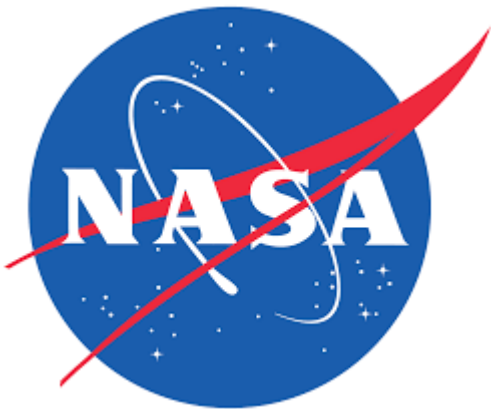


# Climate change: The economics of energy and water



## Introduction

Sustainability of the global environment 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 such "The Blue Gold" riparian rights issues with 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. Similarly, there is large potential for wind energy 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 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 coal-fired 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. It 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 CO<sub>2</sub> 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

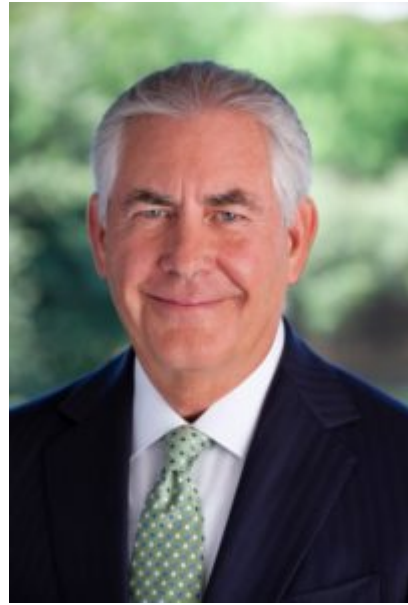
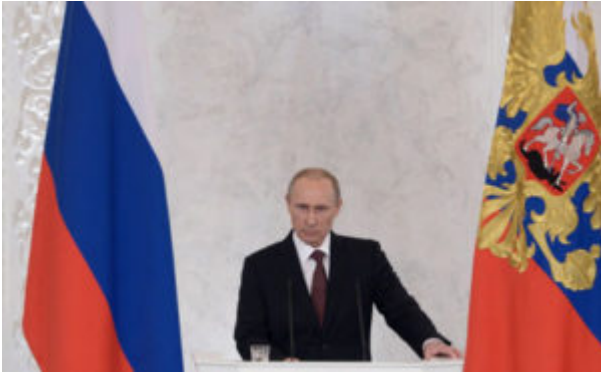
innovative regulatory policies have to be drawn and deployed by governments within the framework of the UNFCCC and many other protocols to tackle the adverse impacts of pollution, devise mechanisms for abatement of carbon emissions or discharge limits, including carbon capture and storage technology (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 water 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.

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## **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 fundamentalmente 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 Exclusive 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

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## **GECF sees oil price to range from \$70 to \$95 in long-term**

GULF TIMES – Doha

Doha-based Gas Exporting Countries Forum (GECF) expects long-term global oil price to range from \$70 to \$95 a barrel, while short-term prices are expected to remain “weak”.

“Our projection of 2040 oil prices show that over the medium-to-long term, prices will likely range from \$70 to \$95 per barrel in constant (2015) dollars,” GECF said in its maiden report ‘Global Gas Outlook’. These price levels will support the most expensive sources of production such as Canadian oil sands, Venezuelan heavy crude and off shore deep-water African projects, it said.

The expected oil price range (\$70 to \$95) would mean that an expected pick-up in the global economy would sustain the new levels. Global gross domestic product growth is expected to be stronger between 2015 and 2020, at 3.1% per year, but would start to slow down to 2.9% after 2020 as non-OECD (Organisation for Economic Cooperation and Development) Asia, including China and some other major emerging but maturing economies, slow to a more sustainable long-term rate.

In the medium term, the cost of producing the most expensive (marginal) barrel is an important component for oil price projection although the cost of production varies significantly depending on the geology of the production basin, the technology employed and the fiscal terms applied to producers by host governments. GECF said oil price forecasts are predicated on the same determining factor that shape today's oil prices including economic growth, the interplay between global oil supply and demand, industry production costs, geopolitical events and the behaviour of the Organisation of the Petroleum Exporting Countries (Opec). In the short term, GECF said it expects oil prices to remain "weak" due to a more "pessimistic" economic perspective than previously anticipated and to the absence of a strong decline in non-Opec output.

Forecasting that oil demand growth to grow moderately, it said global demand for oil and other liquids would increase to over 98mn barrels per day (mbpd) in 2020 from 93mbpd. "Oil demand continue to rise until it peaks at 106.5mbpd in 2035 and then stabilises around 106mbpd through 2040," it said, adding the largest decline in demand for oil and other liquids is expected to occur in the power sector, where it faces strong competition from other fuels including natural gas, renewables and nuclear.

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# Roudi Baroudi on MTV Lebanon – Economic News

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## Arab Gas Pipeline



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# In Italy, a Sleeper Crisis for the E.U.



It is a strange development that the greatest alliance of democratic states in modern history, the European Union, has come to fear democratic votes and elections. Yet the plebiscite on a set of constitutional changes in Italy on Sunday may be a momentous day for Europe and the European Union.

Italy was a founding member of the European Economic Community and of the common currency, the euro. If Italy votes no in the referendum and then turns against Brussels and the euro, it might well spell the end of the European Union. It would also be a serious and lasting defeat for a reformist and internationalist social democracy.

Formally, the plebiscite puts to voters a set of constitutional changes that make a lot of sense. Matteo Renzi, Italy's prime minister, proposes to reduce the power of the Senate, the upper house of Parliament. Unlike its American counterpart, the Italian Senate has not just representatives

from various regions but also “lifelong” appointees and stakeholders from various lobbies.

The senators have blocked many decisions made by the Parliament in the past; because they tend to be older (minimum age of 40), they are often seen as a symbol of Italy’s “gerontocrazia.” Reducing the powers of the Senate is a key step to modernizing Italy’s political system and meeting economic challenges. In fact, a majority of the senators agreed with Mr. Renzi’s reforms, and they seemed likely to be approved in the plebiscite.

But in polls after September (before a blackout was imposed leading up to the vote), public opinion turned against Mr. Renzi and his proposals. That is largely because he has failed to deliver on his main promise to improve the economy. Italy has not yet fully recovered from the 2008 global crisis: For example, unemployment is higher than in most of the European Union, with youth unemployment hovering around 40 percent.

By these economic indicators, “la crisi,” as the Italians call it, is as deep as the depression that hit Poland and other Eastern European countries after 1989. Southern Italy now even has a lower gross domestic product per capita than Poland, adjusted for purchasing power.

Mr. Renzi made efforts to change things. He introduced job-market reforms that made it easier to hire young workers and eased some of the protections enjoyed by employees with older contracts. He has raised the retirement age modestly, a necessary step because of rising life expectancy (Italy has one of the highest life expectancies in the Western world) and to relieve the welfare state.

Mr. Renzi has also hired many young ministers instead of the old power brokers like Massimo D’Alema, the former leader of Mr. Renzi’s Democratic Party who now recommends a no vote. All in all, Mr. Renzi’s policies are reminiscent of Tony Blair’s

New Labour in the 1990s or Germany's labor-market and pension reforms under Gerhard Schröder after the turn of the millennium.

Mr. Renzi, however, is operating in a much worse global economic context. Italy cannot build on an export-driven growth model like Germany under Mr. Schröder, and it is suffering under a heavy debt burden left by Silvio Berlusconi.

And the tide has turned against reformist social democracy in Italy and elsewhere. The populists on the left and right build on the disenchantment, ire and despair of large parts of the electorate. They promise a real rupture, which Mr. Renzi's party, part of the political establishment, cannot credibly offer.

If he loses the plebiscite and steps down, as he has vowed to do, the European Union would be badly damaged as well. Mr. Renzi is staunchly pro-European, while the populists rally against Brussels and the austerity policies of the Union. Jean-Claude Juncker, the president of the European Commission, understood this and unveiled a 315 billion euro investment plan in 2015. But it is probably too little, too late to help Mr. Renzi, even as Italy could benefit from investments in solar power and urgently needs investment in internet communication.

The union has also become increasingly unpopular because it largely left Italy alone to manage the tide of refugees and migrants from North Africa (more than 170,000 people have arrived in Italy so far in 2016). Hence, even many of Mr. Renzi's adherents feel abandoned by the European Union.

Mr. Renzi's foes – the left-wing populists of the Five Star Movement of Beppe Grillo, and the right-wing populists of the Northern League – fiercely attack the prime minister and the European Union. Mr. Grillo has indicated that if the plebiscite fails, he wants to hold a referendum on dropping



the euro.

Brexit has set an example that a nation can vote against the advice offered by economic and political experts. Even without a plebiscite about the euro, Italy might become almost impossible to govern.

That will certainly frighten the financial markets. If the interest rates for Italy's public debt, which at the moment stands at about 132 percent of gross domestic product, continue to rise (speculation against Italian government bonds has already started in recent weeks), it might be difficult to keep Italy in the eurozone.

If Italy, the fourth-largest economy of the European Union, rejects the euro, the common currency would be finished, and probably the Union as well. But how would the populists, once in power, act? If they have the choice between state bankruptcy and keeping the euro, they might still opt for the common currency.

The founding members of the European Economic Community reacted to the fall of the Berlin Wall and the breakdown of state socialism by establishing the more deeply integrated European Union and the euro. That worked well until the crisis of 2008.

It might be, however, that the union and the common currency were made for good times, not for bad ones.

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**Cyprus matters: An open**

# Letter to the new U.N. secretary-general



Your Excellency, Antonio Guterres:

The news out of Geneva is encouraging, offering hope that Cypriots might soon wake up from their decadeslong nightmare of division and hostility.

The potential of such a development – i.e. of a full and fair settlement that reunites the island nation's ethnic Greek and Turkish communities for the first time since 1974 – reaches far beyond its own borders. As you yourself were quoted as saying Thursday, “We are facing so many situations of disasters. We badly need a symbol of hope. I strongly believe Cyprus be the symbol of hope at the beginning of 2017.”

Indeed, Cyprus matters – a lot, to many peoples, and for several reasons. The actual extent of symbolic value is notoriously difficult to determine, but the very demonstration that such a protracted conflict can be resolved through negotiations will buy credibility for diplomatic solutions wherever they are needed.

And that is not all, not by a long shot.

As you know, it has been determined beyond the shadow of a doubt that the Eastern Mediterranean contains world-class

deposits of natural gas within the exclusive economic zones (EEZs) of several countries. This precious resource will not only generate revenues that allow regional governments to invest in education, health care and other social goods for their populations, but also provide Europe with greater energy security and lower costs that help restore its economic competitiveness.

Regardless of who ends up owning more or less of the deposits in question, Cyprus is destined to play a pivotal role that both accelerates the process by which benefits begin to flow and multiplies the positive impacts for producer and consumer nations alike.

Because of its physical location and geostrategic position, along with the often difficult relations among its neighbors, the island already qualifies as a powerful catalyst in several processes: as the most viable point of origin for a "Peace Pipe" that would carry the gas of several East Med countries to the European mainland and or to Turkey; as the most logical spot for a liquefied natural gas (LNG) plant whose output would reach customers in Europe and Asia by ship; and as the most convenient operational headquarters for everything from exploration and production to maintenance and telecommunications.

Of course, exploitation of this resource is inevitable to some extent. The gas is there, there is demand for it (especially from Europe, the world's largest energy market), and there are no insurmountable obstacles to its extraction. Without a united Cyprus, however, the pace and scope of development will be substantially diminished. Cooperation with Turkey would remain difficult if not impossible, other regional players might judge it more prudent to build their own pipelines, and foreign investors would be less willing to invest in LNG and other capital-intensive facilities.

Excellency,

Just as a reunified Cyprus is a prerequisite for full and timely development of the region's gas reserves, its rapid emergence as a regional energy hub can be the lifeblood of a new shared future for the island's Greek and Turkish communities. The day-to-day work of reunification will continue long after the pageantry of any peace ceremony as homes and other properties are restored to original owners, displaced populations return to their towns and villages, and compensation is paid to qualified parties. The devil will remain very much in the details, patience will run short among people who have been waiting more than 40 years, and tempers will flare. With a lucrative gas sector growing up alongside this process, however, there will be both solid opportunities for intra-Cypriot cooperation and more financial resources available to smooth over the rough spots.

As you and others have recently stated, Cyprus is closer than ever to putting itself back together. Both President Nicos Anastasiades, who heads the internationally recognized Republic of Cyprus, and President Mustafa Akinci, leader of the breakaway Turkish Republic of Northern Cyprus, have expressed keen interest in – and even guarded optimism about – getting deal done sooner rather than later. What is more, a confluence of third-party interests, personalities and geopolitical developments is leading in the same direction. Turkish President Recep Tayyip Erdogan insists that he is committed to a settlement, Greek Prime Minister Alexis Tsipras has made Cyprus a top priority, and both Russian and American energy companies are invested in the Eastern Med, giving them a shared interest in regional stability that figures to extend to their respective governments. In addition, the incoming U.S. secretary of state, former ExxonMobil chief Rex Tillerson, is a veteran oilman who not only understands energy economics but also has cultivated good relations with Moscow.

Excellency,

Many key players already have entered the mix, including

ExxonMobil, whose consortium with Qatar Petroleum, the world's largest LNG producer, has secured exploration rights to the most attractive morsel in Cyprus' recent third licensing round, Block 10 of its EEZ. Rosneft, one of Russia's top three energy companies and half-owned by the Russian government, just acquired a stake in Egypt's massive Zohr field, directly adjacent to the Cypriot zone. Then there is another Russian giant, Soyuzneftegaz, which has been granted extensive exploration rights just to the east of Cyprus in Syrian waters.

Given Moscow's decisive role in helping the Syrian government to battle insurgents, and the fact that its only overseas naval base lies on Syria's coast, never has it been closer to securing the position of strength in the Eastern Med that Russian statesmen have sought for centuries. American power has long stood in the way, but now the two countries have a shared interest in the region's stability, and Tillerson's boss, President-elect Donald Trump, has articulated a less confrontational vision of the relationship.

The diplomatic tea leaves are hopeful too. Anastasiades recently credited the Turks with pushing for an early resumption of talks, describing the prospect of access to Cypriot gas as a key consideration in Erdogan's calculations. Akinci has voiced his belief that 2017 "can be made a year of peace and resolution." And the U.N.'s own envoy, former Norwegian Foreign Minister Espen Barth Eide, said both sides "recognize that the status quo is unacceptable and unsustainable, and that the current talks offer the best opportunity for a solution."

Excellency,

The benefits of Cyprus' returning to the world stage as a nascent energy hub would flow to peoples across the Euro-Mediterranean region and beyond. Once other countries in the Eastern Med start producing gas in quantities sufficient for

export, a stable and unified Cyprus will make it easier for them to reach customers in Europe and Asia, providing enough revenues for a veritable renaissance of the regional economy; Turkey and its European neighbors would be surer of meeting their energy needs, and therefore of rejuvenating their own economies; the removal of an ever-present disagreement also would provide space for a rapprochement between Turkey and Greece; and the whole neighborhood would gain from a return to normality, helping it to attract more tourists and investors, expand trade relationships and increase cooperation on everything from academic and cultural exchanges to civil aviation and maritime search and rescue.

And on the aforementioned symbolic level, what could be more conducive to remedying the problems of the Middle East than to teach Arabs and Israelis that peace and coexistence are not zero-sum games? That peace is both its own dividend and the source of many more to come? That this formula can be applied to just about any case of ethnic, national and/or religious dispute? That the futures of individuals, families and communities can be radically improved by sharing a land you love with someone you used to hate?

A lot depends on the principals, Akinci and Anastasiades, to make this happen. Many members of their respective constituencies subscribe to rival narratives, but most are tired of division, and while cobbling together a workable deal and selling it in two separate referenda will be demanding work, the payoff figures to be almost incalculable. But ultimately it is up to Turkey to allow the Cypriots to find a solution that suits them.

Add all of this up, and the momentum for peace has never been greater. The people of Cyprus need and deserve all the help they can get to make good on this potential, as do those of other countries and societies in need of reconciliation, as well as still others who desperately need affordable and reliable energy supplies. In short, whoever we are, we help

ourselves by assisting the Cypriots. That's why Cyprus matters.

Roudi Baroudi is CEO of Energy and Environment Holding, an independent consultancy based in Doha, Qatar.

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## **Cyprus matters: An open letter to the new U.N. secretary-general**



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Of course, exploitation of this resource is inevitable to some extent. The gas is there, there is demand for it (especially from Europe, the world's largest energy market), and there are no insurmountable obstacles to its extraction. Without a united Cyprus, however, the pace and scope of development will be substantially diminished. Cooperation with Turkey would remain difficult if not impossible, other regional players might judge it more prudent to build their own pipelines, and foreign investors would be less willing to invest in LNG and other capital-intensive facilities.

Excellency,

Just as a reunified Cyprus is a prerequisite for full and timely development of the region's gas reserves, its rapid emergence as a regional energy hub can be the lifeblood of a new shared future for the island's Greek and Turkish communities. The day-to-day work of reunification will continue long after the pageantry of any peace ceremony as homes and other properties are restored to original owners, displaced populations return to their towns and villages, and compensation is paid to qualified parties. The devil will remain very much in the details, patience will run short among people who have been waiting more than 40 years, and tempers will flare. With a lucrative gas sector growing up alongside this process, however, there will be both solid opportunities for intra-Cypriot cooperation and more financial resources available to smooth over the rough spots.

As you and others have recently stated, Cyprus is closer than ever to putting itself back together. Both President Nicos Anastasiades, who heads the internationally recognized Republic of Cyprus, and President Mustafa Akinci, leader of the breakaway Turkish Republic of Northern Cyprus, have expressed keen interest in – and even guarded optimism about – getting deal done sooner rather than later. What is more, a

confluence of third-party interests, personalities and geopolitical developments is leading in the same direction. Turkish President Recep Tayyip Erdogan insists that he is committed to a settlement, Greek Prime Minister Alexis Tsipras has made Cyprus a top priority, and both Russian and American energy companies are invested in the Eastern Med, giving them a shared interest in regional stability that figures to extend to their respective governments. In addition, the incoming U.S. secretary of state, former ExxonMobil chief Rex Tillerson, is a veteran oilman who not only understands energy economics but also has cultivated good relations with Moscow.

Excellency,

Many key players already have entered the mix, including ExxonMobil, whose consortium with Qatar Petroleum, the world's largest LNG producer, has secured exploration rights to the most attractive morsel in Cyprus' recent third licensing round, Block 10 of its EEZ. Rosneft, one of Russia's top three energy companies and half-owned by the Russian government, just acquired a stake in Egypt's massive Zohr field, directly adjacent to the Cypriot zone. Then there is another Russian giant, Soyuzneftegaz, which has been granted extensive exploration rights just to the east of Cyprus in Syrian waters.

Given Moscow's decisive role in helping the Syrian government to battle insurgents, and the fact that its only overseas naval base lies on Syria's coast, never has it been closer to securing the position of strength in the Eastern Med that Russian statesmen have sought for centuries. American power has long stood in the way, but now the two countries have a shared interest in the region's stability, and Tillerson's boss, President-elect Donald Trump, has articulated a less confrontational vision of the relationship.

The diplomatic tea leaves are hopeful too. Anastasiades recently credited the Turks with pushing for an early

resumption of talks, describing the prospect of access to Cypriot gas as a key consideration in Erdogan's calculations. Akinci has voiced his belief that 2017 "can be made a year of peace and resolution." And the U.N.'s own envoy, former Norwegian Foreign Minister Espen Barth Eide, said both sides "recognize that the status quo is unacceptable and unsustainable, and that the current talks offer the best opportunity for a solution."

Excellency,

The benefits of Cyprus' returning to the world stage as a nascent energy hub would flow to peoples across the Euro-Mediterranean region and beyond. Once other countries in the Eastern Med start producing gas in quantities sufficient for export, a stable and unified Cyprus will make it easier for them to reach customers in Europe and Asia, providing enough revenues for a veritable renaissance of the regional economy; Turkey and its European neighbors would be surer of meeting their energy needs, and therefore of rejuvenating their own economies; the removal of an ever-present disagreement also would provide space for a rapprochement between Turkey and Greece; and the whole neighborhood would gain from a return to normality, helping it to attract more tourists and investors, expand trade relationships and increase cooperation on everything from academic and cultural exchanges to civil aviation and maritime search and rescue.

And on the aforementioned symbolic level, what could be more conducive to remedying the problems of the Middle East than to teach Arabs and Israelis that peace and coexistence are not zero-sum games? That peace is both its own dividend and the source of many more to come? That this formula can be applied to just about any case of ethnic, national and/or religious dispute? That the futures of individuals, families and communities can be radically improved by sharing a land you love with someone you used to hate?

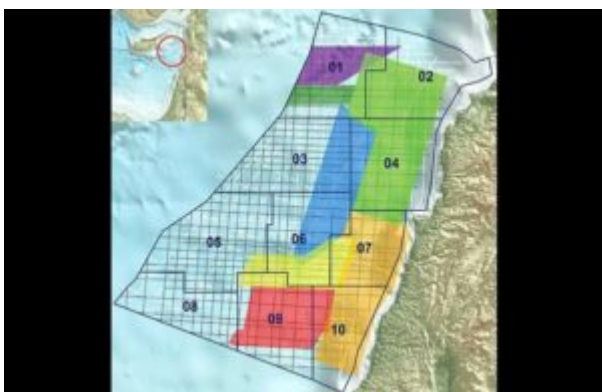
A lot depends on the principals, Akinci and Anastasiades, to make this happen. Many members of their respective constituencies subscribe to rival narratives, but most are tired of division, and while cobbling together a workable deal and selling it in two separate referenda will be demanding work, the payoff figures to be almost incalculable. But ultimately it is up to Turkey to allow the Cypriots to find a solution that suits them.

Add all of this up, and the momentum for peace has never been greater. The people of Cyprus need and deserve all the help they can get to make good on this potential, as do those of other countries and societies in need of reconciliation, as well as still others who desperately need affordable and reliable energy supplies. In short, whoever we are, we help ourselves by assisting the Cypriots. That's why Cyprus matters.

Roudi Baroudi is CEO of Energy and Environment Holding, an independent consultancy based in Doha, Qatar.

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## **Lebanon step closer to becoming energy producer**



BEIRUT: Six or seven years from now the Lebanese may be able to watch from their vantage point giant platforms extracting gas from the bottom of the sea, provided that everything goes according to plan.

This sense of optimism was deepened after the Cabinet Wednesday passed the long-awaited decrees defining the blocks and specifying conditions for production and exploration tenders and contracts.

Energy economist Roudi Baroudi said the passage of the two decrees was a step in the right direction.

"It's never too late to do well. What has been done now with the passing of the two decrees is a small part to move forward. All of the oil companies that pre-qualified are still interested in exploring gas off the Lebanese coast," Baroudi told The Daily Star.

He added that oil giants such as ExxonMobil are already operating 70 nautical miles from Lebanon, in reference to Cyprus.

It is still not clear if the Lebanese government and the Petroleum Administration will offer all of the 10 blocks off the coast for bidding.

The approval of the two decrees was seen as a crucial step after the previous cabinets shelved the issue of the gas exploration due to the deep political division in the country.

A source close to the Petroleum Administration said that newly appointed Energy and Water Minister Cezar Abi Khalil would hold a news conference Thursday to give further details about the prospect of gas exploration in the future.

"I think the minister and the Petroleum Administration will hold talks with the oil companies that won in the pre-qualification round to determine if they are still

interested," the source said.

Baroudi rejected the notion that the oil and gas glut in the world may discourage oil firms from taking part in the offshore gas licensing round in Lebanon.

"The world is still consuming double the size of gas they are producing. The prices are definitely going to go up if the consumption of gas globally remained high," he added.

Baroudi stressed that according to a recent study, fossil fuel would remain the dominant commodity for energy production for the next 30 to 40 years. "Alternative energy such as wind mill and solar energy will only represent 20 percent of the total electricity consumption for many years to come," he added.

The government will have a gargantuan task in persuading oil majors to participate in the next licensing round.

Former Energy Minister Gebran Bassil has said gas reserves off the Lebanese coast could potentially exceed 96 trillion cubic feet.

But companies and experts insist that it is too early to talk about the actual size of the gas reserves until drilling takes place.

However, Baroudi believes that there is strong possibility that the potential gas reserves off Lebanon's coast may be bigger than those of Cyprus or Israel.

The other sensitive issue facing the government is the so-called disputed zone between Lebanese and Israeli territorial waters.

Lebanon has suggested that the United Nations broker a deal to demarcate this zone but Israel has rejected such a move.

International companies such as Spectrum have conducted 3-D seismic surveys of most of the coast to determine the

potential size of hydrocarbon deposits.

These data were sold to the international oil companies.

A source close to the Petroleum Administration told The Daily Star just a fraction of the gas off the coast could run all of Lebanon's power plants 24 hours a day for 25 years.

"If all the power plants in Lebanon were switched to gas, which is clean and cheap energy, then [the country] can operate all these power plants with 0.2 trillion cubic foot per year under the current energy consumption," the source added.

He said Europe was an ideal export market once the country started pumping gas.

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## **US OFFICIALS VISIT EAST MED TO ASSIST WITH ITS EMERGENCE AS AN ENERGY POWER**

US Secretary of State John Kerry visited Lebanon last week where he met with Parliament Speaker Nabih Berri. Kerry announced to Berri that the US will be providing Lebanon with a financial aid to ease the burden created by the Syrian influx of refugees to Lebanon. Lebanon is providing sanctuary to over a million and a half Syrian refugees, a reality that is tremendously affecting Lebanon and causing authorities a major concern. The impact of the immigration is felt on a political, economic and security level. Kerry stressed on the importance of putting an end to the current political stalemate by electing a new President in the shortest delay.

President Michel Suleiman's six-year term ended last month. Lebanese politicians failed to agree on a successor since.

erri in turn expressed its hope that the U.S. will play a 'fair and balanced role' in mediating the Israeli-Lebanese dispute over maritime boundaries. Berri added that the U.S. could potentially benefit from such efforts as they could be involved in Lebanon's offshore hydrocarbon explorations. Lebanon's seabed is believed to contain substantial amounts of natural gas. Its first licensing round was postponed several times due to domestic political rivalries and is now scheduled to be opened in August 2014.

Lebanon and Israel both claim a triangular area of 850 square kilometers as their own. Direct negotiations between the two countries are inconceivable due to the fact that Lebanon and Israel are in a state of war and that Lebanon does not recognize Israel. The dispute gained importance after the discovery of substantial natural gas reserves in the Levant basin. Noble Energy discovered the Leviathan field and the Tamar field offshore Israel located respectively 130 and 80 kilometers west of Haifa with respective gross mean resources of 19 and 10 Tcf. Noble also made a successful encounter in Block 12 of Cyprus EEZ when it discovered the Aphrodite field, the third largest discovery in the deepwater Levantine Basin with a gross mean resources of 5 Tcf.

John Kerry's visit to Lebanon follows Joe Biden's visit to Cyprus. Biden met with the President of Cyprus Nicos Anastasiades to whom he stressed on the importance of Cyprus emerging as a net gas producer. The presence of the two senior U.S. officials in the Eastern Mediterranean Lebanon in the Eastern Mediterranean highlights the increasing importance of this region in the energy scene and Washington's pledge to help solve the various disaccords. The Russian annexation of Crimea reminded Europe of its pressing need to diversify its geographical sources of supply. The Eastern Mediterranean could play a role in strengthening Europe's energy security



and the U.S. are investing efforts in this direction.