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EU-GCC Co-operation
in the Field of Energy

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EU-GCC Co-operation in the Field of Energy

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Oil Security and Relations between the Gulf Countries and the EU

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1 Energy security: global approaches and policy issues

Security Concepts

To a large extent, energy security concerns oil and gas, and refers to the economic and geopolitical dimensions of the problem. Nuclear energy security is a very different issue, and concerns technical and socio-political aspects. There is no particular issue with coal security.

Security may be considered in a physical perspective, as the elimination or the reasonably efficient control of the risk of total or partial disruption in the short-term supply of imported oil and/or gas. (In a long run perspective, it would mean the capacity to adjust demand, in quantity and type of fuels, to available or expected supplies). The main risks of physical disruption (excluding a politically induced export embargo by major exporters) arise from the vulnerability of production installations, of maritime waterways, of tankers and terminals, of pipelines.

Security may be considered from an economic point of view by consumers as the prevention of the risk of "price shocks" viewed as the brutal increase of the price of crude oil, (the prevention of counter shocks, the brutal and massive fall in crude prices, has to be taken into consideration as a risk for exporting countries, for which security means a floor to low prices).

In a more exacting approach, security may be considered as ensuring a situation of price trends linked to the evolution of identified fundamental drivers for change, making energy policies possible that are based upon rational expectations of supply and demand in business as usual conditions. This would allow to optimise the utilisation of energy and limit the consequences of dependency for importing nations, and of price squeezes for exporters.

Short-term security and long-term security require different analysis. For examples of short-term determinants of security, the International Energy Agency indicates that the emergency response mechanism put in place by its International Emergency Programme is hampered by low fuel stocks, the reduced ability to switch fuels and limited capacity to increase domestic oil production to compensate for any serious diminution in imports. Those are good

examples of security as the ability to provide short-term solutions to short-term disruptions. Long-term security problems are of a very different nature and call for different approaches. There are negative consequences of the prolonged period of low oil prices between 1992 and March 1999, which has encouraged benign neglect and led to complacency on the part of policy makers and the public about the need to incorporate long-term security concerns into near-term foreign policy.

Whose security? It generally refers to the consumers' situation: the security question arises because of the vulnerability induced by the dependency on imports to satisfy basic energy needs, especially oil and natural gas, but the suppliers' side of the security issue should not be ignored: expected income and returns on investment by producers may suffer from a drop in demand or in prices.

Responses to Security Needs

The menace of a worldwide physical shortage of oil, before the middle of the century is quite unrealistic and disregarded even by the most pessimistic supporters of the "geological scarcity" school. The case for natural gas is still more comforting. The security question therefore does not concern a global quantitative situation of durable imbalance between world supply and demand of hydrocarbons. There are however geopolitical, regional and economic aspects of the security issue that deserve a long-term policy approach. Dependency risks could be mitigated on the supply side by diversifying the fuels in the energy mix and the import sources of those fuels and by sound emergency preparedness; on the demand side, demand management is of paramount importance, especially as it requires a long-term vision.

Geographical diversification of the sources of energy supply may be an instrument for reducing the risks of vulnerability arising from the concentration of imports on a handful of suppliers. The issue, however, should not be examined independently of considerations on the advantages and disadvantages of proximity. Proximity may be looked at as an asset in a security policy, allowing tight economic (and political) relations within a broadly-based co-operation policy. An example is the Euro-Mediterranean Free Trade Area proposed in Barcelona in 1995. Geographical proximity is the foundation of a proposed partnership, where the reciprocity of interests should be the source of mutual trust and co-operation. At the same time, proximity may be considered as a liability and a potential menace linked to increased exchanges with unreliable partners: too many "neighbourly conflicts", potential black mail, and the genuine or invented "dependence risk".

Diversification of the physical sources of energy is a complementary response to security needs. In the case of the increasing share of natural gas, a dependency risk may be feared, all the more so, as compared to oil, that transportation costs create rather separate regional market, where the play of the “proximity paradox” is much more important than in the case of the “great pool” of world oil

Nuclear and renewable energies are part of the picture, but most likely will not challenge the dominant role of hydrocarbon fuels and their security policy dimension, in the next two or three decades.

Diversification of supply routes is a significant part of the response to insecurity, as transit implies increased vulnerability. Two factors are of particular importance: extended supply lines and increased reliance on large capacity crude oil and natural gas pipelines. The interests of the transit states with respect to transit fees are however often in conflict with those of both oil exporters or importers, and should be given proper consideration before they can lead to a destabilising open conflict.

Contractual agreements on the conditions of energy supply (volume and prices) as part of a broadly based co-operation are a promising basis for the quest of a new relationship between the EU and the GCC.

Energy demand management raises, among many others, the question of domestic and international conditions of competitiveness in the industrial economies, linked in particular to taxation, and of the potential conflict between environmental constraints and the economics of energy supply.

The Costs of Improving Security

In many cases, security should be treated as a public good, but, because the world oil system is “one great pool”, it is an international public good, and the question of who should bear the extra costs is a very complex one, as there are numerous externalities to take into consideration. In the foreground is the evaluation of the real cost of disruptions or price shocks for the various parties concerned, which may determine the security maximising approach they will choose. Many participants are concerned: producing countries, importing countries, private enterprises and national oil companies, regional political entities, etc. The decision to take costly security oriented measures, and the sharing of those costs between direct and indirect beneficiaries, is essential and much more complex than the mere issue of private costs or public costs in a domestic economy. Among many crucial issues of extra costs which need to be covered, and eventually shared, one can mention: the costs of creating and maintaining available capacity ahead of demand, the costs of multiple transit routes, the costs of network interconnections justified, partially at least, by

security considerations, the costs of stockpiling, the cost of flexibility achieved by the use of multi-fuel energy systems etc. Those questions cannot be treated and resolved by market forces alone. They should occupy a significant place in the agenda of any long-term contractual relationship aiming at improved security.

2 The World Oil and Gas Markets and Security-related Regional Interests and Policies

The crucial question is: how to deal regionally or nationally with security issues concerning a product the market of which is a world market? In a globalised market, where a disruption anywhere means a price hike everywhere, and where oil is fungible, the notion of energy security may require rethinking. Conflicting energy security policies, based upon divergent interests and methods, can be implemented by regional groups or powerful countries, and lead to counterproductive global results.

Much attention should be paid to the long-term energy security policy of the US and its relations with the GCC countries. US intervention on the geopolitical parameters of Middle East oil does not necessarily fit European objectives and needs. For the coming years, US dependency on oil imports from the Gulf will continue to decline, as it can increasingly rely on oil supplies from the Western Hemisphere and Atlantic basin; but the inevitable rise of imports from the Middle East in the longer term, the global world oil market implications of any change in the Gulf, the huge financial and economic stakes for American companies, give the Middle East a major strategic dimension in US policy. The Great Power politics of the US in the Middle East, relying very much on the indiscriminate use of sanctions, military presence, and on political pressure as major instruments to guarantee security, is quite a challenge for a specific European approach. In case of acute tension in the Middle East, US policy can prove very counterproductive. The question is how to devise and implement a European oil policy towards the Gulf taking full advantage of engagement and dialogue, leading to security of supply through a market based system of contractual relations profitable to both sides, in the absence of a profound change in the US attitude.

In a different perspective, Asia is becoming inexorably more reliant on imports from the Persian Gulf, (oil, but also natural gas, and perhaps pipelines routes to the Indian peninsula in the future) as East Asia oil production will soon decline, and demand will keep growing with the rapidly increasing energy needs of Asia. One should take into consideration the possibility of a very different approach to the GCC by the main Asian importers, and of Asian markets by GCC countries. A more dynamic attitude than the “low profile” Asian countries have shown so far, both for oil and gas, is highly probable. It should be

considered as a structural factor in the design of a potential special relationship between the GCC and the EU. In case of tight supply, competition between Asia and the EU for access to Middle East gas and oil may become acute, and should be addressed well in advance through a co-ordinated approach of objectives and instruments.

3 Energy Security: The EU View

Despite the fact that the first stage in the building of the European Union was the creation of the Coal and Steel Community in 1952, energy issues are treated at the national level, and attempts to include a chapter on energy in the Rome, Maastricht and Amsterdam treaties ended in failure. The Commission nevertheless is preoccupied by the strong dependency of the Union on imported energy, and tries to define the basic principles for improving energy security. The latest statement of the Commission's position can be found in the "Green Paper" issued in November 2000, which intends to react to the recent evolution of the oil market by raising the level of the debate on the energy security issue. It follows several other such papers, notably one in 1995 outlining 3 dimensions of the energy policy proposed for the member countries: competitiveness, security of supply, environment. A brief survey of the main propositions of the Green Paper is useful for our analysis of the global Gulf/EU relationship in the perspective of improving long-term energy security.

Oil and Gas: Needs and Dependency

The EU is extremely dependent upon imported energy. It currently imports 50% of its total energy consumption (representing 6% of total imports). Oil represents 41% of EU's energy consumption, natural gas 22%, coal 16%. As long-term growth revives, the overall dependence of the EU is likely to rise again, reaching 70% within 20 to 30 years. Imports from OPEC countries reached 3.1mb/d in 2000, 51% of EU's oil imports. Imports from the Gulf region amount to 22% of total oil demand in Western Europe, and 45% of total oil imports: the share of GCC is limited to 15% (Saudi Arabia 13%; Kuwait 2%), Libya provides 10%, Iran 9%, Iraq 7%. (For the sake of comparison, Japan's imports from the Gulf reached 4.1 mb/d in 2000, about 74% of total Japanese oil imports). If nothing is done, the total energy picture by 2020 or 2030 will still be dominated by fossil fuels: oil 38%, natural gas 27%, solid fuels 19%. For oil, dependence could reach 80 to 85%, for gas 70% and for coal 100%.

According to the Green Paper, by 2020, OPEC will cover 50% of the Union's needs with a global production of the order of 55 mb/d (32 mb/d in 2000.). The average cost of OPEC's oil is around \$ 2, and significant profit margins will provide an incentive to produce that OPEC will find hard to resist. The volume of non-OPEC production, at an average cost at present of \$5, with a

marginal cost of more than \$10, will be closely linked to price movements, since reserves will continue to be plentiful. It is estimated that a crude oil price of about \$20 should make it possible to guarantee the investment in production in non-OPEC regions (especially the Caspian and Russia) which will be needed to meet increasing demand over the next twenty years.

Gas demand is expected to grow from 299 Mtoe (million tons of oil equivalent) in 1998 to 401 Mtoe by 2020 (+44%), raising the share of natural gas from 21% to 27% in total energy consumption. Most of the increase will be used for power generation. Imports represent more than 40% of present consumption. By 2020, they would have climbed to 67%. Over 40% of present imports come from Russia and 25% from Algeria, most of the rest from Norway. The Commission expresses its concern about the concentration of gas imports from two sources (Russia and Algeria). Of the volume already contracted to cover 2020 needs, 95% will still come from the current 3 main supplying countries (for 189 Mtoe). There remain nearly 100 Mtoe to be imported to cover the gas deficit, and Gulf gas could provide part of the required incremental supply.

Security of Energy Supply from the Commission Point of View

The concept of security of supply appears in the Amsterdam treaty on the European Union. Security of supply in the energy field must be geared to ensuring, for the good of the general public and the smooth functioning of the economy, the uninterrupted physical availability on the market of energy products at prices affordable for all consumers, (both private and industrial), in the framework of the objective of sustainable development enshrined in the Amsterdam treaty. For the Commission, security of supply does not seek to maximise EU's autonomy in energy or minimise dependency; but to reduce the risks connected to the latter. The question of security of supply is all the more pressing with enlargement imminent and the relations with EU partners (suppliers and transit countries) in the process of being redefined.

The Green Paper raises three major questions: as it will become increasingly dependent on external energy sources - based on current forecasts, energy dependence will reach 70% in 2030, and 90% for oil:

- Can the EU accept an increase in its dependency on external energy sources without compromising its security of supply and European competitiveness?
- For which sources of energy would it be appropriate, if this were the case, to foresee a framework for imports?

- In this context is it appropriate to recommend an economic approach: minimizing energy cost; or a geopolitical approach: minimising the risk of disruption?

The EU's Limited Scope to Influence Supply Conditions

The Green Paper states “The EU has very limited scope to influence energy supply conditions”. It is essentially on the demand side that the EU can intervene, mainly by promoting energy saving in buildings and the transport sector. The Union suffers from having no competence and no Community cohesion in energy matters. The lack of a real energy policy reduces the EU ‘s bargaining power. No co-ordination is established between European importers. As long as the EU fails to develop means to reduce the influence of the international markets, this situation will remain the Achille’s heel of the European economy and its ability to influence dialogue at world level will remain limited.

The EU has failed to establish instruments for co-ordinating energy policy along the lines it has developed in other areas (standards, intervention funds, mechanisms for decision-making and for negotiating international agreements etc). As a result, in so far as an EU energy policy can be said to exist, it can only be defined indirectly, by analysing other common policies such as transport, environment or the single market. The Community’s own mechanisms are quite inadequate to deal with tensions on the energy market. Partial responses to the threat of disruption of physical supply through emergency reserves and crisis measures exist, but there is no centralised decision making mechanism through which oil could be released onto the market.

For the supply of natural gas, the EU’s long-term security depends on the continued ability to ensure, remunerate and finance adequate investment in gas supply infrastructure - which requires the market to pay a “rewarding gas price” to cover the cost of bringing new supplies from increasingly remote areas. The European gas industry estimates that \$100bn to \$200bn will be needed to meet the rising demand for the next two decades.

The nature and extension of a special relationship between EU and the GCC countries depend to a large extent on the answers to the following questions: EU dependency will ineluctably increase, yet there is nothing like a common energy policy: can this state of affairs be improved? In such a case, is it possible to limit the consequences of dependency, through agreements with suppliers? Is there a special case for security risks in Europe linked to the high dependence on imports when compared to the situation of Japan, (which already imports almost all its oil supply), and of the USA where there is a recurrent debate on oil imports (more than 60% of total consumption) and national

security? Is the source of imports relevant as the petroleum market functions globally with respect to volume and prices? If a shortage anywhere is a shortage everywhere, why should the dependence on Gulf supplies matter more for EU than for Japan or East Asia? Governments themselves cannot do much, they can only plead with the companies for co-operation. In the framework of an ongoing dialogue with producer countries what should supply and investment promotion agreements contain? Given the importance of a partnership with Russia in particular, how can stable quantities, prices and investments be guaranteed?

4 Energy Security: The Case of the GCC Countries

Oil statistics reveal the unique position of the GCC countries in global resources. Proved reserves reach at least 467b bbl (45.12% of world total). Gulf countries' exports to the OECD reached 10 mb/d in 2000 (almost half of total oil imports of the OECD countries). Gas reserves, although less dominant, are very abundant with 22.72 trillion cubic metres (15.5% of world total).

The Gulf region (GCC plus Iran and Iraq) produced 28% of the world's oil in year 2000, while holding 65% of reserves. The gas reserves of the Gulf region, (especially Iran, Qatar and the UAE), amount to 34% of world total, but there is certainly much more gas still to be found in Iraq and Saudi Arabia.

For high reserves/low production cost Gulf countries, long-term security means primarily maintaining beyond the role of conventional oil as the major fuel the next 2 decades, by preventing too rapid an emergence of competitive energy sources alternative to oil, and capturing a significant share of the increasing contribution of natural gas to the world energy demand. This means oil prices low enough to slow down the search for substitutes and the relative decline in demand for oil; yet high and stable enough to encourage investment and facilitate domestic economic diversification and political transformation.

Taxation policies in the consumer countries justify the GCC's complaint about the lack of security of demand. Any contractual agreement on security should address the question of taxation in a comprehensive way, and take into consideration the producers' uneasiness about energy taxation.

The downstream integration of national oil companies of the producing countries in EU's oil sector may be an interesting possibility (Venezuela has such a policy with the US refinery sector). Saudi Arabia had negotiated a deal, which almost succeeded, with Total in the early 90s: it offered the French company access to 400 000 mb/d of crude over 20 years, as a payment of a Saudi holding in its refineries. Despite the ultimate collapse of the project it might be something worth another attempt. Refining capacity owned by GCC companies in Europe at present does not exceed 750000b/d, about 5% of European total capacity. For natural gas, options are more open, and contractual

long-term agreements related to quantities, as well as price fluctuations limited to within a predetermined band, might be useful instruments to encourage heavy investment in natural gas production and transport.

5 The Nature and Significance of a Long-term Market Dominance by the GCC Countries

The demand for Middle East oil according to all forecasts and scenarios (IEA, EIA-DOE, WEC, European Commission) will be at least 50 mb/d by 2030, which means that production should almost treble from the present level. Although the bulk of the increase will come from Asia, both for oil and gas, a recent IEA report “flags as an issue the increasing dependence of the IEA member countries on the Middle East states”. From 50% in 1985, it is currently just under 60% it will reach 70% (a return to the situation of 1970), during the decade 2020-2010, and 75% by 2020. It may begin to decrease after 2020, as the importance of oil from unconventional sources increases. A first question is: what are the risks entailed by an extremely high dependence of world energy supply upon a small group of countries in a region generally considered as politically unstable? A second (non independent) question is: will the Gulf countries be willing and able to expand by more than 85% their production and capacity up to 2020, and almost treble it to 2030?

The Issues of Dependence and Security Risks: Conflicting Views

The foundations for a concern about dependence upon Middle East oil and security rest on a common sense evidence: if Middle East production reaches or exceeds 50% of world conventional supply (with the GCC countries accounting for two thirds of it, Saudi Arabia alone for one half), and represents more than 75% of internationally traded oil, the vulnerability of the world oil system to disruption or scarcity will be considerable. Saudi Arabia has been and continues to be a reliable producer, but it may be uncomfortable in 2015 or 2020 with the position of controlling one third of world oil production. OPEC and Saudi Arabia would become synonymous, and the political pressure on Saudi Arabia from both producers and consumers would be intense.

Common sense however is not necessarily reason, and various opposing views characterise the debate.

For many analysts, political instability in the region constitutes a high risk factor in several ways. The possibility exists of brutal political change, opening the door to major disruptions:

- The failure of the peace process between Israel and the Palestinians is a crucial source of resentment and anti-Western feelings in the Arab and Moslem world, and may undermine the established powers considered as too friendly to the enemies of Islam.
- The relations between the GCC members and neighbouring countries such as Iraq and Iran are all but confident and stabilised.
- There are still unsettled border disputes and conflicts between GCC members.
- Domestic political and social problems affect most countries: the legitimacy of rulers is challenged, pressures are increasing for political modernisation and economic reform.

In this perspective, Saudi Arabia is in the forefront of the “vulnerable states”. This pessimistic view may be mitigated by counter arguments. Some arguments are based on “market forces”:

- Market forces dominate and reduce to nil the “normal” risks of Middle East producers taking undue advantage of their resources (Lichtblau, *The Energy Journal*, 1994, vol.15).
- Fear of dependency is “self defeating” as it accelerates the drivers for change away from oil and Middle East domination. (Stevens, *Energy Policy*, 1997, vol. 25).
- Middle East oil is needed, conditions should be established to allow orderly increases in production, the risks being reduced by the promotion of viable alternatives.
- Other arguments are based on political considerations:
- When is the level of dependency “too high”? is it 30%, 50%; 72%? By 2020, Russia’s oil supply should reach 12% of world consumption.
- There is necessarily a dependency risk for major consuming countries, they better limit the consequences of it than try to wipe it out. There are no examples of disruption for political reasons.
- Whatever their political orientation, suppliers loose more by disruption than buyers.
- Stability is better assured by prices high enough for Middle East states to distribute benefits of a “social pact” and comfort the status quo.

This leads to another major issue: “Why should Gulf countries, Saudi Arabia first, almost treble their production by 2030?”

In its 2000 report, the IEA declared “There is little argument that the Middle East Opec countries have the resources to cover incremental global oil demand. The key will be for them to attract sufficient, sustained and timely capital investment. “

This comment may be challenged, the key question being whether the Middle East OPEC countries (and Venezuela) will ever feel they have an incentive to attract sufficient, sustained and timely capital investment.

In terms of resources, there is no real problem. But while simple possession of the reserve base is necessary, if both actual capacity and actual output are to be doubled, it is not sufficient. The problem there is that the Gulf states are not necessarily production maximisers, on the contrary they may prefer (as they are doing now), to regulate production and, they hope, prices. What's is more, they have failed so far to put in place the investment required to increase considerably their output. If they are to do so, they will have to change their policies either borrowing much more or liberalising foreign direct investment regulations with regards to energy investment. The present capacity of the core producing countries remains much the same as it was in 1973. There has been no notable expansion in 27 years. For one reason or another, the Gulf states have shown little inclination, or ability, to expand production in recent decades. Peak output occurred in 1980 for Saudi Arabia, 1972 for Kuwait, 1991 for the UAE, only Qatar is still increasing its (limited) production and capacity. Even during the heydays of the oil price boom of 1974-1985 there was relatively little expansion of capacity.

The political decision to satisfy the increasing world demand for oil will result from the combination of several conflicting perspectives where time is part of a complex strategy. It rests notably on overcoming the "rentier schizophrenia": civil peace in the case of autocratic regimes has to be bought through a social contract which requires huge revenues. Genuine growth requires diversification from oil, and an efficient economy with taxes, no subsidies, and institutional changes. A huge increase in revenues would challenge Saudi diversification by producing an even greater dependency on oil exports. Throughout the difficult transition period, any increase in oil revenues deters fundamental reforms, as the status quo is more comfortable for the present rulers.

The Case for a High Production, Low Prices Strategy

The main rationale for high production from the Middle East, whatever the present short-term situation, rests on the future challenge to oil as the major fuel and the potential competition from alternative sources of energy. Saudi Arabia has more than 260 billion barrels of proven reserves. These are enough to reach a production level of 20mb/d and keep it for a period well beyond 2030 - provided there is still a demand for oil. A stimulating literature deals with the possibility (not the probability) of an accelerated end to the conventional oil era, after a period of intense competition between producers (Lichtblau *Energy Economist*, 1994, vol.18, 1994; Stevens, ("Increasing global dependence on Gulf

oil, *Energy Policy* 1997 vol 24); Enav, *FT ME Energy*, July 1998, Odell, ("Oil reserves, much more than meet the eyes", *Petroleum Economist*, nov.1997; Lynch ("Crying wolf: warning about oil supply" *Petroleum Intelligence Weekly*, Apr. 6 1998); Elbony, *Energy Studies Review*, 1996, vol.19 etc). The Middle East producers would then leave their still important assets underground. The high reserves/low cost producers would then face the British coal syndrome. Low prices and abundant oil lengthen the life of oil as a major energy and maintain the value of reserves for high resources countries like Saudi Arabia, Iraq and to a less extent Kuwait and Abu Dhabi.

The main trends challenging Middle East oil in the long-term are well known:

- increased production of competitive oil from "expensive" fields is boosted if prices remain "too high",
- technical progress, particularly improved recovery rates, increases supply from known reservoirs,
- natural gas uses increase and displace oil for practical an environmental reasons,
- non-conventional oil will play a substantial role after 2020.

After 2020, the possibility that a major change in environmental constraints and policies may drastically reduce the demand for oil (it would mainly concern the transportation sector, which could cease to be the captive market for an ever increasing demand for oil by private car owners) should not be disregarded. Sheikh Zaki Yamani, petroleum consultant and former Saudi oil minister, is credited for a striking summary of the "end of oil" challenge: "The stone age did not end because the world ran out of stones".

An issue raised by Saudi officials regarding their willingness to make the investment necessary to sharply expand productive capacity, is the risk that demand will not grow as expected. One way out is to share the risks with foreign investors. The present prohibition by Saudi Arabia of foreign investment in the upstream oil sector will certainly be lifted in the coming years (as it has recently be the case in Kuwait). Whether this foreign involvement is timely and adequate will depend considerably on the assessment of the political risks by the companies. There lies a strong incentive to look for the possible contribution of a new EU-GCC relationship.

6 Prospects for Building a New EU/GCC Relationship

The proposed new EU/GCC relationship should provide a credible means of improving security and welfare for both sides.

There is a clear contradiction between two statements of the EU's Green Paper: on the one hand, it is said that "The E.U. has very limited scope to influence energy supply conditions", but a few lines below the question is asked "in the framework of an ongoing dialogue with producer countries what should supply and investment promotion agreements contain?". The Green Paper asks then "given the importance of a partnership with Russia in particular, how can stable quantities, prices and investment be guaranteed?" The latter question implies a certain possibility, although limited, for the EU to influence the supply conditions. Leaving aside the essential question of demand policy as the major instrument to limit the consequences on security of high dependency upon imported oil and gas ("Nevertheless, a policy of demand management is the only way to reduce its external dependency and meet the challenge of climate change") the main issue presently under consideration is precisely to determine the content of the "limited scope", and the potentialities for extending it through a special relationship between the GCC and the EU. The ongoing dialogue should not be restricted to the former Soviet republics (and Southern Mediterranean Countries in the framework of the Barcelona proposals for an Euro-Mediterranean partnership), and the prospects and conditions for extending the concept of partnership to the Gulf countries should be carefully studied.

The institutional and political structures for the "dialogue" will have to be ad hoc. It would be useful to analyse previous comparable experiences, but there is no ready made blueprint. Specific objectives, conditions, instruments, mutual interests and actual conflicts or divergent perspectives will have to be clearly identified. The European Energy Charter (signed Dec 17 1994 by 41 countries) is not likely to provide an adequate model of an international regime for energy co-operation between the EU and the GCC. Its overall objective is the transfer of western technology to the East, providing hard currency and economic security, and thereby encouraging development of democratic institutions. "The industrial resources of the West will be harnessed to work alongside Eastern companies in developing the East's massive energy resources and systems" (C Rutten, chairman of ECC conference, 1994). One of the main objective is to enable the creation of a legal framework to ensure that companies which are encouraged to transfer expertise, capital and technology would be treated fairly, and to remove trade barriers in energy materials and products.

The situation in the former “Eastern European countries “and the FSU in the early 90s bears no similarities with the present state of affairs in the Peninsula. The GCC countries are full fledged members of the world economic system, and need no special treatment to facilitate a transition toward market oriented policies. In their relations with the Gulf countries, the companies face no particular commercial or financial risk. It is worth noting than in discussions within the Euro-Mediterranean partnership, the extension of the Energy Charter to South Mediterranean countries has been considered irrelevant to the North/South energy relationship. The argument is that WTO membership carries the same objectives and commitments as those found in the European Energy Charter.

There are considerable limits to operational contractual agreements. The EU which has no energy policy lacks the necessary powers to act on supply conditions to ensure the best possible management of security of supply. Individual states have little direct power on the energy sector, after deregulation and privatisation. Public revenues depend very much on high oil taxation and they have to face consumers resistance to “excessive” gasoline and fuel prices (the alternative to which, in an environmental perspective, is regulation). International companies are tied by the sole target of shareholders returns. Gulf countries are blocked by their internal strife between the need for immediate revenue, and the rationality of a long-term strategy. National Oil Companies try to maintain their power and the financial means for their growth, against their governments’ desire to get all the oil and gas rent.

These obstacles are of course difficult to overcome, but a method can be proposed, and paths explored, allowing a progress toward the common objective of increased security for oil and gas trade between the GCC and the EU. It is evident that in the interdependent world oil market, a partial stability and co-operation agreement cannot provide the sole answer to the security question, but it can change the general outlook, and contribute to the establishment of an orderly market.

A Methodological Guideline

It is impossible to build a special relationship bypassing market conditions (such as the practice of preferential prices, a specific stabilisation mechanism limited to partners, non competitive bids, etc). At the same time what is at stake is the building of relations of interdependence profitable to both parties, integrating political, geopolitical, financial and global economic perspectives beyond oil and gas. Some basic issues provide a general background for delineating the prospects for a fruitful EU/GCC future relationship: How stands the case for special links between two groups of countries in a globalised oil market? What

could be the rationale for such links? What are the fields for mutually beneficial co-operation and how potential contributions of both parties should be determined? How can the EU deal with “competition” from Asian and US interests and policies?

Specific Interests of Both Parties Should Be Made Explicit and Clear

What can the EU expect from economic and global agreements with the GCC that it could not get from other suppliers or from purely commercial relations?

1. Access to much looked after upstream plays in a region where oil is abundant and produced at low cost (\$ 5000 for a barrel for the lifetime of a well, one fourth of the average world cost) when it opens to companies in Kuwait and Saudi Arabia.
2. Investment outlets in profitable hydrocarbons downstream industries and other infrastructures and industrial activities.
3. A reduced risk of supply rationing due to increased economic interdependence in case of market tightening.
4. The potential for building natural gas exports lines to provide the extra supplies needed beyond 2020.

What can the GCC expect from the EU, that it could not get from other oil and gas importers?

1. Access to a rich market, relatively easy to reach by fixed links in the case of gas the demand for which is bound to increase steadily;
2. Extension of some form of the “Barcelona process” to the Gulf, in particular duty free exports of petrochemical products,
3. Increased diversified investment from a capital exporting region,
4. Readjustment of external relations, presently too much associated with the US,
5. Active participation of non-American companies in the oil upstream opening process,
6. A favourable position in the competition for natural gas outlets with Iran and the Caspian and central Asian states. (Iran plans to develop its huge natural gas reserves, including natural gas liquids production) The gas market, contrary to oil, is a regional market (price indexing practices, supplies under “take or pay” contracts, imports primarily by pipelines).The natural gas sector probably features more evident and necessary factors justifying co-operation on a long-term basis.
7. Development of downstream activities in EU countries, securing privileged market access in case of excess production.

7 Perspectives and Conclusions

There are therefore various fields for potential co-operation or co-ordination of instruments and objectives to improve long-term stability and reduce insecurity in the oil and gas markets. All of them will not necessarily directly improve EU's security, but may significantly contribute to global security and to the reduction of risks and conflicts.

Physical and Political Security

Several contributions to the crucial issue of incentives to increase production, are possible: co-operation to create the conditions to build capacity, in advance of actual demand in order to avoid tensions on prices and production volumes, and sharing the cost of this long-term policy. Political security will be improved by a reduction of the high political risks involved in the choice and continuity of transit routes. Increased security through routes diversification has a high cost which has to be shared on a clear basis, between exporting states, companies, importing regions or states. Granting a reliable international political guarantee to pipelines crossing several boundaries may be a complementary contribution of an overall agreement..

The treatment of conflicts requires the presence of influent parties which have a stake in a positive issue. The production of crude from the Persian Gulf has the potential to grow by 80% by the year 2020. These gains are achievable provided foreign investment is allowed to participate and Iran and Iraq are free from sanctions. The EU may contribute much more actively than it has done so far to a coherent political approach of the "Western " policy toward the Middle East.

When the oil upstream opening process is decided in Saudi Arabia, and confirmed in Kuwait, it is of the common interest of EU and GCC that it should not be restricted to American companies. With the presence of European companies, the GCC countries will be able to benefit from an EU economic and political engagement which may be useful when sensitive political issues arise in bilateral US-GCC relations.

Financial and Investment Security

The diminution of price volatility, and the efficient working of a stabilisation mechanism for crude prices within a predetermined band might be of considerable support to long-term capacity building and production increase. Traditionally, the EU is more open to such a multilateral approach than the "market obsessed" USA, and common propositions by the EU and the GCC might give more efficiency and a touch of realism to the idea.

In the absence of a radical change of attitude toward foreign investment in the oil upstream, and toward taxation, it is highly unlikely that the Saudi Arabian government will ever command the kind of funds required to meet anticipated demand. The law of supply and demand makes it likely that it will be able to fund capacity increases required to keep pace with rising demand, not to anticipate it. Meeting anticipated demand implies an oil environment based on much looser (and thus low priced) oil market than keeping pace with rising demand which implies a tight market and consequently much higher prices -and thus higher returns to the governments of both Saudi Arabia and other GCC nations. Investment needs, however, for both oil and gas, are enormous, and any scheme or agreement related to the objective of long-term security of supply should give particular attention to the means of increasing investment in the energy sectors.

Contributing to the autonomy of gas prices vis-à-vis crude oil prices, in order to get prices stable and high enough to justify investment on the Gulf-EU routes may also be a sensible approach of long-term security.

Commercial Security for the Long-term Supply of Natural Gas

If only because it is an attractive market, the EU can negotiate a strategic partnership with its supplier countries in order to improve security of supply. It has begun to do that with the Russian Federation by offering its aid to improve its transport networks and develop new technologies within a political framework that could stabilise supply and guarantee investment.

The natural gas sector has clear and compelling reasons justifying cooperation on a long-term basis. The gas market, contrary to oil, is a regional market (price indexing practices, supplies under “take or pay” contracts, imports primarily by pipeline).

After 2010 or 2015, Europe will be in need of gas supplies from the Middle East, although these are not required for the next decade. Securing the outlet for increased supply of natural gas from the Gulf in 20 years’ time is therefore the relevant policy challenge. EU long-term security depends on the continued ability to ensure, remunerate and finance adequate investment in gas supply infrastructure - which requires the market to pay a “rewarding gas price” to cover the cost of bringing new supplies from increasingly remote areas. The European gas industry estimates that \$100bn to \$200bn will be needed to meet the rising demand for the next two decades. New import pipelines from the Gulf coast (Qatar and other), and Iran will contribute to the diversification of gas supplies, together with the growing contribution of LNG imports (extended LNG capacities in Qatar, the UAE, and Yemen) thereby reducing the “risk” of too high a dependence on Russia (which might supply as much as 60% of

natural gas imports in 2020). Prices paid by the consumers should reflect the high costs of production and transit risks. In a predominantly buyers' market, special agreements with European buyers may be extremely useful for Gulf producers.

Taxation Issues

The question of taxation of petroleum products is crucially important, especially since it emerged as a very sensitive domestic political issue in several European countries in the summer of 2000. Here obviously lies a major field for conflict or co-operation within a broadly-based contractual framework.

Environmental Considerations and Constraints

The role of environmental issues in the energy field will undoubtedly increase in the coming decades, whatever the present position of the American administration. The EU has a long experience of discussions and negotiations on environmental matters with enlargement candidates, it could therefore use it to build a positive dialogue with GCC countries to delimit the areas of common concern, and take into account the impact on the oil exporting countries of the unavoidable measures required for the safeguard of the world environment.

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Co-operation with the Gulf and Diversification of EU Gas Supplies

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Framing the issue

Demand for natural gas in Europe is expected to grow rapidly, and, due to the limitation in the domestic European resource base, gas imports are expected to grow even more rapidly. The Green Paper on security of energy supply¹ expects that imports of gas into the Union will double by 2020 and continue growing beyond that date. Estimates of gas demand growth are inevitably uncertain, because gas can be substituted for in all its uses, and the final consumer always has the option of resorting to other fuels if gas is too expensive or physically not available.

In fact, gas has been gaining ground, and is expected to cover an increasing share of primary energy demand, because of its convenience and reduced environmental impact. The growing reliance on gas will be the result of new installations – notably power plants - being designed to use gas, and old installations being converted to gas. The two processes – incremental demand and substitution of other fuels – may take place more or less rapidly. In short: gas demand may well grow more rapidly than currently expected if gas will be cheap and abundant, or less rapidly if the opposite turns out to be the case.

If the effort currently underway to liberalise and unite Europe's gas market is successful, we may expect cheaper gas and faster demand growth. However, uniting and liberalising the internal gas market will not be sufficient if additional supplies are not brought to the European grid. Establishing sufficient transport capacity from as broad as possible an array of suppliers is essential to guarantee that the gas market will, in fact, be competitive.

Increasing the role of gas in primary energy supply is a desirable objective in view of environmental priorities – the use of gas generates much lower CO₂ emissions than that of oil or, worse, coal – as well as in order to avoid an increase in oil imports. It is expected that demand for oil imports will grow

¹ European Commission, Green Paper - Towards a European strategy for the security of energy supply, COM(2000) 769 Final.

especially in the Far East and in North America, and Europe may be better off if it succeeds in keeping its oil demand essentially stable.

Gas is expensive to transport. Therefore, notwithstanding the fact that it is much more widely spread on the globe than oil, not all countries that have large reserves have succeeded in becoming also important producers, even less exporters. Specifically, Iran and Qatar, possessing respectively the second and third largest gas reserves in the world, are net importer (in the case of Iran – although this may change very soon, with the beginning of exports to Turkey) or have managed only limited exports (in the case of Qatar – practically all of these towards the East).

Countries that are already tied to the European market by transportation infrastructure, notably pipelines, enjoy a very significant advantage for satisfying additional demand. It is in fact much easier to increase the capacity of an existing pipeline than to build one from scratch. And it is much easier for an established supplier that already has sales in a market to decide to build an entirely new pipeline, than it is for a new supplier that has no market share at all to build its first pipeline. New competitors must overcome substantial barriers to entry.

Russia, being the country with the largest gas reserves in the world, and being connected to the European market by the most extensive and largest pipeline network, will almost certainly increase her share of the European gas market. Russia currently supplies 42% of European imports, a share which the Green Book expects to “increase under the effect of enlargement and pressure of consumption to over 60%”. This clearly would represent excessive dependence on a single supplier.

Transportation infrastructure to access the European market exists from the North (Norway), from the North East (Russia) and from the South (Algeria). In all cases, existing lines are in the process of being expanded. From the South, a new line is planned to bring Libyan gas to Italy. However, as Table 1 indicates, there is a vast difference between the resource base of Norway or the potential North African suppliers, and that of Russia. Algeria, which is the second largest gas producer among those presently connected to the European grid, has reserves equal to one tenth those of Russia. Neither Algeria nor Norway could or would have an interest in challenging the position of Russia as Europe’s main gas supplier. That being the case, competition on the gas market will remain limited. Connecting other producers to the European gas grid is therefore a priority objective.

Table 1 - Natural gas: Proved Reserves of Present and Potential Suppliers to Europe by Pipeline

At end 2000

	Trillion cubic metres	Share of world total	R/P ratio
Norway	1,25	0,8%	23,8
Russian Federation	48,14	32,1%	83,7
Central Asia			
Kazakhstan	1,84	1,2%	*
Turkmenistan	2,86	1,9%	61,8
Uzbekistan	1,87	1,3%	34,0
Caucasus - Azerbaijan	0,85	0,6%	*
Gulf			
Iran	23,00	15,3%	*
Qatar	11,15	7,4%	*
Iraq	3,11	2,1%	*
Saudi Arabia	6,05	4,0%	*
UAE	6,01	4,0%	*
North Africa			
Algeria	4,52	3,0%	50,6
Egypt	1,00	0,7%	55,2
Libya	1,31	0,9%	*

*Over 100 years.

Source: BP Statistical Review of World Energy June 2001

Table 2
Natural gas: Trade movements 2000 – by pipeline
Billion cubic metres

	European Union	Enlargement Countries
Norway	47,48	1,52
Russian Fed.	79,57	38,26
Algeria	33,96	0,36
Total imports	161,01	40,14

Source: BP Statistical Review of World Energy June 2001

To some extent, diversification can come from increasing imports of Liquefied Natural Gas (LNG) – which, being transported by ship, enjoys greater flexibility, at least in theory. However, it should be noted that, besides being a major exporter of gas via pipeline, Algeria is also by far Europe’s largest supplier of LNG, accounting for 77% of total European LNG imports (Table 2). In this sense, LNG is not a significant diversification from pipeline gas – at least not until this date. Nigeria is the only other significant supplier, while limited volumes of LNG reach Europe from Libya, Trinidad, Qatar, Abu Dhabi, Malaysia and Oman. In the coming years Egypt is also expected to become a significant supplier.

Table 3
European LNG imports by Country
of Origin
Year 2000 – Billion Cubic Metres

Trinidad & Tobago	0,79
Oman	0,08
Qatar	0,46
UAE	0,30
Algeria	25,07
Libya	0,80
Nigeria	5,03
Malaysia	0,15
TOTAL	32,68

Source: BP Statistical Review
of World Energy June 2001

One should also keep in mind that international trade in LNG accounts for only 25% of internationally traded gas. The importance of LNG is rising, but the bulk of international gas trade takes place by pipeline, and will continue to do so.

Therefore, while increasing LNG imports may well contribute to diversification of supplies, a more competitive European gas market requires establishing physical pipeline links with some of the producers that may seriously challenge, or at least limit, the predominance of Russian gas.

If we leave it to the market, the outcome is almost certain to be simply increasing reliance on consolidated suppliers for the rest of this decade and quite likely the next one as well. However, the end result would be a tight oligopoly, and consequently relatively higher prices, making a joke of any pretence that we have created a competitive gas market. Europe would become even more dependent on barely three countries.

Table 4 - Natural gas: Production*

	1990	1999	2000,0	Change 2000 over 1999	2000- share of total
Billion cubic metres					
Denmark	3,1	7,8	8,1	4,4%	0,3%
Germany	15,9	17,8	16,9	-5,4%	0,7%
Hungary	4,2	2,9	2,7	-6,2%	0,1%
Italy	17,3	17,5	16,8	-4,1%	0,7%
Netherlands	60,6	59,3	57,3	-3,3%	2,4%
Norway	27,8	51,0	52,4	2,8%	2,2%
Romania	28,3	14,0	13,6	-3,3%	0,6%
United Kingdom	45,5	98,9	108,1	9,3%	4,5%
Other Europe	14,1	11,6	12,0	3,1%	0,5%
Total Europe	216,8	280,8	287,9	2,5%	12,0%
Azerbaijan	9,2	5,6	5,3	-5,7%	0,2%
Kazakhstan	6,6	9,3	10,7	15,6%	0,4%
Russian Federation	597,9	551,0	545,0	-1,1%	22,5%
Turkmenistan	81,9	21,3	43,8	>100,0%	1,8%
Ukraine	26,2	16,9	16,8	-0,4%	0,7%
Uzbekistan	38,1	51,9	52,2	0,7%	2,2%
Other Former Soviet Union	0,5	0,4	0,4	2,2%	†
Total Former Soviet Union	760,4	656,4	674,2	2,7%	27,8%
Bahrain	5,8	8,4	8,6	1,9%	0,4%
Iran	23,2	53,0	60,2	13,8%	2,5%
Kuwait	4,2	8,7	9,6	10,5%	0,4%
Oman	2,6	5,4	8,5	56,5%	0,4%
Qatar	6,3	24,0	28,5	18,8%	1,2%
Saudi Arabia	33,5	46,2	47,0	1,7%	1,9%
United Arab Emirates	20,1	38,0	39,8	4,7%	1,6%
Other Middle East	5,5	7,9	7,5	-5,4%	0,3%
Total Middle East	101,2	191,6	209,7	9,4%	8,7%
Algeria	49,3	85,2	89,3	4,9%	3,7%
Egypt	6,8	14,7	18,0	23,1%	0,7%
Libya	5,6	5,6	5,5	-0,7%	0,2%
Nigeria	4,0	6,0	11,0	81,4%	0,5%
Other Africa	1,2	5,6	5,7	1,8%	0,2%
Total Africa	66,9	117,1	129,5	10,7%	5,3%
TOTAL WORLD	1993,8	2327,7	2422,3	4,3%	100,0%
of which: OECD	853,1	1037,2	1069,6	3,1%	44,2%
European Union 15	150,4	206,2	212,1	2,9%	8,8%

*Excluding gas flared or recycled.

†Less than 0.05.

Note: As far as possible, the data above represents standard cubic metres (measured at 15°C and 1013 mbar); as they are derived directly from tonnes of oil equivalent using an average conversion factor, they do not necessarily equate with gas volumes expressed in specific national terms.

Source: BP Statistical Review of World Energy
June 2001

Greater diversification ought to be sought on the grounds of guaranteeing competition and ensuring greater stability and security of supply. This means opening the door to gas from the South East – the quadrant from which gas does not presently flow into the Union. A lot of attention has gone into Central Asia and the Caucasus in the last decade, however it is clear (see again table 1) that the largest reserves are located in the Gulf, and specifically in Iran and Qatar. Bringing gas from both Central Asia and the Gulf requires solving a complex puzzle of several pieces, all of which must fall in place. Turkey is the essential bridge for all gas export schemes, and the appropriate legislation and regulations must be put in place there first and foremost. Turkey must then be connected to the rest of the European grid, either across the Balkans or across Greece. Finally, if gas supplies must come from the GCC specifically, the political obstacles to gas pipelines across the GCC and the Eastern Mediterranean must also be eliminated.

Opening the door from the South East

The South East includes numerous potentially important gas producers that may contribute to the diversification of Europe's gas supplies, notably:

1. in Central Asia: Turkmenistan, Kazakhstan and, to a lesser extent, Uzbekistan;
2. in the Caucasus, Azerbaijan
3. in the Gulf: Iran, Qatar and Iraq.

Pipeline supplies to the European gas market from Central Asia and the Caucasus would have to pass through either Russia or Turkey, while pipelines from the Gulf will necessarily transit through the latter. Russia being a competitor, it will never enthusiastically support the transit of gas from Central Asia. Still, diplomacy in the direction of leading Russia to accept transparent and competitive third party access to its pipeline network is relevant in this context.

The EU has taken steps to encourage diversification of supplies and the opening of the door to gas from the South East, but has done so in a non systematic manner. A lot of attention has gone specifically into developing new transportation routes for Turkmen gas across Turkey, in particular through the INOGATE initiative.

However, the discovery on the part of BP of significant gas reserves in Azerbaijan has for all practical purposes killed the prospect of bringing Turkmen gas to Turkey for the time being, simply because Azerbaijan is so much closer and the reserves are owned by a European company. Hence, it is now universally accepted that Azeri gas will flow into Turkey, but Turkmen gas will not.

In fact, soon after the discovery of gas in Azerbaijan, Turkmenistan reached a new agreement with Russia to export some gas through the Russian network (this agreement was pursued by Putin as one of the first initiatives he took after coming to power; however, Turkmenistan is only allowed to export to the Ukraine and Moldova, which frequently do not pay, and not to the good clients further West).

As for Kazakh gas (in particular from the very large Karachaganak deposits, owned by Agip, BG and Texaco) it is mostly re-injected. The very large new discovery at Kashagan is an oil bearing structure but it is certain to contain also vast volumes of gas. It is likely that Central Asian gas will find its way to Europe through Russia, as diplomacy, increased pipeline capacity and dwindling production from some key Russian fields will progressively create conditions more conducive to such trade. On the other hand, Caucasus – i.e. Azeri – gas will certainly be shipped primarily to Turkey.

No equivalent effort on the part of the EU has gone into developing supplies from Iran, Qatar or Iraq. The possibility of pipeline exports from Qatar has been evoked in EU-GCC meetings of experts. In the case of Iran, a private consortium to develop a gas pipeline, led by GDF, has long been in existence (Iran Gas Europe), but it has been allowed to slowly fade into oblivion. EU documents evocate the possibility of such exports materialising in some not so distant future, but there exists at present no initiative to facilitate or accelerate this result.

The Pivotal Role of Turkey

If we leave aside the possibility of transiting through Russia – which may be regarded as only partial diversification from Russian supplies – the salient features of all pipeline projects from the South East is that they must first land in Turkey.

Turkey is – in and of itself – a rapidly growing and potentially very important gas market. Therefore, diversification of supplies from the South East must be sought first and foremost through encouraging a rapidly growing and competitive gas market in Turkey, and improving gas transportation facilities between Turkey and the core European market (notably Hungary/Austria/Italy).

In April 2001 a very important new gas law has been passed in Turkey in the context of emergency measures requested by the IMF to extend fresh support to the beleaguered Turkish economy. The new law abolishes the monopoly of BOTAS, and creates a regulatory authority for electricity and gas. Botas will be separated into transmission, storage and gas marketing arms. The existing and currently planned Botas transmission network will form a National Transmission System, but other companies will be able to build and own transmission lines. A gas release programme will be set up under which Botas will have to auction at least 10% of its supply portfolio every year until 2009, or until its market share is reduced to 20% Botas will conclude no new gas import agreements until its market share is reduced to 20%. No other company will be able to conclude an import agreement with any company with which Botas has an importation contract

This law appears to bring Turkey fully in line with the *acquis communautaire* with respect to the organisation of the gas market – in fact Turkey may be quite a lot more advanced than several member countries in the direction of liberalisation. Whether the law will be swiftly and efficiently implemented is another matter, but the incentives for the Turkish state are quite substantial, in terms of potential foreign investment inflow and decreased energy costs.

This last point is crucially important. Turkey is surrounded by very large gas reserves, and the development of a gas industry has been hindered by BOTAS's monopoly and insufficient investment funds. The monopoly meant that producers could not directly access the market, but had to sell to BOTAS. They therefore requested BOTAS to sign take-or-pay contracts at relatively high prices. BOTAS did not have sufficient financial strength to guarantee such import contracts, and, at the same time, undertake the investment necessary in expanding gas networks – a prerequisite to increasing gas demand.

BOTAS signed such take-or-pay import contracts with several foreign suppliers - notably Russia, Azerbaijan and Iran. Memorandums of understanding were signed with Iraq and Egypt. Presently, the situation is that BOTAS has contracted for 47 billion cubic metres per year of gas by 2005, but demand last year was only 14.5 billion and this year probably 16 billion. For a long time Turkey has been obsessed that not enough gas was available, and now it is likely to face excess supplies. The new law "forces" BOTAS to relinquish 80% of its import contracts (one may note that the company might have had a hard time honouring these contracts anyhow) and creates conditions for a very competitive market in Turkey. Prices may go sharply down and the potential for re-exports to the rest of Europe will be created.

This means that a very important piece in the mosaic – a potentially competitive and open Turkish gas market – is now in place. The EU should support this development with all possible instruments. However, the situation concerning the next piece of the mosaic – connecting Turkey to the EU gas grid – is less brilliant.

The Missing Link in the Balkans

Turkey currently receives gas from Russia by way of a pipeline that runs all around the Black Sea, crossing the Ukraine, Moldova, Rumania and Bulgaria. Relations between Gazprom and all of these countries have been difficult, indeed very difficult. This has encouraged Gazprom to launch the Blue Stream gas pipeline across the Black Sea, which it is implementing in association with Italy's Eni.

Once Turkey will start receiving gas from the Blue Stream, from Iran and, further down in time, from Azerbaijan, it may become possible to reverse the flow of the pipeline coming from Bulgaria and Romania, and use it to export gas from Turkey rather than import gas from Russia.

Bulgaria and Romania would welcome the possibility of diversifying their supplies, as they are at present entirely dependent on imports from Russia, plus domestic production. But their markets are small. Unfortunately, no connection exists between Romania and Hungary or Austria – nor to the West to Serbia or any other of the successor states of former Yugoslavia.

The alternative to a connection across the Balkans that would to some extent make use of existing pipelines is an entirely new pipeline connecting Turkey across Greece to Southern Italy. This project is listed as one of the revised priority TEN pursued by the European Commission². It may however be rather expensive, because of the nature of the terrain in Northern Greece and water depths between Greece and Italy, if Albania is to be avoided. In addition, although technically Southern Italy is connected to the European gas grid, it is an area of low consumption and already abundantly supplied with gas from North Africa. Gas coming from Greece would therefore have to be pumped further North, at least to the Po valley, and would require an enlargement of the capacity of existing South/North pipelines in Italy.

Whatever the solution that is adopted, it is clear that connecting Turkey to the main EU gas grid is a very important priority for the EU, even independently of a renewed EU-GCC Partnership.

² European Commission, Energy Infrastructure, Communication to the Council and the European Parliament, COM(2001)

The Competition Among Gulf Suppliers

Where does the GCC come into the picture? We indicated earlier that the relevant countries in the region are Iran, Iraq and Qatar, and shall now review the situation for each of these.

Iran has the second largest gas reserves in the world. It shares with Qatar the single largest gas field in the world, which is called North Field in Qatar and South Pars in Iran. Iran has lagged behind Qatar in developing its portion of the field, but in the past two or three years has launched a succession of South Pars projects, enlisting some of the prime non-American international oil companies. We may therefore expect that South Pars will be developed in earnest.

Iran has a take-or-pay contract to supply BOTAS, which envisaged deliveries beginning in early 2000. Deliveries began in fact only in December 2001, and are expected to build up progressively to 10 billion cubic metres by 2007³

Further into the future, Iran has all the required characteristics to supply growing volumes of gas into Turkey and beyond, into the EU. Its reserves are approximately half those of Russia, and its current production is only a fraction. In short, once Iran becomes connected, it has enough gas to take up all of the contestable share of the European market, to the exclusion of any other Gulf supplier. And achieving this result is simple: all that is required is connecting Turkey to the EU grid.

Iraq has relatively small proven gas reserves – but this, as for Saudi Arabia, may be the consequence of the fact that the country never attributed priority to exploring for gas. In recent years Iraq went through the motions of launching a gas export project to Turkey, based on fields that are in the North of the country, very close to Turkey. An agreement was signed with Turkey, and an international tender launched, which resulted in the selection of Agip to develop the upstream part of the project, and GDF to develop the midstream. But nothing has happened on the ground, pending the lifting of UN sanctions. As the portfolio of projects to be implemented as soon as sanctions are lifted is very considerable indeed, it is not at all clear that gas exports will receive topmost priority – if and when sanctions are in fact lifted.

With respect to Iran and Iraq, Qatar finds itself at a distinct disadvantage. Although physically its gas is in the same reservoir as Iran's, the latter has a border in common with Turkey, while Qatar should obtain transit through two or three countries (Saudi Arabia then Jordan and Syria, or Iraq). This has proven an elusive goal for the Qataris so far.

³ Gas Markets Today December 11, 2001, page 2.

On a purely commercial basis we would therefore attribute little hope to the possibility of significant supplies coming from Qatar, although in fact the cost of the gas at the wellhead is probably lowest in Qatar, and the distance is the same as for Iran. The difference is of course in the politics, as well as in the regional impact of the alternative solution – because exports from either Iran or Iraq would have no positive regional impact, while a pipeline connecting Qatar to Turkey would serve the entire region.

The Regional Politics of Gas in the GCC and the Eastern Mediterranean

Gas has been a prominent victim of the inability of countries in the GCC and in the wider Near East region to cooperate rationally. Most countries in the region hold large reserves of hydrocarbons and consider resorting to imports of any kind of energy products as politically unacceptable. This however leads to irrational exploitation of resources.

In fact, while some countries have huge reserves of oil, others have predominantly reserves of non-associated gas. Saudi Arabia, commanding 25% of global oil reserves, never attributed priority to exploring for and exploiting non-associated gas. It has limited itself to ensuring that associated gas is properly utilised, that is either re-injected or sold to industry, but not flared. Apart from this “conservationist” concern, Saudi Aramco has felt until recently that investing in oil was in any case more profitable than investing in gas, and has treated gas as secondary – in line with the tradition of all major international oil companies.

The Saudi perception progressively changed in recent years, because insufficient availability of dry gas has hampered new industrial investment, especially in petrochemicals, which are the cutting edge of Saudi industrialisation. Consequently, foreign companies have been called for – in itself an indication of the fact that gas is not considered as important as oil – to develop three major integrated gas projects. It has been made clear to the companies that international trade in gas - both imports and exports - is not to be considered. However, from the point of view of mere economic rationality it is quite possible that Saudi industry might be better off relying on possibly cheaper imported gas, while Saudi gas is exported to neighbours – especially in the light of the peripheral location of reserves so far discovered.

A similar story could be told of the UAE, where Dubai has long lamented that not enough gas was available to meet all its potential consumption, while at the same time refusing to purchase gas from nearby Sharjah at the price that was requested; and Abu Dhabi, that possesses significant gas reserves and LNG export schemes, has been pulling the brakes on further gas developments. In 1999, the possibility of a turnaround has emerged under the form of the Dolphin

project, which is mostly sponsored by Abu Dhabi interests and proposes to export Qatari gas to Dubai.

Kuwait has been in need of gas supplies for the last decade, but a project to pipe gas from Qatar to Kuwait has not made much progress.

The GCC has for a long time had a GCC Gas Network concept on the drawing board, but has so far failed to reach agreement to implement it. This is an area in which a EU-GCC dialogue may be of help, because the GCC countries have little experience or indeed proper understanding of the gas industry, and tend to equate oil with gas. But while for oil the upstream is the decisive part of the business, in gas the transportation network or grid is the essential aspect, and the upstream is in a sense ancillary. The EU could effectively promote, on the basis of the experience of its member countries, the benefits to be derived from establishing a GCC-wide gas network, allowing individual producers to sell to any customer along the network, and breaking the pattern of segmented projects geared to export; or closed, vertically integrated projects for the domestic transformation of gas.

The situation is not much different in the Near East. Gas discoveries in Egypt have accelerated over the years, and the country can no longer absorb all the gas it produces (notwithstanding having achieved a remarkable rate of penetration, well above that of any other country in the region). As all geographically closer markets have been barred by political obstacles of one sort or another, there are presently underway no less than four independent LNG projects, mostly geared to the European market in the West Mediterranean or beyond.

Syria too has significant gas reserves, albeit not sufficient for covering all potential domestic uses. Nevertheless, Syria speaks of exporting some limited volumes of gas to Lebanon, but implementation is not visible yet. Lebanon has no gas at all, and at least three major power stations based on gas turbines (presently fired with diesel, waiting for the day that gas will become available...). Finally, Jordan also has no gas worth speaking of.

As far as Israel is concerned, it is potentially the single largest gas consumer in the region, but still has no gas. Following some (modest) offshore discoveries in Israeli waters, the call for self sufficiency has become very vocal – if certainly not disinterested – and has undermined all hopes of an agreement with Egypt.

The lack of a regional gas grid in the Near East should be a cause of concern for the EU, in the broader context of the Euro-Med partnership. The present state of affairs is an obstacle to sustainable growth in the region and negates an obvious opportunity for regional cooperation and for strengthening

horizontal trade ties. It thus appears as an obvious goal for the EU to pursue in the context of the Barcelona process – as well as to serve the cause of its own energy security and diversification of sources of supply.

An export pipeline linking Qatar to Turkey across Saudi Arabia, Jordan and Syria and capable of serving Lebanon as well would therefore serve several very important objectives. It should be pursued as a priority objective in the context of a renewed EU-GCC Partnership.

This project would easily be commercially attractive, and in fact has been pursued by several major international oil and gas companies at different times. Its difficulty lies entirely in the number of countries whose agreement must be obtained and which need to participate in its establishment. Creating conditions suitable for its implementation is a very complex diplomatic task, and only once the appropriate framework of intergovernmental agreements will be established, private companies may be expected to become involved to invest the required resources and take care of the industrial and commercial aspects. Establishing such framework is a very important objective which should be pursued with priority in the context of the EU-GCC Partnership.

Conclusion

This paper has argued the following points:

- Europe will need growing supplies of gas, and has a very limited number of suppliers.
- The advantage enjoyed by existing suppliers is such, that diversification of supplies will not take place if it is not actively pursued through appropriate policies.
- Diversification can be obtained by opening the door to gas from the South East.
- To this end, two intermediate objectives are crucially important:
 - Fostering a competitive and open gas market in Turkey;
 - Connecting Turkey to the main European gas grid across the Balkans and/or Greece.
- Progress is being made on the first intermediate objective.
- Once the door to gas from the South East is opened, it is likely that gas will flow primarily from Iran, with some coming from Azerbaijan and possibly Iraq. In the absence of a specific political initiative, gas is unlikely to flow from the GCC (Qatar).
- Establishing a pipeline from Qatar across Saudi Arabia, Jordan and Syria to Turkey, and serving Lebanon along the way would serve several

important policy objectives in the context of the Mediterranean Partnership as well as for diversification of gas supplies.

- This project requires that political obstacles to the establishment of a pipeline across several countries be overcome, however its realisation may be envisaged on the basis of private sector investment.

Europe' Energy Security after September 11: A Re-Assessment

Eberhard Rhein,

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The events of September 11 have given rise to speculation about increasing political instability in Saudi Arabia and the Gulf region and therefore about the security of the world's energy supply.

It has been said that Bin Laden, in attacking New York and Washington, was in reality targeting Saudi Arabia and the stationing of American troops there, and that he aims at overthrowing the Saudi regime by a fundamentalist Islamic regime.

It is therefore important to re-assess the situation and query the risks that the West is running because of its increasing dependence on oil and to a much lesser degree- gas from the Gulf region.

Humanity will increasingly depend on the supply of fossil energy from the Gulf region (GCC, Iraq, Iran). It is there that more than two thirds of the planet's known reserves of oil and more than a quarter of those of gas are lying in the ground or sea. All other known reserves (Central Asia, Africa, America, Europe), however important they may appear for individual countries or companies, are dwarfed by the huge reserves, especially in Saudi-Arabia and Iraq for oil and in Iran and Qatar for gas.

Renewable energy cannot be counted upon to make a significant contribution to the world energy supply before the middle of the century. But the technology is by now sufficiently advanced for it to step in progressively. The pace of its advance will depend essentially on the evolution of prices for fossil energy and further progress in cost cutting for renewable energy.

Nuclear energy is unlikely to witness a renaissance. Its inherent security risks will not make it more attractive. The reserves of uranium are not that abundant; and its cost of production is bound to go up, as the costs for research, waste disposal, enhanced safety requirements etc. will be fully imputed to the accounts of the producers.

It is therefore normal that all eyes are riveted on the Gulf. Political, military and economic planners will all look to that region. This will remain so for several decades, unless, against all odds, really big new fossil reserves will

be discovered in other parts of the world. Whether we like it or not, humanity will be in the hands of a few small countries for its economic survival.

This progressively emerging situation will create two types of risks, one of “monopoly pricing”, the other of “interruption of supplies”.

Jointly, the Gulf countries will, in a few decades, possess the quasi monopoly of oil supply to the world. But this prospect will not induce them to pursue a reckless price policy, e.g. aiming for a price of > 50 \$/b.

An excessive oil price is bound to provoke reactions. Consumers will reduce the consumption of oil, by more stringent economies. They will switch to alternative energy supplies, i.e. coal, gas and – more slowly – renewable energy. The higher and faster the price rise, the more radical the adjustment processes. Even if the producer countries were able to score some short-term gains, they must reckon with the consumers shifting to alternative sources of supply. All they would achieve is another inflationary push and possibly another worldwide recession. But in the longer term, say within a time frame of 5-10 years, the Gulf producers would lose out. They are fully aware of these risks and will therefore, in their own interest, impose upon themselves a good dose of self-restraint in their pricing policy.

Neither Europe nor even the USA should therefore feel much concerned about the risk of seeing a monopoly producer (or a group of producers) in the Gulf imposing excessively high prices. The price of fossil energy is bound to rise anyhow in the coming decades because of rising costs of production. Against the prospect of global warming, Europe (and even the USA) should, indeed, welcome steadily rising prices of fossil energy. Looked at from this vantage point and ignoring the flagrant violation of international law the Iraqi annexation of Kuwait in 1990 did not really endanger the stability of global fossil energy supply.

An interruption of supplies of fossil energy from the Gulf may either result from the existence of a military conflict in the region or from a deliberate political decision of a future monopolist not to supply specific countries or groups of countries considered as hostile.

None of the two scenarios looks really frightening.

Neither the 10 year war between Iraq and Iran nor the short conflict with Iraq in the early 90` s has substantially disturbed the oil supply from the Gulf. All it has done was to push up prices, but not for a long time.

Excluding the hypothesis of a nuclear suicide attack on all the Gulf countries, one should consider the likelihood of a serious, lasting and comprehensive cut of supplies subsequent to conflicts (civil wars, regional wars, toppling of regimes by fundamentalists etc.) as rather slim.

Similarly the use (or abuse) of oil as a political instrument should be considered as a rather blunt weapon.

If applied against individual countries, e.g. USA, Japan, only, it will always be possible to buy oil in the spot market: oil cannot be traced. If the country concerned were an OECD member, solidarity and re-supply commitments would intervene.

If applied against a major group of countries, e.g. USA +EU, the monopolist would forego an important share of its export revenues. Even a fundamentalist regime will think twice before adopting such a hostile strategy that is bound to backfire sooner or later; the more so as it cannot be sure of the diplomatic and economic sanctions applied by the international community.

Five conclusions may be drawn from the foregoing analysis:

First, the long-term security of supply of fossil energy from the Gulf appears much greater than many analysts tend to believe after the events of September 11. Terrorist attacks will never succeed in stopping the bulk of oil exports. Even if the present regimes were toppled by Islamist groups (like in Iran in 1979), the new rulers could not dispense with the oil revenues to keep themselves in power.

Second, the risk of excessive price rises, as a consequence of Gulf countries acquiring a quasi monopoly position in the global oil market, seems slim in view of the reactions that such a price hike would provoke with consumers and producers of competing energies.

Third, it is therefore irrelevant for the security of the world energy supply who controls the energy resources of the Gulf, as long as it is none of the superpowers. This is not to say that Europe should gladly welcome the control of these resources by any single country (e.g. a Federation of all the Gulf states). But the situation would not ipso facto warrant a military intervention, esp. if the monopoly control were acquired without cold-blooded annexation as in the case of Kuwait 1990.

Fourth, from a European oil supply perspective, the presence of American forces in the region is not strictly necessary. It may even have been

harmful, as the origin of the terror attacks by Bin Laden seems to indicate. If the GCC countries want to maintain the presence of American troops, Europe should not raise the issue. But if, on the contrary, they wished them to be phased out, Europe should not object.

Fifth, the optimal way for Europe to secure its long-term energy supply is by a combination of three complementary approaches:

- The strict maintenance of 3-4 months strategic oil reserves, by the EU and all OECD countries; (the North Sea might ideally constitute a second layer of strategic reserves).
- The maintenance of diversified sources of supply, as long as possible. Therefore a European presence in Central Asia and Africa, through European oil companies, is to be encouraged.
- An accelerated transition towards renewable energies and energy economies within the EU.

To this end, the EU should encourage more R&D on renewable energy and tax fossil energy heavily while exempting renewable energy from any such taxation.



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