MEDITERRANEAN ENERGY PERSPECTIVES

2018

EXECUTIVE SUMMARY

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EXECUTIVE SUMMARY

Located at the cross-roads of civilizations and accounting for 7% of the world population, the Mediterranean region is made up of countries with varied economic, political and cultural profiles. Such incredibly rich diversity encompassed in a single region creates a certain microcosm that reflects global trends and tendencies. It provides the perfect opportunity to closely analyse these trends, serving as the ideal platform to understand the impacts that the implementation of sustainable development measures would have not just on a country-by-country level, but in a regional and global context as well.

The region is particularly vulnerable to the effects of climate change, with the impacts of these changes already resonating throughout the area. While temperatures have risen 1° C globally they have actually increased 1.4°C in the Mediterranean region. If current trends continue and if warming rises by over 2°C, most of the Mediterranean basin could quickly turn into a desert.

At the same time, the rapid development of the South and East Mediterranean countries is leading to a significant increase in energy demand and is changing the economic and energy landscape of the region. The North countries are undergoing different changes, with a diversification of energy sources through the increased introduction of renewable energy sources and implementing stronger and effective energy efficiency measures, also thanks to the growing investment in digital technology.

This is why it is crucial to closely look at the regional developments and to be able to make the necessary decisions to lead the region into a sustainable future.

This Outlook, Mediterranean Energy Perspectives, 2018 edition – MEP2018 provides a unique and comprehensive analysis of the energy sector in the Mediterranean region. It presents data ranging from the early days of the region's energy industry to the situation today and an outlook to 2040 based on OME's proprietary supply and demand model, the Mediterranean Energy Model.

Current efforts, related to energy security, and notably taking into consideration the COP21 developments in regards of renewable energy sources and energy efficiency are carefully considered as they are key issues for the Mediterranean energy sector and for the whole economic and environment future of the region. This outlook also draws upon the extensive expertise of the OME and its members.

MEP2018 develops two scenarios:

- The *Reference Scenario* considers past trends, current policies and ongoing projects and incorporates the Nationally Determined Contributions (NDCs), but it assumes that international financing and other aids will not be forthcoming. Only unconditional NDC targets are assumed to be met.

- The *Proactive Scenario* is based on the implementation of strong energy efficiency programmes and increased diversification in the energy mix based on the NDCs submitted by each country. This Scenario assumes that international financing will be made readily available and that all targets of the NDCs will be met in full.

1 ENERGY TRENDS: IT'S TIME FOR A CHANGE

The Mediterranean region is undergoing continuous changes in energy consumption, which will likely lead to a 40% increase in the region's overall energy demand by 2040. The overall Mediterranean trend hides great disparity amongst its shores with all the increase in energy demand expected to be driven by South and East Mediterranean countries, while demand in the North will be decreasing. With such a significant increase in demand, it is paramount the Mediterranean region alters its energy trajectory through robust implementation of Nationally Determined Contributions (NDCs) and follows through on both energy efficiency measures and renewable energy deployment targets.

At the moment, primary energy demand of North Mediterranean countries exceeds that of the South and East, accounting for 63% of total Mediterranean energy demand. By 2040, regardless of the scenario, energy demand in the South and East will exceed that of the North, inversing the existing proportions. Under the Reference scenario, South and East Mediterranean energy demand would more than double to exceed 800 Mtoe, while under the Proactive Scenario, it would be slightly over current levels of North energy demand, curtailing the overall energy demand to only a 13% increase to 2040.

The structure of energy demand in the Mediterranean region has shifted markedly over the last 25 years: from an industry sector centric structure to a more diverse one. Meanwhile power generation has taken an increasing share. Over the outlook period to 2040, most of the energy demand will come from the electricity and transport sectors, as the economies of the South and East Mediterranean countries continue their robust development.

Per capita energy demand in the South and East is currently less than half that of in the North. As populations in the South and East Mediterranean improve their access to modern energy services, this average will increase substantially to 2040 (+62% compared to current levels) under the Reference Scenario. This increase in per capita energy demand in the South and East could be capped efficiently in the Proactive Scenario, yielding an increase limited to +28% in 2040.

The energy mix will remain fossil fuel based, but the share of fossil fuels could be reduced from the current two-thirds, to almost half in 2040. Energy savings could reach 250 Mtoe under the Proactive scenario, which is 20% less than the Reference scenario. At the same time, oil demand will continue to increase, particularly for transport fuels. While fossil fuels remain the dominant energy source in the Mediterranean's primary energy mix in 2040, regardless of the scenario, oil will remain the dominant fuel in both scenarios through 2040.

Encouraged by incentives, forward policies and technological advances, renewables, especially non-hydro renewables, are expected to exhibit robust growth trends to 2040. Renewables will expand on average by 2.3% per year to contribute 14% of energy supply in the Reference case in 2040. With a more favourable outlook in the Proactive Scenario, renewable supply increases 3.4% per year to account for 24% of energy demand. Both the North and South and East Mediterranean sub-regions will experience sustained growth in non-hydro renewables.

Energy efficiency is also set to play a decisive role in both the end-use sectors and power generation; the increased use of renewables in the mix will also be pivotal. In the Proactive scenario all increase in demand will stem from renewables and in the end-use sectors, renewables demand will increase threefold.

2 STEP ON THE GAS

The Mediterranean region holds 4.2% of the world's proven oil reserves, and 4.6% of the world's proven natural gas reserves. Despite large-scale discoveries in the past decade, many areas in the South Mediterranean, especially offshore, are still either unexplored or under-explored in regard to oil and natural gas.

The East Mediterranean has become an exciting exploration frontier with large gas discoveries that have taken place since 2009[1] and with the prospect of substantial hydrocarbons resources still waiting to be tapped beneath the eastern Mediterranean waters. Current estimates anticipate around 9 800 billion cubic meters (bcm) of undiscovered technically recoverable gas and over 3.4 billion barrels of oil resources in the region[2].

Exploration activities in Israel led to the discoveries of two giant fields - Tamar and Leviathan in 2009 and 2010, which were classified as the world's largest deep-water gas discoveries between 2001 and 2010. Cyprus has also had some luck in the region with the discovery of a large offshore gas field, Aphrodite, in December 2011. However, political tensions surrounding the area still play a significant role in hindering robust development of the region.

Egypt, as well, has had success in attracting foreign investors, which has led to very promising discoveries both onshore and offshore, particularly for natural gas. The crown jewel of recent exploration activity in the country has been the discovery of the super-giant gas field, Zohr, in August 2015. Eni's Zohr discovery is the largest discovery of its kind in the Mediterranean Sea.

In the past few years, there has also been a resurgence of interest in exploration in the Adriatic, in the areas south-west and west of Crete, and in the Ionian Sea. A significant amount of acreage has been opened to exploration following the recent and ongoing licensing rounds.

These discoveries have confirmed, once again, the substantial hydrocarbons potential in the Mediterranean Sea, hence the importance of the Mediterranean region in the global exploration and production industry.

However, exploration in the western Mediterranean is falling behind. In Algeria, although plenty of new discoveries have been reported in the past few years the average field size seems rather

[1] Tamar and Leviathan fields in 2009 and 2010 offshore Israel; Aphrodite in 2011 off the coast of southern Cyprus; and Zohr in 2015 offshore Egypt.

[2] USGS (2010a), "Assessment of Undiscovered Oil and Gas Resources of the Levant Province, Eastern Mediterranean", Fact Sheet 2010-3014, March, the United States Geological Survey, Boulder, Colorado.
USGS (2010b), Assessment of undiscovered oil and gas resources of the Nile Delta Basin Province, Eastern Mediterranean: U.S. Geological Survey Fact Sheet 2010-3027, May, the United States Geological Survey, Boulder, Colorado.

small. The majority of these discoveries were made in extensively explored mature basins and were dominated by gas.

Libya has the largest oil reserves in the Mediterranean region. However, because of former UN and US sanctions and ongoing civil unrest, the level of exploration has been low for decades and the majority of the country remains unexplored or under-explored. The volatile socio-political situation has not only affected oil and gas exploration activities, but also production activities in the country.

Natural Gas

Natural gas production, which has nearly doubled since 1990, will do it again until it reaches its peak in 2037, before declining to 300 bcm in 2040. Gas export potential from the region will further increase in the next two decades.

The strong increase in gas demand in the last two decades has had an impact on the region's energy mix: the share of gas in total energy demand increased from 15% in 1990 to 27% in 2015. By 2040 this share is expected to increase further.

Today, the Mediterranean region accounts for 9% of global natural gas demand. At the moment, Italy remains the largest gas consumer in the region, followed by Turkey. Demand for natural gas never stopped growing in the South Mediterranean. An important driver behind this was the policy chosen to promote natural gas for domestic use in order to free up more oil for export in major producing countries. As a result, the South West Mediterranean has the largest share of natural gas in the primary energy mix, at 46% in 2015.

Power generation is set to remain the largest gas-consuming sector in the region. At the same time, a spectacular increase is expected over the next two decades in the use of gas in the transport sector under both scenarios. At only 3 Mtoe in 2015, gas consumption in the transport sector is anticipated to exceed 10 Mtoe in the Reference Scenario and 20 Mtoe in the Proactive Scenario by 2040.

During the outlook period, Algeria, Egypt and Libya will remain net gas exporters while Cyprus and Israel will join the group. By 2040, total gas export potential of those five countries will increase moderately (to 50 bcm/yr) in the Reference Scenario but this level could be more than doubled (to 110 bcm/yr) in the Proactive scenario.

Today, the Mediterranean region as a whole is a net importer of natural gas. Despite having large exporters in the South West Mediterranean, those exports are outweighed by imports in the North and South East sub-regions. Looking into the future, the Mediterranean region as a whole will remain a net gas importer.

Oil

Over the past decade there has been a significant decrease in investor confidence for exploration activities, primarily due to volatile prices, weak market fundamentals and an unattractive fiscal and regulatory environment. Political and economic volatility have also played a significant role in hindering exploration activity in the region.

Oil production in the Mediterranean region, which fell to 3 million barrels per day (mb/d) in 2016 since its peak in 2007, is expected to slightly bounce back to reach 4 mb/d in 2040.

From 1990 to its peak of almost 420 million tonnes of oil equivalent (Mtoe) in 2007, oil demand in the Mediterranean region constantly increased with a solid average annual growth rate of 1% per year. Since then, oil demand in the region fell significantly, impacted by high oil prices, Euro zone crisis and an unstable economic and political environment. However, oil demand in the Mediterranean is expected to increase from 370 Mtoe in 2015 to nearly 500 Mtoe in 2040 under the Reference Scenario while remaining similar to that of today's level in the Proactive Scenario. All the increase will stem from the South Mediterranean.

Overall the Mediterranean region relies on oil imports to meet its demand. It will continue to do so in the future. Except for Libya, oil exports from major producers in the Mediterranean region will decline towards 2040. Algeria and Libya will remain the only net oil exporters.

Unconventional resources

In the Mediterranean region, the development of unconventional oil and gas is in its infancy. Current activities are centered on resource assessment and early exploration stages. Shale gas and oil resources have not yet been quantified on a national basis for most countries. Most estimates are based on data concerning the volume of source rock in the subsoil. Existing of source rock does not necessarily mean availability of oil or gas. Drilling remains unavoidable to assess the potential with greater accuracy.

Furthermore, the real amount of unconventional resources is strongly influenced by the access to them. Not all countries can be said to be supportive of the exploitation of unconventional resources. Their development and the use of hydraulic fracturing (or fracking) technology are banned in several countries where a reasonable mining potential exists. Despite having enormous potential, France was the first country in the Euro-Mediterranean region to explicitly outlaw hydraulic fracturing and shale gas extraction in July 2011. In the following years, some other countries in the North Mediterranean followed France, and banned/suspended shale gas or hydraulic fracturing activities.

In the South Mediterranean region, the situation is even more challenging given the continuous social unrest in some countries and the rapidly evolving organized anti-frack movements in some others.

In sum, there is a growing consensus among the industry experts that shale gas in the Mediterranean region is unlikely to be produced commercially and in significant volumes in the short to mid-term. Although the region may become a rather modest producer in the longer term, the volumes produced might offset part of the decline in conventional gas production, hence making a modest contribution to the regional energy security.

Coal

Despite considerable coal reserves (30 billion tonnes), the Mediterranean region is a net coal importer. Coal production in the Mediterranean decreased significantly since the late 2000s to below 190 million tonnes (Mt) in recent years, partly in response to the weak economy, lack of

investments and transition to cleaner energy technologies. Over the outlook period, coal production in the region is expected to increase slightly. Almost all the increase will take place in Turkey.

Coal demand in the Mediterranean is expected to increase in the Reference Scenario, reaching 115 Mtoe by 2040; but decrease by 40% (compared to 2015) in the Proactive case, which will cause a significant drop in the region's net coal import dependence ratio.

Major discrepancies exist between Mediterranean sub-regions with regards to future trends. In the North Mediterranean, coal use will decrease significantly in both scenarios. Coal will likely account for less than 5% of the region's energy mix in 2040. In fact, coal demand in the North would have been much lower if there were no plans for new coal-fired power plant capacities and rehabilitation of existing ones in the region that are not EU members. In any case, the main actors of the future trend for coal demand in the Mediterranean region will be in the South, namely Turkey, and to a lesser extent Egypt.

3 YOU BETTER SHAPE-UP, IT'S ELECTRIFYING

Technological, social, economic, and policy trends have combined to make this a time of exciting innovation for electric systems in the region. It is a time of both continuity and change for the grid. While centralized networks will remain as a dependable mainstay, it will have to adapt to meet sizeable demand growth and evolve, as large-scale renewables and distributed energy resources connect and place new demands on grid functionality in all Mediterranean power systems.

Under current trends, electricity demand will nearly triple in the South and East Mediterranean leading to a need for an additional 260 GW of capacity to be installed by 2040 (out of 315 GW for the whole Med region). The Proactive Scenario would limit this increase to 200 GW and hence allow to spare 60 GW, mainly through variable renewable energy sources.

Most of the demand growth in electricity demand is expected to stem from the industrial and residential sectors, where the average annual growth rate will be about 4% and 3.6% respectively in the period 2015-2040, according the Reference Scenario. Such a growth could be considerably curtailed with energy efficiency gains in the coming years according to the Proactive Scenario, reducing the average growth rate in the industrial and residential sectors to 2% and 2.6% per year respectively.

Natural gas and variable (non-hydro) renewables will dominate future investments in power generation across the region. In the North Mediterranean, the increase in variable renewable-based generation is the dominant trend (75 GW and 125 GW to be added respectively in the Reference and Proactive Scenario) and will come mainly from solar energy - as photovoltaic (PV) technology costs fall and incentive measures encourage continued investment - and from wind generation. In the South Mediterranean gas will continue to make for the lion's share of the electricity mix in the Reference Scenario (210 GW t be added), followed by renewables (80 GW). On the contrary, variable renewables take the lead in the Proactive Scenario with 130 additional GW.

Total renewable capacity will reach around 180 GW, including 10 additional GW of hydropower capacity, followed by an additional 140 GW of gas capacity.

The outlook for nuclear in the North is murky in the aftermath of the Fukushima nuclear plant accident. Spanish government has stated that no nuclear plants will be built, a referendum in Italy rejected a government initiative to resume nuclear power generation in 2011, and the process of reducing the share of nuclear in the French electricity mix, announced by the former French President François Hollande, was confirmed by President Emmanuel Macron, even if different scenarios are envisaged in terms of expected deadlines. This suggests that the North will build more natural gas and variable renewables generation to meet electricity demand growth in the parameters of climate change objectives. As for the South and East, nuclear could enter the mix after 2020 based on proposed projects in Egypt, Jordan, Turkey and Morocco, (the latter after 2030), to account for around 5.5% of capacity in the Reference Scenario with 24.4 GW to be installed by 2040. In the Proactive Scenario the outlook for nuclear power is the same in terms of gigawatts, accounting for 6.4% of the total capacity in 2040.

To power rising electricity needs, coupling variable renewable energy sources deployment and grid upgrades is crucial and assumes different aspects in terms of integration effects and system adaptation according to the sub-region, mainly because of different economic situations and national energy mixes, but also market designs, legal frameworks and sector-based country policies. Two different and not necessarily competing trends are already noticeable: on the one hand, greater electric interconnections between countries; and on the other hand, more decentralized electricity generation, which could make international interconnections less important, especially when configuring in microgrids.

Overall, the grid is modernizing and moving from a pure electricity delivery business to an integrated platform for data and services, enabled by rapid progress in digital information and communications technologies. Electricity systems should adapt to the ongoing energy transition which is articulated around three main trends: decarbonization, decentralization and digitalization. This transition is happening at different speeds but is expected to further accelerate considering the rapid drop in costs of distributed energy resources. Transmission system operators are centrally placed to orchestrate the shift in close cooperation with distributors as networks are the key transformation agents.

In this context, new models for customer energy management, grid infrastructure and electricity market design are arising to address these changes, forcing utilities and regulators to rethink how the grid works and explore ways to improve grid operations through the aggregation of distributed resources, using a combination of power electronics, communications tools and analytics software.

4 RENEWABLES: NO LONGER CINDERELLA, BUT NOT YET THE BELLE OF THE BALL

Until the early 2000's renewable energy technologies were almost inexistent in the Mediterranean region, apart from hydropower, biomass and, to a lesser extent, geothermal. Between 2000 and

2015, non-hydro renewables have more than doubled their output. Renewables currently stand at just above 100 Mtoe, about 11% of total Mediterranean energy supply.

Renewable technologies are mostly present in the power generation sector. Already today, renewable energy power capacity is higher than that of natural gas. By 2040, more than two thirds of the cumulative installed capacity in the Proactive Scenario (591 GW) is expected to come from renewable energy sources. This implies adding new renewables capacity of 16 GW per year over the next 22 years.

At the same time, other end-use sectors lag behind, making the Mediterranean renewable energy potential far from being fully exploited. Nevertheless, consumption of renewable energy sources in end-use sectors is expected to almost double by 2040 compared to 2015 under the Proactive Scenario. The highest contribution will be in the residential sector (one-fourth), whereas the highest increase will occur in the transport sector (a 3-fold growth).

Although South and East Mediterranean countries have set ambitious goals for renewables the actual rate of implementation of national plans is still quite slow.

Today almost 80% of the region's renewable energy supply is in the North Mediterranean countries (84 Mtoe in 2015). Of the remaining 23 Mtoe, 73% is concentrated in the South East Mediterranean countries, mostly in Turkey (15 Mtoe). North Mediterranean countries are expected to maintain the lion's share of renewables in primary energy supply under both scenarios, despite expected stronger growth for non-hydro technologies (particularly wind and solar) in the South and East Mediterranean, as a result of a favourably evolving regulatory framework and the introduction of stronger policy support measures.

Hydropower and other renewables made up 38% (228 GW) of the region's installed electricity generation capacity in 2015. While hydropower has been long established, non-hydro renewables have shown an impressive progression, with an average annual growth rate of 19% over the last ten years. Installed non-hydro renewables capacity almost doubled in only five years - from 2010 to 2015 to reach 104 GW. Largely underlying this trend is the spectacular increase in wind and solar PV generation capacity.

The outlook to 2040 shows a significant increase in electricity generation fuelled by renewable resources across the Mediterranean region. In the Reference Scenario, renewables provide over 1137 TWh (34% of total electricity production) by 2040. In the Proactive Scenario, renewables produce more than 1438 TWh, around 52% of total electricity production.

Reaching the Proactive scenario implies adding capacity of about 15 GW per year on average over the next 25 years, most of which by non-hydro technologies (14 GW). North Mediterranean countries are expected to add about 9 GW of new renewable capacity per year to reach a total of 410 GW by 2040 (thus more than doubling current renewable-based power installed capacity). South and East Mediterranean countries would contribute some 6 GW per year, to reach 181 GW by 2040, a five times growth under the Proactive scenario compared to current levels, completely changing the electricity market supply and demand structure in South Mediterranean countries.

5 INVESTING IN A CLEAN AND SUSTAINABLE FUTURE

The Mediterranean countries were responsible for 6% of the world's carbon dioxide (CO_2) emissions in 2015. Although this share is relatively low compared with other regions, the Mediterranean region is particularly vulnerable to the consequences of climate change and is likely to be more exposed to extreme events such as heat waves, droughts and floods in the near future.

Climate change impacts are already visible across most of the Mediterranean basin. Even a small temperature increase could be enough to create ecological havoc in the region. The Paris Agreement has sent out a decisive and global signal that the start of a transition to a thriving, clean economy is necessary. However, less than 2 years after its entry into force the recently released Special Report of the IPCC on Global Warming of 1.5°C clearly states that the negotiated efforts are not enough to invert the trends, and a more drastic change is needed to avoid catastrophic consequences at global level. The report sets the world a clear target: we must reduce emissions of greenhouse gases to net zero by the middle of this century to have a reasonable chance of limiting global warming to 1.5°C. This challenge is even more urgent in the Mediterranean region, which is considered as a climate change hot sport.[3]

This is why investment in renewables, efficiency measures, as well as actively adopting NDCs are paramount to maintaining an environmentally and economically sustainable future for the region.

Full implementation of the unconditional targets expressed in the NDCs in the Reference Scenario would lead CO_2 emissions trends to stay closely correlated to energy demand, seeing an increase of 14% by 2030 and of 36% in 2040. In the Proactive Scenario, with the implementation of the conditional NDC targets, decorrelation from energy demand trends would occur as early as mid-2020s, leading CO_2 emissions to actually drop below current levels. By 2030, CO_2 emissions could be 5% lower than today.

Around 3 trillion euros will be needed between 2018 and 2040 to cover all the Mediterranean energy investment needs. Technological innovations and new financing methods are making renewable energy more accessible than ever before. For instance, solar costs are now rivalling the cost of new thermal power plants. As a result, total cumulative investment needs over the outlook period will not be very different from one scenario to the other. On average, energy investments would account for 1% of each Mediterranean country's GDP (1.1% in the Proactive Scenario).

About 55% of total energy investments will be needed in the North; a quarter in North Africa and a fifth in the South East. The larger share of total energy investment needs – around 60% in both scenarios, will be needed in the upcoming decade to 2030 to cater to the policies embarked upon reaching the NDCs 2030 targets.

[3] W. Cramer & J. Guiot, 2015, Mediterranean Institute for Biodiversity and Ecology, Aix-en-Provence, France.

Around 60% electricity investments will be needed in the North Mediterranean countries under both scenarios, on account of refurbishing the existing park and network, including replacing gas-fired and ageing renewable technologies, notably for hydro.

In the South, catering to increasing electricity demand, in the Proactive Scenario, opting directly for renewables, especially cost-efficient technologies such as solar, would bring down the cumulative electricity investment needs by 6% compared to the Reference Scenario.

Most of the increase in investment between the two scenarios relies on the investments needed to bring down the energy demand, predominantly, energy efficiency investment needs.

The challenge will be to develop new financing structures to provide the clean energy industry with greater capital access to grow and deploy renewable technologies at scale and to finance the energy efficiency measures in a variety of sectors not all related directly to energy (consumers, appliances, public transport etc.).

The energy supply sector will require the largest overall commitment of capital. Of the € 1.5 trillion required for power generation over the period to 2040, investment in renewables is by far the largest regardless of the scenario. This trend partly reflects the rising role of electricity in total final energy consumption, but also underlying cost and activity changes in both power and fossil fuel supply.

Renewable energy investment will be, for the biggest part, in solar and wind technologies. In both scenarios, solar and wind will account for three quarters of renewable energy investment.

At the same time, investments in energy efficiency will have a direct effect on reducing energy consumption while also improving industrial competitiveness and driving economic growth. Energy efficiency measures can help boost GDP through increased spending on upgrades, as well as from households and businesses reinvesting their financial savings on energy over time back into the local economies.

The Mediterranean region will need to invest close to € 44 billion a year on average to reach the energy demand levels of the Reference Scenario, constituting still a 40% increase in demand over the outlook period. To achieve energy savings of 20%, annual energy efficiency investments will need to reach € 61 billion per year on average. This means that the difference in investment in order to embark on a more virtuous energy path is an additional € 17 billion per year.

Strong investments in renewable energy and efficiency measures, paired with implementation of NDC targets and adoption of strong policy measures will be key in bringing the Mediterranean region into a sustainable future. Beyond obvious environmental benefits, these investments will improve regional energy infrastructure, while reducing the energy bill and strengthening energy security in the region, as energy dependence will fall to 24% as early as 2030 compared to 44% presently. Furthermore, reduced geopolitical tensions and job creation will improve social wellbeing for the whole region and beyond.

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This year marks the 10th anniversary since the first publication of the Mediterranean Energy Perspectives. The 2018 edition – *MEP 2018*, in the lineage of its predecessors, provides updated insights into the past and possible future evolution of the energy situation in the Mediterranean region under different sets of assumptions. It presents detailed data and analysis of both the supply and demand side of the energy equation in the Mediterranean region. Its aim is to compile, analyse and present the most important factors and uncertainties likely to affect the Mediterranean energy trends over the next 20 years. The publication draws upon the expertise of the Observatoire Méditerranéen de l'Energie (OME) and its members.

MEP 2018 is a unique and comprehensive analysis of the energy sector in the Mediterranean region. It contains long historical data, as well as perspectives to 2040 based on an exhaustive supply and demand model (Mediterranean Energy Model) developed by OME and two scenarios of evolution.

MEP 2018 presents:

- A description of the Mediterranean region in the global context
- Historical and forecast data on the supply and demand balance by energy source and for each segment of the Mediterranean energy sector
- Energy demand scenarios up to 2040, under a Reference Scenario and a Proactive Scenario
- Past, present and future of oil and gas exploration and development activities
- Evolution of electricity generation, installed capacity, and infrastructure
- Developments of innovative and renewable energy sources
- Energy efficiency
- Impacts on energy import dependence and CO_2 emissions
- Corresponding energy investment needs to 2040

MEP 2018 has been prepared by OME experts and benefited from input and review from OME member companies and independent experts. Bringing this expertise together provides an important reference and serves as an indispensable decision-making tool for investors, policy makers, researchers and all those who require a comprehensive picture of the energy industry and markets in the Mediterranean, the way they operate and their long-term perspectives.

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