors
- Appropriate **cost/benefit sharing arrangement**
- Ensuring necessary **grid (interconnector) infrastructure**

EU specific:

- More **certainty on the post 2020 framework**, including role of cooperation mechanisms, i.e. governance structure for achieving RES target
- Clear and transparent **strategy for RES imports** from neighbouring regions/countries

Prerequisites for enhanced RES cooperation (2)



Neighbouring country specific:

- Appropriate **(energy system) planning**
- Establishing robust **regional electricity market/system** to allow for balancing of generation and load
- **Strategies** in neighbouring countries to capitalize on expansion of indigenous RES-E for export to EU
- Addressing and ensuring **social and environmental safeguards** related to RES expansion and cooperation

Key Policy Recommendations for EU

[NB! PRELIMINARY RECOMMENDATIONS]



Actions and Milestones.....

2030-2050

2020-2030

Now - 2020

- **Transparent & robust governance structure for reaching 2030 EU RES target**
- **Political commitment for enhanced RES cooperation**
- **EU-neighbour dialogue platform to identify interests, opportunities**
- **Strategy for RES cooperation between EU and neighbours, which identifies possible RES-E import contributions to 2030 EU RES target (e.g. TWh and/or %)**
- **Review current Article 9, and extract lessons learned**



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Key Policy Recommendations for EU

[NB! PRELIMINARY RECOMMENDATIONS]



Actions and Milestones.....

2030-2050

2020-2030

Now - 2020

• Ensure transparent & robust governance structure for reaching 2030 EU RES target

- Ensure political commitment for enhanced RES cooperation
- Create EU-neighbour dialogue platform to identify interests, opportunities (strategy input)
- Develop (long-term) strategy for RES cooperation between

- Implement RES cooperation strategy
- Introduce suitable cooperation mechanism
- Put in place formal cooperation agreements
- Collaborate with neighbours on financing new grid interconnectors and start constructing
- Initiate post 2030 (RES) energy framework, which includes RES cooperation commitments/efforts with neighbours



EU and neighbours
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 Define RES-E import
 Your energy. Our passion
 Contributions to 2030

Key Policy Recommendations for EU

[NB! PRELIMINARY RECOMMENDATIONS]



Actions and Milestones,.....

2030-2050

Now - 2020

- Ensure transparent & robust governance structure for reaching 2030 EU RES target
- Ensure political commitment for enhanced RES cooperation
- Create EU-neighbour dialogue platform to identify interests, opportunities (strategy input)
- Develop (long-term) strategy for RES cooperation between EU

2020-2030

- Implement RES cooperation strategy/ies, including short term pilot projects and long term planning activities
- Introduce revised (Art. 9) cooperation mechanism, or alternative instrument
- Collaborate with neighbours on establishing required formal agreements
- Collaborate with neighbours on establishing/financing new grid interconnectors
- Initiate post 2030 (RES) energy framework, which includes RES cooperation commitments/ efforts with

- Implementation and review with view to improving relevant framework for RES cooperation
-
- ...



and neighbours
ECN

- Define RES-E import
- Your energy. Our passion.
Contributions to 2030 EU

Key Policy Recommendations for Third Countries [NB! PRELIMINARY RECOMMENDATIONS]



Actions and Milestones.....

Now – 2020

2020-2030

2030-2050

- Energy planning to ensure future energy demand needs are met
- Establish robust regional and (RES) markets (particularly in N. Africa and W. Balkans)
- Ensure political commitment and strategy for (long term) RES-E exports to the EU
- Investigate and suggest policy coordination (RES, industry, education, etc.)
- Initiate relevant pre-feasibility studies



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Key Policy Recommendations for Third Countries [NB! PRELIMINARY RECOMMENDATIONS]



Actions and Milestones.....

2030-2050

2020-2030

Now - 2020

- Improved (energy) planning to ensure future energy demand needs are met
- Establish robust regional and (RES) markets (particularly in NA and WB)
- Ensure political commitment and vision for (long term) RES-E exports to the EU
- Develop (long-term) strategy for RES cooperation with EU
- Investigate and suggest policy coordination (RES, industry, education, etc)
- Initiate relevant pre-feasibility studies
- Feasibility studies, addressing mutual benefit as well as social and environmental issues
- Select and build specific interconnections (joint efforts with EU/EU MS)
- Set up coherent regulatory framework for RES-E exchange in collaboration with EU/EU MS
- Collaborate with EU/EU MS and with financing institutes (e.g. multilateral banks) to secure necessary financing



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Key Policy Recommendations for Third Countries [NB! PRELIMINARY RECOMMENDATIONS]



Actions and Milestones.....

Now - 2020

- Improved (energy) planning to ensure future energy demand needs are met
- Establish robust regional and (RES) markets (particularly in NA and WB)
- Ensure political commitment and vision for (long term) RES-E exports to the EU
- Develop (long-term) strategy for RES cooperation with EU
- Investigate and suggest policy coordination (RES, industry, education, etc)
- Initiate relevant pre-feasibility studies

2020-2030 2030-2050

- Continued feasibility studies, addressing mutual benefit requirements/needs as well as social and environmental issues
- Select and build specific interconnections (joint efforts with EU/EU MS)
- Set up coherent regulatory framework for RES-E exchange in collaboration with EU/EU MS
- Collaborate with EU/EU MS and with financing institutes (e.g. multilateral banks) to secure necessary financing

Implementation and review with view to improving relevant framework for RES cooperation



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Concluding remarks



1. Three distinct timeframes, with different focus and attention:
 - **Now - 2020: Preparation & planning**
 - **2020 - 2030: Implementation**
 - **2030 - 2050: Adaptation & scaling up**
2. EU has three distinctively different 'neighbours', different approaches are needed as well as different timing
3. Common denominator for EU-Third country RES cooperation: Future cooperation must be based on mutual benefits (and these have yet to be fully understood) and not solely on cost effectiveness in the EU

**BRINGING EUROPE AND THIRD COUNTRIES CLOSER
TOGETHER THROUGH RENEWABLE ENERGIES**



**Thank you
for your attention!**

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