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Commissioner for Climate Action and Energy

Ibrahim Saif
Minister of Energy and Mineral Resources, The Hashemite Kingdom of Jordan

Gérard Mestrallet
CEO of ENGIE

MEMBER’S CORNER
Maarten Wetselaar
Executive Vice President Integrated Gas, Shell

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Bringing Europe and Third Countries closer together through renewable energies

Current challenges and recommendations to enhance cooperation in the post 2020 framework

This article summarizes some of the key findings and main outcomes of the Intelligent Energy Europe project Bringing Europe and Third Countries closer together through renewable energies (BETTER). The paper is structured as follows: First, a summary of the current policy context and the rationale for RES-E cooperation in the Euro-Mediterranean region is presented. Then, an analysis of the main drivers and barriers for RES-E cooperation beyond 2020 and beyond, as well as the main prospects for long-term energy cooperation between the EU and its neighbouring countries is provided. Finally, a set of policy recommendations on how to enhance RES-E cooperation beyond 2020 are outlined.

POLITICAL CONTEXT

Since the launch of the Barcelona process back in 1995 and the introduction of the European Neighbourhood Policy (ENP) in 2004, energy has been at the core of Euro-Mediterranean cooperation. RES cooperation within the EU and as well as with EU neighbouring countries has been highly on Europe's political agenda for various reasons. Back in 2001, a key driving force behind the R&D Directive 2003/75/EC and the RES expansion was the EU's long-term vision of an affordable, reliable and sustainable energy system by 2030. This vision was coupled with a concrete goal to reduce CO₂ emissions by 85-90% by 2050 compared to the 1990 level. Intermediate goals in the period to 2050 include the 20/20/20/20 targets for 2020 and the 27/27/40 targets for RES energy share of electricity, emissions reduction by 2020. In January 2011, the EC called for more cooperation to meet the 2020 RES targets while the EU 2050 road map opened up discussion on how to fully exploit Europe's Energy System on the long term keeping in mind that current capacity and infrastructure will be of critical importance for the long term pathways. Similarly, in November 2014, energy ministers of EU Member States as well as South and East Mediterranean countries agreed to intensify the Euro-Med cooperation in the energy sector and consequently concluded with the establishment of these platforms to enhance bottom up dialogue and exchange of best practices on gas, electricity and on renewable energy and energy efficiency. More recently, in February 2016, the EC adopted the Energy Union Package consisting of several important documents addressing the energy and climate change to 2020 and beyond as well as cooperation with neighbouring regions. For example, the EC Communication on a Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy recognized that the key to improve energy security lies in a more collaborative approach based on true solidarity and trust through a functioning internal energy market and greater cooperation at regional and European levels, and second, in a more coherent external action.

In this context, an important role for cost effectively meeting the RES 2020 target but also for the design of Europe's Energy system beyond 2020 may involve cooperation within the EU and with the EU's neighbouring regions incentivized by RES cooperation mechanisms as provided for by the RES-Directive.

The directive 2009/28/EC provides for four cooperation mechanisms available to EU Member States to realise part of their national EU target abroad. Of particular importance for the BETTER project is Article 9 of the RES Directive which enables one or more Member State to cooperate with neighbouring countries in joint projects regarding the generation of electricity from renewable sources. A prerequisite to the acceptability of the project is that the electricity produced within the project must be conserved in the Community area. Other preconditions for using these mechanisms include that an equivalent amount of electricity to the electricity accounted for by the buyer country has been allocated to interconnection capacity by all responsible Transmission System Operators in the country of origin, the country of destination and, if relevant, each third country involved in the transit; and that third country cannot provide support for the RES production, other than investment aid.

The European Commission estimates that great savings can arise from an international cooperation approach in reaching EU Renewable Energy targets by 2020. Nevertheless, implementing such cooperation scheme is not an easy task. Proof of that is the fact that since the Directive entered into force in 2009, not a single Article 9 project has seen the light and other regional initiatives –such as for example ESI and the Mediterranean Solar Plan– have not delivered the desired outcomes.

In the following, the main drivers and barriers for enhanced regional cooperation between EU and its neighbouring countries are explored.

DRIVERS AND BARRIERS FOR ENHANCED RES-E COOPERATION IN THE TIME FRAME UP TO 2020

The rationale for Article 9 based RES cooperation is that, compared to the EU, neighbouring countries have a relative advantage in terms of RES potential (mostly wind, solar and hydro) and/or costs. As an example, figure 1 shows the wind and solar (PV and CSP) realisable technical potentials of selected countries in Europe as well as in North Africa, Western Balkans and Turkey. Similarly, figure 4 displays the cost comparative advantage of selected renewable technologies compared to the EU28 average values of fixed costs per energy unit.

Figure 2 shows that, within Europe, France, UK and Spain command over the highest wind onshore potentials whereas UK stands out due to its excellent wind locations. Turkey ranks in between UK and Spain, offering comparable resource qualities to the latter. Due to their small size, the Contracting Parties of the Western Balkans disappear in direct comparison with larger countries. In contrast to the Western Balkans, most North African countries offer vast future potentials of wind onshore. For example, the available potential with excellent wind conditions in Egypt is in the size of all available locations of same quality within the EU28. Algeria has lower resource quality compared to Egypt, but overall its realisable long-term potential is well above 350 TWh, hence more than the total electricity generated in the country from both conventional and renewable sources every year.

Similarly, figure 3 shows that in terms of PV potentials, Egypt ranks first in a cross-country comparison, followed by Turkey and Algeria. The available resources in all three top-ranking countries clearly exceed the ones in Spain, France or Italy. The available potentials for solar PV within Libya are in the size of the best locations within Spain, Italy and Portugal. A closer look at the Western Balkan countries indicates that also most of them stick out due to their comparatively good geographic conditions.

Finally, figure 5 shows the realisable long-term (2050) potentials for concentrated solar thermal power expressed, as before, in available full load hours. The countries with the largest potentials are Algeria, Morocco and Turkey. Similar to PV, all North African countries as well as Turkey show a considerably higher range compared to European countries. Moreover, countries such as Libya, Tunisia or Egypt, being last in the size ranking among North African countries, offer realisable long-term potentials of almost similar magnitude than the top-ranking EU country Spain. Besides the availability of considerable amounts of untapped RES potentials in North Africa, West Balkans and Turkey, the economics of the resources are decisive when it comes to the assessment of attractive cooperation opportunities. Due to the fact that most important renewable resources have low variable generation costs, the focus with regard to cost comparisons should be laid on fixed generation costs. In figure 4, the fixed costs per unit of generated electricity in North Africa, Turkey and the Western Balkans are contrasted against the EU28 average in relative terms at technology level (i.e. for wind, solar PV, CSP and hydro). It should be noted that the costs in this calculation only contain

![Realisable long-term (2050) potential of wind onshores (TWh)](image)

![Realisable long-term (2050) potential of concentrated solar thermal electricity (TWh)](image)

![Realisable long-term (2050) potential of photovoltaics (TWh)](image)
overnight investment costs and exclude possible differences in financing conditions. According to this comparison, the fixed costs per unit of generated electricity for PV panels are on average around 20 to 50% lower in assessed neighbouring countries than within the EU28. For example, for wind power plants, North Africa turns out to have significant cost advantages. The Western Balkans show comparatively more attractive conditions for hydropower units.

It should be stressed that the cost comparison presented in Figure 3 is mainly based on differences in resource qualities. To get a holistic picture on the comparative competitiveness of RES in neighbour regions of the EU the necessary support costs have to be taken into account. These costs vary according to region, time and technology and are determined by the difference of long-term marginal costs and marginal value. With regard to the cost side that is mainly characterised by the installation costs, also financing costs including the evaluation of country-specific risks as well as additional costs stemming from necessary infrastructure as in the case of North Africa need to be considered. Concerning the benefits, the mark values of the generation are decisive. This value is significantly influenced by the fact whether a certain technology has a dispatchable or variable output, respectively.

There might be a case for European Member States to be interested in developing new renewable energy projects in neighbouring countries.

Despite the expected benefits, since 2009, not a single Article 9 project has been implemented and the prospects until 2020 are quite limited. Two key reasons for this are, firstly, the mismatch between demand and supply, and secondly, the limited interconnection capacity between Europe and neighbouring countries. As a result, there is almost no demand for RES-E imports to Europe as most Member States believe they can reach their RES target domestically. Secondly, the cost decline of domestically available RES-E in the EU has reduced the cost advantage of RES-E imports from neighbouring countries to the EU. Third, following the Russia-Ukraine crisis, energy security concerns are now at the top of energy policy priorities. In this sense, following the Energy Union package in February 2015, the EU has taken steps to revitalize energy cooperation with neighbouring countries as a way to improve energy security (but mostly focusing on fossil fuels). In some neighbouring countries, episodes of civil unrest have affected security (but mostly focusing on fossil fuels). Finally, in some neighboring countries, episodes of civil unrest have led to higher country risks and financial costs, resulting in scepticism from foreign investors.

In the case of large-scale exchange (i.e. surplus in neighbouring countries – economic and political relations with the EU. The contribution of the domestic economic mix. The actual socio-economic benefits from RES deployment do not always match the expectations on the right policies (B2M, industrial, etc) must be in place to tap the full socio-economic benefits. High upfront costs and lack of financing mechanisms. Electricity prices are still politically defined and high fossil fuel subsidies prevail. Lack of clear political commitment to RES-E. Social acceptance issues. Path dependencies, especially in countries rich in fossil fuel, can be deeply rooted and institutionalized in the whole society. Additionally, unless the socio-economic and environmental benefits from RES-E deployment are underscored by citizens, public opposition may arise.

**CHALLENGES FOR ENHANCED COOPERATION BETWEEN EU AND NEIGHBOURING COUNTRIES**

- The legal and regulatory framework needs further development in order to attract private investors, particularly in North African and the Western Balkans. Although there are binding targets for RES in most countries, in many cases these are implemented rather reluctantly. Some technical barriers associated to fragile electricity systems still persist (e.g. weak grid infrastructures). This is a very important challenge in the WI that results in supply shortages, high import duties, economically expensive blackouts and load shedding.

- The actual socio-economic benefits from RES deployment do not always match the expectations on the right policies (B2M, industrial, etc) must be in place to tap the full socio-economic benefits.

- High upfront costs and lack of financing mechanisms.

- Electricity prices are still politically defined and high fossil fuel subsidies prevail.

- Lack of clear political commitment to RES-E.

- Social acceptance issues.

- Path dependencies, especially in countries rich in fossil fuel, can be deeply rooted and institutionalized in the whole society. Additionally, unless the socio-economic and environmental benefits from RES-E deployment are underscored by citizens, public opposition may arise.

**THE BETTER PROJECT**

- **Full title:** Bringing Europe and Third Countries closer together through renewable energies
- **Year of implementation:** July 2012 – May 2015
- **Finding programme:** European Commission, EASME, Intelligent Energy Europe (IEE)
- **Website:** www.better-project.net
- **BETTER consortium:** CIEMAT, DLR, ECN, IRESEN, O&I, PIK, TU-WIEN, IRESEN (JUAN HERNÁNDEZ RESEARCH, UIND
- **Project Coordinator:** Nadia Seco (CIEMAT)

**Potential drivers for RES-E cooperation for Europe**

- Achieve RES and Climate change targets more cost-effectively.
- Foster stabilizing economic relations with neighbouring countries.
- Open new market opportunities.
- Diversify energy portfolio & supply regions - increasing security of supply.
- Technology transfer and capacity building.
- Get flexible renewable power supply to complement own variable RES-E (e.g. CSP)

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- **Project Coordinator:** Nadia Seco (CIEMAT)

**Potential drivers for RES-E cooperation for Neighbouring countries**

- Create new jobs and industrial opportunities.
- Foster technology development and domestic know how.
- Create income from domestic resources.
- Reinforce the existing economic and political relationships with the EU.
- Contribute to the decarbonisation of the domestic energy mix.
- Create economies of scale in RES-E deployment.

**Comparative Advantage of Selected RES technologies for hydrogen and fuel cells**

<table>
<thead>
<tr>
<th>Technology</th>
<th>EU28</th>
<th>Turkey</th>
<th>Western Balkan</th>
<th>North Africa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen small-scale</td>
<td>40</td>
<td>80</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>Hydrogen large-scale</td>
<td>40</td>
<td>80</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>Solar</td>
<td>120</td>
<td>140</td>
<td>120</td>
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</tbody>
</table>

**Comparative Advantage of Selected RES technologies for hydrogen and fuel cells**

- Hydrogen small-scale: 40% for Turkey, 80% for Western Balkan, 40% for North Africa.
- Hydrogen large-scale: 40% for Turkey, 80% for Western Balkan, 40% for North Africa.
- Solar: 120% for Turkey, 140% for Western Balkan, 120% for North Africa.
The integrated assessment conducted in the BETTER project serves as an overarching top-down approach to identify opportunities for RES cooperation under varying policy pathways in pan-EU scenarios. These scenarios include the 28 EU Member States and North Africa, Turkey, and the Western Balkans regions as cooperation partners. The approach used for the integrated model-based assessment in the BETTER project comprises three dimensions:

1. A comprehensive scenario-based assessment of prospects for RES cooperation from the integrated (top-down) perspective has been undertaken with TU Wien’s Green-X model. This techno-economic policy analysis acted as a key basis for the overall evaluation of prospects for RES cooperation in the enlarged geographical context (EU plus third countries). It allowed for identifying monetary savings associated with enhanced RES cooperation as well as resulting changes in costs, expenditures, and benefits by region that come alongside with the changes in installed RES capacities and generation across the assessed regions.

2. Complementary to above and specifically for the electricity sector, grid and transmission needs are constrained, respectively, together with the physical integration possibilities were evaluated from a technical perspective in a power-system analysis, done by use of TU Wien’s HYREPS model. Figure 1 provides a graphical overview on the interplay of both models. Both models were operated with the same set of general input parameters; however, in different spatial and temporal resolution, Green-X delivers a first picture of renewables deployment and related costs, expenditures and benefits by country on a yearly basis (2010 to 2040). The output of Green-X in terms of country- and technology-specific RES capacities and generation in the electricity sector for selected years (2030, 2040) served as input for the power-system analysis done with HYREPS. Subsequently, the HYREPS model allowed the interplay between supply, demand and storage in the electricity sector on an hourly basis for the given years. The output of HYREPS was then fed back into the RES investment model Green-X. In particular, the feedback comprised the amount of RES that can be integrated into the grids, the electricity prices and corresponding market revenues (i.e. market values of the produced electricity of variable and dispatchable RES-E of all assessed RES-E technologies for each assessed country). Future scenarios were defined along two dimensions. Firstly, with respect to the EU RES target ambitions, and secondly, choice of cooperation strategy. For simplicity, figure 1 shows only four different possible future pathways for the ambition level related to the future RES expansion in Europe; two distinct RES pathways are presented in this Roadmap for 2030 (and beyond). One following a strong RES target for 2030 is 3.5% RES share in gross final energy demand, and, one reflecting the current policy thinking, aiming for a 2030 RES share of 27%.

Concerning the second dimension, two scenarios are distinguishable:

1. Reference cases (also referred to as EU only cooperation): RES cooperation only within the EU i.e. no cooperation between EU Member States and the neighboring regions.

2. Default cases (also referred to as EU plus cooperation): These scenarios assume full RES cooperation and across the EU as well as all three case regions North Africa, Western Balkans (Balkans and Turkey).

Results from the integrated assessment show that, irrespectively of the RES ambitions, the EU domestic RES-E deployment is substituted to a certain extent by RES-E imports when cooperation is made possible. In the time frame to 2030, the share of domestic RES generation in total energy consumption is 1 percentage point higher in the EU plus scenarios compared to the EU only scenario. In the time frame to 2040, the difference is 3 percentage points. When it comes to renewable energy deployment in neighboring regions, as displayed in figure 2, the EU only scenario predicts a linearly increasing RES deployment in the West Balkans up to 2035 that ranges between roughly 54% and 61% in gross final energy demand, depending on the overall ambition level concerning RES. In the EU plus scenarios, this share is a bit lower for the weak target scenario in the final period, e.g. the order of 5% instead of 46% by 2040 while in earlier years the opposite trend is applicable - i.e. RES deployment is higher in the case of full cooperation than under reference conditions. This implies that, following a conserva- tive pathway for RES, the West Balkans Contracting Parties of the Energy Community offer attractive opportunities for RES investments in the short- to midterm while other neighbors, in particular North African countries, offer a more viable long-term perspective. In the case of a strong target, the attractiveness of investing more than needed
BEYiTER project to become an action oriented project, the role and involvement with stakeholders has been prominent and ONE has played a pivotal role in this respect. Proof of this is that over the last thirty months, more than 200 biannual meetings have taken place with government officials, private sector as well as civil society representatives from all studied regions. Additionally more than ten large dissemination and stakeholders consultation events have taken place across Turkey, North Balkans, South Balkans and Europe, being the last one of these events the final conference of the European Parliament on March 3rd 2015. As a result of this extensive work, the BETTER project has contributed to generate and disseminate extensive knowledge on future of renewable energy deployment and cooperation across Europe and Neighbouring countries while taking into consideration the views from the various actors at play. More than forty experts covering various relevant topics are available in the project website (http://www.better-project.eu/index.html). One of the most relevant extensions has been a policy package, consisting on one sector plans per region, guidelines for project developers as well as a roadmap with concrete policy recommendations for both EU and neighbouring countries on energy security and macroeconomic aspects have been analysed.

ABOVE BETTER

Over the last thirty months, while understanding and adapting to a changing geopolitical environment the BETTER consortium has attempted to shed some light to the above mentioned challenges by addressing RES cooperation between EU and neighbouring countries in several dimensions. While the starting point of the project has been Article 9 of the RES directive 2009/28/EC, the project has assumed renewable energy cooperation opportunities and challenges in a broader way.

In this context, the core objectives of BETTER has been to assess in case studies, stakeholder involvement and integrated analysis, to what extent cooperation with neighbouring countries can help Europe achieve its RES targets in 2020 and beyond, trigger the deployment of RES electricity projects in third countries and create synergies and win-win circumstances for all involved parties. The case studies focusing on North Africa, the Western Balkans and Turkey have investigated the technical, socio-economic and environmental aspects of RES cooperation.

Additionally, an integrated assessment has been undertaken from the EU plus third country perspective, including a quantitative cost-benefit evaluation of potential policy approaches as well as strategic power system analysis. Impacts on the achievement of EU target levels, energy security and macroeconomic aspects have been analysed domestically is applicable throughout the whole assessment period – in other words, Western Balkans would act as a virtual exporter to the EU 28 until 2030. In the case of a weak target, Turkey would become an importer under a full cooperation (EU plus scenario) since domestic RES deployment is then lower compared to the reference case of no cooperation with the EU28 (EU only scenario). Thus, North Africa would act under these circumstances as key host, exporting physically to the EU28 and the Energy Community (presumably including Turkey). Contrary, assuming a strong RES target for 2030 and beyond and full cooperation (EU plus scenario), Turkey would become a major host for investments in RES, achieving a consistently higher RES share in comparison to the reference case EU28 only scenario, that lies roughly two to four percentage points below the EU plus scenario.

When it comes to the results in terms of the amounts that could be traded, figure 4 shows that for 2030, the EU would import roughly 310 TWh in 2030 under a strong RES target according to full RES cooperation (EU plus) scenarios. Turkey would forthwith export around 88 TWh in 2030 under a strong target, whereas it would even be a net importer in a weak target scenario. The Western Balkan countries exhibit less distinct scenarios in 2030. A strong target leads to the virtual export of around 11 TWh whereas the countries remain small exporters under a weak target 2030. For North Africa a clear trend can be identified. A strong target leads North Africa to in that case physically export quite a substantial amount of renewable electricity. 281 TWh in 2030 as compared to roughly half of that amount (i.e. 165 TWh) in 2020 when a weak RES target is assumed.

In a nutshell, the main results from the comprehensive integrated assessment work can be summarised as follows:

1. There are significant RES-E export opportunities from the neighbouring regions to the EU and the associated economic benefits for both importer and exporter are large.
2. In the 2020 timeframe, there is no real basis for exploiting Article 9 cooperation because there is no demand for imports from Member State side and the neighbouring regions have resources not available for exports as far most of them their electricity demand is rising too fast.
3. Post 2030, RES-E imports to the EU will likely emanate from North Africa, as the RES-E potential there is by far the highest of all neighbouring regions.

4. EU 2030 RES policy framework as well as post 2030 RES policy framework will play a key role in determining the need for and attractiveness of RES-E exports to the EU. A weak target and/or governance framework may leave the large cost-saving potential of international RES-E cooperation unused.

5. Robust business opportunities for RES-E exports/imports will depend on the EU's seriousness on achieving its 2030 decarbonisation goals, on the political willingness to partially liberalise on RES-E imports from neighbouring regions, and on the exporters' willingness to export RES-E to the EU.

6. Western Balkans is the region more likely to host the first project of this type because of various reasons including the existing interconnection levels as well as the geographical hotspots causing regulatory opacity.

In the time frame post 2020, EU should consider RES-E imports from neighbouring regions as a way to meet its ambitious decarbonisation objectives by 2030 and 2050, contribute to improve EU energy security, contribute to Europe's international cooperation efforts in neighbouring regions as a way to create jobs, income opportunities, contribute to build a sustainable energy mix, etc. In this sense, the EU should develop an appropriate, clear and appealing legal framework to foster RES-E imports. Simultaneously based on the results from comprehensive pre-faisability studies and together with the relevant neighbouring countries stakeholders, jointly develop new RES-E projects for exports to North Africa, Turkey and Western Balkans. In order to avoid undesirable outcomes, the EU should develop environmental and social safeguards for RES-E imports in order to ensure that the RES-E projects lead to positive socio-economic and environmental effects in exporting countries, at national, regional and local levels.

In neighbouring regions, 2020 RES targets should be defined and pursued to provide certainty signals to investors and to avoid higher fuel shares as a result of RES-E imports. Together with Europe, more interconnections should be planned and developed. In order to attract investment, de-risking mechanisms should be implemented (such as PPA). Additionally, civil society should be engaged, participate and benefit from the development of RES-E projects at all levels.

POLICY RECOMMENDATIONS TO ENHANCE RES-E COOPERATION

For mutually beneficial cooperation projects to materialize in the future, a set of general policy recommendations for the EU and neighbouring regions have been identified:

- In the time frame until 2030, Europe should provide more clarity on the 2030 energy and climate framework. In this respect, we believe that Europe should show its determination and ambition in the next COP by aiming for more stringent climate targets. Additionally, Europe must quickly define its post 2020 governance structure to reduce uncertainty that currently prove RES from clearly defining its strategy on how to meet the post 2030 RES targets. Finally, Europe must speed up efforts to reach the 10% interconnection target within the EU as this is currently jeopardising many member states from developing joint projects with physical transfer within Europe as well as with neighbouring countries. Similarly, EU should consider developing and implementing an EU-wide framework to conduct pre-faisability studies for appraisal of realistic RES-E cooperation that not only take into account the techno-economic feasibility of the project but also its environmental, social and economic impacts for both Europe and neighbouring countries at the national and local level.

While working towards building the EU's internal energy market, more efforts should be devoted to raise awareness among national and regional policy makers as well as civil society about the wider benefits and drivers for RES-E cooperation in order to create support and willingness for such cooperation. Simultaneously, the EU should continue to foster and enhance not only dialogue but the various forms of cooperation around renewable energies.

Neighbouring regions should keep advancing on improving the legal and regulatory framework for RES-E cooperation. Particularly the Integrated Assessment, the Balkan and the ENPlus ENOS-G3 partners should contribute to build a sustainable energy mix, etc. In this sense, the EU should develop an appropriate, clear and appealing legal framework to foster RES-E imports. Simultaneously based on the results from comprehensive pre-faisability studies and together with the relevant neighbouring countries stakeholders, jointly develop new RES-E projects for exports to North Africa, Turkey and Western Balkans. In order to avoid undesirable outcomes, the EU should develop environmental and social safeguards for RES-E imports in order to ensure that the RES-E projects lead to positive socio-economic and environmental effects in exporting countries, at national, regional and local levels.

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- The present article summarises the work conducted through the whole project duration carried out by the entire BETTER consortium. It is based on several deliverables, particularly the Integrated Assessment and the Final Report. The authors gratefully acknowledge the contribution of all BETTER consortium partners involved in the project.

- The realisable technical potential represents the renewable electric power fraction of the overall technical potential assuming that all existing barriers are overcome and all active forces are active. Therefore, general parameters such as market growth rates, planning constraints are taken into account. It is important to mention that this potential term must be seen in a dynamic context, i.e. the realisable potential has to be revisited to a future year (e.g. 2030) as discussed herein.

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Communications

Houda Ben Jannet Allal

**OMÉ and UNDP high-level policy discussion on renewable energy cooperation, BETTER project**
3 March 2015, Brussels, Belgium

**Sohbet Karbuz**

**TURDOGE - Turkish Oil and Gas Conference on East Mediterranean Gas**
18 March 2015, Ankara, Turkey

**Houda Ben Jannet Allal**

**PRESENTATION**
High-level ministerial panel at the Arab launch of the United Nations Decade of Sustainable Energy for All
24 March 2015, Amman, Jordan

**Bruno Lescoeur**

**INTERNATIONAL STRATEGIC STUDIES INSTITUTE (ISSI)**

**PRESENTATION**
Offshore Mediterranean Conference
25 March 2015, Ravenna, Italy

**Sohbet Karbuz**

**PRESENTATION**
International Strategic Studies, Institute on East Mediterranean gas developments
4 April 2015, Ankara, Turkey

**Bruno Lescoeur**

**INTERNATIONAL STRATEGIC STUDIES INSTITUTE (ISSI)**

**PRESENTATION**
Launch of the three Euro-Med Platforms organized by the Moroccan ministry of Energy, Mines, Water and Environment
6 May 2015, Rabat, Morocco to participate with the co-presidencies of Union or the Mediterranean (UfM) and the European Union

**Sohbet Karbuz**

**PRESENTATION**
World Energy Regulators Conference on Fuel Mix Change in the Mediterranean Region
27 May 2015, Istanbul, Turkey

**Bruno Lescoeur**

**INTERNATIONAL STRATEGIC STUDIES INSTITUTE (ISSI)**

**PRESENTATION**
Aspen Energy Forum
6 June 2015, Rome, Italy

**Emmanoula Menichetti**

**PRESENTATION**
Mediterranean Energy Perspectives, at the International Conference on Unlocking the renewable energy investment opportunities in the Mediterranean, a Regional perspective
11 June 2015, Milan, Italy Organized by RES4Med and Maker- Busscar University

**Bruno Lescoeur**

**INTERNATIONAL STRATEGIC STUDIES INSTITUTE (ISSI)**

**PRESENTATION**
Launch of the UPM Platform on Gas
11 June 2015, Brussels, Belgium

**Bruno Lescoeur**

**INTERNATIONAL STRATEGIC STUDIES INSTITUTE (ISSI)**

**PRESENTATION**
EC-OME Conference: Euro-Med Natural Gas Market: Prospects, challenges and opportunities
11 June 2015, Brussels, Belgium

**Sohbet Karbuz**

**PRESENTATION**
Euro-Med Oil and Gas Exploration and Prod. Summit
6-9 October 2015, Malta

**Houda Ben Jannet Allal**

**PRESENTATION**
Mediterranean Region and the Challenge of Climate Change Conference
15 October 2015, Milan, Italy Organized by Editors in cooperation with OME, WEC, UN and DCP

**Houda Ben Jannet Allal**

**PRESENTATION**
What should we expect: energy and climate scenarios, and perspectives, Mediterranean Region and the Challenge of Climate Change Conference
15 October 2015, Milan, Italy Organized by Editors in cooperation with OME, WEC, UN and DCP

**Houda Ben Jannet Allal**

**PRESENTATION**
Final session of the workshop From Tunis to Paris: Fostering the transition to a low-carbon energy future in North Africa
20 October 2015, Tunis, Tunisia Organized by OME’s Renewable Energy Committee in cooperation with TIST and AMPE

**Emmanoula Menichetti**

**PRESENTATION / CO-MODERATION**
Main energy and emission trends in the South East Mediterranean a scenario analysis, workshop
From Tunis to Paris: Fostering the transition to a low-carbon energy future in North Africa
20 October 2015, Tunis, Tunisia Organized by OME’s Renewable Energy Committee in cooperation with TIST and AMPE

**Houda Ben Jannet Allal**

**PRESENTATION**
Energy Perspectives in the Mediterranean & the UPM Platform on Gas at the 13th Tunisian Petroleum Exploration and Production Conference
26 October 2015, Tunis, Tunisia

How to reach OME office

**BY TRAIN**
OME Office can be accessed from both airports Charles de Gaulle Roissy or Orly as following and takes about one hour:

- From Charles de Gaulle Roissy or Orly: take RER B
  - stop at Châtelet station
  - Connect by taking RER A
  - stop at Aubervilliers Diderot Station

**BY BUS (RERbus)**
- From/To Charles de Gaulle Roissy
- direction to Opéra, Paris
- Stop at Bus Stop... 15-minute walk to reach OME office
Le soleil éclaire maintenant le jour et la nuit

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