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EUROGULF

An EU-GCC Dialogue for Energy Stability and Sustainability

Robert Schuman Centre
for advanced studies

Giacomo Luciani

Executive Summary and Policy Paper

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Table of Contents

Introduction

The EUROGULF project was launched in 2002 by a consortium led by the Robert Schuman Centre for Advanced Studies at the European University Institute, and comprising the Oxford Institute of Energy Studies, the Energy Policy Unit of the National Technical University of Athens and ECONERGY Sal of Beirut. Funding is provided by the European Commission through a grant from the SYNERGY programme.

The objective of the project is to analyse EU-GCC relations with respect to oil and gas issues and propose new policy initiatives and approaches to enhance cooperation between the two regional groupings. The project has originated a collection of papers whose provisional drafts have been discussed in two workshops: in Riyadh in April 2004, and in Florence in November 2004. The final versions of all papers will be circulated at the concluding conference in Kuwait, on April 2 & 3, 2005.

This Executive Summary focuses on the main themes of the project, and especially highlights the major policy recommendation that the project originated. Responsibility for analysis and policy recommendation rests with the author of each paper and is not necessarily shared by all members of the consortium. The responsibility for this Summary rests with the Project director, prof. Giacomo Luciani.

1. Prospects for Oil and Gas Exports from the GCC Member Countries

Our research substantiates the commonly held view that oil production from the GCC is set to increase in importance over the next 20 years. However, the rate at which GCC production increases will be affected by increases (or declines) in non-Gulf and unconventional oil production, which in turn will be affected by a number of factors, including price.

Prospects of GCC oil exports towards the EU are a potentially important area of "oil dialogue" between the EU and the GCC, considering that the share of the GCC countries in European oil supplies is limited when compared to the importance of their reserves. EU-GCC oil exchanges are influenced by three main factors:

- Oil reserves in the GCC are exploited less intensively than elsewhere in the world: their share of global production is less than half of their share of global reserves (21 per cent as against 42 per cent);

- The EU is diversifying its primary sources of energy, relying relatively less on oil, and relatively more on natural gas and coal;

- The EU is the preferred destination for oil from Russia, the Caspian and North Africa, primarily for logistical considerations, while Gulf oil is mostly directed to the East or – in some case - to the US.

These factors have limited the direct dependence of the EU on GCC oil exports, but the market for oil is global, and the importance of such direct dependence is therefore relative. The EU is dependent on GCC oil production and exports because the latter are essential to the orderly functioning of the global oil market, and the GCC members countries are the marginal suppliers of world oil.

2. Defining a Long-term Equilibrium Price Band

One of the objectives of the EUROGULF project was to investigate whether it is possible to determine an 'optimal' price band, i.e. a rationally-defined level of prices which will guarantee future supplies and the full utilisation of global energy resources.

In approaching this task, the project has started with the definition of a much broader price band, which is bound at its upper limit by a price level where incremental demand is negatively affected and a lower limit where supply would be shut in.

The definition of the upper boundary can be estimated from studies of the price elasticity of demand for crude oil.

Oil is less of a factor in the OECD economies than in was in 1973. More of it is in transport, where for reasons including taxation, hedonic values attached to personal mobility, and structural and other barriers to intermodal shifts in transportation, demand elasticity is lower. But the price of oil affects other commodity prices, not the least of which is natural gas - and more and more gas is becoming the fuel of choice in power generation, and electricity is essential to a modern economy. **So, higher, sustained oil prices would eventually take their toll on economic growth.**

This is the conclusion of recent reports by intergovernmental agencies such as the IMF and the OECD/IEA (See Analysis of the Impact of High Oil Prices on the Global Economy, IEA, May, 2004; available on the IEA website). Their analyses in May 2004, at the beginning of the current run-up in prices concluded the following:

- As in the past, the net effect on the global economy of higher prices would be negative. Producer gains would be more than offset by consumer losses.

- Depending on what producers do with the extra revenues (import goods and services or pay down debt and rebuild reserves), the effects would be less or more severe respectively.

- Impacts on trade deficits and budgets could put pressure on interest rates and therefore prompt tighter monetary policy responses.

- Exchange rates would be affected, leading for example to a rise in the US dollar, impairing certain developing countries' capacity to service dollar denominated debt and adding to current account imbalances, particularly in countries where prices of oil products do not reflect their costs.

At the time of writing, some of these effects are beginning to appear.

Analyses of price effects on inflation and therefore policy responses and their knock-on macroeconomic effects confirm that this subject is a 'moving feast'. Oil does make up a smaller share of the consumer basket in OECD countries. Some research indicates that there was a shift in the impact around 1980; pre-1980 oil price increases fed directly through to the core CPI, whereas since then their direct impact as been negligible. Some research suggests that the impact on the economy of price increases during the seventies were compounded by monetary policy responses, but this has been less the case since 1980.

From today's price level of around $50 per barrel, it would seem that 'extreme' price levels—in other words, a true 'price shock'—would be required before world economic growth would fall abruptly. Such extreme levels would seem to be above the current levels, but this tempting conclusion must be cautioned by the qualification that it is 'too early to tell'. This caution is even more warranted, as indicated above, given the recent devaluation of the dollar.

The definition of the lower boundary can be estimated by looking at the operating cost of existing global production. Such analysis highlights the price level, at which existing production would be shut-in as uneconomic. It is clear from such analysis that over 87 per cent of crude production today would still be economic at oil prices down to around $8 per barrel. However, more important is the price level at which new capacity will generate sufficient economic return to justify investment.

Our analysis for 2020, which we carried out in late 2003, has shown that nearly 80 per cent of conventional oil production, up to 104 million barrels per day, could be developed and operated at a cost of less than $8 per barrel, with OPEC remaining the lowest cost producer. More recent data suggests that, given the rise in steel prices and other inputs associated with the finding, development and production of oil, this marginal cost would have risen, perhaps to $12 - $14/bbl.

Therefore the 'price band' has limits somewhere above $50/bbl and not much below $14/bbl and certainly not below $8/bbl.

In a free market, where there is no constraint on production capacity, it would be natural for prices to fall to the marginal cost of production, which in the low demand case would be around $8 per barrel. However, the fact that the actual oil price has traded within a band of $18 - $26 per barrel for over 80 per cent of the past decade demonstrates the market power of OPEC.

Our research suggests that the oil price required by the private oil companies and national governments is on average some $10 - $12 per barrel higher than actual development costs required for projects to breakeven. More interesting is the fact that the price required by private oil companies is lower than the price required by national governments even though they might be involved in more expensive and technically more difficult developments.

To date our analysis suggests that a minimum oil price of $25 is sufficient to secure investment in new supplies, but even at this level pressure would be put on the budgets of national governments.

Our conclusion is that there is no prescriptive or optimal oil price band that will guarantee long term security of supply of energy. We have identified that the broad range of prices where projects are economic but which do not adversely affect demand is between $8 and $50 per barrel. We have also shown that an oil price in excess of $20 per barrel is required for companies and governments to justify investments to shareholders and to balance budgets respectively. However, prices required by companies and governments are a moving target, compounded by shifts in the exchange rate of the U.S. dollar.

We do not subscribe to the view—if only because it escapes precision—that oil prices need to be sufficiently high and implicitly that some international mechanism should be contrived to ensure they are, for GCC members to 'bear the burden of the massive investment required to satisfy global demand'. It is clear that in the case of the GCC, an oil price of just $8 per barrel would be sufficient in theory to justify investment and raise finance, but for most countries it would fall well short of meeting their budgetary requirements.

Finally it must be accepted that finding and defining a price band is not only elusive, it could be dynamic. As soon as the oil price nudges into the upper or lower zones, the dynamic relationships of supply and demand would adjust, and the price would be affected.

3. Reforming Reference Pricing

The current price regime for oil in international trade was introduced in the second half of the 1980s and is known as “reference pricing”. The concept of a ‘market-related’ system which involves a formula linking the price of a given export crude to a reference price (or a set of reference prices) arising in a particular market was pioneered by PEMEX in 1986. The pricing formula has the following form: Export price of crude X = Marker price (or prices) R plus or minus adjustment factor F.

Initially the marker prices were *spot* WTI, *dated* Brent, or spot ANS, all prices for physical (wet) oil barrels. The logic is that a marker price must be generated in a physical market where the transactions are sales and purchases of barrels of oil. However, these spot markets of marker crudes have problems: they are very thin; the number of price quotations for actual transactions is very small; they can be more easily squeezed than very liquid futures markets. Most exporting countries have therefore replaced dated by futures Brent, and spot WTI by the NYMEX price of the contract for light sweet crudes. So Brent, WTI, Dubai/Oman etc. remain the marker crudes but the relevant prices of the first two are taken from what is in essence a market of financial instruments.

The economic price of a commodity, a good or a service is the price that arises from the interaction of the supply of and the demand for this commodity, good or service in a market where sellers and (buyers) offer and (purchase) them.

In contrast, for oil the price of a physical barrel in international trade is linked very closely to that of a futures contract. This price results, of course, from the interaction of supply and demand; but of the supply and demand for this item, which is a futures contract, not a physical barrel of oil.

The determinants of a transaction in the futures market include expectations about developments in the supply of and demand for oil. In that sense there is a relationship with the physical oil world, but not to actual conditions at given points in time. The point is that in a physical market the buyer purchases a commodity, good or service because it has a place in his/her consumption or investment plans - but purchases are sometimes also made or deferred in response to expectations about changes in prices or other supply conditions. In a futures market the trader will buy or sell not because he has a *physical need* for the item but entirely on the basis of expectations about subsequent price movements.

There are other determinants for transactions on futures markets that are not related to the oil situation. This is because the futures oil contract is a financial instrument, held by many economic agents (particularly hedge funds, banks, other financial institutions) in a portfolio of various financial instruments. The aim is to optimise the composition of the portfolio. Funds move in or out of a

financial market, be it oil, bonds, foreign exchange etc. etc., depending on relative expectations.

Hence a decoupling between price movements in the futures market and the economic fundamentals of the supply of, and demand for, the physical barrel may occur from time to time.

The current oil price determination system can be described succinctly as follows:

(a) The marker prices are determined in two futures exchanges – NYMEX in New York and IPE in London.

(b) OPEC attempts to influence price formation on the futures exchanges in two ways. The most important is by signalling its price preferences by altering the level of its policy-determined production ceiling (and the associated production quotas). Another signalling device was the adoption a few years ago of a price band.

(c) Those that buy or sell futures contracts may or may not respond to the signals. A positive market response to an OPEC (production) signal depends on whether OPEC appears to be united in the making of the policy decision; on how credible (that is how realistic) the OPEC policy decision appears to be; and on whether the market is taken by surprise by the policy decision or whether it had widely expected it and therefore fully discounted it in the price.

(d) Both OPEC and the market continually assess the likely future movements in supply and demand, the factors that may cause either curve to shift in one direction or the other, and numerous sources of uncertainties - the most important being those which affect the world economic outlook and the geopolitical situation (for example, in Iraq).

Is it possible to improve on the current, flawed functioning of the oil market and bring about greater adherence to market fundamentals? Both the oil producing countries and the major oil importing countries have an interest in oil price stability, but also in prices that are responsive to market conditions, and therefore sustainable in the long run. There is an obvious trade off between these two objectives. Provided a market design could be arrived at, which simultaneously guarantees greater price stability and responsiveness to market conditions, both sides would probably see its merits.

A combination of greater price stability with increased reliance on market mechanisms may be brought about by the development of active new physical oil markets: candidates are in the Mediterranean, in the Gulf itself, and probably in the Far East (Southeast Asia). The project examines in particular the prospect that a liquid physical spot market might develop in the Eastern Mediterranean, and asserts that this should be an important priority for the EU. An Eastern Mediterranean spot market does not require the participation of the GCC oil producing countries, but would benefit from it.

The actual benefit of developing new physical oil markets will depend from their design. The European Commission should take steps to ensure that they are transparent, based on standardised contracts traded in an exchange, and with numerous players. While in the end the success and shape of new markets depends on the action of sellers, buyers and intermediaries, rather than on government intervention, governments and the Commission can encourage/facilitate the creation of markets and influence their design.

However, in order to ensure that fundamentals play a more important role in price formation, the active participation of oil producing countries will be necessary. **The project argues in favour of either one or both of the following developments:**

- **Allowing secondary trading and the development of a secondary market in major crude oil;**

- **And/or primary trading based on recurrent auctions with uncertainty in the seller's supply.**

If only secondary trading is allowed, a lot of information will be gained for price discovery, and the oil exporting countries will gain a much more direct influence on prices through variations in volumes exported, relative to what they have now. If auction-based primary trading is opted for, the price determined in such auctions will become the guide to the market, and volatility may be very fundamentally reduced. Nevertheless, the market would still be very active, indeed more active than under the current reference pricing system; producers would receive its signals and be able to respond to them.

Ideally, the EU should propose an exchange-based trading system with frequent primary auctions for the major crude oils – organised in an appropriate weekly or monthly calendar – coupled with continuous secondary trading of standard parcels.

4. A Cooperative Approach to Strategic Stocks

The project has analysed the policy of accumulating strategic stocks as it has been practiced in the US, Europe and under the IEA Emergency Response system, as well as the recent debate within the Union concerning the possibility of increasing the level of mandatory stocks from 90 to 120 days of consumption. This analysis points to several problems in the definition of an effective policy for the accumulation and utilisation of strategic stocks, notably:

- The difficulty of defining the appropriate level of strategic stocks
- The impossibility of distinguishing the use of stocks in "strategic" emergencies from their use as market intervention tools
- The very limited and seemingly ineffective use of the stocks in actual experience.

Such doubts have also been voiced in the context of the proposals to increase Europe's strategic stocks put forward by the Commission in 2002 and withdrawn in 2004.

Private stocks and demand flexibility

Against this backdrop, the project proposes that a clear distinction be made between the wisdom of maintaining large public stocks and that of encouraging large(r) private stocks. The problems concerning public stocks are very much related to their public nature – that is to the need to have clear activation criteria, cost-benefit analysis, and differentiation between emergency contingencies and market intervention. None of these arguments applies to privately held stocks, and the wisdom of encouraging private actors in the industry to hold larger stocks would appear to be out of discussion.

The drive towards cost cutting and maximisation of return on invested capital has meant that all companies have strived to minimise their working capital, and one way to do so is to reduce stocks and progressively eliminate all redundancies in one's logistics system. The consequence is much greater vulnerability to supply disruptions.

The debate about insufficient investment under conditions of market liberalisation is ongoing, and may be expected to eventually converge on solutions that will re-establish some stability and resilience to the system. This debate, however, mainly concentrates on network energy, and appears to have overlooked the problems of the oil industry.

We may think in terms of adopting regulations at various stages in the industry mandating a certain level of stocks and redundancies in several crucial facilities, which may contribute to the overall reliability of the system. In a sense, this is what is done when oil companies are mandated to maintain stocks equal to at least x days of consumption – except that these stocks are then called strategic and are not freely controlled by the companies themselves. **It is proposed to introduce rules to mandate companies to maintain stocks of crude and products as well as a certain redundancy in capacity in crucial logistics or refining capacity, but allow the companies to more flexibly use such stocks and excess capacity when they feel a need to do so**.

Major users of oil products and gas should also be encouraged to invest in flexibility. Depending on the circumstances, this may mean maintaining a dual firing capability, or maintaining sufficient stocks. Consumers should be educated about the volatility of energy prices and encouraged to protect themselves against it. Presently, contractual instruments that may allow this are not on offer, but they might be encouraged or even mandated on oil product suppliers. E.g. **requesting oil products suppliers to offer contracts that will guarantee prices or limit price increases to the final consumer over a given period of time may create sufficient incentive in the industry to hold larger stocks and invest in redundancy.** Such contracts are certainly feasible on the basis of direct or indirect trading on futures markets – but are out of reach for the individual or small consumer.

Similarly, **limiting by regulation the extent to which refiners, distributors and major industrial consumers can transfer oil price increases on to the final consumer would encourage futures trading and holding of stocks**.

The discussion on oil stocks cannot be separated from the discussion on the volatility of crude oil prices, and that strategic stocks should be understood in a very narrow sense, and resorted to only to deal with actual and clearly identifiable exceptional circumstances; otherwise the emphasis should be on creating a more resilient and stable international oil trading environment, which will dampen the shocks to which the final consumer is exposed.

Cooperative management of supply emergencies

The hypothesis of some kind of cooperative management of supply emergencies has been greatly enhanced by the informal agreement between the Executive Director of the International Energy Agency, Claude Mandil, and the Minister of Petroleum of Saudi Arabia, Ali Naimi, in the run-up to the 2003 war in Iraq. The agreement envisaged that Saudi Arabia would use its unutilised capacity to make up for any shortfall in global crude oil supplies, and the IEA would abstain from using its strategic stocks. This agreement constitutes a powerful and extremely significant precedent, because it

implicitly asserts that existing unutilised capacity in Saudi Arabia is the first line of defence against unexpected and undesirable interruptions or disturbances in the regular patter of crude oil supplies.

Although the Mandil/Naimi understanding is a purely informal pact, it has been publicly described by its two parties, and not objected to – therefore implicitly ratified – by their respective constituencies. We may therefore speak of an informal agreement to cooperatively manage unutilised capacity and strategic stocks to compensate for unexpected and unintended shortfalls in crude oil availability. In this context, several interesting questions become of relevance.

Firstly, **the major industrial countries cannot be indifferent to the existence of unutilised production capacity**. Indeed, the interest of the importing countries in having a sufficient cushion of unutilised capacity available for situations of stress is clear. Nevertheless, the importing countries do nothing to share the investment burden, which is required to maintain such unused capacity. Indeed, the importing countries constantly claim that the producing countries should allow more of an involvement of the international oil companies in investing upstream – however the international oil companies are certainly not interested in investing in unused capacity. It is probably impossible to envisage that governments of the importing countries would contribute to the financing of investment in unused capacity; however, in the context of a cooperative approach to dealing with supply emergencies, **the investment by producing countries in unused capacity should be credited to them as their contribution to the overall stability of the system**.

Secondly, the issue of location of stocks: should stocks necessarily be held in the EU or may they be held outside of the Union? The Commission has explicitly indicated: “stocks could be held in the EU Member States and candidate countries or equally in producer or transit countries”. This opens the door to some very interesting possibilities that deserve in depth discussion:

- **The EU might decide to invest in the creation of storage facilities offering their use for free to producers wishing to “deposit” their crude in them.** Producers would retain ownership and control of the crude under normal circumstances, but the EU would be allowed access under emergency conditions. Producers might receive a certificate for the crude they deposit in the storage, which they might use as collateral to borrow from the financial system. The European Investment Bank might specifically be mandated to issue loans against these certificates, e.g. to finance investment in creating unutilised capacity in the same producing countries. The availability of such an “oil deposit window” would encourage producing countries to abandon the attempt to modify their production levels in anticipation of changes in market balance: experience has told us that such anticipations can prove unfounded, leading to even worse market imbalances. The ability to divert oil to a “deposit window” in case of weak demand, or to withdraw from it in case of unexpectedly strong demand, would enhance the ability of major producers to maintain prices at levels close to their targets.

- **Storage facilities might be created in connection with major pipelines.** They might, in this context, be functional to the stability of the Mediterranean crude oil market, whose creation is anticipated and encouragement proposed. For crude oil originating in the GCC countries, which would enter the Mediterranean primarily through the Suez Canal and/or the SUMED pipeline, creation of storage facilities in Egypt might be considered.

- **Strategic stocks should include not only crude oil and oil products that have been sold by the original owner to a titleholder of a different nationality.** National oil companies of the producing countries should be encouraged to integrate downstream into refining and marketing in the EU, and thus become subject to stockholding obligations and own stocks within the EU. National oil companies of the producing countries should also be encouraged to establish stocks of crude oil – possibly for trading purposes – within the territory of the EU.

5. Economic Diversification

All oil-producing countries pursue the goal of economic diversification. As long as they remain pure exporters of crude, the GCC countries have all incentive to maximise oil revenue, even to the detriment of global prosperity. But the more they become integrated into the global economy, the more their perspective will change.

Economic diversification must be based on the areas of strength and comparative advantage. In this context, diversification into downstream oil production, petrochemicals, and other energy-intensive industries is of paramount importance. Although there may be other areas in which the GCC countries may enjoy or acquire competitive advantage, it is difficult to conceive of a satisfactory scenario of economic diversification that does not make the best of their resource endowment.

In the long run, the GCC member countries must become fully industrialised, and assimilated to the industrial countries that are members of the OECD. Several OECD member countries are also major oil exporters, Norway first and foremost, and they too of course care about maximising their oil and gas export revenue, however the quality of relations with them is widely perceived to be more cooperative than with the GCC member countries. The difference clearly lies in the level of industrialisation.

Downstream integration of the oil producing countries

Downstream integration, including in refining and marketing in the major importing countries, creates greater market stability by facilitating the feedback from the final consumer market to the upstream producer. Greater awareness of consumer demands, better control of market share, greater attention to product quality, are all-important to preserve consumer acceptance in the long run.

Environmental issues also come into play. Transporting lighter products poses less of a hazard to the natural environment in the event of an accident, while the worst hazard is created by the transport of heavy fuel oil. The EU's stated intention of pursuing a reduction in the maritime transport of crude oil across the Mediterranean would best be served by promoting refining close to the source and transportation of lighter, more volatile products, accompanied by severe restrictions on the transportation of heavy fuel oil.

Strategic storage of oil products can deliver much greater security than the strategic storage of crude. Not all oil products may be said to be equally essential, and the storing of products may allow guaranteeing consumption of the essential needs for a longer period, *coeteris paribus*. It is noteworthy that

the EU strategic storage policy has been essentially aimed at guaranteeing the storage of products.

In the industrial countries, refineries have long been the least “beloved” segment of the integrated oil companies, and frequent attempts have been made to restructure the sector and reduce capacity. This has generally pitched companies against governments, because restructuring is facilitated by cooperation between all oil companies, i.e. by restriction of competition. National governments and the EU commission have opposed this, preventing oil companies from implementing cooperative agreements aiming at reducing refining capacity. In other words, the competition authorities in the industrial countries may have slowed down a process of industry restructuring, which is widely recognised to be necessary and in the best interest of the consumer in the longer run.

In addition, environmental requirements (especially the requirement for site restoration) have greatly increased the cost of permanently shutting down a refinery, encouraging less drastic approaches. The resulting excess capacity has depressed refinery returns, thus also hindering the upgrading of refineries and the improvement of the quality of products.

In short, it is not clear that the alleged advantage of locating refineries close to markets rather than close to the source of crude oil reflects truly objective and technical factors, rather than artificial obstacles brought about by legal and regulatory specificities.

The GCC countries may progressively change their profile and become suppliers of more products and less crude oil to the Mediterranean market – while at the same time extending their marketing presence in the European markets, so as to better control their market outlets and share. From the point of view of the European Union, the potential advantages and disadvantages of this possible evolution should be weighted carefully. It is likely that this evolution might be resisted or encouraged through appropriate regulatory decisions, on a wide range of aspects going from environmental requirements for the transport of crude oil and oil products, to requirements for holding of strategic stocks, or relevant rules pertaining to the closing of refining capacity.

The consideration of advantages and disadvantages should be conducted in the light of the previously exposed arguments in favour of supporting the economic diversification of the GCC member countries. **If we accept the hypothesis that supporting GCC economic diversification will contribute to the security and stability of supplies, then surely facilitating downstream integration of the oil producers into refining is a step in the right direction.**

Petrochemical exports and the question of "double pricing"

The rapid growth of production of commodity petrochemicals in the oil producing countries has been viewed as a threat by the industry in Europe. The European chemical industry has for many years claimed that petrochemicals production in the GCC countries was unduly subsidised, and successfully bid for protection. This has been a serious bone of contention in EU-GCC relations ever since the signing of the 1988 cooperation agreement.

In the context of EU-GCC relations it is extremely important to reach an agreement opening the door to greater openness of the European petrochemical products market.

All GCC member countries have ambitious programs to develop their petrochemical exports. With the exception of Saudi Arabia, all GCC member countries are members of the WTO, and no action has been initiated under the WTO to argue that the production of petrochemicals is subsidised. Indeed, the fact that petrochemical production is expanding also in countries where the industry depends on imported feedstock, such as Bahrain or Dubai, proves that subsidies cannot be the reason for the industry's success and competitiveness.

In view of overcoming the remaining difficulties with respect to the pricing of NGL to the petrochemical industry in Saudi Arabia the following action plan is proposed:

1. The Saudi Government should pass a resolution abolishing all previous decisions concerning pricing of LPG and affirming the full autonomy of Saudi Aramco in establishing a pricing structure in line with the company's own long term strategic objectives. The new resolution should preferably note that Saudi Aramco occupies a dominant position on the domestic market for LPG and should not abuse it. This may be achieved if e.g. contractual conditions for the supply of LPG to domestic customers are agreed upon through a process of collective negotiations between Saudi Aramco and its industrial customers, and the same conditions are offered to all domestic customers, existing as well as new. The resolution should also assert that Saudi Aramco is required to extend to all international customers that are in the same conditions as domestic customers equivalent contractual conditions. Possibly, the resolution should also establish a special arbitration board to settle disputes or mediate between the parties in the absence of an agreement.

2. An association of all industrial users of LPG should be formed, including SABIC, all of SABIC's joint venture partners, and other private Saudi petrochemical. This association should preferably be set up entirely independently of Government initiative, although the Government may acknowledge its existence and affirm its right to negotiate with Saudi Aramco on behalf of all industrial users of LPG. The association should be open to all "captive" customers of Saudi Aramco. A "captive" customer is one which has no supply alternative and necessarily depends on Saudi Aramco for its supply of LPG. Operationally speaking, "captive" customers shall be defined as

customers served by pipeline, independently of the fact that they may be located within the borders of the Kingdom or outside of them.

3. The current government-sanctioned pricing structure should be replaced by a freely negotiated contractual agreement between Saudi Aramco and the Association. The agreement may be valid for a fixed period of time (e.g. five years) and be renegotiated thereafter. In the absence of a new agreement whenever one is due, compulsory arbitration shall be envisaged.

In judging of the prospects of GCC exports of commodity petrochemicals it should be kept in mind that all major European oil and chemical companies are divesting their commodity petrochemicals businesses, because it is not viewed as promising enough. In one case (Netherlands's DSM) the business was sold to SABIC of Saudi Arabia. Previously, ENI had been negotiating the sale to SABIC of 50% of its ENICHEM subsidiary, as a step to reduce its involvement in petrochemicals. Two other major European companies, Basell and Lanxess, are currently in the process of being either sold or floated in dependently by their respective parent companies (Shell, BASF and Bayer).

In the light of these realities, the EU and the GCC should engage in a dialogue to achieve a more advanced model of division of labour based on transferring the production of commodity petrochemicals to the Gulf. This may involve issues related to the privatisation of GCC petrochemical companies and the preservation of competition between them, avoiding the creation of a dominant company enjoying excessive market power. In other words, the EU has legitimate interests that should be preserved, but these do not coincide with the all-out defence of European commodity petrochemical producers, whose best strategic option may well be to be acquired by Gulf producers and become part of the latter's global drive.

6. Gas dialogue

The project's research has highlighted the obstacles that continue to hinder an agreement to implement the GCC Gas Grid, which has been on the drawing board since the early 1980s. Instead, Qatar, the main promoter of gas interconnection in the Gulf, has been trying hard, without big success until now, to link with its GCC neighbours, such as Bahrain, the UAE, Oman and Kuwait, through single and segmented projects

One of the reasons for that failure could be the little experience of the GCC in building and operating gas transportation networks or grids. Here, we believe that a EU-GCC dialogue may be extremely helpful, with the Europeans bringing to mind their experience in the gas industry and its transport sector.

In addition, 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 GCC could also learn from the EU experience regarding power and gas deregulation and liberalisation, as well as the links between domestic prices of petroleum products and those of natural gas.

As a way to encourage and promote a GCC Gas Grid, the EU could well encourage European companies to establish natural gas consuming and export-oriented value-added downstream ventures and related industries in the GCC region. This is especially true if the future gas development in the region would be "reoriented" more and more towards domestic markets due to export constraints and market saturation.

Establishing a GCC-wide gas grid is an important prerequisite which would facilitate the serious thinking of building a pipeline between the GCC to the Near East and Europe. In fact, in order for the Qatari gas reserves to be supplied by pipeline to the nearest point connecting with the European gas network, they must be channelled through one or more GCC countries.

Bringing natural gas from the GCC, and more specifically Qatar, to Europe, requires solving a complex puzzle of several pieces, all of which must fall in place. Nevertheless, if an export pipeline is put in place linking Qatar to Turkey across Saudi Arabia, Jordan and Syria and capable of serving Lebanon as well, several very important objectives would be served. It should be pursued as a priority in the context of a EU-GCC Partnership. That would go hand by hand with the EU support of the Arab Gas Pipeline project, which is to link Egypt with Jordan, Syria, Lebanon, and ultimately Cyprus and Turkey.

To some extent, diversification of gas supplies to the EU can come from increasing imports of LNG – which being transported by ship, enjoys greater

flexibility, at least in theory. Let us here focus on. Since 2001, Qatar has concluded many landmark deals aimed to supply its LNG into European markets.

While GCC-EU gas trade must develop in a competitive environment with operational responsibilities resting firmly with the gas industry, the GCC and European Union can play an important role in coordinating and supporting this trade. The establishment of an advisory body to facilitate the development of common gas strategies and the exchange of information between the GCC and EU gas industry and buyers could make an important contribution to gas trade. Such a body is particularly important in the current period of transition to a competitive gas market as uncertainty can impede the development of investment and trade.

A dialogue between the GCC and EU gas industries and transit countries is also important in the context of facilitating and safeguarding new investment and commercial opportunities. New opportunities for foreign participation in the GCC gas and downstream industries are emerging and this should stimulate the development of trade.

The emergence of risk mitigation strategies and financial instruments is an important development that is not yet fully exploited in the gas industry.

The EU is already making a direct political and financial contribution to the development of gas infrastructure through its Trans European Network (TEN) programme. A closer dialogue with the GCC could have an impact in identifying and prioritising new projects that could facilitate the development of gas trade with the GCC.

7. Development of Renewable Energies, Promotion of the Rational Use of Energy and Reduction of CO2 Emissions in the GCC Region

The project has conducted a thorough analysis of opportunities for the development of renewable energy sources (RES), the promotion of the rational use of energy (RUE) and the reduction of CO2 emissions in the GCC region. The project also points to a preliminary list of projects, which could be undertaken in the context of EU-GCC cooperation.

In the longer run, the most promising opportunities for cooperation in the reduction of CO2 emissions may be found in the search for more advanced, cleaner fuels, and in the capture of CO2. A recent study of the International Energy Agency has highlighted that the oil producing countries of the Gulf are the ideal candidates to develop carbon sequestration.

It should be noted that **concentration of refining, petrochemical and other energy intensive activities close to the main hydrocarbon fields is environmentally sound, because it facilitates carbon sequestration and the reduction of emissions**. To the extent that the global economy will move, as some predict, from using petroleum products to using hydrogen and fuel cells in transportation and stationary uses, the GCC member countries will be able to compete as producers of hydrogen. The latter is in fact not found in nature, but must be produced, and one of the easiest methods of doing so is the steam reforming of hydrocarbons – methane or some of the products of refining crude oil. Steam reforming of hydrocarbons is a process generating significant carbon emissions, which the GCC member countries would be in a position to sequestrate cheaply and efficiently. In short, the strategy of integrating downstream and exporting quality petroleum and petrochemical products rather than crude is fully in line with the Kyoto protocol and is not vulnerable to changes in the technology and fuel preferences of the major energy markets.

The EU and the GCC should engage in dialogue to promote RES and RUE and experiment with carbon sequestration and cleaner fuels, in view of developing technologies to protect the environment while at the same time making the best possible use of scarce energy resources.

8. The GCC Member Countries and the Energy Charter Treaty

Although members of the GCC were not asked to participate in the Energy Charter Treaty negotiations, no provision impedes their eventual membership. While the main objective of the Treaty was to build an energy community between two sides of the collapsed iron curtain, its scope has expanded by granting observer status to other important energy producing countries, from Algeria and Nigeria to Iran and all members of the GCC.

The ECT provisions not only guarantee the safe and secure investment in, and trade with GCC countries, but also contribute to their industrial development, and protect their outward investment and trade. In January 2003, the Secretary General of the ECT Secretariat highlighted the 'tremendous advantages' that accession to the Treaty would bring to oil and gas exporting countries'. The ECT seeks to overcome existing legal problems of today's energy environment and guarantee stable political and economic cooperation. For that purpose, membership of the ECT would make the voice of some of the most important energy-rich countries heard in the progressive definition of an energy regime at the international level. The ECT has created a preferential investment, trade and transit area that the GCC countries should be interested in being a part of.

9. Concluding remarks

The EUROGULF project has generated an important body of analysis and several innovative proposals, some of which can be undertaken directly by the EU and the GCC, other may be promoted by these two groupings in other institutional contexts, notably the IEA and OPEC. The International Energy Forum also offers an institutional framework for the promotion of new forms of cooperation.

Most of the proposals put forward in the project to enhance EU-GCC cooperation could also be taken up in other regional contexts. Thus, for example, the adoption of new price determination rules on the part of the GCC major oil producers would have global significance – not just for the EU and the GCC; the development of a spot market in the Eastern Mediterranean is primarily, but not exclusively, of regional interest; it could be mirrored by the parallel development of new spot markets in the Far East or elsewhere.

Innovative approaches to strategic stocks would have global significance and impact, although specific mechanisms, e.g. the creation of the proposed “oil deposit window” should be established on a regional basis (but could be imitated in other regions).

Economic diversification issues also have a global facet, which is best dealt with in the context of the WTO, and a regional dimension, to the extent that trade in petrochemicals has been an area of conflict between the EU and the GCC.

The development of gas networks connecting the GCC countries is primarily of interest to the countries themselves, and indirectly of global interest; the establishment of pipeline connections between the GCC and Europe is of regional interests, but parallel developments have been discussed in the direction of Eastern markets.

Measures to encourage reduction of CO2 emissions are of global significance, although the EU has maintained a keener interest than other international actors.

Finally the question of GCC membership in the ECT is primarily for the Energy Charter Secretariat to deal with, although the Union has a major voice.

EU-GCC energy cooperation is therefore per force institutionally complex and cannot be conceived of in isolation from dialogue and cooperation in a broad array of international institutions and forums. It should not be viewed as aiming at the establishment of preferential ties – which would be unrealistic and finally unnecessary – but at improving global conditions in the international exchange of oil and gas, to the benefit of all.

17/03/2005

Robert Schuman Centre for Advanced Studies and the Mediterranean Programme

The Robert Schuman Centre for Advanced Studies carries out disciplinary and interdisciplinary research in the areas of European integration and public policy in Europe. It hosts the annual European Forum. Details of this and the other research of the centre can be found on: **http://www.iue.it/RSCAS/Research/**.

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The ***Mediterranean Programme*** was set up at the Robert Schuman Centre for Advanced Studies of the European University Institute in 1998. It focuses on the Mediterranean region.
The Mediterranean Programme engages in research with the twin aims of: a) generating intellectually excellent scholarly work; and b) contributing to the general policy debate relating to the flows of persons, goods and ideas between and within the Northern, Eastern, Southern and Western Mediterranean areas in its four core fields of interest: EU–Mediterranean/Middle East Relations, Political Regimes, State, Economy and Society in the Middle East and North African, International Migration, Energy Relations in the Mediterranean region.

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Energy relations with the Mediterranean, Gulf and Central Asian countries is a key area of expertise within the Mediterranean Programme. Current work covers: regulation of energy markets; issues in the efficiency and stability of global energy markets; and development of gas exports and regional transportation networks.

EUROGULF Project
"EUROGULF - An EU-GCC Dialogue for Energy Stability and Sustainability" is a project supported by the European Commission, DG TREN, under the Synergy Programme. This project is led by the Mediterranean Programme, in co-operation with the Oxford Institute of Energy Studies, the National Technical University of Athens and ECONERGY Sal of Beirut. The project runs from May 2003 to April 2005. The first workshop took place in Riyadh on 5 and 6 April, 2004. The second workshop in Florence, in November 2004. The final conference will be organised in Kuwait 1-2 April 2005. An outline of this project is posted on the Programme's web site.

EUROGULF-HCT Project
"EU-GCC Co-operation through the Promotion of Hydrocarbon Technology Transfer – Improving the EU Security of Supply" is a project sponsored by the European Commission, DG TREN, under the programme "Energy, Environment and Sustainable Development". It is led by the National Technical University of Athens in co-operation with the Mediterranean Programme and others.

MEDSUPPLY Project
"MEDSUPPLY – Development by southern and eastern Mediterranean countries of energy sources for Europe" was a project supported by the European Commission, DG TREN, under the Synergy Programme, and operated by a consortium consisting of the Observatoire Méditerranéen de l'Energie (OME) of Nice, the Mediterranean Programme and Sonatrach corporation of Algeria. The project was concluded in May 2003 and all project reports are available on CD Rom upon request. A presentation to DG TREN was held in Brussels on 9 October 2003.

Caspian Oil and Gas Scenarios
The Programme jointly organised with the International Energy Agency (IEA, Paris) a Conference on "Caspian Oil & Gas Scenarios: After a decade of rising expectations, what will a factual analysis decide for the decade to come?" which was held in Florence on 14–15 April 2003. The conference papers are available on the web pages of the Mediterranean Programme and the IEA.

Insuring Against Disruptions of Energy Supply (INDES)
Insuring against Disruptions of Energy Supply (INDES) was a project organised by CEPS in co-operation with the Mediterranean Programme and other partners with funding from the Fifth Framework Programme. Materials from this project are available from the project's web site **http://www.energymarkets.info/indes/index.html** .

Conferences on the Geopolitics of Energy
In conjunction with the Oxford Institute for Energy Studies, the Programme organised a conference on *Energy: Interdependence or Conflict Across the Mediterranean*, which took place on April 26 and 27, 2001. The keynote speech was given by Ms. Loyola de Palacio (Vice President of the European Commission and Commissioner in charge of Energy and Transport).
Since 2002, the Programme has organised in Florence an Annual Conference on the Geopolitics of Energy in association with the Aspen Institute Italia.

- The first conference ("Emerging Challenges in the Field of Energy Policy for Europe, the USA and Russia") took place on July 9 & 10, 2002. Some of the materials were published in Aspenia as well as in Medenergie.
- The second conference ("The Geopolitics of Energy**:** The Asian Shift**")** tool place on 8–9 July 2003; the complete materials were published in OGEL.
- The third conference took place on 8&9 July 2004; the complete materials are posted on the RSCAS website.

All conferences were characterised by high-level participation from academia, international organisations (European Commission, International Energy Agency, OPEC) and energy companies.

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