Roudi Baroudi Remarks at the 8th Mediterranean Oil and Gas Forum 2017 in Nicosia, Cyprus.









These are truly historic times for the Eastern Mediterranean. The region still has more than its share of problems, but we could be on the verge of a new era — and the energy industry is well-positioned to show the way.

Energy is the lifeblood of modern economies, and all of the science points to massive reserves of oil and (especially) natural gas off the coasts of several Eastern Med countries, including Cyprus, Egypt, Israel, and Lebanon. If responsibly managed, this resource will contribute both directly and indirectly to significant GDP growth, giving these countries the capacity to make long-overdue investments in education, healthcare, infrastructure, transport, and other sectors. In turn, these investments will improve overall competitiveness, raise standards of living, reduce poverty, and set the stage for self-sustaining growth over the long term.

For our region, though, "responsibly managed" means more than just following international business, governance, environmental, and safety standards: it also means finding a way to build and maintain economic and political trust, both between nation-states and within individual societies. Whether we like it or not, we are all partners in this endeavor, so we share an interest in achieving the kind of stability that encourages private investment, reduces trade barriers, and accelerates economic activity across the board. If long-time rivals provide sufficient political and/or diplomatic space for our emerging energy industry to take root, the resulting economic benefits will flow to all concerned, alleviating many of the symptoms — and even some of the causes — of the

region's various problems.

No discussion of this topic is complete without emphasizing the central role to be played by Cyprus. Although every country involved will retain some of its gas production for domestic use, for most of us the real game-changer will be a massive boost in export revenues. There are two ways to get gas to markets in Europe and elsewhere — pipelines and liquid natural gas (LNG) carriers — and Cyprus is clearly the best gateway for both.

Its geographical location, ample coastline, and unique geostrategic position make it: 1) the perfect collection and distribution point for the output of neighbors like Lebanon and Israel; 2) an ideal terminus for one or more pipelines to Turkey and the European mainland; 3) the only viable location for a regional LNG plant; and 4) a natural middleman between regional governments whose relationships are troubled or non-existent. Because of these and other qualities, including its membership in the European Union, Cyprus should be the cornerstone on which the entire edifice of regional energy growth is built.

what is more, the Republic of Cyprus (ROC), has taken serious steps to make the most of these circumstances by establishing a presence at several steps along the region's energy value chain. It has moved quickly and effectively to make the island an indispensable regional energy hub by passing suitable legislation, setting up a national energy company, and drawing up a world-class regulatory regime. It also has already signed EEZ delimitation agreements with Egypt, Lebanon and Israel, attracted oilfield support, communications, and other service firms, and has now held three successful licensing rounds for exploration and production rights, securing the participation of major IOCs from around the globe.

The only significant **hurdle** still standing is the decades-old division of the island, where the internationally recognized

ROC controls only the southern two-thirds, while the rest is under the **Turkish control through the** "Turkish Republic of Northern Cyprus" ("TRNC"). Here too, however, both sides have demonstrated strong commitment to a negotiated reunification, and while the latest round of talks has been delayed by an uptick in tensions, there is **still reason** to expect **a resumption**.

Among these reasons is the fact that the new US Secretary of State, Rex Tillerson — whose previous career as head of ExxonMobil makes him singularly well-equipped to understand the importance of Cyprus — has already taken a direct interest in the peace process. We can only hope that the US, the UN, and the EU will exert even more positive pressure to help the talks succeed, including the powerful inducement of having at least some of the region's gas exports pass through Turkey, which is already one of the world's most important energy corridors.

TRNC. The governments of Greece and the United Kingdom also have critical parts to play in helping the Cypriot people to achieve reconciliation and start reaping the rewards thereof.

The other question mark in the Eastern Med is my homeland, Lebanon, and while a lot of time has been wasted in the past few years, efforts to gets its house in order are finally back on track.

Until recently, political infighting had blocked Parliament's election of a new president for more than two years, the Parliament extended its own mandate for nearly three years, and the prime minister and Cabinet were basically caretakers because of widespread perceptions that they lacked legitimacy. Even before this multi-sided impasse, rival political camps were so mutually suspicious that cooperation was impossible.

Despite these headwinds, some crucial preparatory steps were taken. The Lebanese Petroleum Administration was created in

2012, and while political squabbles delayed its work, the LPA still found a way to lay the foundation for the country's nascent energy sector: all the necessary mechanisms are in place or ready to be rolled out, including tender procedures and draft terms for the fiscal regime.

It is my pleasure to report that other pieces are now falling into place as well. The former commander of the Lebanese Armed Forces, General Michel Aoun, has been elected president, and he enjoys more broadly based support than any of his recent predecessors. He also has made a welcome habit of insisting that Lebanon can only regain its former glory by ensuring and enforcing the rule of law, something that will be essential if the Lebanese are to keep the proceeds of gas exports from being squandered by incompetence or pilfered by malfeasance.

There is a new prime minister too, and he and his Cabinet likewise enjoy relatively strong acceptance. Last but not least, most political factions have gotten serious about holding new parliamentary elections. The usual debate over constituency size and other rules may cause a delay, but most signs point in the right direction.

As many had hoped, the LPA has moved quickly to take advantage of improving political conditions. Most tellingly, it has initiated the country's first licensing round, inviting bids for offshore exploration in five of the 10 blocks it has delineated in Lebanon's Exclusive Economic Zone (EEZ). At least two of the five blocks are pretty straightforward: Block 4 lies entirely within Lebanon's EEZ, directly off the coast, while Block 1 lies in the northwest corner, where demarcation has already been agreed with Cyprus. (As far as I know there is no delimitation agreement between Lebanon and Syria. Actually there is a maritime dispute stemming from the tabling by Lebanon of coordinates for its northern EEZ boundary to the UN to which Syria objected in writing).

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in the south, where Lebanon's maritime claims overlap with Israel's. The area in question is less than 5% of Lebanon's EEZ and an even smaller slice of Israel's **claimed EEZ**, which would have been negotiated away under normal circumstances, but the two countries have technically been at war for almost 70 years, punctuated by repeated outbreaks of actual hostilities and even more numerous threats thereof.

The situation is difficult but not impossible. The **US** and the **UN**, as well as Cyprus have rendered their good offices in order to find ways to solve the dispute by holding separate talks with Israeli and Lebanese officials, and whatever their other disputes, both sides now have a shared interest in avoiding anything that might hinder energy development. With so much at stake in terms of attracting foreign investment, securing export revenues, and accelerating GDP growth, the cost of another shooting war would simply be too high.

Conversely, the benefits — not just for Lebanon and Israel, but also for their neighbors and their would-be customers — of getting down to business are too attractive to pass up. Reliable supplies of cheap, clean natural gas from the Eastern Med would improve energy security for Turkey, the EU, and other consumer nations. Europe in particular would benefit from lower energy costs, reducing a major burden on households and restoring economic competitiveness. Perhaps most importantly, an East Mediterranean gas boom touched off by diplomacy would set an inspiring example for other regions haunted by longstanding disputes.

Beirut is not out of the woods yet. It still needs to settle several issues, including the establishment of a transparent and accountable Sovereign Wealth Fund to make sure that the benefits of future energy revenues flow to the general population rather than to small groups of economic and political elites. But at least the guiding principles are clear: steer clear of unnecessary frictions with Israel, follow international best practice, and protect the ensuing

revenues. Other obstacles may well emerge, but none will be insurmountable if these three rules are followed. REB remarks for Nicosia 2 March 2017

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LNG plant at Vassilikos still an option, president says



Monetising the Aphrodite gas field is a top priority for the government, which based on expected future gas finds is also looking at options, including a liquefaction terminal at Vassilikos, President Nicos Anastasiades said on Wednesday.

In his speech at the 8th Mediterranean Oil and Gas Forum in Nicosia, Anastasiades presented the government's strategy for the development of the hydrocarbons sector, which includes improved cooperation among the region's countries.

Referring to the Aphrodite field, the president said it represents a top priority with the energy ministry in talks with the consortium to draft a development and production plan as soon as possible.

At the same time, he added, commercial talks with potential buyers in Cyprus and Egypt for long-term contracts are equally important.

Such talks are ongoing and the most viable option is a

regional pipeline to Egyptian liquefaction facilities, either at Damietta or Idco, the president said.

"Of course, it must be noted that, on the basis of expected future discoveries, the government of Cyprus is also examining various other scenarios of commercial development, including a liquefaction terminal at Vassilikos," Anastasiades said.

Noting that French energy giant Total plans to conduct exploratory drilling in block 11 of Cyprus' exclusive economic zone within the year, while the ENI/Kogas consortium plans to continue its exploratory programme, Anastasiades said that "it is becoming increasingly evident that the Cypriot hydrocarbons sector in the last two years has gained fresh momentum".

"This is especially true after the promising results of the third licensing round, during which, despite the challenging investment climate in the hydrocarbons industry, we have received applications for the three available plots from companies of the highest calibre," the president said.

Negotiations over exploration and allocation contract terms with the ENI/Total consortium in block 6, ENI in block 8, and the ExxonMobil/Qatar Petroleum consortium in block 10, are in their final stages, he added.

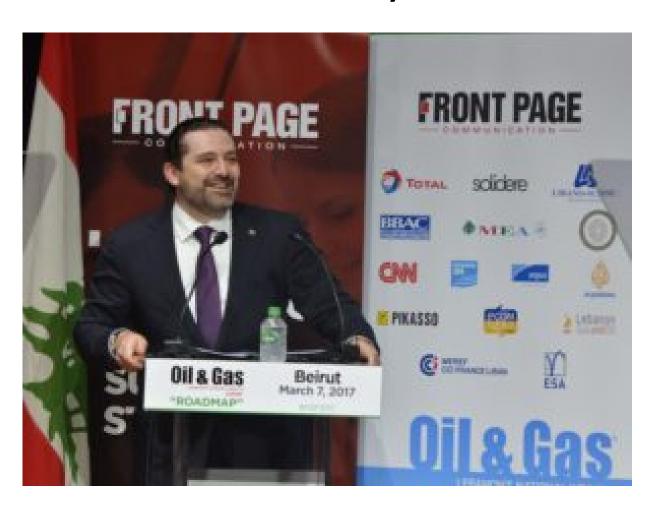
"We expect these plots to be licensed very soon, and that the companies will set an aggressive exploratory schedule," Anastasiades said.

According to the president, Cyprus' regional policy has traditionally placed a very high premium on creating an environment of stability and mutually beneficial cooperation.

"To this end, we are convinced that economic cooperation can also strengthen political trust, which comprise the necessary preconditions for successful cooperation in the field of hydrocarbons," he said. Anastasiades added that Cyprus hopes that the promise of prosperity can help create peace and stability in the region.

"I have the strong belief that, through respect for international law and national sovereign rights, all countries in our region and beyond, including Turkey, can benefit from cooperation and the creation of an environment of stability, which can secure energy investments in the billions," he argued.

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US Secretary of State Tillerson calls Anastasiades





New US Secretary of State Rex Tillerson and President Nicos Anastasiades held a telephone conversation on Tuesday evening — the first since the American official took office.

The announcement was made by Government Spokesman Nikos Christodoulides on his Twitter account.

Christodoulides wrote the conversation focused on the suspended UN-brokered Cyprus peace process, bilateral issues but also regional affairs.

Tillerrson was expected to also call later on Tuesday Turkish Cypriot leader Mustafa Akinci.

Singing the praises of an oft-slighted OPEC, World Energy Council chief gives

his thoughts





In September 2010, the Organization of the Petroleum Exporting Countries (OPEC) marked its 50th anniversary, but most of the world's leading social, economic and environmental bodies did not join in the celebrations.

The milestone provided what should have been a fitting backdrop for recognition of the very real accomplishments of OPEC's past and present and the role it is likely to play in the future. The organization's resources and policies have evolved to the point where it is now an indispensable partner on multiple levels: its determination to maintain security of supply contributes to world economic stability, its dominant position in the energy industry gives it vital influence over measures to protect the environment, and closer coordination with it could help multilateral institutions to better serve human development around the globe.

Despite all that OPEC has done on these and other fronts, the organization's contributions remain largely unheralded. The mainstream media typically dismisses the group as a crude (in both senses of the word) cartel. This unflattering assessment is broadly shared by everyone from individual consumers of oil products to the heads of states and major corporations.

OPEC's image problems may stem from its own public relations. For far too long, the organization and its members have been both loath to accept blame for mistakes and, bizarrely, unwilling to trumpet successes. The result was a familiar one to anyone who studies the contemporary Arab world: those who refuse to define themselves are instead defined by various —

often hostile - others.

An unfair reputation

OPEC was founded with the overall aim of liberating its member countries' hydrocarbon assets from foreign domination, thereby making more of the proceeds from their sale available for promoting economic development, providing better education and healthcare for their populations and sharing the wealth with less fortunate peoples.

Admittedly, not all or even most of the organization's member states have consistently pursued these goals with sufficient rigor. We all know the reputation of the "oil sheikh", the spoiled prince who squanders millions on a luxurious lifestyle. For decades there was more than a grain of truth to the stereotype.

But it is not within OPEC's purview to impose standards on the governance of sovereign member states or on the personal behavior of their rulers; its primary task, again, is to help them make more money from their primary natural resource, and in this it has succeeded beyond anyone's expectations.

Recent years have witnessed a marked improvement in the handling of energy wealth, a fact demonstrated by the proliferation of massive development and infrastructure projects, tremendous improvements in areas such as education and healthcare, and by the gargantuan holdings accumulated by some countries' sovereign wealth funds — Abu Dhabi's alone, according to some estimates, is thought to control assets in the range of \$1 trillion.

In addition, as the oil trade has matured, OPEC has sought to fulfill a regulatory function when possible and to ensure flows of supply and transparency in the petroleum trading system. Its efforts on these fronts flow through numerous channels, including its central role in the International Energy Forum and its support for the Joint Oil Data Initiative.

It undertakes these endeavors despite the risks attached to

the heavy investments necessary to ensure the robustness and readiness of the entire supply chain. The maintenance of price levels that justify the running of such risks is a major reason why the world's economies always have access to the fuel they need. And as OPEC frequently stresses, the sky-high rates for hydrocarbon products in many countries have little to do with its own practices.

Instead, they often stem from factors entirely outside OPEC's control, including taxes levied in affluent consumer nations, the expansive profit margins of major oil companies based in several of the same countries, speculators who operate there and — it has to be said — the politico-military policies pursued by some Western governments in and around the world's principal oil-producing region, the Middle East.

Despite OPEC efforts, global energy markets have suffered periodically from a lack of cooperation between the producing nations and the consuming ones, to the detriment of both, but at the same time it is OPEC who has actually done something to alleviate the repercussions of poor cooperation.

Far from being a one-trick pony concerned solely with its own commercial interests, OPEC increasingly attends to the long-term welfare of the consumer nations by, among other things, working for the development of an effective and coordinated energy framework and enabling exchanges on petroleum issues of common interest.

In the past two years, with much of the world economy suffering the after-effects of the global financial crisis, OPEC also was instrumental in limiting the damage and fueling the recovery: it raised output to keep prices reasonable, availed itself of existing spare capacity and accelerated programs for capacity expansion in order to discourage speculation and was always there to facilitate dialogue and cooperation.

After displacing the major international oil companies as the primary determinant of crude production, OPEC and its member states have become key players on the global economic stage. The organization is now a crucial interlocutor with bodies

like the G8, the G20, and the European Commission, and it has begun to participate in efforts to combat poverty and environmental degradation.

Oil aid

Across the developing world, the OPEC Fund for International Development (OFID) uses its resources to provide significant financial and other resources to support social and economic projects and to ensure affordable energy prices for the poor. All told, the agency pledged more than \$500 million in grants and soft loans over the past year. The scope of these funds ranges from the battle against HIV/AIDS to improving supplies of clean water to emergency humanitarian relief.

As of October 2010, OFID's cumulative commitments to provide easy credit for public sector entities in less developed countries had reached almost \$9 billion, more than \$5.4 billion of which had already been disbursed.

On top of this, recent years have also seen OPEC get serious about protecting the environment. As climate change and other green issues have gained their rightful spot on the global agenda, the organization has begun to do its part.

In 2010 alone, for instance, OFID earmarked support for a variety of environmental causes, including grants for the International Conference on Food Security and Climate Change in Dry Areas in Amman, the 3rd Annual Conference of the Arab Forum for Environment and Development in Beirut, organic agriculture training in East Africa and an effort by Green Globe to train 300 campaigners tasked with raising awareness of environmental issues.

While accepting that the global energy mix will change in the coming decades, OPEC has been instrumental in supporting research aimed at reducing emissions in the here and now, especially carbon capture and sequestration technologies pioneered at the In Salah operation in central Algeria. It also has adopted active roles in multilateral groupings, including the World Bank's Global Gas Flaring Reduction

Partnership, as well as the International Energy Agency's Greenhouse Gas Research and Development Program.

For the positive socioeconomic influences it exerts on today's world, and for all of the prescient preparations it has begun to make for tomorrow's — including measures to mitigate the effects of its members' lifeblood — the group deserves some credit. Provided it gets better at explaining itself, it might even receive a few long-overdue cheers when its Diamond Anniversary rolls around in 2020.

Roudi Baroudi's remarks on the sidelines of New York Times Athens Energy Forum NYT Conference 2017







February 2, 2017

My purpose here is to update you on progress at the eastern end of the Mediterranean — namely some new steps taken by the government of Lebanon to gets its nascent energy sector off the ground.

As you may recall, Lebanon has wasted a lot of time in the past few years. Cyprus recently held its third licensing round, and others have gone even further: Israel, for instance, is already drilling, and while internal legal and policy battles have slowed some aspects, Israeli negotiators have aggressively pursued export or transit deals with other countries — including both Jordan and Turkey.

In Lebanon, things have been very different. A long-running political struggle left the presidency vacant for more than two years, the Parliament granted itself two extensions totaling almost three years without new elections, and the Prime Minister and Cabinet served in a de facto caretaker capacity because of widespread perceptions that they lacked legitimacy.

Even before this breakdown of the constitutional order, rival political camps were so mistrustful of one another — and so evenly matched — that little headway could be made because ach side blocked the other's initiatives.

Luckily, even with these paralyzing conditions in effect, some preparatory steps were taken. The Lebanese Petroleum Administration was established in 2012, and while

dysfunctional politics delayed everything from the onset of its legal authority to the recruitment of qualified personnel, the LPA managed to lay much of the necessary groundwork. The idea was that once the politicians stopped bickering, all of the rules, regulations, and policies would already be in place, so the country would have the wherewithal to start playing catch-up.

I'm happy to report that there has been significant improvement. A new president has now been elected by Parliament, and his genuine support — both in the legislature and among the general population — is more broad-based than many of his predecessors. A new Prime Minister has also been installed, and since this was part of the same deal that allowed the presidency to be filled, he and his Cabinet enjoy relatively strong acceptance. Perhaps most importantly, the long-delayed parliamentary elections are due to be held in June, and while the usual debate is taking place about the rules under which those polls should take place, there is general optimism that they will be held "on time".

Best of all, the Lebanese Petroleum Administration has taken this momentum as a signal to start activating the energy sector. Last month it took a decisive step in this direction by initiating the country's first licensing round, inviting bids for offshore exploration in five of the 10 blocks it has delineated in Lebanon's Exclusive Economic Zone (EEZ). Nonetheless, the process will not be a simple matter of "plug and play", but this time the obstacles are external.

Again, the LPA has done a lot to make sure all the necessary mechanisms are in place or ready for installation, including tender procedures and draft terms for the fiscal regime. And at least two of the five blocks being licensed should be relatively straightforward: Block 4 lies entirely within Lebanon's EEZ, directly off the coast, and Block 1 lies in the northwest corner of Lebanon's EEZ, where its demarcation has already been agreed with both Cyrus and Syria. Those

interested in these blocks will know exactly what they're bidding on, and the successful bidders and their partners free to get on with the business of modern exploration work without other distractions.

Blocks 8, 9, and 10, on the other hand, are a different matter altogether because all three are in the south, where Lebanon's maritime claims overlap with those of Israel. At issue is a relatively small area of about 840 square kilometers, less than 5% of Lebanon's EEZ and an even smaller slice of Israel's. Under normal circumstances, the conflicting claims would likely have been negotiated away with relative ease, but Lebanon and Israel have no diplomatic relations and have remained in a legal state of war — with frequent outbreaks of actual hostilities — for almost 70 years despite the 1949 armistice.

The situation is not irrecoverable, however, and both the United States and the United Nations have worked hard to broker a consensus by holding separate talks with Israeli and Lebanese officials. What is more, whatever the intractability of their other differences, on this score at least both sides have a clear and compelling interest in avoiding any kind of conflict that interferes with the development of their energy reserves. All of the region's emerging producer countries stand to make substantial revenue gains, allowing gamechanging investments in health, education, transport, and other areas whose impact will be felt for decades, even centuries.

It all comes down to mathematics: there is simply too much money at stake, meaning that in addition to the lives that would inevitably be lost, the direct financial and opportunity costs of another armed confrontation would be exponentially greater than the price-tags attached to bombs and missiles.

The numbers don't lie, so there is reason for optimism that the EEZ issue will be resolved before it impedes exploration activities. In addition, if and when cooler heads prevail and some kind of understanding on indirect cooperation (or even non-interference) is reached, the resulting dividends will go far beyond Dollars, Euros, Pounds or Shekels — and the effects will be felt far beyond the Mediterranean.

Cheap, clean, and reliable natural gas supplies from the Eastern Med would also significantly enhance energy security for Turkey, the European Union, and other countries. For Europe in particular, it would be a new lease on life, restoring the competitiveness of the Continent's economy and providing consumers with lower prices for energy and a long list of other goods and services. And for both the MENA region and other parts of the world haunted by conflict or the threat thereof, an East Mediterranean gas boom made possible by sober diplomacy would set an encouraging — and highly lucrative — precedent.

These manifold and far-reaching benefits mean that numerous local and outside actors will want the same thing in the Eastern Med: stability. Cyprus, for instance, figures to be a linchpin for the entire regional gas economy, but it can only play that role to the fullest if it achieves reunification after more than 40 years of division. Each of the main external players on the island — Britain, Greece, and Turkey — also has good reason to want tensions reduced, and Russia's growing presence in the region (including investment offshore each of Cyprus, Syria, and Egypt) gives it a vested interest in a more predictable region. American companies are also present, and literally no one better understands what is at stake than the incoming US secretary of state, former ExxonMobil boss Rex Tillerson.

Of course, there is still much for Beirut to address, including the structure and management of an effective and transparent Sovereign Wealth Fund to safeguard future energy revenues. There is also the matter of determining the true size of its offshore treasure, but all signs from exploration

under way off Cyprus and Israel — plus the discovery of Egypt's massive Al-Zohr gasfield — suggest that Lebanon is on the verge of a historic windfall. In fact, some 2-D and 3-D studies already indicate that the country's hydrocarbon potential outstrips those of its immediate neighbors.

At this point, all Lebanon needs to do is play its cards right: avoid unnecessary confrontations with Israel, follow international best practice for safe and environmentally responsible oil and gas development, and protect the ensuing revenues against nepotism, waste, and other forms of mismanagement. So long as it makes itself a stable platform, investment will come and a better future will almost certainly follow.

Lebanon poised for energy breakout, including in Cyprus



Lebanon is finally getting serious about developing its offshore oil and gas reserves thanks to a reduction in

domestic political tensions, a senior industry veteran told a high-profile energy conference in Athens on Thursday.

"There has been significant improvement," said Roudi Baroudi, CEO of Qatar-based Energy and Environment Holding (EEH), an independent consultancy.

Speaking at the Athens Energy Forum, which attracted a long list of political and industry leaders from Greece and other E.U and Middle East countries, Baroudi said major obstacles had been removed in recent months and that more progress was in the offing.

"A new president has now been elected by Parliament, and ... a new prime minister has also been installed," he reminded the audience, adding that both officials enjoyed strong public acceptance. "Perhaps most importantly, the long-delayed parliamentary elections are due to be held in June."

Many Lebanese institutions have been hamstrung by years of infighting among rival political camps, causing the country to fall behind neighbors like Cyprus and Israel in getting its nascent energy sector up to speed. Conditions for progress look much better now, Baroudi said, explaining that much of the credit was due to the Lebanese Petroleum Administration (LPA) established in 2012.

"Luckily, even with these paralyzing conditions in effect, some preparatory steps were taken," he explained. "The LPA managed to lay much of the necessary groundwork. The idea was that once the politicians stopped bickering, all of the rules, regulations, and policies would already be in place, so the country would have the wherewithal to start playing catch-up."

In fact, he said, both "2-D and 3-D seismic geology studies, as well as high-tech airborne acquisition surveys, already indicate that the country's hydrocarbon potential outstrips those of its immediate neighbors."

Now that the political log-jam is breaking up, Baroudi noted, the LPA has begun to act in other ways as well.

"Last month it took a decisive step ... by initiating the country's first licensing round, inviting bids for offshore exploration in five of the 10 blocks it has delineated in Lebanon's Exclusive Economic Zone," said Baroudi, who has worked in the energy industry for over 30 years.

Nonetheless, "the process will not be a simple matter of 'plug and play'" because apart from continuing fears about transparency, Lebanon also would need to sort out a maritime boundary dispute with Israel.

"Both the United States and the United Nations have worked hard to broker a consensus by holding separate talks with Israeli and Lebanese officials," he told the forum. "Whatever the intractability of their other differences ... [Lebanon and Israel] have a clear and compelling interest in avoiding any kind of conflict that interferes with the development of their energy reserves."

"It all comes down to mathematics," Baroudi argued. "There is simply too much money at stake, meaning that in addition to the lives that would inevitably be lost, the direct financial and opportunity costs of another armed confrontation would be exponentially greater than the price-tags attached to bombs and missiles."

In addition, he said, the benefits of an East Mediterranean energy boom would serve the interests of Turkey, the European Union, and various extra-regional actors, increasing outside support for negotiated solutions on both the Libano-Israeli front and the issue of Cyprus reunification.

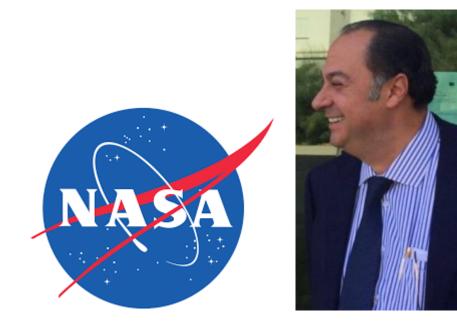
"Numerous local and outside actors will want the same thing in the Eastern Med: stability. Cyprus ... figures to be a linchpin for the entire regional gas economy, but it can only play that role to the fullest if it achieves reunification," said

Baroudi.

"Each of the main external players on the island — Britain, Greece, and Turkey — also has good reason to want tensions reduced, and Russia's growing presence in the region, including investment offshore each of Cyprus, Syria, and Egypt, gives it a vested interest in stability.

American companies are also present, and literally no one better understands what is at stake than the incoming US secretary of state, former ExxonMobil boss Rex Tillerson."

Climate change: The economics of energy and water



Introduction

Sustainability of the global environmental as an integral part of a sustainable economic development policy and strategy is gaining prominence and attention of world leaders and economic development policy advisers and strategists. The high and the more frequent incidents of the devastating impacts of natural disasters due to the changing climatic conditions has become the wake-up call that we should not expect the global environment to sustain us, as an independent world, if we continue the assault on the global environment. Access to adequate water for economic activity, as well as its desired quality for human consumption and to clean and affordable energy are vital to our survival in this interdependent world of ours, and should be an integral part of the economic development agenda.

The World population is projected to grow from the current level of 6.5 billion people to roughly 9 billion in 2035. The pursuit of improving living standards would come with the increasing population growth, which would inevitable place more pressure on the natural environment and could lead to global climate crises, if the appropriate mitigating measures are not taken. The global demand for energy is expected to increase by roughly 50 percent by 2025-2030 and water demand will also be rising drastically. Energy production and use is intertwined with water usage. The interplay and relationship is as close "as daylight is unto darkness," to quote Shakespeare As a result, and to maximize benefits to society of these three important resources (energy, water, and the environment) environmental requirements should be fully integrated into the production and uses of energy and water.

Water is utilized directly as a source of electricity production from hydroelectric plants, cooling of electromechanical machinery and equipment in thermal power plants, it is used in thermal boilers to raise steam into turbines for power generation and directly as heating energy, it is used in crude oil de-salters and directly in washing solid fuels for power generation, and watering of coal-beds to minimize potential of self-combustion. Unfortunately, in some other cases rivers and lakes are used as sinks for the by-products of energy production.

The construction of hydroelectric dams has significant impacts on both upstream and down stream uses of rivers and water ways, which, in some cases call for complex in inter-country and regional riparian rights agreements. There are examples of Blue Gold" riparian "The rights issues international, regional and inter-country in the Middle East, and several other regions world-wide. Energy production from oil fields and from fossil fuel power plants on climate change are known to be the contributing factors to rises in sea levels, the shrinking of lake waters, shrinking and drying of rivers, deforestation, extremities of dryness and water scarcity, and increasing and expanding desertification. We are witnessing the impacts of these changes on society and human well-being of inadequate supplies of drinking water and water for sanitation. Lake Chad in West Africa is one such example, where the livelihood of millions of people is threatened as a result of climate change impacts on the lake.

Clean water is an incredible precious resource, but as a result of climate change impacts, it is becoming more and more scarce world wide. In the areas of the world where this precious resource is still available especially for the water intensive agriculture industry, it should be preserved by protecting it from pollution, and impacts of climate change. Conservation in its use through the application of combination of command and control measures, and economic instruments should be accorded the highest priority.

Balancing Energy and Water Usage

It is critical to attain the sustainability of these vital resources in the world, especially in the emerging countries, where portable water is becoming a rare commodity.

The main questions remain as to how the balancing act can best be done to achieve this important objective? There are a number of technically and economically feasible and proven options that could be applied. The constraining factor is the lack of the appropriate policy and advanced regulatory environment.

The Role of Renewable Energy — Alternative Sources and Energy Mix

While oil, gas, coal will remain in the foreseeable future the predominant resources to meet the worlds' energy demand, their continued expansion to meet the growing energy requirement would contribute to the further degradation of the global environment in addition to the overall increase in pollutants and their adverse impacts on human health. The development agenda should call for diversification from further increase in fossil fuel use. The Middle East and North African region, for example, is particular richly endowed with solar radiation, which should enable large scale development of solar-based energy for household and commercial sector uses. there is large potential for wind energy Similarly, development in the region, due to existence of strong wind regimes, both off and on-shore. In this respect Great Britain has reached the 5th or 6th top wind farms position (after Denmark with 20 percent of its current electricity is from wind turbine) in the world and almost reaching 10 percent of the UK power needs, 140 wind projects are already operational. A contribution of renewable energy resources including nuclear of 15-20 percent to energy consumption could lead to same level of reduction in fossil fuel use for power generation, use of methane from landfills, enhancing the use of bio fuels as it has shown the commercial viability in different parts of the World. This will turn have positive impacts on combating acid rain, as well as global warming, water use for power generation, and reduce adverse impacts of climate change as discussed earlier. Iceland and Sweden for example are targeting for a carbon free economy by 2020, promoting hydrogen and fuel cells. On the other hand, in Africa, Kenya for example is exploiting massively its geothermal resources successfully. Research and development is in the final stages

of solar energy storage to the extent of developing solar desalination. An introduction to a corporate, business or individual green culture should be spread among the polluters in order to achieve green goals.

Efficiency of Energy Use

As it has been continuously called upon by the IEA roadmaps, policies and regulations to increase energy efficiency, have to be accompanied by deep understanding of the potential role of renewable energy resources and implications for the climate change landscape, geopolitically and socially, in order to maximize benefits of energy use efficiency and conservation from both the local and global perspectives. Compared to the middle income and advanced countries, intensity of energy use in the developing world is much too high. There is significant scope to reduce energy intensity without impacting negatively on economic growth and well-being of the population. To achieve this will require the formulation and implementation of policies and regulatory mechanisms to foster energy end-use efficiency and conservation. The policies and regulatory mechanisms should be encompass the use of both command and control and market instruments. Under the command and control mechanisms, Governments would continue to develop and promote energy efficiency technologies and services and impose achievable energy use limits, which would be enforced for industry, transport sectors and households. For lighting purposes for household and commercial applications, energy savings up to about 30 percent can be achieved. The market instruments should have strong economical incentives through subsidies, tax rebates, finance and pricing to induce actions for efficiency and conservation in order to make a difference; we have to trim our individual carbon foot prints.

Advanced Clean Energy Technologies and Monitoring Systems

Advances in science and engineering capabilities in these areas and use world-wide have brought improvements in the

manner in which energy is produced. Medium-speed diesel engines which can perform at nearly 46 percent efficiency, burn less fuel for same energy output as the technologically outdated ones that perform at efficiencies lower than 30 percent. Today, we are seeing super-critical boilers for coalfired plants with efficiency levels in the range of 46 percent compared to the conventional ones performing at less than 30 percent efficiency. Whilst bio-fuel has become a global commodity, R&D need to go further with hybrid vehicles, wave and tidal power, solar concentrators, combined heat and power (CHP) technology in power plant that are 75 percent efficient v/s 45 percent, advance amine scrubbers for Power Stations and other technologies. The recommendation is that governments need to establish the appropriate legal and regulatory framework to enable a robust carbon capture and sequestration to provide an effective framework for carbon management.

President Barack Obama's recent speech on energy and environment to the joint session of the US congress; the European commission for their massive dedicated work; and France's President Sarkozy for their continuous support for the climate challenge, are bringing great hope and greater awareness to the challenges we face as an inter-dependent world to avert the adverse impacts of climate change. should be a joint public, private, and corporate effort to tackle the problems of climate change, and the critical role of the appropriate policy, legal and regulatory frame cannot be over-emphasized. These should serve to encourage and attract private capital into new technologies that will assist in adapting to climate change and setting guidelines and parameters for efficient energy and water uses, carbon pricing (despite the current carbon market plummeting due to the current financial crisis) and trade. The Emissions Trading Systems (E.T.S.) developed by the European Community and NASA's proposal to launch satellites into Orbit to track and measure CO2 in the atmosphere are clear examples of policy and regulatory initiatives to help tackle the problem.

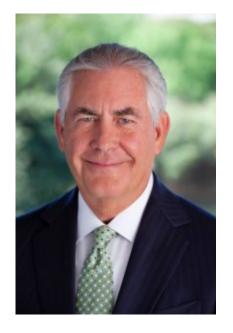
In deed, the need to achieve a sustained balance between protecting the environment and energy and water use cannot be over-emphasized in the world, especially in the MENA region, where we face significant challenges to conserve water because of its scarcity, especially in the face of an expanding population growth. Climate, Energy and Water have always played significant roles in preserving and supporting the World's environment we live in. They will continue to do so in the future. There is now empirical evidence that our environment is gradually changing because of people actions to water and air quality. Emissions from human economic activities have changed ocean cycles, contributed to warmer weather and altered global climate balance. Immediate innovative regulatory policies have to be drawn and deployed by governments within the framework of the UNFCCC and many other protocols to tackle the adverse impacts of pollution, devise mechanisms for abatement of carbon emissions or discharge limits, including carbon capture and technology (including mapping and assessing potential sites for site storage, promote in several continents and global monitoring systems to audit greenhouse gas emissions and provide environmental and economical incentives. The actions to be taken in Copenhagen at end of 2009 and the ones we take collectively on as countries, or as continent, or as a hemisphere or globally and even as individual persons will go a long way to catalyze the energy and water future efforts. Fortunately, the world is not going to run out of energy and resources soon. However, the threats facing our atmosphere, especially climate change, can be minimized only by concerted efforts at mitigation through international cooperation.

Climate is valuable, if not more, as energy and water, to our survival in an interdependent world in which we live.

Roudi Baroudi is the secretary general of the Lebanon Member Committee of the World Energy Council. His email is:

Così Cipro unita aiuterebbe tutto il Mediterraneo











il Giornale it mondo

Uno dei fattori chiave che hanno permesso a Donald Trump di vincere a novembre è stata l'enorme voglia di cambiare la politica interna.

Eppure la sua presidenza può offrire enormi opportunità anche per quanto riguarda la politica estera e Cipro, insieme al resto dei Paesi dell'Est Mediterraneo, potrebbero così essere tra i primi beneficiari della politica estera di Trump.

L'isola è divisa dal 1974, nonostante i vari tentativi di riunificazione. Trump non è il primo presidente a seminare speranze per Cipro unita, ma questa volta, dopo molti anni, ci sono seri motivi di credere che un accordo totale ed equo è possibile.

Prima di tutto la figura di Trump. È la prima volta che nella storia americana sale alla Casa Bianca qualcuno di così fondamentalmente diverso rispetto ai suoi predecessori. Molti studiosi si sono focalizzati sulle ripercussioni negative che la politica di Trump porterebbe, ma allo stesso modo sono in vista cambiamenti positivi.

Inoltre, a pesare in senso positivo, c'è la nomina del segretario di Stato. Benché Rex Tillerson abbia una scarsa esperienza nel governo, ha lavorato per dieci anni alla ExxonMobil, una compagnia con 75mila dipendenti, che opera in duecento Paesi. Prima ancora ha personalmente seguito e guidato il processo attraverso cui ExxonMobil ha raggiunto la sua invidiabile posizione in Russia, il più grande produttore di energia del mondo. Insomma, un curriculum che la dice lunga sulle sue capacità.

E non da ultimo c'è la tempistica. Cipro sta costruendo molto rapidamente il suo polo energetico regionale per l'est Mediterraneo. Dalle recenti attività di esplorazioni è stata confermata la presenza di depositi di gas naturale.

Questo sviluppo energetico di Cipro potrebbe essere un perno di vitale importanza, primo per la sua posizione geografica, insieme alla sua posizione geostrategica, e per il fatto di essere membro dell'Unione Europea e, non da ultimo, per lo sviluppo industriale della regione.

Molti protagonisti si sono già messi in gioco, incluso la ExxonMobil che, insieme al Qatar Petroleum, il più grande produttore di gas naturale, si è assicurata i diritti di esplorazione del Blocco 10 del Cyprus Exlusive Economic Zone. In campo c'è anche Rosneft, una delle compagnie di energia più importanti della Russia, e Soyuzneftegaz, un'altra compagnia russa.

In questo delicato momento storico, Cipro trarrebbe ovviamente grandi vantaggi da una riunificazione. Prima di tutto,

evidentemente, attrarrebbe più investitori. Se il riavvicinamento tra il presidente russo, Vladimir Putin, e il turco, Recep Tayyip Erdogan, continua così come sostengono molti osservatori, sarà più facile portare avanti una negoziazione positiva. E questo ci fa tornare alla nuova amministrazione americana. Sia l'Unione Europea che l'Onu si sono impegnate a cercare un'intesa su Cipro ma per superare l'ostacolo «dell'ultimo miglio» potrebbe venir richiesto un impegno americano più intenso.

Cipro unificata, che diventa un polo regionale dell'energia sarebbe così un vantaggio non solo per se stessa ma ridurrebbe le tensioni tra Ankara e Atene, e tutti i Paesi vicini del Mediterraneo avrebbero vantaggi dalla stabilità ritrovata, incluso più turismo e più investimenti.

Un discorso non certo facile da realizzare: il processo di unificazione non è facile da raggiungere. Ecco perché una volontà solida dei protagonisti è così fondamentale; le potenziali ricadute positive derivanti dal settore energetico di Cipro potrebbero essere così più forti delle rimanenti obiezioni. È quindi tempo di dare un'opportunità costruttiva e dare un regalo di pace prima a Cipro poi ai paesi del Mediterraneo.

Roudi Baroudi

Ceo della Energy & Environment Holding, basata in Qatar