EUROPEAN POLICYBRIEF

ATLANTIC FUTURE

One of the most exciting – and potentially most promising – changes in the Atlantic Basin is the emergence of the Atlantic energy system. The new position for the Atlantic in global energy markets is supported by the shift for demand to emerging Asia-Pacific markets, as well as structural declines in energy demand within the Atlantic Space. The shale revolution, advances in petroleum technology and exploration, as well as movement towards low-carbon economies present new opportunities, interdependencies and perspectives for all Atlantic actors but particularly for the EU to diversify its energy resources.

19 December 2014

INTRODUCTION

Profound changes are taking place in the area of energy that are transforming the strategic outlook for the Atlantic Basin. These are redrawing global energy maps and moving the global centre of gravity for energy supply westward. The Atlantic-shaping trends include a westward shift in the global centre of gravity for energy supply into the Atlantic Basin, driven by recent, significant expansion in Atlantic Energy resources – in particular shale in the Northern Atlantic and offshore oil and gas in the Southern Atlantic, but also an eastward shift in the global centre of gravity for energy demand into Asia-Pacific. Traditional, historical patterns of Atlantic Basin demand are disappearing. The Atlantic Basin will become increasingly energy autonomous in net terms and Atlantic energy exports, at the margin, will increasingly flow east towards Asia-Pacific.

Atlantic countries will increasingly become net suppliers of energy at the margin. Global energy flows across the Atlantic will become increasingly dense, and the majority of these will follow a 'flow circuit' out of the Southern Atlantic, around the Cape of Good Hope, across the Indian Ocean Basin, through Southeast Asia, and to the Pacific. This Atlantic energy renaissance is beginning to challenge the long-held assumption that the global centre of gravity for energy supply, particularly in the fossil fuel realm, would remain firmly rooted for the foreseeable future in the Middle East, Central Asia, and Russia.

An Atlantic Basin energy system is emerging. New players and technologies are already notably altering both the Atlantic Space and global energy maps, as new conventional and unconventional fossil fuel sources and renewable energies come online, and as opportunities for pan-Atlantic energy cooperation begin to emerge. Future political developments may help drive, but also to obstruct, investment and partnerships in exploitation and trade of new Atlantic energy resources. This policy brief is mainly based on the work carried out by Paul Isbell for the ATLANTIC FUTURE project.

EVIDENCE AND ANALYSIS

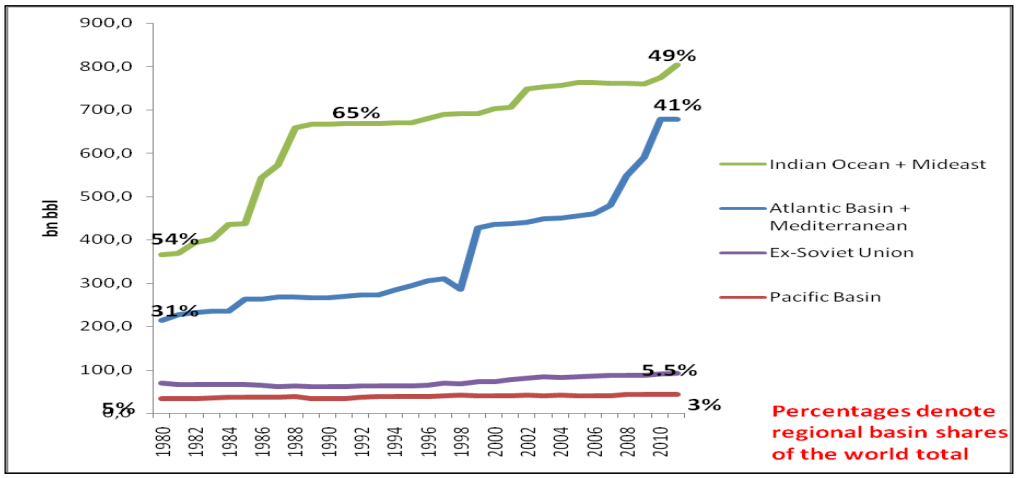
One of the most exciting – and potentially most promising – changes in the Atlantic Basin is the emergence of the Atlantic energy system. Tectonic shifts are taking place both in regard to production patterns and trade flows. The shale revolution, advances in petroleum technology and exploration, as well as movement towards low-carbon economies present new opportunities, interdependencies and perspectives for all Atlantic actors but particularly for the EU to diversify its energy resources. The new position for the Atlantic in global energy markets is also supported by the shift for demand to emerging Asia-Pacific markets, as well as structural declines in energy demand within the Atlantic Space.

The Atlantic Space holds over 40% of the world's proven petroleum reserves and, potentially up to two thirds of 'other' oil resources such as unconventional oil and deep offshore reserves, and more than two-thirds of currently generated renewable energy. The Atlantic Basin's contribution to daily oil production is already 44% and is expected to rise to 47% as nearly two-thirds of the projected growth in global oil production by 2030 will take place in the Atlantic.

Nearly one-third of the global total of energy and three-quarters of globally traded energy is transported via the seascape. The total Atlantic Basin **energy flows** (including both intra- and extra-Atlantic energy trade) constitute over three-quarters of the total use of the global 'seascape' for the transportation of global energy flows. Intra-Atlantic (or Atlantic Basin) energy flows make up 75% of all Atlantic Basin global energy flows (of which only 25% are extra-Atlantic) and constitute around two-thirds of total maritime energy transportation. Seaborne oil and gas flows are anticipated to increasingly 'reverse their overall net direction from Cold War East-to-West flows to the new 21st century West-to-East flows' and the Atlantic Basin will be a strategically-positioned supplier-region.

Emanating both from the Northern and the Southern Atlantic, a veritable Atlantic energy renaissance is taking place.

Proven Oil Reserves, Basins and Regions (billion barrels and % of world total / 1980-2011)

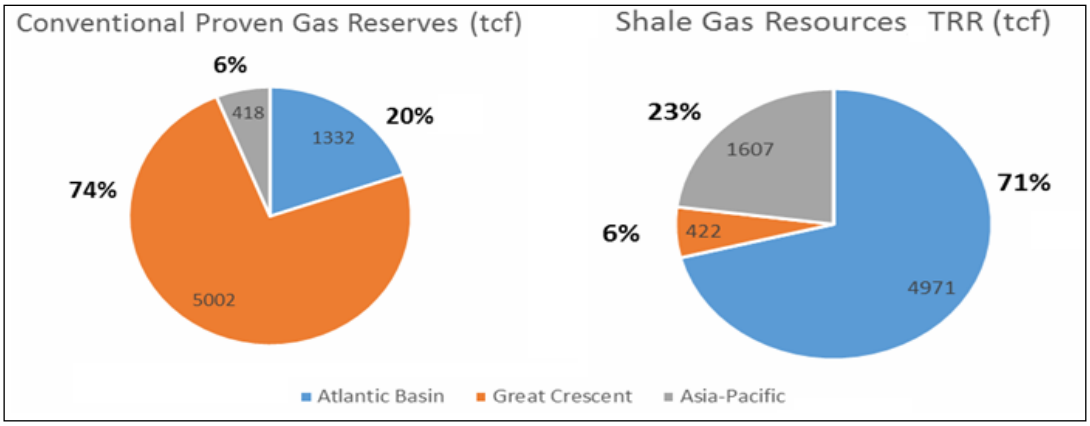


Data Source: BP Statistical Review of World Energy 2012. Elaboration: Paul Isbell, (2013)

In the Northern Atlantic, the **shale revolution** is rolling out. The United States has once again become the world's leading fossil fuel producer and is not only expected to become nearly completely energy independent over the next two decades but also an exporter. It has become a net exporter of refined petroleum products for the first time since 1949. In 2012 shale gas accounted for 37% of US natural gas supply, up from only 2% in 2000. As recently as in early 2013, the International Energy Agency (IEA) expected the United States to overtake Russia in 2015 as the leading producer of natural gas and to overtake Saudi Arabia in 2017 as the world's leading producer of oil.

However impressive the shale revolution in the Northern Atlantic, the **deep water offshore boom** in the Southern Atlantic preceded this North American contribution to the Atlantic energy renaissance and continues to rival it. Catalysed by the pre-salt discoveries in Brazil (by themselves potentially as high as 50 to 200 bn bbl) and the development of the deep offshore reserves in Angola, the Gulf of Guinea and the West Africa Transform Margin, the deep water offshore boom has embraced nearly all of Africa and the most of Latin America. Investment in offshore oil exploration and production has risen dramatically in the Southern Atlantic, outpacing the rest of the world. Southern Atlantic offshore oil reserves (130bn barrels) already dwarf those of the Arctic (90bn barrels), and we can expect the vast majority of the capital expenditure investments in global offshore hydrocarbons between 2011 and 2015 to take place in the Southern Atlantic (Isbell, 2013). The South Atlantic could become the key region for increases in global oil production and the critical regional supplier to Asia-Pacific.

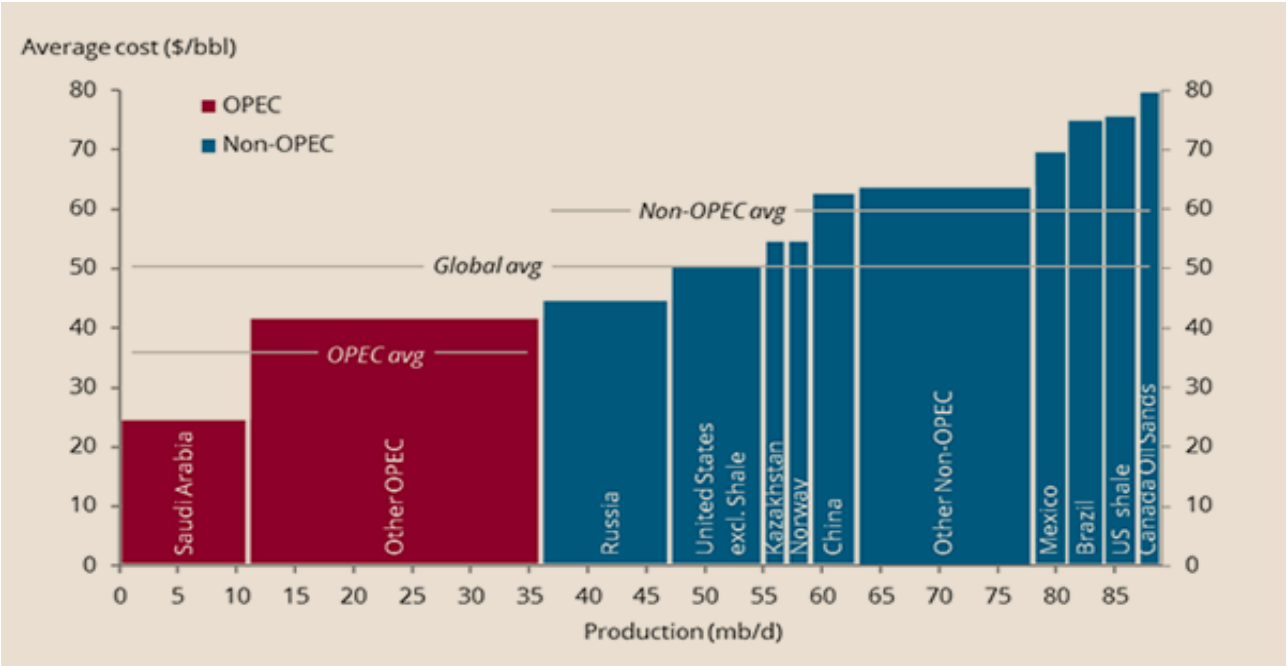
In terms of **'conventional' gas** reserves and production levels, the Atlantic Basin (11% and 27% of global reserves and production, respectively) stands in the shadows of the 'Great Crescent' (72% and 40%, respectively)[1], in terms of new **'unconventional' gas** (i.e., 'shale' and 'tight gas', along with coal bed methane), the currently unfolding story is quite different. Based on estimates published by the United States Energy Information Agency in 2011 (and further adjusted downwards, in the case of the US figures, in 2012), the broad, 'political' Atlantic (including the Mediterranean) Basin contains two-thirds (67%) of the estimated global 'technically recoverable' shale gas resources in the world (59% without the Mediterranean), compared with only 26% in the Pacific, and less than 2% in the Indian Ocean Basin (EIA, 2011).



Data Source: EIA 2013. Elaboration: Paul Isbell (2013)

The recent oil price corrections from $115 per barrel in July 2014 to $60 per barrel in December 2014 will have implications for the economic viability of some of the unconventional natural gas and oil projects in the Atlantic Basin. Canadian oil sands are particularly vulnerable with average production costs of $80 per barrel, followed by tight shale oil plays in the US and deep sea projects in Brazil that have average production costs in the mid $70s (see Figure). These are *average* costs of all projects, so some will still be viable below these price levels. Shale producers have also managed to bring down costs considerably. Still, the *Financial Times* estimates that oil prices at $70 will put projects of 1.5 million barrels at risk in 2016. Declining oil prices will also have implications for producers of unconventional natural gas in the US as many of them do not break even by their sales of methane alone, but rely on their sales of Natural Gas Liquids, which track the price of oil closely.

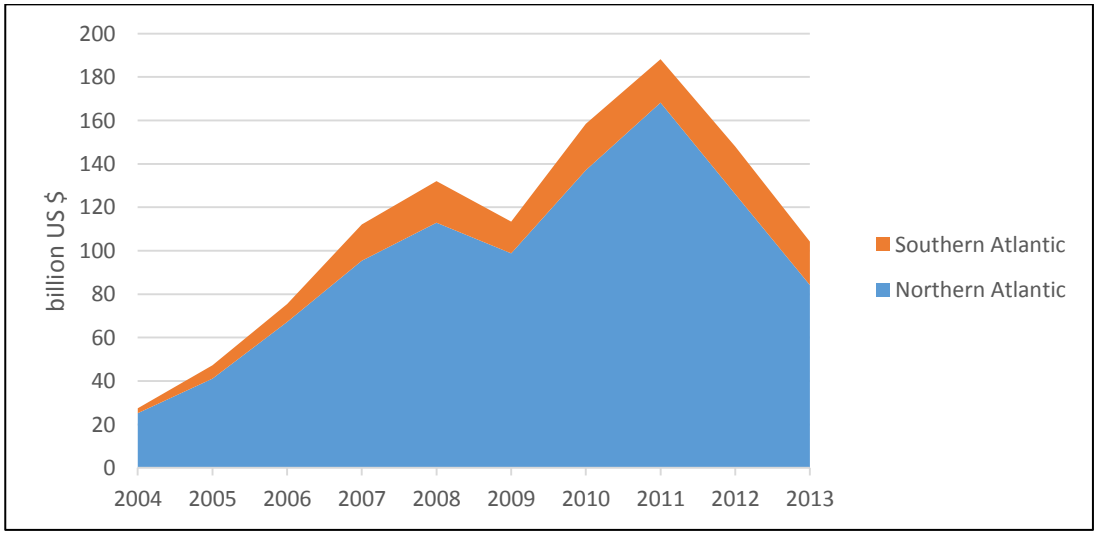
[1] Russia: 22% and 19%; Central Asia: 14% and 5%; and the Middle East: 36% and 16%.



Source: Anji Raval, "Oil Price Plunge Means Survival of the Fittest," *Financial Times*, December 10, 2014, http://www.ft.com/intl/cms/s/0/51cc00ba-7f85-11e4-86ee-00144feabdc0.html?siteedition=intl#axzz3MKmv9IKQ

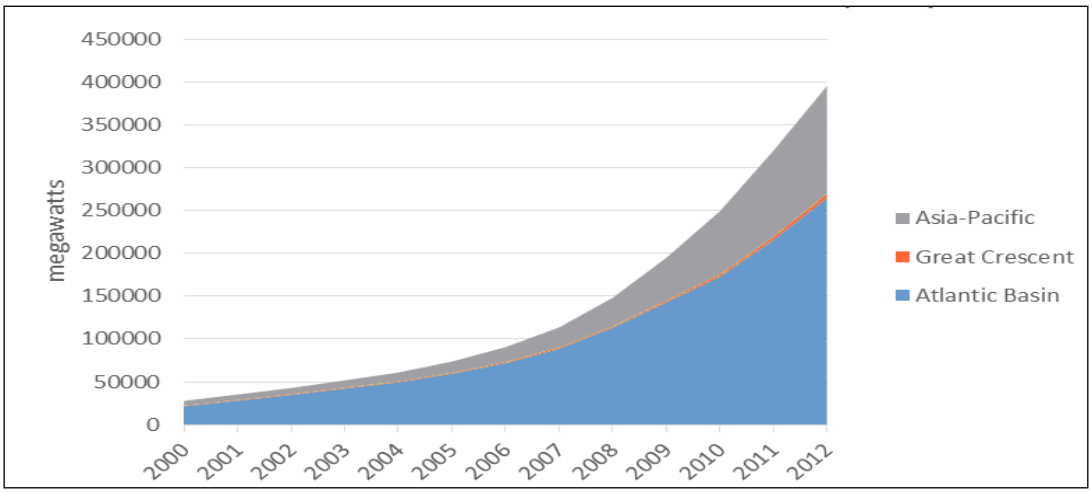
A low carbon revolution has been blooming in the Atlantic over the last decades, as renewable energy is even more highly concentrated in the Atlantic Basin than the traditional fossil fuels. Considering the basin's collective installed capacities for solar (77% of the world total), wind (64%) and geothermal (59%), Atlantic renewables constitute roughly two-thirds of the world's total installed renewable electricity capacity. In terms of generation and consumption, the Atlantic accounts for more than 75% of total modern renewable energies[2i] Despite this dominance in non-conventional renewable energy technologies, **the Basin's current lead in the roll-out of modern renewables remains either insufficient, irrelevant or unsustainable**, as a number of obstacles continue to undermine their development. Chief of among these challenges is lagging investment in renewable energy in the Atlantic Basin that has sunk to pre-2007 levels. In 2006, such Atlantic investment was US$75bn a year - and 75% of the global total. The Asia-Pacific region will continue to erode Atlantic Basin predominance in renewable energy – already today, Asia-Pacific renewable energy investment - 49% of the global total - is already surpassing renewable energy investment in the Atlantic basin (48%). ***By 2030, Asia-Pacific will contribute 41% of all renewable energy production***, cutting the Atlantic Basin's prior lead (54% in 2030, down from 79% in 1990)

Atlantic Basin Renewable Energy Investment (US$ bn, 2004-2013)



[2] BP Statistical Review of World Energy (2013)

Global Renewables: Installed Electrical Capacity

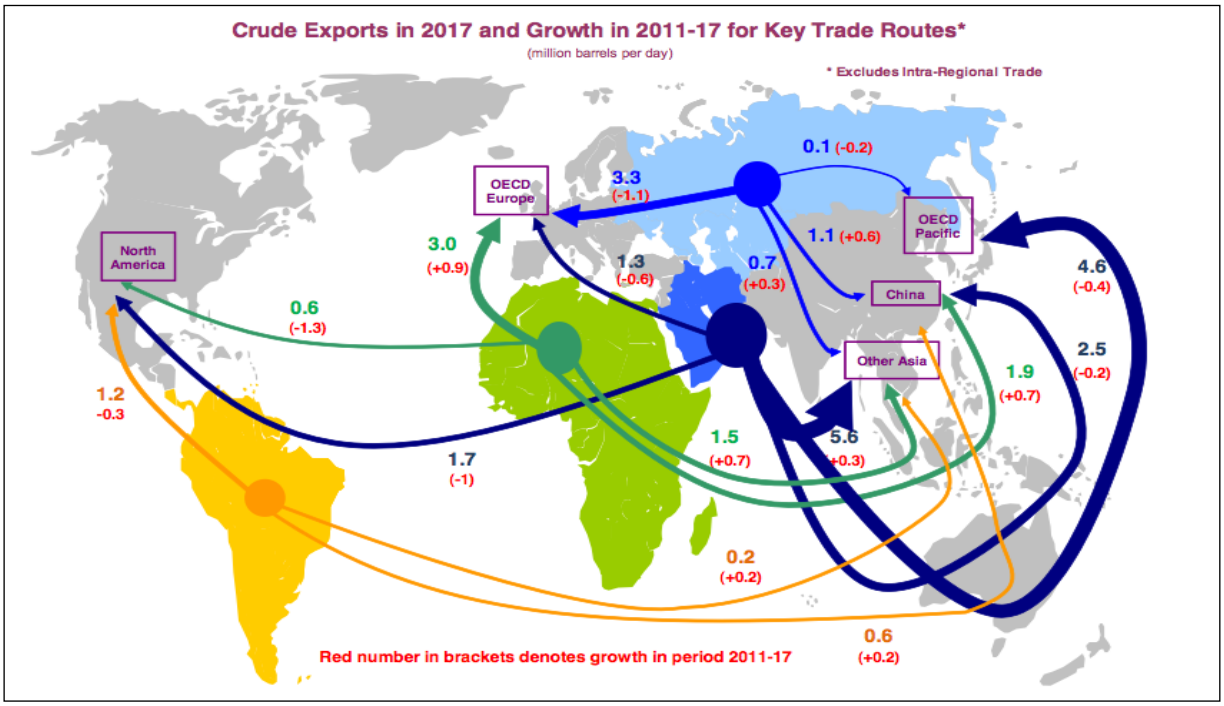


Data Source: BP Energy Outlook 2030, January 2013. Elaboration: Paul Isbell (2013)

Moreover, the rapidly disappearing headline cost differential between renewable energies and fossil fuels continue to tilt the playing field against renewable energy, and the renewables are further undermined by substantial public subsidies for fossil fuels. Also the recent changes in the energy policy environment have been unfavourable to renewable energy, contributing to **"re-carbonisation" of the Atlantic Basin** energy trajectory. This is particularly true for the northern Atlantic, where the renewables had faced a favourable policy and commercial landscape before the 2008 economic crisis. The renewables have been significantly undermined by a combination of abrupt pressures and constraints stemming from global trends and coinciding with the great recession. These factors have generated a global backlash against renewable energy and climate change policies. The growth of low carbon energy is further undermined by the recent boom in unconventional fossil fuels (the shale revolution).

The **evolution of intra-Atlantic energy trade** is closely linked with the above-mentioned trends and the rise of the global seascape that are transforming the world energy map. Since the 1970s, the international energy trade and investment patterns of the Atlantic Basin countries have become overwhelmingly intra-basin with two-thirds of the collective energy imports of Atlantic countries sourced from within the basin and 90% of their collective energy exports destined to other basin countries. Over the course of the last decade, new South-South dynamics have been created. Centrifugal forces have been injected within the Atlantic energy space, resulting in the erosion of intra-basin energy linkages (particularly with regard to exports and imports). This new South-South dispersal of some intra-basin energy dynamics into the extra-Atlantic should not yet be seen as the permanent reversal of decades-long deepening of intra-Atlantic energy connections.

The main drivers for **extra-Atlantic trends** have been so-called transitory adjustments – sudden and unexpected reduction of US demand for South Atlantic oil (US shale revolution, and resulting fall in demand), increasing Asia-Pacific energy demand and Asian oil diplomacy in the Southern Atlantic. These **centrifugal tendencies could be constructively transformed and re-channelled by pan-Atlantic energy cooperation**.



Source: IEA, Mid-Term Report 2012

The **Atlantic Basin energy investment**, resources and production continue to grow faster than the demand in the Atlantic, bringing opportunities for the Atlantic countries to reduce their extra-Atlantic dependencies, and thus lessen their geopolitical limitations, real or perceived. **Reducing external energy dependence on the Middle East and Russia** appears on the strategic horizon for the EU. The offshore revolution has presented Southern Atlantic countries with an opportunity to attempt to transform projected increases in hydrocarbon revenue into the longed-for authentic seeds of both sustainable development and the low carbon revolution.

Important **obstacles** still exist. Firstly, despite the prospect of greater energy independence and reducing reliance on Russia, the shale revolution remains stalled in Europe as a number of economic (e.g., basin cost structures), legal (e.g., property rights), environmental (e.g., local pollution and water contamination) and political constraints (e.g., environmental and low carbon opposition) will continue to stand in its way over the near-to-midterm. Also, geological factors do not seem to be as promising in Europe as in the US and have, for example, prompted for example Chevron to withdraw from a multibillion investment in Ukraine. Recently, political developments have helped further renew debate on the potential to reduce Europe's dependence on the Great Crescent, especially Russia, via imports of liquefied natural gas (LNG) from the US. Concerns about high transportation costs remain, however. Although the US natural gas prices are much lower than in Europe, after transportation costs are added, prices will need to be on comparable levels to what they are now in many European countries. Hence, US gas supplies are more a geopolitical proposition of diversification than a commercial one, and as such they carry certain risks.

Also, the potential financial, economic, and political distortions within Southern Atlantic macroeconomics (e.g., Dutch Disease and the corruption of state institutions and enterprises) and the potentially corrosive effects on the very body politic itself (e.g. the ''resource curse') potentially could be reinforced or unleashed by a hydrocarbons boom, altering political and economic cultures and blocking or hindering the 'low carbon revolution' in the Southern Atlantic. The Southern Atlantic is globally unique in that agriculture, energy, climate, and land-use constraints and possibilities all tend to converge and intersect in Africa and Latin America unlike in any other region in the world, generating large risks stemming from incompatible land-use strategies, but also significant opportunities to integrate management of energy, climate, agriculture, water, forestry and land-use, particularly in considering formulas for transnational 'pan-Atlantic' energy cooperation.

Despite the above-mentioned obstacles, intra-Atlantic versus extra-Atlantic energy trade flows represent important poles of possibility and incentive for deepening pan- Atlantic energy cooperation upon the coalescing foundations of an Atlantic Space energy system. These dynamics may help facilitate new forms of transnational energy cooperation as (more attainable and perhaps even preferable) modes of regional, rather than global, governance.

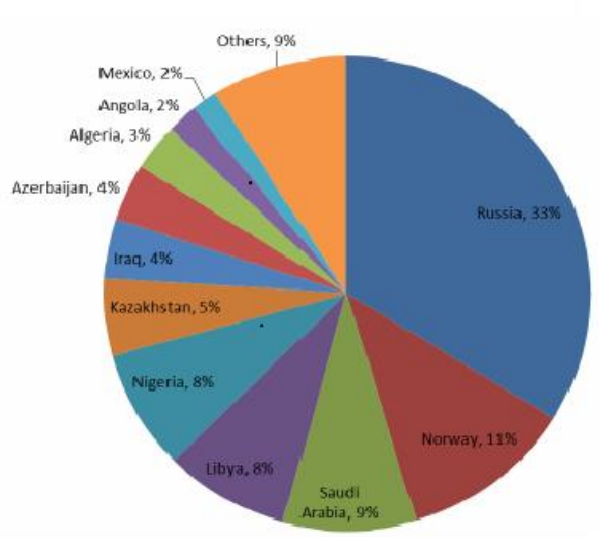
Given its concrete and specific configuration, the Atlantic is a microcosm of the energy world, reflecting dynamics of the global energy sector. Unlike the "Eurasian space" of the Energy Charter Treaty – currently the only multilateral, rules-based energy governance regime – the Atlantic has a relative balance between net importers and exporters, developed and developing/emerging countries, international private oil and gas firms and state hydrocarbons companies, and between fossil fuel and low carbon industries. This makes the Atlantic Basin a **space of different energy experiences** and offers opportunities for cross-fertilisation of best practices and cooperation.

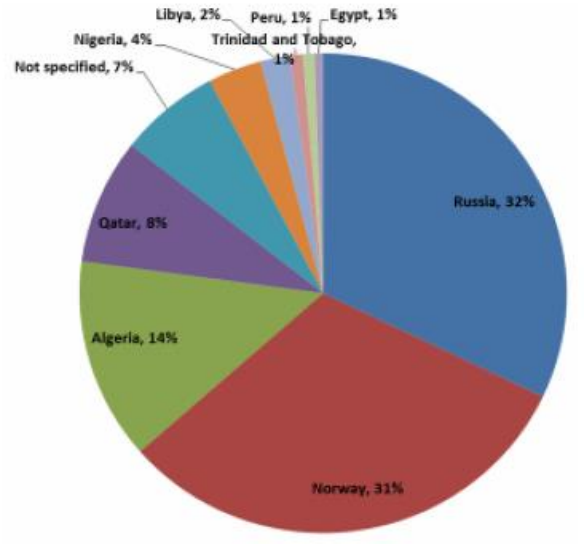
POLICY IMPLICATIONS AND RECOMMENDATIONS

Guaranteeing sustainable energy supplies for the households and industries is one of the most central issues on the current European policy agenda. The objectives of the European energy strategy are multifold and linked with the **Climate Change Convention goals**. The objectives of such a strategy include: achieving reducing CO2, combining the development of renewable energy resources, the achieving of energy efficiency, the creation of an internal energy market and the guaranteeing of stable energy supplies, with sustainable economic growth, prosperity and security.

Increasing energy supply security via diversification of supply sources and transport routes is a particularly central concern, since over half of the hydrocarbons consumed in the EU are supplied by the Russian Federation and the Middle East. More than 21% of all the EU's oil imports (or 15% of its total oil consumption) came from the Middle East in 2011, and around 50% of imports (or 35% of total EU oil consumption) came from the Russian Federation. As regards gas, EU imported 75% of the gas consumed in 2011 (BP, 2012). Around 35% of these imports (or 26% of total European gas consumption) was supplied by Russia. Although Europe's oil dependence on the Middle East has somewhat declined (mainly due to trade sanctions on Iran), gas imports are on the rise. The EU's gas dependence on the Russian Federation has risen substantially with the last rounds of enlargements into post-Soviet space, reaching about 30% of total EU gas consumption in 2013 (BP, 2013). There is a stark East-West divide in relation to gas dependence on Russia, with Eastern and Central Europe's dependence substantially higher (around 70% for the subregion). Several occasions of disruption of gas supply to some EU member states, due to Russia-Ukraine disputes, as well as cases of "pipeline diplomacy" and "energy blackmail" have raised concerns about detrimental effects on the security of supply of natural gas and crude oil to the EU. The ongoing Russia-Ukraine conflict is further increasing Europeans' concerns about security of energy supplies. In May 2014, the Commission issued a communication on "European Energy Security Strategy" (COM (2014) 330 final), which focuses on achieving "a more collective approach through a functioning internal market and greater cooperation at regional and European levels" (p.3). The areas covered by the strategy are: immediate actions for 2014/2015 winter to prepare for the possible supply disruptions due to the Ukraine conflict; strengthening emergency and solidarity mechanisms between the EU member states; moderating energy demand; building an integrated internal energy market; increasing EU energy production; technological innovation. Diversifying external supplies and infrastructures as well as better coordination of energy policies are also included as priority areas.

Extra-EU imports of crude oil and Natural Gas Liquids* **Extra-EU imports of natural gas***





Source: Eurostat. *(share in energy terms in 2012)

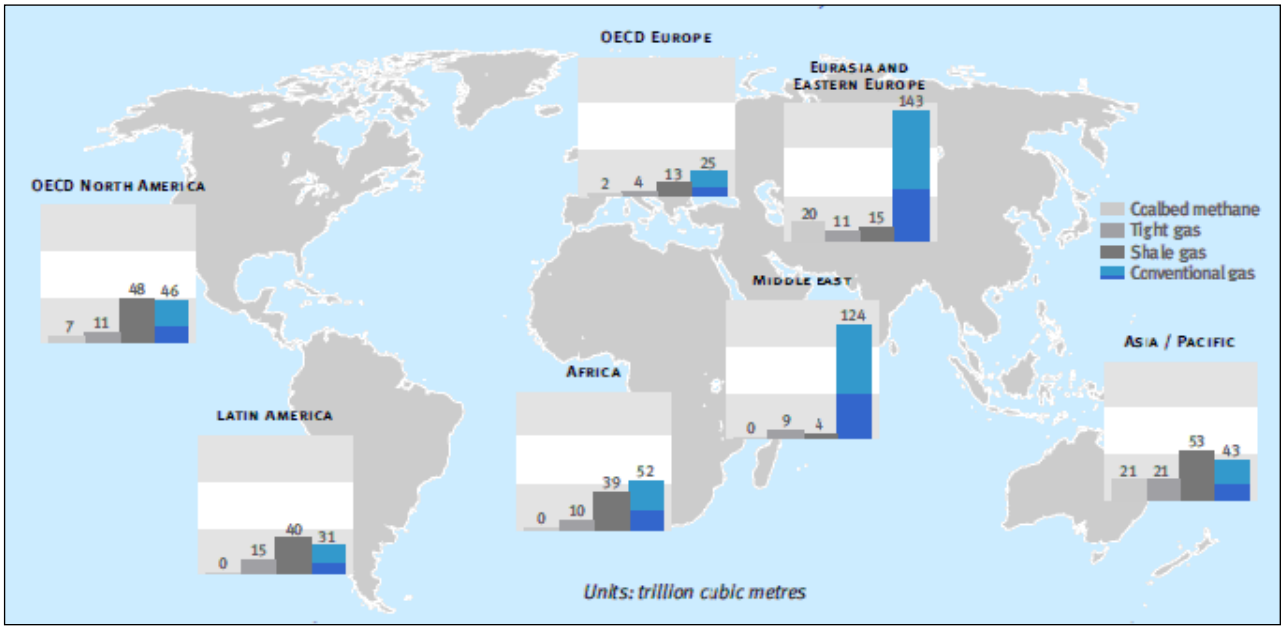
The issue of energy has undoubtedly become one of the priority areas of the 2014-2020 Commission. Mission letters sent by President Juncker to the two Commissioners involved in energy – Maroš Šefčovič, Vice-President, and Miguel Arias Cañete, area Commissioner – set **establishing a European Energy Union** as the key priority. His mission letter points out that "we need to pool resources, combine infrastructures and unite negotiating power vis-à-vis third countries. We need to *diversify* our energy sources, and *reduce the high energy dependency* of several of our Member States. I want to keep our European energy market open to our neighbours. However, if the price of energy from the East becomes too expensive, either in commercial or political terms, Europe should be able to *switch swiftly to other supply* channels. We need to be able to **reverse energy flows when necessary**." In relation to the diversification, the President of the Commission identifies coordinating specific actions for strengthening energy security on the European scale, including by diversifying sources and routes of energy imports and pooling the member states' negotiating power.

A pan-Atlantic dimension has been absent from the reformulation of the EU energy strategy, And yet, the Atlantic energy renaissance is in strategic terms emblematic of a number of deeper, globally reaching tectonic shifts now convulsing the global energy flow map. Atlantic-shaped but also Atlantic-shaping trends lead to a continual evaporation of the traditional post WWII pattern of net westward global energy flows and their subsequent reversal to net eastward energy flows. The **Atlantic Basin will become increasingly energy autonomous in net terms**. This changing global energy position of the Atlantic offers opportunities for the reduction of the EU's external energy dependency, particularly on the Russian gas.

The only Atlantic opportunity currently seriously discussed is achieving reduced dependence on Russian gas by **importing liquefied natural gas (LNG) from the United States**, which is to be provided through increased shale production. A number of projects are already ongoing or waiting approval, mainly along the Gulf of Mexico and the Atlantic coast of North America. By 2025, the US could be exporting as much as 40 bcm of LNG a day or 60% of current production levels – if the entire application pipeline is approved and executed. Although the US is still importing about 8% of its gas consumption, by 2040 its net export capacity will be about 12% (CSIS, 2014). That said, it is not sure if the US exports will be able to compete on cost with Russian gas in Europe, considering the **large up-front investments that are required** in the US for liquefaction and in Europe for regasification and building of more gas interconnections, particularly between Spain and France. Further, US LNG exports to Europe face opposition from varying domestic industry and environmental interests, seeking to respectively keep US gas prices low and block fossil fuel development.

The ongoing negotiation of the Transatlantic Trade and Investment Partnership (TTIP) is crucial in further facilitating the imports of LNG, because the US legislation grants automatic approval of gas to countries that have signed a free trade agreement with the US. The TTIP negotiations have proved complicated and controversial, however, and are unlikely to produce results in the short term. In fact, **any rapid "transatlantic effort" to reduce EU's energy dependency on Russia is unlikely to produce sustainable results if it remains exclusively northern Atlantic**.

Recoverable Resources by Region (2013)



Data Source: International Energy Agency. World Energy Outlook, November 2014. Elaboration: Eurogas. Statistical Report 2014.

The ATLANTIC FUTURE project has found that in the time frame of 10 to 15 years (2025-2030), the EU's dependencies on the Great Crescent could be strategically reoriented. For such a strategy to succeed, it would need a **pan-Atlantic vision**, i.e. inclusion of partners from the whole of the Atlantic Basin. Europe's land-based energy import flows could thus be replaced with sea born flows from other parts of the Atlantic Basin – the Mediterranean and broader Africa, Latin America and the Caribbean, as well as North America. Much of Europe's flattening hydrocarbons demand could be met more politically sustainably by imports from Atlantic Basin countries. The possibility for West Africa, Brazilian and US oil to displace EU imports from the Middle East already exists, and will continue to grow. Natural gas, on the other hand, could come from the US and eventually other countries likes Argentina, Venezuela, Nigeria, or any number of potential new gas producers along the Atlantic, Mediterranean or even Indian littorals of Africa.

The discussions on decreasing the geopolitical limitations resulting from external energy dependence on the Middle East, Russia and Russia do not consider all potential risks related to the so-called carbon constraint. It is paramount however that the implications of both the issue of **climate change and carbon budget constraint should be addressed in geopolitical projections**. While the energy vise no longer faces the Atlantic Basin strategic horizon, a climate vise still does. A paradox lies at the heart of the Atlantic Basin's energy future – it may be richer in seaborne fossil fuels but this will be oil, gas and coal that it should not burn. If the ongoing shifts in the global geopolitical and energy flow maps do not sufficiently integrate the imperilled low carbon revolution, future global scenarios will become increasingly volatile and unpredictable as a result of the distorting and complicated feedback mechanisms – ecological, economic and geopolitical – produced by fossil fuel induced climate change.

The European Union has been the international pioneer in spearheading the fight against the climate change and we are now living a moment of unprecedented momentum since 2009 Copenhagen COP15 in the global climate change talks. In October 2014, the EU leaders agreed the new climate-energy targets for 2030, including a binding target of 40 percent reduction of greenhouse gas emissions below

1990 levels, a structural reform of the European carbon market, a EU-wide target of 27 percent renewable energy share in the EU's energy mix, as well as an optional target of 27 percent of energy efficiency. Crucially, China and the US have followed the EU's lead. On November 12, 2014, President Barack Obama and President Xi Jinping announced an historical climate agreement in Beijing by which the US intends to reduce carbon emissions by 26-28 percent below 2005 levels in 2025. China intends to achieve a peaking of carbon emissions around 2030 and to increase the share of non-fossil fuels in its energy mix to around 20 percent by 2030. **COP21 in Paris will provide opportunities for the EU to press for a legally binding treaty**, in the face of the pressure from the US and China to opt for softer global governance tools. The Union will go to Paris in 2015 with ambitious goals but its main challenge will be matching these aspiring climate change targets with concrete policy action at domestic but also international level (Carafa, 2014).

Another oft-forgotten aspect of energy is that of development. In the Southern Atlantic, over half of the population lives beyond the reach of the energy grid and distributed forms of solar energy are already competitive with other off-grid energy sources. Even without subsidies or further public support, the marginal superiority of the low carbon energy over its hydrocarbon contemporaries with respect to the post-Millennium sustainable development goals is most apparent. Under the auspices of the UN's **"Sustainable Energy for All" initiative**, Africa faces an opportunity – more likely to be embraced if included in a pan-Atlantic energy cooperation – to leap-frog a generation of technological development by pursuing more flexible and sustainable development model based on distributed energy services provided by local energy services companies through smaller-scale off-grid and mini-grid solar electricity technologies and through the provision of improved biomass technologies.

In conclusion, projecting the global energy flow map through the Atlantic basin framing ultimately suggests that Atlantic Basin countries should engage in pan-Atlantic, transnational energy cooperation in order to capitalise on the geopolitical and/or governance opportunities of the Atlantic energy renaissance.

RESEARCH PARAMETERS

The aim of the Atlantic Future is to study the rationales of cooperation in the Atlantic space and to suggest strategies to the European Union on how to engage with the wider transatlantic relationship, in a context of on-going redistribution of power and overall rebalancing of relations around and within the Atlantic space. During the first period of the project, Atlantic Future has dedicated its efforts to conceptualising what the project understands by the Atlantic area as a geopolitical space and to identifying the fundamental trends that are shaping the relations in this area. All of this, by providing a solid empirical basis about the evolution of Atlantic links in four key strategic areas: economic and finances, security, people and institutions and resources and environment.

In order to achieve these objectives the research made use of an interdisciplinary approach where the political geography, international relations and political economy provide the conceptual tools to explain the causes and consequences of political changes in the Atlantic. Specifically, the research in this first period of the project was organized into four thematic Work Packages (economic and trade; security; people and institutions; energy).

The project considers two types of geographical scopes since the research includes not only the description of the intra-oceanic flows (Atlantic as a biophysical reality) but it also aims to identify the links and changes among the major regions bordering the Atlantic (Atlantic as a laboratory of globalisation), in the thematic areas of this project (economy and trade; security; energy and environment; people and institutions). Due to this dual objective, the project adopted two working definitions about the Atlantic as a "space" and as a "basin".

The *Atlantic Space* is the wider definition that includes the four regions as a whole that are bordering the Atlantic Ocean: North America, Central and South America and the Caribbean, Europe and Africa. Europe is understood to include all EU member states except Croatia (for it was not an EU member yet for the time period the research will focus on, i.e. 1992- 2012) as well as Iceland, Norway,

Liechtenstein and Switzerland. The rationale behind including these three countries is that they are part of the European Free Trade Association (EFTA) (Liechtenstein, Iceland and Norway as also part of the European Economic Area). The *Atlantic Basin* includes those countries bordering the Atlantic Ocean, those countries with a direct coastline in the Caribbean, and all EU-member states (except Croatia) and Switzerland.

PROJECT IDENTITY

PROJECT NAME

Towards an Atlantic Area? Mapping trends, perspectives and interregional dynamics between Europe, Africa and the Americas (ATLANTIC FUTURE)

COORDINATOR

Jordi Bacaria Colom
BARCELONA CENTRE FOR INTERNATIONAL AFFAIRS (CIDOB)
Barcelona, Spain
www.cidob.org

CONSORTIUM

Aberystwyth University -AU
Aberystwyth, United Kingdom

Centro de Investigación y Docencia Económicas AC – CIDE
Mexico DF, Mexico

Ecologic Institut GmbH – Ecologic Institute
Berlin, Germany

Fundación para las Relaciones Internacionales y el Diálogo Exterior – FRIDE
Madrid, Spain

Fundaçao Getúlio Vargas – FGV
Rio de Janeiro, Brazil

Institut des Hautes Études de Management – HEM
Rabat, Morocco

Instituto Portugues de Relaçoes Internacionais – IPRI
Lisboa, Portugal

Istituto Affari Internazionali – IAI
Rome, Italy

Johns Hopkins University – JHU
Washington DC, United States

University of Pretoria - UP
Pretoria, South Africa

German Marshall Fund – GMF
Brussels, Belgium / Washington DC, United States

Friedrich-Alexander-Universität Erlangen Nurnberg – FAU
Nurnberg, Germany

FUNDING SCHEME

FP7 Framework Programme for Research of the European Union – Collaborative project Activity 4 – Europe in the world.

DURATION

January 2013 – December 2015 (36 months).

BUDGET

EU contribution: €2.495.276 €.

WEBSITE

www.atlanticfuture.eu

FOR MORE INFORMATION

Contact: Jordi Bacaria Colom
jbacaria@cidob.org

FURTHER READING

An analysis of the empirical evidence that was collected and other sources was done in order to support nineteen scientific papers that were delivered during the first period of the project regarding the thematic Work Packages. For more information on the work carried out within Work Package 5 on resources and environment, please refer to: Isbell, Paul. Atlantic Energy and the Changing Global Energy Flow Map. *Atlantic Future Scientific Paper,* No. 17, 2014, http://www.atlanticfuture.eu/files/338-ATLANTIC%20FUTURE_17_Energy.pdf

Atlantic Basin Initiative, "A New Atlantic Community: Generating Growth, Human Development and Security of the Atlantic Hemisphere: A Declaration and Call to Action," a *White Paper of the Atlantic Basin Initiative*, Center for Transatlantic Studies, School of Advanced International Studies, Johns Hopkins University, March 2014.

BP Group. *Statistical Review of World Energy 2012*. http://www.bp.com/

BP Group. *Statistical Review of World Energy 2013*. http://www.bp.com/

Carafa, Luigi. "Climate Change and the 'Big Three': Preparing the Ground for a Post-2020 Global Climate Regime?", *Notes Internacionals CIDOB*. 2014. http://www.cidob.org/en/cidob/organisation/cidob_experts/luigi_carafa

Center for Strategic and International Studies (CSIS), "New Energy, New Geopolitics: Balancing Stability and Leverage", April 2014 http://csis.org/event/new-energy-new-geopolitics-balancing-stability-and-leverage

Isbell, Paul. "Energy and the Atlantic: The Shifting Energy Landscapes of the Atlantic Basin", The German Marshall Fund, 2012. http://www.gmfus.org/archives/energy-and-the-atlantic-the-shifting-energy-landscape-of-the-atlantic-basin/

Paul Isbell, "Atlantic Energy and the Strategic Horizon", *Revista CIDOB d'Afers Internacionals* No. 102/103, Barcelona, September 2013

United Nations. *UNCOMTRADE 2014*. http://comtrade.un.org/

World Energy Outlook. *International Energy Agency*. November 2014 http://www.worldenergyoutlook.org/