

Constantinos Simitis

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Dear Mr Simitis,

It was a pleasure to meet you in Bahrain and discuss with you the 'over-excitement' about the region. I hope the expected benefits will materialise to various countries in the region.

I have written and commented extensively on the region. Please find attached three articles - one on Cyprus; one on East. Med, and one on Turkey. I also include a copy of the speech I delivered in Cyprus last month and a link to an interview I gave on Lebanon: <http://www.naturalgaseurope.com/lebanon-natural-gas-carole-nakhle>

Should you have further questions, please don't hesitate to contact me.

Kind regards

Carole

Dr Carole Nakhle

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From: Constantinos Simitis
Sent: 13 May 2013 10:09
To: Nakhle C Dr (Economics)
Subject:

Dear Mrs. Nakhle,

We met in Bahrain and discussed the "excitement" in the eastern Mediterranean and the promise of a new Golden Age. In your intervention you stressed, and I agree, that a Golden Age cannot be found around the corner. The situation has changed and moreover a lot of work is necessary if we want to exploit the oil. This exactly is the point I want to underline in a discussion in Greece. Could you send me, please, your report and related material? I thank you for your so friendly readiness to help me.

With best regards,
C. Simitis



Energy: Cyprus gas - a lifeline to the economy

Cyprus' discovery of the Aphrodite gas field in the Eastern Mediterranean is seen as potentially providing a lifeline for the Cypriot economy. Contracts signed with international oil companies could help the island turn the page on its vulnerable indebted economy and its reliance on imported energy supplies. This report looks at the reality of these claims and considers the friction it is causing with Turkey which objects to Cyprus' exploration and drilling programme.



Dr Carole
Nakhle

CYPRUS' discovery of the Aphrodite gas field has been described as providing a lifeline for the Cypriot economy.

Contracts recently signed with international oil companies could help Cyprus to turn the page on its vulnerable indebted economy and energy supplies' days.

The Cypriots should feel lucky. The Aphrodite field, the country's first gas discovery - made in 2011 - could not be more timely.

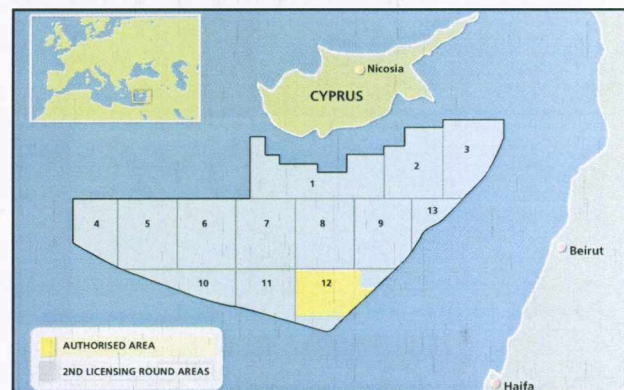
In June 2012, Cyprus became the fifth Euro-area member (after Greece, Ireland, Italy and Spain), to request international financial aid. The rescue package is equivalent to the country's GDP of 17 billion euros.

As Europe struggles to handle such a request, the bailout package has been delayed until at least the end of March 2013.

Island's image

Meanwhile, Cyprus has signed several contracts with international oil and gas investors. Such a major development can significantly improve the island's image as a credible borrower and could convince Europe's finance ministers to act less reluctantly and release the rescue funds.

Cyprus's new right-wing president, Nicos Anastasiades, stated that revenue from future



Second licensing round for hydrocarbon exploration blocks offshore Cyprus

sales of natural gas deposits should be used to reduce debt, while the rest would go into national growth initiatives. Future oil and gas production in this traditionally resource-poor country will reduce fuel import bills substantially.

The development of the oil and gas sector will also bring large capital investment across the supply chain, creating many jobs and generating both fiscal and export revenues.

Cyprus has a simple primary energy mix, which is dominated by oil and its products – an unusual situation for a European Union (EU) country. Given its geographical location, Cyprus is disconnected from the European energy

Cyprus Oil & Gas: A New Lifeline?

The discovery of the Aphrodite gas field is seen as potentially providing a lifeline for the Cypriot economy.

Contracts signed with international oil companies could help Cyprus turn the page on its vulnerable indebted economy and its reliance on imported energy supplies.

In fact, Cyprus has a very high dependence on energy imports, which cause the uneasy feeling of insecurity when it comes to energy supplies. With energy import dependence of nearly 93%, the reliance of the Cypriot economy on energy imports is the third highest within the EU, behind Malta (100 per cent) and Luxembourg (97 per cent).

In a high oil-price environment, as is the case today, the burden on the Cypriot economy is quite painful. In 2010, Cyprus faced an energy imports bill of 1.27 billion euros - the equivalent of almost 20% of total imports cost or 6% of GDP.

Therefore, any potential oil and even more gas production in this traditionally resource poor country will not only reduce the import bills substantially, but will also bring large capital investment across the supply chain, creating many jobs and generating both fiscal and export revenues.

That is what we are all hoping for.

But just like with any lifeline, the question is how robust that lifeline is. The Aphrodite field is yet to be appraised and its reserves proven. It seems, however, that the Russians did not think there was much value in it!

Balance

Of course, the future of any oil and gas province depends on achieving a balance between on the one hand what the government - the owner of the resource want, and on the other what the investors - the provider of capital and technology, want.

At the most general level, the objectives of these two key stakeholders are closely aligned in that both parties wish to see a country's indigenous hydrocarbon potential exploited to the optimal economic extent. Views may differ, however, on what is optimal, with private sector companies having higher economic hurdle rates to clear before committing to investment.

At its simplest, governments most of all want a 'fair share' of the economic rent from the exploitation of the nation's oil and gas resources, hand in hand with commitments from investors to invest in exploration and development of the indigenous resource.

However, it is rarely that simple. In fact, there is no clear definition of what represents a 'fair share' and it is seldom that both government and the industry agree for long as to whether a fiscal regime for instance is fair or not.

When I looked at what Cyprus has offered to entice international investors, several things caught my eyes.

Contractual arrangement

Apart from Malta, Cyprus the only EU countries that offers a Production Sharing Agreement as the contractual framework for its upstream oil and gas sector.

Under this regime, the ownership of oil/gas production remains within the state. But as the international company is paid in barrels for the service it provides, it is entitled to ownership of that share of production. In this sense, the reserves that can be booked under PSA tend to be smaller compared to a concessionary regime. This figure shrinks as oil/gas prices increase.

We usually find PSAs in developing countries where the sentiment about state ownership of the resource is pronounced and is rather an emotional subject. We also find them in countries where the corporate tax regime is unsophisticated (in other words hardly anyone pays any) and difficult to police, and as such probably it would not have reliably raised enough revenue. In this case, PSA is therefore a more secure option.

Apart from these observations about the choice of the regime, from an economics' perspective, of course, the difference between fiscal regimes is not that relevant as the same economic outcome can be achieved by playing around with various fiscal and non-fiscal instruments. The government take can be made equivalent for the different types of regime, for a given oil or gas price.

However, the regimes tend to behave differently in response to changing prices. A neutral concessionary regime typically has a static level of government take whether prices rise or fall whereas a PSC regime with progressive features is most likely to yield a rise in government take with higher prices and a lower take with lower prices, hence the importance

of pricing for governments who opt for this regime. I will elaborate more on that, but first let me say few words about another interesting feature of what the Cypriots have offered.

Almost all the fiscal (and non-fiscal) terms are biddable or negotiable. While I can understand that the rationale behind this approach is to maximise flexibility, but I also believe that the advantages of this system are often exaggerated.

Such a system makes it difficult to compare the terms of various contracts; discriminates among investors by creating various fiscal structures and therefore increases the administrative burden.

In fact, international organisations advocate that one way to achieve transparency and objectivity is by the standardization of the terms of exploration and production. They also recommend that the biddable items remain limited (say maximum to two) – and these would normally include the work programme and signature bonus.

If cost recovery or profit sharing is used as a biddable item, it is recommended that the government should pre-set by law the range within which bids can be placed. The danger is that companies offer very high rates just to win the bid and later negotiate a lower fiscal burden.

It is also unclear what form state participation, if any, will take, and for Domestic Market Obligations, the pricing decision is crucial. When domestic prices are set below the market price, this will reduce the revenues that companies would otherwise have secured if the product was sold at international prices. It also adds to the fiscal burden.

Then there is the issue of the income tax paid on behalf which is the stabilisation assurance by excellence. While there is no problem with such a provision, one has to consider the economic situation of Cyprus: if there is an intention to increase the overall corporate tax rate, the oil companies will be more or less shielded as they will continue to share the same rate with the host government, something that can cause wider discontent.

I wonder whether because of the desire to achieve simplicity and because of administrative convenience in the short term, the Government could have exposed itself to additional complexities and to increasing calls for re-negotiations and for imposing new fiscal terms, especially as more discoveries come on stream.

Price exposure

This takes me to my more macro observation that rather relates to market conditions. As I said earlier, under a PSA, a Government has a more direct exposure to changing market conditions, namely to changes in prices.

Furthermore, because of the differences (economic and technical) between oil and gas, with gas, one has to think in parallel about both the upstream and the downstream.

Gas monetisation

For any gas reserves holder, prioritization between the possible gas markets and uses has to be decided in order to obtain the highest possible added value for both the country and its investors.

Domestically:

Cyprus has the 2nd least diversified primary energy mix in the EU, behind Malta. For decades, it has been generating its electricity by burning fuel oil, which is environmentally damaging and expensive – a substantial waste of money especially in a high oil price environment. In this sense, there is the attraction of developing the domestic gas market.

One additional notable difference compared to many EU countries is the absence of natural gas within the energy mix. This is likely to change when the island starts its own gas production. The use of natural gas will create a more balanced and diversified energy mix and will therefore enhance the country's security of supply.

But, if the numbers that have been quoted in the media and this morning are correct, then the domestic market is too small, and this is where Cyprus has to look elsewhere to sell its gas.

Export Market

We heard a lot about the export routes and options but I'd like to go back to two basic yet important questions: Firstly, will Cyprus export its gas by pipelines or LNG? Secondly, under what pricing mechanism?

Traditionally, this used to be a rather simple choice as both systems were oil price-indexed and sold under long term contracts hence for the exporter it was a rather guaranteed and safe option. However, this simple difference between the two systems is now breaking up. The changes are still concentrated in LNG and in Europe but cracks elsewhere in the system have started to appear.

An increasing fraction of LNG that is sold in Europe is under spot prices, which, from a buyer's perspective, give a greater flexibility. While for the pipeline gas, which is traditionally sold under long-term oil price indexed contracts in Europe, this pricing mechanism is increasingly eroding.

In fact for pipeline gas, it seems that oil indexation is there on paper but not in practice. Take for instance the Russian gas that comes to Germany. It is oil indexed. If you calculate the price according to the oil indexed formula and compare it with the price that is actually paid, you can see that the latter is in fact lower.

Furthermore, as drastic changes shape the oil market, it is not surprising to see that the oil indexed price is coming under pressure.

Of course, you may say that Asia currently looks more stable as there is no gas-on-gas competition – no pipelines although this might be changing if the Russians complete their pipeline to China. Furthermore, while demand for gas is growing constantly, LNG supply is lumpy. Currently, there is no threat to that stability in Asia, but look a few years ahead and you can see massive Australian and US supplies coming on stream. The European experience could well be replicated in Asia.

Earlier in February, Japan's TEPCO (Tokyo Electric Power) announced it would buy LNG from the US. What is interesting is the shift in pricing strategy, as Tepco said it would for the first time link the price of gas in its contract to the spot US Henry Hub benchmark, rather than a formula linked to the price of oil.

If the Cyprus selects to sell its gas under long term oil indexed, the question is how to do that. Finding buyers for this type of contracts is becoming increasingly more difficult, especially in Europe. Even if oil indexation is nailed down, it will not be safe.

The Cypriots will also face the difficulty to link to existing pipelines, given existing players, and the complexity and cost of building new pipelines (*perhaps from Greece to Italy*).

To connect to the existing network system in Europe, Cyprus will have to face up to new supplies coming through the Shah Deniz and South Stream and to Turkey's plans to become a pipeline hub (*this can further strengthen the case why the Turks have no interest in helping the Cypriots to enter the European pipeline system*).

Even Greece is on the Russian system. Why would the Russians allow Cypriot gas to compete with theirs? *After all, the Russians are interested in selling their gas not upstream as they are not running out of gas.*

As such, the most viable export option seems to be by LNG. But here too, if LNG is the choice, will it be under oil indexed contracts or will the Cypriots be happy (or in fact forced) to do it under spot prices? As I said earlier, it will be difficult to sell in Europe at oil indexed prices. If gas is sold on the spot market, the question is: will it be competitive enough? Around 20% of additional gas coming on stream – from Australia in 2016, and the US will start exporting LNG in 2017 – is not contracted so will compete for spot prices.

Unpredictable world

Ladies and Gentlemen, this is the 'new' world that Cyprus will be entering, if things go according to plans. It used to be a predictable world. In those good old days, the price would be the same, oil-indexed, safe, guaranteed and stable for both LNG and pipeline. Now for LNG this doesn't hold anymore in Europe, and on a **second** look even European pipelines are not safe. On a **third** look, globally, another wave of LNG is coming just at a time when Cypriot gas is coming on stream. Cyprus will have to compare the benefits of using its gas at home with exporting it at a competitive price. It cannot simply rely on selling it at a fixed price indefinitely.

JANUARY 12, 2012

Energy: Eastern Mediterranean – an emerging oil and gas province

Dr. Garole Nakhe

GIS Expert

[http://www.geopolitical-](http://www.geopolitical-intel.com/en/article/energy_eastern_mediterranean_an_emerging_oil_and_gas_province)

[intel.com/en/article/energy_eastern_mediterranean_an_emerging_oil_and_gas_province](http://www.geopolitical-intel.com/en/article/energy_eastern_mediterranean_an_emerging_oil_and_gas_province)

In the world of oil and gas, the Middle East occupies centre stage. However, with the two biggest gas discoveries of the last decade made off Israel's shores, the Middle East oil and gas borderlines could be expanded west, beyond Saudi Arabia, to include the Levant region. Can the waters shared between Israel, Cyprus, Syria and Lebanon, become the next North Sea despite existing political and economic rivalries? What would that mean to the countries involved and to Europe?



Map showing the prospective gas fields in the Eastern Mediterranean

ISRAEL made its first offshore gas discovery in 1999. Ten years later, a bigger field, Tamar, with estimated gas reserves of 8.7 trillion cubic feet (tcf), was discovered.

Then in 2010, another discovery, the Leviathan gas field, almost twice the size of Tamar, was made.

Levant basin

These discoveries transformed the potential of not only Israel's waters but also of the whole Levant basin, which encompasses approximately 83,000 sq km of the eastern-most portion of the Mediterranean area, stretching from Israel to Syria, and including Lebanon and Cyprus.

The US Geological Survey (USGS) estimates that the province could be sitting on 1.7 billion barrels (bnbl) and 122 tcf of recoverable oil and gas respectively.

To date, only the gas potential of the region has been proven, although according to Noble Energy, the US company which made the gas discoveries off Israel's shores, sizeable oil prospects beneath Leviathan have been identified, but with limited probability of success.

With the world's proven oil and gas reserves estimated at 1.3 trillion barrels and 6,608.9 tcf respectively, the Levant basin potential looks modest. It can, however, transform the economic, energy and political realities of the region, with wider implications for Europe and elsewhere.

In Israel, gas production from the Tamar field is projected to start in 2013. Prior to that, Israel risks facing a short-term supply deficit. Production from the Mari-B field, currently Israel's sole domestic source of natural gas, is expected to decline sharply in late 2013.

Israel also gets 40 per cent of its gas supplies from Egypt through the Eastern Mediterranean Gas pipeline.

Regime change

Following the regime change in Egypt, however, attacks on the pipeline have become more frequent, disrupting imports and threatening Israel's security of gas supplies. Egypt is also seeking to renegotiate the terms of the existing gas deal, following complaints that the agreement signed under the Mubarak regime favoured Israel by fixing prices below market rates.

Meanwhile, domestic demand for gas in Israel is expected to more than double from 177 billion cubic feet (bcf) in 2010 to 450 bcf in 2015, as the country switches from coal to gas in power generation.

In order to overcome any potential gas shortage prior to the start up of Tamar, Israel is planning to construct a Liquefied Natural Gas (LNG) terminal to receive gas to meet

domestic market needs. Once in production, Tamar is expected to satisfy the bulk of domestic demand for the next 20-25 years.

In Cyprus, the first offshore licensing round took place in 2007. To date no commercial discoveries of oil or gas have been made but in November 2011, Noble Energy announced the discovery of gas in its Aphrodite well in Cyprus's exclusive economic zone.

The country is almost totally dependent on oil imports for its energy mix, with a small but growing contribution from renewable sources of energy. Cyprus has started to prepare for a potential oil and gas bonanza; it is studying plans to build its gas infrastructure including gas pipelines and an LNG terminal.

Lebanon reserves

Lebanon also has no proven oil or gas reserves. Onshore exploration was attempted back in the 1940s, without success, by the then Iraqi Petroleum Company. After the end of the civil war in the early 1990s, seismic surveys were carried out, but the political uncertainties and corruption in the country held back progress towards a licencing round.

Lebanon introduced a new hydrocarbon law in 2010. The country is planning its first offshore bidding round in 2012, largely expedited by Israel's discoveries.

Production from future gas discoveries from offshore Lebanon will be used mainly to meet the country's growing domestic demand for electricity. This will reduce the use of heavy oil fuel for power generation and alleviate the imports bill. Furthermore, revenues generated from potential oil and gas exports will contribute to reducing the country's large debt of US\$53.4 billion (2011).

Syria production

Syria is a small oil producer, where production peaked in 1995 and has declined to around 375,000 barrels per day. Although natural gas production is expected to rise, it will be insufficient to meet expected demand, and if no new discoveries are made, it will peak in 2014. Syria is developing plans to import more natural gas to meet its growing domestic demand. The country also aims to become a strategic hub for gas transportation. Any offshore gas discoveries in its waters can alleviate domestic market dependence on imports and increases the country's export potential.

Europe's gain

Europe, the world's second largest market for gas after North America, could also gain from the development of the Levant oil and gas resources. It is argued that after meeting domestic market needs in the respective Eastern Mediterranean countries, the remaining amount of 388 tcf could meet the EU's increasing needs by 2020 for 35 years.

A sub-sea pipeline that brings Israeli and Cypriot gas to Greece and on to markets in Italy and Germany is being considered.

As the Tamar field can fulfil Israel's domestic gas requirements for the foreseeable future, gas production from other fields will be exported, either by pipelines or LNG, with Europe being the main beneficiary given the proximity of the European market and the conflict between the neighbouring Eastern Mediterranean countries which restricts trade among them.

Greece's debt

It is also argued that Greece could eradicate its debt by exploiting its Mediterranean hydrocarbons. A pipeline to Greece, however, would be too costly and technically challenging, given the length of the route (more than 1,000 km) and the water depth.

Most of the exploration and production activity will be in ultra-deep water which increases both cost and technical complexities. LNG seems to be more likely but the challenge is also cost as well as securing long-term buyers.

Although demand for gas is expected to increase, a combination of the shale gas revolution and new LNG supplies coming on stream has created a well-supplied market and toughened competition.

Another North Sea

Many compare the potential of the Levant region to 'another North Sea'. However, in the North Sea, the UK and Norway peacefully and rapidly agreed on the delineation of their maritime borders and have since co-operated in the development of their shared oil and gas province. But the picture in the Eastern Mediterranean is dramatically different.

The Levant basin includes the exclusive economic zones (EEZ) of Israel, Cyprus, Syria and Lebanon. The United Nations Convention on the Law of the Sea allows a country to extend

an exclusive economic zone (EEZ) 200 nautical miles from its coasts. In its EEZ, a state has special rights over the exploration and use of marine resources including energy.

Israel signed a maritime agreement with Cyprus in 2010, whereby both the Leviathan and Tamar fields fall within Israel's EEZ.

A maritime agreement was previously reached between Lebanon and Cyprus in 2007 but has yet to be ratified by the Lebanese government.

Official complaint

Lebanon made an official complaint to the UN that the boundaries agreed by Cyprus and Israel infringe its offshore territory.

Israel and Lebanon do not have an agreed maritime border and are unlikely to reach an agreement any time soon given the fact that the two countries are still officially at war.

Any discoveries near the disputed border can create conflict over the ownership of resources and increase regional tensions. Lebanon claims that up to a third of Leviathan field extends into its territory.

The leader of the Lebanese military group, Hezbollah, currently in government, warned the Israelis 'against extending their hand to that region' and added that 'whoever might attack the future oil and gas facilities in the Lebanese regional waters will have their facilities attacked'.

From their side, the Israeli government has committed to provide and fund military defence of Israel's gas and oil facilities.

Turkey-Cyprus dispute

There is also the ongoing dispute between Turkey and Cyprus. The state-run Turkish Petroleum Corporation got the green light from the government in Northern Cyprus to start exploration north of the island.

Turkey claims that the agreement between Cyprus and Israel violates the rights of Northern Cyprus, and has threatened to use force to protect its neighbour's privileges.

The boundaries between Lebanon and Syria are under negotiation. Occupied by its internal problems, Syria's reaction to the developments in the area has been limited. Egypt, however, warned it would closely monitor how the boundaries are drawn to ensure they do not encroach on Egypt's EEZ.

While defining maritime borders is not a prerequisite for holding a licencing round, such unresolved issues cause significant uncertainties and distort investment decision. No company wants to acquire a block, which can be revoked one day as a new borderline is drawn.

Delicate political situation

Furthermore, because of the delicate political situation between Arab countries and Israel, international oil companies seem to have shied away from Israel as they fear putting their investments, in the more rewarding Arab nations, at risk.

The future of the Eastern Mediterranean oil and gas potential mainly depends on whether the countries involved can overcome their political adversaries and focus on their mutual economic gains.

Eastern Mediterranean facts

- Natural gas provided 33% of Israel's electricity produced in 2009. The share is expected to increase to 50 per cent by 2013
- The development cost of the Tamar field is estimated to be US\$4.0 billion (bn) compared to US\$14 bn for Leviathan
- Israel has an agreement with Eastern Mediterranean Gas, whereby Egypt exports 200 mcf per day (increased from 165 mcf) until 2028
- Cyprus has been divided into two regions since a military coup in 1974 - the Republic of Cyprus in the south and the Turkish Republic of North Cyprus (TRNC). Turkey is the only country to recognise the TRNC as a state
- All of Lebanon's maritime boundaries remain undefined
- The Arab Gas Pipeline exports Egyptian gas to Jordan, Syria and Lebanon with a separate line to Israel

Energy: Turkey's energy ambitions could affect supply and price in Europe

Turkey is expanding its web of oil and gas pipelines and suppliers. Given its geostrategic position - at the intersection of important energy transfer routes - improved connections with producer countries and consumer markets will enhance Turkey's supply security, increase its geopolitical importance, as well as its earnings from transit fees. It will also have wider implications on Europe.



Dr Carole
Nakhle

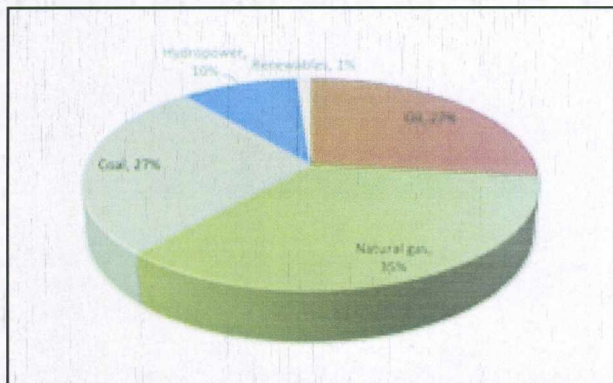
TURKEY'S expanding population and rapid economic growth have contributed to higher energy consumption. This has prompted the country to look for new sources of supply while aiming to become an energy transit hub - a move which could have a significant influence on energy prices in Europe and Central Asia. In 2011, Turkey's energy demand grew at a rate of 9.2 per cent, the third fastest in the world behind Qatar (14.1 per cent) and Peru (10.2 per cent).

Dominated

Turkey's energy mix has been dominated by fossil fuels, which provide 89 per cent of the country's primary energy. The share of natural gas has increased rapidly, from 17 per cent in 2000 to 35 per cent in 2012.

Since 1950, Turkey's dependence on energy imports has risen substantially. In 2007, nearly 82 per cent of primary energy demand in Turkey was met by imports, compared with less than 24 per cent in 1968.

Currently, Turkey imports more than 90 per cent of oil, mainly from Russia (41 per cent) and Iran (23 per cent) and relies almost exclusively on imports for natural gas, with Russia being the main supplier (52 per cent).



Turkey's energy mix, 2011 (Source: BP Statistical Review of World Energy, 2012)

Turkey fears its reliance on limited sources of oil and gas supplies increases its vulnerability to external shocks. It was former British Prime Minister Winston Churchill who advocated diversity as the key to security of energy supply. Almost a century later, his formula is still compelling.

In its Strategic Plan for 2010-2014, the Ministry of Energy and Natural Resources ranked energy security as its primary target.

New strategy

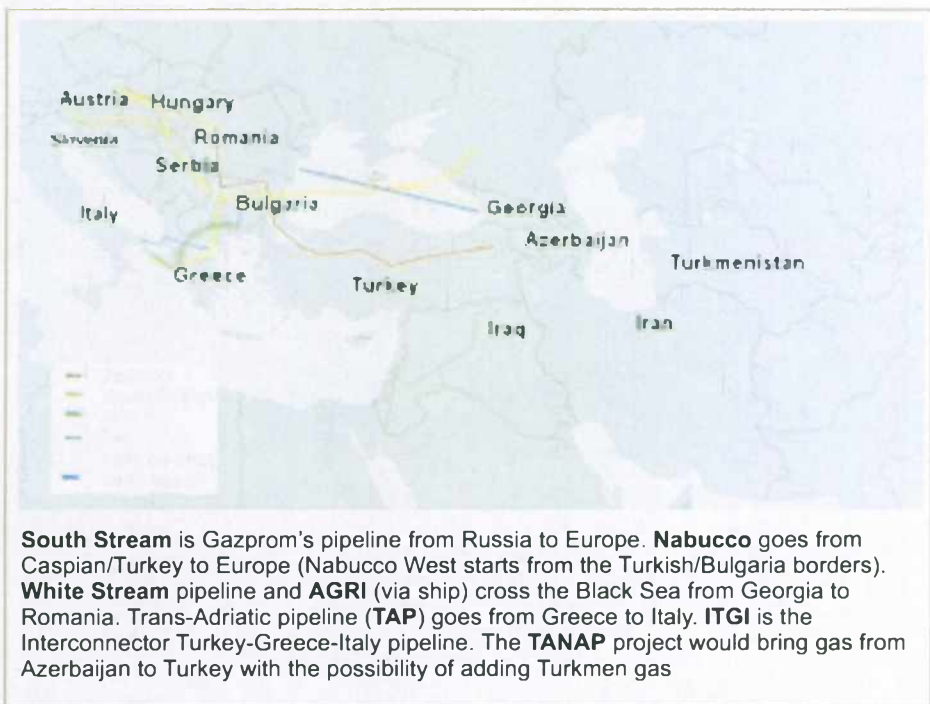
The Turkish Government has embarked on a new strategy to diversify its sources of oil and gas supplies and expand its energy and pipeline

infrastructure. In 2012, several deals were signed and others initiated. In June, Turkish and Azeri officials finalised a US\$7 billion deal to build the Trans-Anatolian natural gas pipeline (TANAP) that will carry gas from Azerbaijan's Shah Deniz field to Turkey. The initial annual capacity of the TANAP will be 16 billion cubic metres (bcm), of which 6 bcm will be supplied to Turkey, with the rest transported to Europe. TANAP could eventually carry as much as 31 bcm,

nearly equal to the planned capacity of the Nabucco gas pipeline – the 'gas bridge' carrying natural gas from the Caspian Sea and Iraq through Turkey to Austria. There are talks of expanding the TANAP pipeline capacity to 60 bcm to meet increasing demand for supplies. In September 2012, representatives from Turkey, Turkmenistan, Azerbaijan and the European Union met in Turkmenistan's capital, Ashgabat. At this meeting, Turkey advocated adding Turkmenistan to the TANAP project. Turkmenistan, the holder of world's fourth largest natural gas reserves, can offer 40 bcm per year for delivery to Europe.

Offset costs

Caspian energy sources are particularly attractive to Turkey; not only are they close but fees levied on the transit of natural gas across its territory offer Turkey an opportunity to offset costs for part of its energy import bill. A recent visit to Central Asia by the Turkish Prime Minister was intended to reinforce the energy cooperation Turkey is trying to establish with the region. Turkey's energy outreach is not limited to Central Asia. Turkey's Prime Minister Recep Tayyip Erdogan also discussed potential areas of cooperation with Ukraine, including electricity transportation, the construction of underground



South Stream is Gazprom's pipeline from Russia to Europe. **Nabucco** goes from Caspian/Turkey to Europe (Nabucco West starts from the Turkish/Bulgaria borders). **White Stream** pipeline and **AGRI** (via ship) cross the Black Sea from Georgia to Romania. Trans-Adriatic pipeline (**TAP**) goes from Greece to Italy. **ITGI** is the Interconnector Turkey-Greece-Italy pipeline. The **TANAP** project would bring gas from Azerbaijan to Turkey with the possibility of adding Turkmen gas

gas storage facilities in Turkey, the joint production of hydrocarbons, and the building of a liquefied natural gas terminal in Turkey. Identifying new sources of supplies allows Turkey to work toward realising a second strategic aim - that is, to become an energy transit hub.

The country is on the crossroads of the so-called Fourth or Southern gas corridor connecting the Caspian and the Middle East to Europe (the other three corridors connect the European Union to Russia, Norway and North Africa). The Southern gas corridor - an area identified by the European Commission (EC) for several pipeline projects - was described by the commission as 'one of the EU's highest energy security priorities'. The EU aims to obtain 60 to 120 bcm per year via this corridor.

Smaller projects

Several pipeline options are being considered. Almost all pass through Turkey. Initially the EU's flagship project was Nabucco, designed to supply gas to Europe from the Caucasus and the Middle East via Turkey, Bulgaria, Romania and Austria. The project, however, is being replaced by smaller pipeline projects:

- Nabucco West (a shorter version of Nabucco, which would begin at the Bulgarian-Turkish

border instead of the Azeri border, now that the TANAP deal is in place)

- South East Europe Pipeline (SEEP) - via Bulgaria and Romania to Hungary
- The Trans-Adriatic Pipeline (TAP) - via Greece to Italy

Turkey also is a major transit country for oil: Russian and Caspian oil is transported by tanker via the Bosphorus Strait; a terminal at Ceyhan on Turkey's south eastern Mediterranean coast allows the country to export oil from northern Iraq and Azerbaijan. Turkey anticipates that these transport links can be expanded to carry around seven per cent of global oil supplies.

Potential problems

There are several problems associated with Turkey's emerging role as a global player in oil and gas transport.

While many acknowledge Turkey as an important transit country, it sees itself becoming a 'hub' – a market place and not just a simple transit corridor.

As a transit country, Turkey would get a fee for the transportation of energy from producer countries to consumer markets, without acquiring entitlement to that oil or gas.

However, as an energy hub, Turkey would buy oil and gas arriving within its borders, consume what it needed, and export the balance at a profit to consumers.

This would give Turkey substantial influence over oil and gas resources landing in its territories as well as over their transit terms and conditions. Some would argue that the setting of export prices is incompatible with the role of a transit country as defined in the Energy Charter Treaty, which is ratified by Turkey.

If Turkey is aiming to access gas from Turkmenistan directly, options are limited.

Although Iran has offered to transport Turkmen gas through its territories, given current political circumstances this option seems to be inconceivable.

Political obstacles

The only way to get Turkmen gas to Europe, while bypassing Russia, would be across the

Turkey energy

- Turkey's energy demand is expected to grow by 6% annually until 2020
- Turkey is the third largest importer of Russian coal following Ukraine and Great Britain
- Turkey plans to construct 23 nuclear power plants by 2023
- In September 2012, Turkey's national oil and gas company TPAO together with Shell started exploration operations for shale gas deposits
- In December 2011, Turkey gave Russia permission to build the South Stream pipeline through its territory. The pipeline would supply Europe with 63 bcm yearly from 2015
- The pipeline would run under the Black Sea to Bulgaria, with one branch going to Greece and Italy, and another to Romania, Serbia, Hungary, Slovenia and Austria
- Turkey is located closely to approximately 73 per cent of world's proven oil and 72 per cent of the world's proven gas reserves, namely in Russia, the Caspian and the Middle East

Caspian Sea. However, the unresolved dispute over the ownership of the Caspian between the littoral states undermines this option.

As a Caspian country, Iran has posed major political obstacles to an international agreement on demarcation of the Caspian Sea, and is likely to continue doing so for some time to come. Some have questioned the feasibility of various pipelines, particularly the capacity of Azerbaijan to cater for additional demands.

Both Nabucco West and TAP are bidding for the same gas from the Shah Deniz II field, expected to come on stream in 2017.

Shah Deniz partners are expected to decide next year which pipeline they will choose for gas exports.

Finally, a controversial deal between Turkey and Kurdistan's regional government has upset the central government of Iraq, which claims that any oil deliveries from Kurdistan across the border into Turkey would be as illegal.

This, however, might be a temporary stance –

until a deal is reached between Kurdistan and Iraq. Back in the 1990s, American diplomats distributed a car sticker around Central Asia, with the slogan 'Happiness is multiple pipelines'. The slogan extolled the principle of diversification of pipelines which some saw as the best way of distributing the risks of disruptions to oil and gas supplies. In this sense, Turkey is on the path to happiness,

‘ In 2011, Turkey's energy demand grew at a rate of 9.2%, the third fastest in the world behind Qatar (14.1%) and Peru (10.2%)

as long as it finds sufficient supplies. It is supporting pipeline projects that diversify its sources of supply. It is also positioning itself as the main transit country for hydrocarbon flows into the EU, allowing the region to reduce its dependence on Russian gas. These projects will enhance Turkey's role as a regional power. It is easy to see that Turkey's energy and foreign policies are interdependent.