



PRODUCER - CONSUMER DIALOGUE
What Can Energy Ministers Say To
One Another?

Report

John Mitchell, November 2005



Producer - Consumer Dialogue: What can energy ministers say to one other?

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REPORT

November 2005

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The views expressed in this paper are solely those of the author, and not those of Chatham House or of any of the participants in the workshop on this subject which was held in Chatham House in April, 2005.

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SUMMARY AND CONCLUSIONS

The development of exceptionally high oil prices since mid-2004 has attracted increased political attention. It is likely to be a key theme of the International Energy Forum meeting of ministers scheduled for 2006 in Doha. These high level discussions may provide a political stimulus for further development of a producer-consumer dialogue additional to the international trade which unites billions of consumers with hundreds of oil producing enterprises.

The Ministers in Doha will face a difficult challenge in advancing the shared aspirations which they identified at their 2004 Amsterdam meeting. This paper reviews some possibilities. The key problem is that while the question of price stability is not handled by any other international governmental forum, it is very difficult to see practical means by which it can be addressed by governmental co-operation. For other issues, existing international forums exist, though there may be scope for co-operation on common producer-consumer interests within those forums.

There is no existing international mechanism, other than the world oil market, to address the instability of oil prices, nor do prices change particularly erratically over the long or medium term. Short-term price surges and falls, which are damaging to consumers and producers respectively, might however be mitigated by a "Standby Arrangement" which would formalize and strengthen existing practices for dialogue and informal co-operation between governments during such events.

Access to capital, technology and markets may be improved through more use of the already expanding procedures in the General Agreement on Tariffs and Trade (GATT), the World Trade Organisation (WTO), and the General Agreement on Trade in Services (GATS). An informal group of key exporting and importing countries might be helpful in highlighting energy-specific opportunities within these processes.

In the Atlantic –Mediterranean area, where trade is commoditized, government agreements mainly concern general rules and legal procedures for cross-border investments which are led by the private sector. There is more scope for dialogue in Asia, where governments of exporting and importing countries meet in various forums which provide a political context for government initiatives focused on specific investment projects.

There are concerns about the distortion of demand caused by high taxes on oil consumption in many importing countries, and high subsidies on consumption in oil exporting countries. In principle, it might be possible to address these through the WTO, but they are not included in the WTO Doha mandate.

Exporting and importing governments share the general aspirations and commitments, which affect energy, in the UN Resolution on Sustainable Development, the Johannesburg Plan of Action on Sustainable Development, and in the UN Framework Convention on Climate Change (but not the Kyoto Protocol). Under these frameworks, dialogue countries could consider together initiatives such as:

- International financial facilities to help, during oil price surges, those poor countries which depend on imported oil for power generation;
- Co-operation on some technology-based climate measure – such as carbon sequestration;
- Articulating proposals for compensatory measures (envisaged under Article 8 of the Kyoto protocol) for consideration in any post-Kyoto agreement;
- Developing criteria for "fairness between fuels" to relate emission control policies more scientifically to their climate objectives.

THE INTERNATIONAL ENERGY FORUM

Energy Ministers from the world's main oil and gas exporting and importing countries are beginning to prepare for the 10th meeting of their International Energy Forum (IEF) in Doha in April 2006. The forum has met every two years since 1991, alternately in an exporting and an importing country. Though the Forum's title refers to "energy" in fact the focus is on oil and gas. The Forum has no decision-making authority, but has been popular among energy ministers for the opportunity it creates for bilateral contacts. The first Secretary General, Ambassador Arne Walther from Norway, was appointed in 2003. In January 2005 the Secretariat assisted the Indian Minister of Energy in organizing the first of what will be a series of Round Tables of Asian Energy Ministers including the oil exporters of West Asia.

The agenda for the 10th Forum is likely to build on the conclusions of the 9th Forum meeting in Amsterdam. These indicated some shared interests:

- "Stable oil prices at a reasonable level" (Item 3);
- "Unhindered access to capital, energy technology and markets" (Item 7);
- The capability of Bilateral Investment Agreements and multilateral frameworks, including the WTO and the Energy Charter Treaty, to contribute to providing fair and equitable treatment, security and protection for foreign direct investment (FDI) (item 9);
- The use of energy and energy infrastructure to contribute to poverty alleviation and development, with a "smooth transition" to a "new energy era for the longer term" (including alternative energy resources) in the framework of the World Summit on Sustainable Development (WSSD) (Items 11 and 12);
- Better information (JODI: The Joint Oil Data Initiative) (Item 13).

The conclusions of the Asian Round Table of Energy Ministers¹ in January 2005 add some specific items:

- Expansion and improvements in Asian markets for gas and oil;
- "Criss-cross" investments to secure mutual interests.

International Energy Interdependence

Almost every country in the world imports or exports a significant part (mainly oil) of its energy consumption or production. Fuels accounted for 10.3% of World Trade in 2003², when the price of Brent crude was \$ 28.83 per barrel. The dollar value of fuel trade in 2003 was \$754 billion (bn), double the 1990 figure (these figures include intra-European trade of \$107 bn. of fuels).

In 2004 60% of the world oil production was traded internationally (excluding trade within the European Economic Area)³. By 2025 the traded proportion is projected to rise to over 70%⁴. The high level of oil trade reflects the geographical mismatch between resources and demand. Natural gas trade is more regional, but 18% of world gas production was traded internationally (not counting intra-EEA trade). This proportion is also forecast to increase. There is an open, international market in coal but it accounts for only 17% of world coal production. Oil products supply all the market sectors that gas or coal supply, and the international oil market therefore loosely binds all international fuel markets.

¹ Ministerial Round Table of the principal oil and gas exporting and importing countries of Asia in New Delhi

² WTO Statistics

³ EU plus Norway, Iceland and Lichtenstein.

⁴ USDOE: International Energy Outlook 2004. The IEA projections show a larger increase.

Import dependence

Changes in oil prices have a big effect on the balance of payments of the many countries where fuel is a high proportion of imports. In 2003, before the recent price surge, 86% of fuel imports went to countries where they formed more than 10% of all imports by value. 50% went to countries where fuel was more than 15% of total imports. Asian countries, which take just over 30% of world fuel imports, are more dependent. Two thirds of Asia fuel imports went to countries where fuel was more than 20% of total imports in 2003. India is one of the most vulnerable countries, with fuel (almost entirely oil) accounting for 32% of total imports in 2003. For India, a 10% increase in fuel prices would have required only a 4.7% cut in other imports or an increase of 3.2% in exports to sustain the same volume of fuel imports at the higher price.

For countries which are producers as well as consumers, prices for domestically produced oil and gas reflect international prices, so that the effect of price changes on the economy is greater than the effect on the balance of payments. Figure 1 shows this, using Purchasing Power Parity (PPP) estimates of Gross Domestic Product (GDP) for 2003. In Japan, with its efficiency of petroleum use, and negligible petroleum production, the exposure of the total economy to changes in the price of petroleum is limited to the balance of payments effect. In China the lower petroleum content of the economy accounts for the smaller impact of petroleum prices.

Figure 1 –Fuel vs. Purchasing Power Estimate of GDP for 2003

Country	Fuel imports, % of PPP GDP	Fuel imports + domestic oil and gas production at import prices: % of PPP GDP
Japan	2.3	2.3
EEA	1.6	4.2
US	1.5	3.7
Japan	2.3	2.3
China	0.4	0.9
India	0.6	1.0

Source: WTO Trade statistics, World Bank GDP statistics

Export dependence

International petroleum trade is more important for petroleum exporters than for importers. Because petroleum exports account for such a high proportion of total exports, and their value fluctuates, a good measure of exporters 'balance-of-payments' dependence is the share of their imports which is paid for by petroleum exports. For the Organisation of Petroleum Exporting Countries (OPEC) members, this is much higher than the dependence of Non-OPEC exporters, as shown in Figure 2.

Figure 2 – Export dependence: % of imports & services paid for by petroleum exports 2003⁵

OPEC Country	%	Non-OPEC	%
Algeria	98	Russia	38
Nigeria(est.)	94	Mexico ⁶	28
UAE	81	Norway	27
Iran	79		
Kuwait	75		
Saudi Arabia	74		
Venezuela	64		

Source: IMF country reports and national statistics

A 10% lower oil price in 2003 would have (roughly) required Nigeria to cut its imports by 9% or double its non-oil exports to pay for the same value of imports. Petroleum exports are the principal source of government revenue in many of the exporting countries. Governments depend on petroleum revenues to pay non-petroleum sector's fiscal deficit (where government spending exceeds tax receipts, and on which the non-petroleum sector depends). Figure 3 below shows the proportion of the non-petroleum sector's GDP that is dependent on government oil revenues in major exporting countries for which the information is available for 2003. Because this table shows the dependence of the relatively stable non-oil sector on oil revenues, it is not distorted by oil price changes. However, dependence will increase if high prices lead to more expenditure in the non-oil sector and if the high prices are not sustained this dependence will be unstable.

Figure 3 - Non-petroleum fiscal deficit as % of non-petroleum GDP, 2003

Country	%
Kuwait	90
Saudi Arabia	43
UAE	36
Algeria	35
Nigeria	35
Iran	20
Mexico	11
Norway	2

Source: Author's calculation; IMF Statistical Supplements to Country Reviews, National Statistics. The Kuwait figure excludes income from the Fund for Future Generations.

⁵ In all countries except Mexico, petroleum exports also contributed to a current account surplus as well as paying for the non-petroleum deficit.

⁶ In Mexico, which ran an overall current account deficit in 2003, oil exports paid for less than half the non-petroleum current account deficit in 2003.

Asymmetric governments

In importing countries with market economies, most governments have reduced their direct participation in the economy, including the energy sector, during the past 25 years. OECD importing countries dismantled price controls on oil products during the 1980s. Households, commerce and industry, unplanned by government, make up demand. Oil is imported, refined and marketed by competing companies in the private sector. Competition in the mainly private natural gas and electricity industries has been promoted by liberalisation in North America, Europe and Japan. Governments of importing countries have also withdrawn from oil and gas production. For example Elf (France) and ENI (Italy) were privatised in the 1990s; The Brazilian Government has reduced its shareholding in Petrobras to 56%. In China the oil industry has been partly privatised and reorganised into three major integrated companies, but there is a network of independent refiners and retailers. Broadly speaking, governments of importing countries can talk about commitments relating to incentives, regulations, and taxes, but only in the context of mainly competitive market economies.

In OPEC countries, oil and gas production was wholly or mainly taken over by state companies during the 1970s and 1980s. Outside OPEC, governments have a continuing role in the petroleum export sector. In Mexico oil is a state monopoly. In Russia, the government controls the export infrastructure. Though most oil production is in the new Russian private sector there is a state controlling interest, direct or indirect, in certain companies. The Norwegian government retains a controlling interest in Statoil. Roughly 60% of world oil exports are supplied by twelve state owned companies. Governments of the key exporting countries can talk about their state companies' commitments to investments, operations and quantities (or prices) for supply.

Overall, therefore, the real dialogue is in the market, between billions of consuming households and enterprises and a few hundred producing organizations, some of which have much more importance than others. Around the market, the picture is asymmetrical: governments can decide a large part of what will be produced, but not what will be consumed.

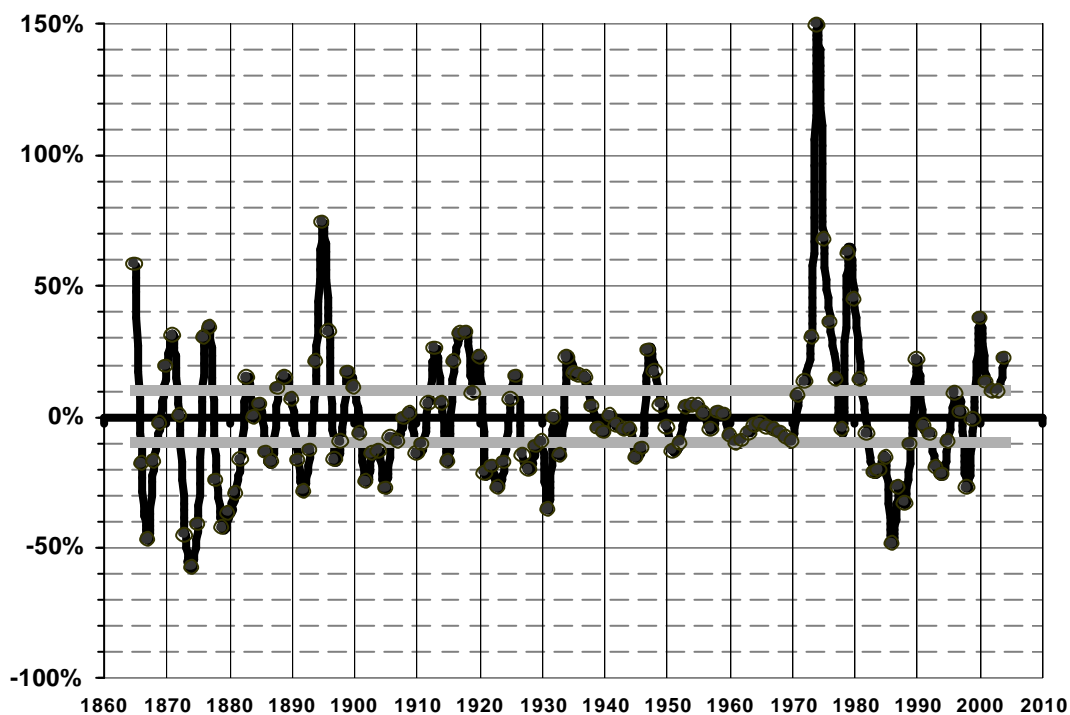
PRICE INSTABILITY

What kind of price instability?

Producers and consumers have many ways of adapting to changes, in long term trends which they themselves create, through the growth of demand, new technology, or the depletion of natural resources – including the environment. Medium term changes resulting from mismatches between demand and supply cycles can be influenced over a 5 to 10 year period by investment and related changes in regulatory and fiscal policy.

Temporary, abrupt changes in price are typical of the international oil market. The historical record shows relatively short periods of such changes which have developed quickly alongside what might be cyclical movements, with no clear historic trend. Sophisticated econometric studies produce similar, but more qualified conclusions: prices revert to means, which move over time; Price shocks persist, but not forever; and, the conditions prevailing when the shocks occur influence their persistence and their effect.⁷

Figure 4 - % Deviation of annual oil price (\$2003), from latest 5-year moving average



Source: BP Statistical review

Figure 4 shows the deviation in the annual average oil price (in 2003 \$) as a percentage of a moving average of that and the preceding four years.⁸ Only one year in four did the price move

⁷ For a review of literature of oil price econometrics, see Steven Barnett and Alvara Vivanco, Statistical Properties of Oil Prices: Chapter 5 in Implications For Calculating Government Wealth in Oil-Producing Countries IMF, 2003

⁸ The moving average incorporates cyclical and long term changes

outside 25% of the moving 5-year average. After each spike (up or down) the annual price returned to within 10% of the average in five years or less. Over half the time it was within 15%, and over a third of the time within 10% of the five-year average. The chances of a price spike above 10% of the moving average were only 27%, while the chances of a fall below 10% were 35%. This suggests strongly that policies which could reduce the extent and consequences of the spikes might go a long way to addressing the problems created by unstable prices, and that the exporters have the greatest interest in such policies.

Price shocks for exporting countries

Economic policy: be prepared

There is an “expert wisdom” about government economic policy in petroleum export dependent economies. It is summarized in the box below, which is based on the recommendations of the International Monetary Fund (IMF) staff which are published as Country Reports after their Annual Article IV consultations with governments of the major oil and gas exporting countries. These ideas are to a greater or lesser degree already being implemented, or at least endorsed, in most major petroleum exporting countries: they do not directly address the problem of fluctuating revenues (except by recommending stabilisation funds). Their effect would be to strengthen the flexibility and efficiency of the economy and the public sector as a whole.

- Governments should balance their budgets: therefore to maintain steady government expenditure in the face of fluctuating revenue, a stabilization fund should be established out of “windfall” revenues, and a fund for the future to provide income when oil is depleted. The two funds are not the same: stabilisation funds absorb surplus revenue when prices are high (preferably in investment outside the country, to avoid domestic inflation) but contributions may be halted or reversed when prices are low. Long term funds (such as the Kuwait Fund for Future Generations, and similar funds in Alaska and Abu Dhabi) cannot be used within the normal budget process. They are to provide revenue when oil runs out;
- Subsidized oil prices should be phased out, as part of establishing a sustainable fiscal balance for the government;
- The non-petroleum economy should be reformed by reducing State participation and intervention, liberalising markets, reducing protection, and opening to foreign investment so as to develop exports and tax revenue for the longer term. For most countries, the expansion of the non-oil economy (which the IMF reforms support) has an immediate priority because only such expansion can provide employment for a rapidly increasing national labour force.

Energy responses

As well as macro-economic choices, exporting governments and their state companies have to take decisions in the energy sector when faced with a “downwards” price change: these are not addressed in IMF consultations.

The first question is whether to increase production (if possible) to make up for revenue, risking more downward pressure on the price, or to restrict it, hoping that other exporters will do likewise, so that the price will increase. This is the classic “OPEC” decision, re-analysed whenever the oil price weakens. OPEC governments only control about 60% of oil exports, and the actions of other major exporters (such as Canada, Mexico, Norway, and Russia) affect the success of any OPEC decision.

The next question is whether capital programmes in the state controlled petroleum sector should be accelerated (so that the country can increase volumes in the medium term) or slowed down in a “wait and see” strategy until prices improve. Investment has not so far been the subject of agreement within OPEC. Member countries are in a paradoxical state of co-operating (sometimes unsuccessfully) to restrain production by quotas (based mainly on current production) when prices are low, while competing through investment for longer term market shares which reflect their different oil reserves and future production potential. During the long structural surplus of capacity between 1980 and 2004, production shares of individual countries, and their capacities, changed continuously, often while prices changed⁹

How can producer- consumer co-operation help exporters when the price collapses?

For a short term price collapse, there may be little that either importing or exporting governments can do together that they would not do separately anyway. If collapse was caused by economic recession in importing countries, their governments will be doing what they can to bring the recession to an end. If the collapse was caused, or exacerbated (as in 1998) by OPEC miscalculation or loss of control, the remedy can only lie in the hands of OPEC members.

What more could be done co-operatively to mitigate a price collapse?

Temporary, controversial interventions

- Importing governments could buy for their strategic stockpiles (if exporters' fears about the use of strategic stockpile could be mitigated, and some financial arrangements worked out) or;
- In extreme cases importing countries which were also producers might limit their own production. It is not clear that certain Governments, such as the US, would have the legal power to do this without new legislation which would be very difficult to achieve.

Take or pay contracts

In times of a shortfall of demand the importing companies could defer liftings but not payments. Importing companies would in effect be financing reserve capacity in exporting countries. They would look for guarantees from exporting governments that the deferred liftings would be available in the future notwithstanding OPEC quotas, and for supportive fiscal and regulatory treatment from governments of importing countries. Establishing credibility for access to the deferred lifting might be difficult, in view of the continuing decline of long term contracts in both oil and gas trade.

Finance for governments of new exporters

Price instability is a special problem for new, less-developed exporting countries outside OPEC where petroleum development depends on investments by international companies. The continued existence of the global market for oil provides, in a sense, a guaranteed outlet (but not a guaranteed price) for the new exports but “Production Sharing” agreements (PSAs) leave the revenue of the exporting country with much of the price risk, while the technical risk of a project is taken by the foreign investor. In new exporting countries without a portfolio of mature projects this exposure is a serious risk to government budgets and development plans.

⁹ See John Mitchell and others: *The New Economy of Oil*, RIIA/Earthscan, 2001, p 156-158
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In such situations there may be scope for multilateral or regional development funds to offer some offshore medium-term revenue smoothing facilities to the host country. Such funds could hedge the price risk through the international financial markets more cheaply than the developing country governments.

Medium and long-term co-operation outside the petroleum sector

Governments of importing and exporting countries can co-operate in developing exporting countries' non-petroleum economies:

- Through WTO negotiations, business in the non-petroleum sectors will get access to competing goods, services, and technology, and have the opportunity to compete in export markets;
- Through bilateral investment agreements. There is a growing network of these, with a tendency to include energy related or energy service related investments in the exporting country within the same framework of facilitation, most-favoured-nation treatment and dispute settlement;
- In free trade agreements, such as the European Union (EU), the Gulf Cooperation Council (GCC), which provide larger local markets, and more competition, for non-petroleum business in the region. If these are linked with an encouraging framework for investment from outside the region they could be a dynamic for growth.

Price shocks for importing countries

In a relatively developed and diversified economy, as in the OECD, industry and household decisions respond through markets to prices, taxes and regulation. The direct effect of oil price changes on government revenue and expenditure is relatively small. Such countries are in a completely different position from the petroleum export dependent countries described earlier. For undiversified, poor or less developed economies with precarious balance of payments and fiscal positions the story is different. This is not discussed here.¹⁰

If price increases are large, sudden and unexpected, there will be damaging effects, even in developed importing countries. Much of the damage appears to be due to relocation of resources, especially labour, at a micro level between sectors and firms within the economy.¹¹ How big these effects are, and how they are distributed within the country, depend on the size of the country's current account relative to its GDP, on the links between them, and on the policy response of the government. Importing countries' balance of payments may also be affected by where the exporting countries choose to invest their windfall foreign exchange surpluses.

Policy choices in importing countries with an oil price shock

For these situations there is a more or less conventional wisdom among economists. It is critical to decide whether to treat the shock as temporary or permanent. For a sudden, but transient shock, in OECD countries (and in rapidly growing, strong economies like China and India):

- Households will try to keep up purchases by borrowing;

¹⁰ There is a discussion in a draft UNDP/ESMAP paper by Robert Bacon "The Impact of Higher Oil Prices on Low Income Countries and on the Poor" March 8, 2005, available on the IMF website.

¹¹ For a review of the literature, see "Oil Price Shocks and the Macro-economy: What Has Been Learned Since 1996", Donald W. Jones, Paul N. Leiby and Inja K. Paik. The Energy Journal, Vol. 25.2, 2004.

- Firms may introduce temporary cost cuts;
- Government and Central banks may use balance of payments and fiscal reserves to maintain economic activity especially if there is spare capacity in the economy or there are other factors which would restrain the inflationary effect of cost of oil imports;
- More controversially they may consider consumer subsidies, temporary cuts in fuel taxes, price controls;
- Most controversially, government may consider releasing “strategic” or compulsory inventories, which are currently held under International Energy Agency (IEA), EU, or national legislation against the contingency of a disruption of oil supplies. Oil was released from these inventories once, during the First Gulf War. In 2002 the European Commission proposed, without success, the creation of a stock under the control of the EU Commission which might, in the event of a price shock, be released to the market.¹² It would also be possible to release inventories specifically to importers affected by a defined event such as a disruption.

Experience also suggests a flurry of political activity of uncertain benefit:

- Governments of importing countries will exhort people to drive less or “save oil in a hurry” by short-term behaviour which will lower consumption within the existing structure of demand, but which will not be sustained;
- There will be lobbying by special interests for measures which will only take effect in the long term: R&D into new technology, and incentives for alternate supply of consumption investment. These will have no effect on the short-term problem, and the short-term prices may be a poor guide to the choice of long-term options.

Matching policy to the problem

If the price shock is a symptom of a medium term problem, such as a mismatch of investment in supply and demand (as appears to be the case in 2003-5), the short-term policies of cushioning the shock would be wrong. They would be difficult to sustain if the price increase turned out to be long-lasting; they would introduce economic distortions which may eventually have to be unwound. Implementation would be bureaucratic, costly, and politically difficult. Households and firms really would need to reallocate resources. What mattered would be policies which increase flexibility in the labour and asset markets, together with regulation, and fiscal conditions that do not obstruct change. R&D and investment incentives would make sense.

Possibility of co-operation

Clearly, the use of inventories would be more secure and effective if importing countries co-operate with one another - otherwise the inventories will simply disappear into the international market. This is the rationale for the IEA co-ordination of response measures, and a weakness of the European Commission’s proposal for the unilateral use of EU stocks.

Similarly, broadly parallel macroeconomic responses by importing countries are likely to be less disruptive than a medley of conflicting policies.

What could co-operation with exporters contribute in the event of a price shock?

¹² EC COMM 2002 488 11.9.02

Information

Reducing uncertainty about the extent and duration of the price change would greatly simplify the task of choosing appropriate responses. There is little governments of major consuming countries in the OECD can add to public knowledge, reinforced by evidence from long term financial and commodity markets, about the future evolution of their economies and therefore of potential demand for fuel and of the potential for domestic supply. Information about oil stocks and short term demand history and projections in some countries (such as the US) is also detailed, prompt, and public.

In many oil exporting countries, the situation is different. OPEC members' production quotas and agreed pricing policies (when they exist) are highly publicised, though the accompanying arguments do not have the nuanced detail that the financial markets gain from the statements about monetary policy from the Federal Reserve Bank in the US, European Central Bank, or the Bank of England Monetary Policy Committee in the UK. In the oil exporting countries information about natural resource production, exports, capacity, reserves and resources, is the property of the government and is not necessarily public. In some countries such information is a state secret.

The JODI initiative of the IEF is intended to improve the coverage and timeliness of factual and historic data from both sides. It is focussed on timely provision of information on production, stocks, consumption and refinery inputs on a monthly basis. It remains to be seen how far it will go with capacity data or forward-looking information.

Increasing production quotas

OPEC countries have, in general, increased production quotas in response to increases in demand, using the information available to them (but not formal consultations with importing governments). Saudi Arabia has a policy of maintaining spare production capacity to enable it to increase production. These are unilateral policies by OPEC and Saudi Arabia respectively, in contrast to the provisions of classic UN commodity agreements where exporting countries are committed in advance to raise or suspend production or export quotas in the event of disruptive price increases.

A "Stand-by" arrangement for price shocks

If co-operation on the vital question of price stability is to go beyond rhetoric, exporters and importers could consider the scope for a co-operative arrangement, limited to the narrow objective of co-operation in response to extreme and rapid movements in the oil price for what were expected to be temporary conditions. Such a stand-by Arrangement:

- Would not aim at managing the price, but at co-ordinating responses to price shocks: these might be registered as deviations from a price band, or as events which disrupt the market;
- Would recognise the different roles of importing and exporting country governments while seeking a broad balance of benefits and responsibilities for a wide range of countries;
- Would not be an alternative to OPEC or the IEA, both of which have broader agendas.

Sketching out the basis for such Arrangement would not be a small task. It might include the following:

- Agreement on the conditions which justify action;
- Agreement on a menu of possible actions;

- A process (institutional or political) for deciding actions to be taken.

These are illustrated below: each point is for discussion:

Examples of conditions, all or some of which might justify action:

- Movement of “the price” outside a band for a defined number of weeks;
- A disruption of a defined proportion of supply due to “force majeure” defined in advance to include major physical accidents affecting production, transportation, or import, acts of war involving an important supplier or importer;
- A market collapse or surge (like the Asian crisis of 1998-9) in which global demand for imported oil falls or increases rapidly and beyond some band related to past imports.

Examples of a range of possible actions

Exporting and importing countries have different possibilities. Many actions would be taken any way, and might involve ad hoc consultation between some governments of exporting and importing countries. The Arrangement could “pre-approve” certain types of action and limitations on them, which, if taken following an agreed procedure of consultation would reduce uncertainty, minimise confrontation, and, in the interests of short-term stability, share the burden of action. Examples of actions could be:

In the event of a price spike or disruption of supply as defined:

- Producers would raise the level of export restrictions, production restrictions which have the effect of export restrictions, or production restrictions on oil or competing products (such as gas) in consuming countries;
- Importing countries would allow directly affected importers access to some proportion (to be designated as “flexible”) of that importing country’s strategic or compulsory stocks, or to some “insurance” stock created for the purpose.

In the event of a price collapse or disruption of imports as defined:

- Exporting countries would reduce the level of exports (usually by production restrictions);
- Importing countries would reduce (or suspend) any quantitative restrictions on imports or consumption, increase government purchases for any flexible strategic stocks or obligations of the private sector to maintain such stocks.

Examples of possible processes

The Arrangement could provide for:

- Shared evaluation of information about market developments, including sharing information about short-term economic developments (e.g. with the IMF);
- Consultation about the scope for and possible effect of responses;
- As a result, the possibility of a common political response to extreme price movements.

Decisions would have to be taken on the day by a small number of sovereign governments. The “Arrangement” would provide a facility for producing and consuming governments to take them together.

Unlike the classic UN commodity agreements, such an arrangement would be focussed on reaction to extreme events rather than the defence or achievement of a price target (though it

would not be inconsistent with OPEC efforts in that direction). It would differ from the IEA in allowing economic considerations to stimulate action (it would not preclude importers from following energy security policy through strategic stocks, but would limit their use for pricing purposes). It would differ from the European Commission proposal of 2002 to create an explicit process for consultation between governments of key exporting and importing countries.

INSTITUTIONAL DIALOGUES

Many IEF concerns can be addressed through the existing international frameworks, though there may be scope for better co-operation between IEF countries on specific energy matters.

Multilateral institutions

GATT/WTO/GATS/TRIMS¹³

The GATT/WTO/GATS/TRIMS framework was not designed, and has not evolved, to address the question of commodity price short-term volatility or price levels. The Havana Charter of 1948 envisaged a separate structure for commodity agreements, but this was never created.

Export dependent oil producers looked to the creation of OPEC in 1960 to protect and advance their interests. For those petroleum exporters who are members of GATT/WTO, the production restrictions operated under OPEC quotas may be justified under the exceptions of Article XX(g) as:

“...relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption”.

On the importing side, actions which might be taken under IEA emergency sharing mechanisms might be excepted under the Article XX(j) as:

“...essential to the acquisition or distribution of products in general or local short supply”.

Both exceptions are subject to the general Article XX requirement that such measures are not applied in a manner which would:

“...constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade”.

Neither the potential OPEC or IEA exceptions have been tested in any GATT/WTO consultation or dispute. There has never been a trade-diverting action by the IEA. The question of whether OPEC production restrictions aimed at defending minimum prices qualify as “conservation” may be arguable in future. Some major oil exporters remain outside the WTO for the time being, but Saudi Arabia and Algeria are negotiating accession and Russia and Iran are preparing to do so.

What are the WTO/GATT petroleum issues today?

Although GATT/WTO does not address price, there are a number of secondary issues which affect international energy co-operation in the petroleum field¹⁴. They are not targeted in the WTO Doha mandate. Some may be treated incidentally in the negotiations. Many are more likely to feature in the accession negotiations for the oil exporting countries now outside the WTO.

¹³ General Agreement on Tariffs and Trade (GATT), World Trade Organisation (WTO), General Agreement on Trade and Services (GATS), Agreement on Trade-Related Investment Measures (TRIMS)

¹⁴ There is detailed review in UNCTAD: Trade Agreements, Petroleum And Energy Policies
UNCTAD/ITCD/TSB/9, UNCTAD 2000 internet edition.

Examples are:

- Dual pricing: In terms of GATT, the question is how price differentials are achieved: export duties (like import duties) are not outlawed by GATT but are negotiable (on a non-discriminatory basis) and exporters could be asked to “bind” low or zero duties against increase. Russian pricing of domestic gas was a critical issue in negotiations leading to EU support for opening negotiations with Russia on WTO membership.
- The Agreement on Subsidies and Countervailing Measures (1995) prohibits subsidies and measures inherently likely to distort trade (such as subsidies on exports, and subsidies linked to using local goods and services). Other subsidies are “actionable” - subject to consultation, the WTO dispute settlement process, and countervailing action - only if they injure the industry of another country importing subsidised goods, or prejudice another country’s exports of like goods to third countries, or if they nullify benefits to market access negotiated under GATT. Petroleum exporters have an interest in this issue both because of the possibility of their domestic pricing policies being challenged and because of the possibility that importing countries subsidise alternative energies or tax fossil fuels used domestically, while rebating the tax on exports.
- Government procurement: WTO membership implies commitments to the principle of non-discrimination. The plurilateral Agreement on Government Procurement applies this to procurement from foreign suppliers, the extension by negotiation of national treatment, and greater transparency regarding government procurement and state enterprises including national oil companies (NOCs). This may require reforms by exporting countries acceding to the WTO. Some provisions of TRIMS are also relevant.
- Tariffs on petroleum products in importing countries are open to negotiation by exporting countries wishing to integrate their operations and export a greater proportion of oil as products.
- State Trading is subject to WTO rules aimed at defending the principle of non-discrimination and avoiding distortions of trade by state trading enterprises. (WTO/GATT does not prohibit state trading). Key issues which might be raised under this heading are:
 - a. Geographic price differentials which, for “strategic reasons” lead to the diversification of export markets from the pattern which might prevail if oil exports were sold at the point of export at the same price to all purchasers (the question of the “Asian premium”/ US discount);
 - b. Discounted or netback pricing of crude to refineries owned by exporting NOCs, either in importing countries or at home;
 - c. Limitations on the resale of crude oil, if causing trade diversion, might be challengeable.

So far, no importing country has raised these issues, even with respect to exporting countries which are members of the WTO.

The GATS goes beyond cross border trade to include the supply of services outside the borders of the importing country (e.g. data processing), commercial presence in the importing country through a branch office, and the presence of natural persons (e.g. specialised expatriate staff). These provisions would increase the availability of oilfield services and technology to the petroleum industry in the exporting countries. The GATS also imposes a “soft” obligation to strengthen the service capability of developing countries. The GATS provides wide flexibility for countries to define which sectors and activities are subject to its provisions, subject to the general rule of non-discrimination between foreign suppliers (except under regional integration agreements). National treatment, though a general objective, is negotiable.

GATT is relevant to environmental regulations and taxes imposed in importing countries. The EU failed in a GATT challenge to the US tax on “Gas-guzzling” cars (Mercedes), but Mexico, the EC and Canada succeeded under GATT in challenging certain aspects of US superfund levies. Under the stronger WTO dispute resolution procedure Venezuela and Brazil successfully challenged the US over rules on reformulated gasoline which discriminated against imports.

As greenhouse gas emission trading regimes develop there will presumably be attempts to bring them within the scope of either GATT or GATS. This is not in the Doha negotiating agenda though the general questions of relations between environmental and trade agreements may be discussed), so will presumably have to wait until the next round in four or five years’ time.

The GATT also offers the possibility for exporting countries to negotiate for concessions from importing countries on the level of domestic taxation on the consumption of petroleum products – a precedent exists in the Tokyo round negotiations on tropical products.

Scope for energy dialogues within the WTO

The WTO and related agreements are growing in importance as more energy exporters become members of the WTO, and the WTO concepts of non-discrimination and reduction of economic barriers extend further into national economies. There seems so far to have been little co-ordination between energy exporters within the WTO on the lines of the cooperation between members the Cairns Group or the various groupings of developing countries during the negotiating processes.

There may be scope for key energy exporters, or petroleum exporters, to set up an informal group in the WTO to identify common interests and engage with key importing countries to address these through the WTO processes.

Energy Charter Treaty (ECT)

The ECT essentially applies GATT/WTO principles to trade in fuels, electricity and energy related equipment between ECT members, including non-WTO members, with some exceptions and a “best endeavours” commitment against introducing or increasing import or export duties. The ECT also replicates the WTO dispute settlements procedure, with the addition that it is possible for a private sector enterprise to bring a dispute against a government into the settlement procedure. The ECT does not apply GATS, but certain GATS provisions regarding service provision, market access and national treatment are incorporated (with some differences) in the investment, transit and service supplies sections for which there is no parallel in WTO.

The US and China did not sign, and Russia has not ratified the ECT. No OPEC exporting country has signed the treaty, though some were observers. If Russia and the non-WTO ECT signatories were to join the WTO, the ECT trade provisions would become redundant.

UN commodity agreements

GATT 1947 provided (Article XX(h)) a general exception for actions “undertaken in pursuance of obligations under any intergovernmental commodity agreement which conforms to criteria submitted to the CONTRACTING PARTIES and not disapproved by them or which is itself so submitted and not so disapproved”. Criteria, not rejected in GATT, were approved by the UN Economic and Social Council in 1947.

UN commodity agreements on wheat, tin, sugar, coffee, cocoa and natural rubber were negotiated, usually on a three year basis. By the 1990s the price stabilization mechanisms had all been abandoned, except in the case of the Cocoa agreement, where an important distinction was

introduced between short term price stabilization and long term objectives in improving prices by market development for cocoa. Features of the UN commodity agreements were:

- They were open to all UN members;
- Councils were set up to review supply and demand and any production, export or import quotas which had been established by the agreements (which were usually of 3-5 year duration). In effect, the importers and exporters agreed price bands or targets;
- In the event of glut, signalled by a price collapse, exporting members would restrict production and importing members would limit imports from non-members. In the event of a shortage, signalled by price, exporters would lift production quotas and restrict exports to non-members;
- Some agreements had stockpiles which might be used in attempts to stabilise prices.

There was continual conflict about the subsidies and quotas which importing countries (such as the EU) used to support commodity production in their own territory (and for export) or developing countries which enjoyed preferential arrangements (the EU support for wheat and sugar production in the EU, and banana production in the Caribbean are examples). Subsidy and quota issues for agricultural products in industrial countries are now being tackled in the main WTO Doha negotiating mandate.

For oil today, there would further obstacles to designing an effective commodity agreement:

- The size of the oil trade – about 10% of world trade in 2003;
- The asymmetry between a supply side in which a few governments play a direct role in setting production and supply prices, and a demand side in which imports, consumer prices, and competition are not controlled by the governments of the main importing countries;
- The difficulties of agreeing a medium term price band;
- The sophistication of the oil markets, which would create immense problems for the management of inventories to avoid speculative attacks when market trends went against target prices.

Regional dialogues

Energy trade and investment is included in wider regional agreements: The European Economic Area (which covers the EU, Norway and Switzerland), EU bilateral initiatives with countries and regions (Russia, EUROMED, and EU-GCC), the North American Free Trade Agreement (NAFTA), the Association of South-Eastern Asian Nations (ASEAN), the GCC customs union, the Southern Common Market (MERCOSUR), and the possible Latin American Free Trade Association (LAFTA). There are also trade elements in a number of bilateral agreements (e.g. by the US) which would extend most-favoured nation treatment, removal of obstacles, and apply dispute settlement procedures to energy trade and, more especially to energy investments. Many energy exporting countries have not accepted agreements with strict dispute settlement provisions, but the US has accepted looser "Trade and Investment Framework" (TIF) agreements with these countries, providing a "soft" mechanism by which government agree to discuss difficult commercial issues.

North American Free Trade Agreement (NAFTA)

In 2003, 30% of US oil imports, and 10% of gas imports came from Canada and Mexico. NAFTA is a broad agreement for economic co-operation and integration which, unlike GATT, has an energy chapter. There are complex provisions on investment and services which apply to energy

(as well as to other activities) though Mexico is exempted from many of the energy obligations. NAFTA has a dispute settlement procedure which, like the ECT, admits private investors, but different procedures are applied to different functions (investment, financial, etc.) The relevant trade procedure is limited to determining whether national anti-dumping and countervailing procedures have been properly followed. (Trade disputes between members would in any case be subject to WTO rules, since all three countries are WTO members). NAFTA appears to have clearer procedures for avoiding or responding to dual-pricing, dumping, and export taxes than WTO. In addition, NAFTA requires that if one of the Governments (except Mexico) restricts energy exports - for reasons allowable under GATT - a proportionate reduction should apply to its domestic market.

Regional oil: two markets for the price of one?

The lack of barriers to international oil trade, and the relatively low cost of transport in crude oil, make it realistic to talk about a “world” price for specific types of crude oil sold on London and New York commodity exchanges, from which prices of other crude oils of different qualities can be derived anywhere in the world. This network of prices links two different importing markets, separated by a combination of logistics and market structure. One is the countries of the Atlantic and Mediterranean, the other is the East Asia-Pacific. The differences between them are illustrated in Figure 5. In the Atlantic-Med region in 2003 46% of the oil supplied was produced in the countries in which it was consumed. A further 31% was supplied from trade within the region. 11% came from Eurasia (Russia, and the Caspian states), and 12% by net imports from the East. Typical IEA and US Energy Information Administration (EIA) projections do not show much change in these proportions. In East Asia and the Pacific, only 22% of consumption was supplied within countries by their own production and a further 12.5% by intra-regional trade. The rapid growth projected for Asia Pacific oil demand, and much of the growth projected for gas demand, will be met by imports from the Middle East.

Figure 5: Regional oil supply balances 2003

	Atlantic-Med.		East Asia-Pacific	
	MBD	%	MBD	%
Total supply	46.8	100.0	22.6	100.0
Untraded production	21.5	46.0	5.1	22.6
Intra-regional trade	14.5	31.0	2.8	12.4
Imports from Eurasia	5.3	11.0	-	-
Imports from Mid-East	8.1	17.0	12.2	54.0
Med-Atlantic Exports to Asia-Pacific	-2.6	-5.0	2.6	11.5
Net imports	5.5	12.0		

Source: BP Statistical review 2004

MBD: million barrels per day

The structure of the two markets is also different. In the “Atlantic – Mediterranean” oil trade is a commodity business characterised by:

- A large number of exporting and producing countries;
- Around half the supply originates from private sector companies (including Russian companies);
- Large volumes traded free of destination restriction;
- Transparent spot and futures prices on the New York and London Commodity exchanges;
- Refining and retailing are wholly or mainly in the private sector in the main importing countries. About 60% of consumption is in the US and the EU without price regulation and under legal regimes which prohibit or limit monopoly or dominant market power;

In the *Asia-Pacific* by contrast, imports from the five major West Asian producing and exporting countries are almost entirely from state NOCs (as are most of the exports from minor exporters) and are sold almost entirely under contracts which prohibit resale. Without a large volume liquid market, there is no benchmark commodity exchange. Downstream, governments of most importing countries, in different ways, are engaged in the regulation and control of their importing and downstream sectors.

Government involvement in both the upstream and downstream ends of the trade in the Asia-Pacific region may provide more scope for bilateral government-to-government dialogue than in the Atlantic-Mediterranean region. Such dialogues might address questions of conditions for reciprocal investment, and perhaps energy co-operation, but it is difficult to see how a bilateral arrangement could create a price regime disconnected from the world market.

Regional gas

International trade in natural gas is at present more regional than in oil, with North America, the EU and North East Asia as relatively separated markets. However, in natural gas in 2003, the degree of “self-sufficiency” (own production plus intra-regional trade) was around 60% in both the Atlantic-Med and Asia-Pacific regions. Russia was the main source of imports to the Atlantic-Med, and the Middle East to the Asia Pacific, as figure 6 shows

Figure 6: Regional gas supply balances 2003

Natural gas	Atlantic-Med		Asia-Pacific	
	BCM	%	BCM	%
Total supply	1459	100	343	100
Own(untraded)production	906	62	219	64
Intra trade	421	29	91	27
Imports from Eurasia	132	9	0	0
Imports from Mid East	3	0	35.5	10
Exports to Atlantic-Med			-2.9	-1

Source: BP Statistical review 2004

BCM: billion cubic metres

There are differences in market structure. The North American and EU domestic markets are liberalised and in private sector hands. EU imports from Russia come from a 51% state company. Asia-Pacific intra trade and imports are mainly (but not entirely) from the private sector or from consortia in which the private sector is primarily responsible for marketing. In the Asian importing countries, up to the present, only in Korea is there an effective national gas grid with the possibility of developing a competitive internal market like those of the US and Europe.

The large expansion of liquefied natural gas (LNG) trade in both regions depends on new investment in infrastructure, as does the possibility of developing pipeline and LNG imports from

Russia in to the Asia Pacific. These investments raise issues of investment conditions which are essentially being solved by agreements resulting from bilateral political negotiations. Except for Japan, the countries involved in the Asia Pacific gas trade are not members of the ECT.

Asian dialogues

At the government level there is a variety of overlapping regional forums which provide a political context for bilateral negotiations either between governments or their national companies. Given the global nature of oil trade and prices, it would be difficult for any of these forums to address the question of oil price stability, but they will contribute to a better understanding of common problems and may provide a framework within which to reduce obstacles to investment, the provision of services, and the development of infrastructure projects across borders. These forums are as follows:

Asian Round Table

However, The Asian Round Table of Energy Ministers in January 2005 brought together governments of the countries mainly responsible for projected future increase in global oil demand and supply.

Asia-Pacific Economic Co-operation (APEC)

Unlike the WTO and North American or EU-centred regional Customs Unions, APEC is a forum. Its commitments are non-binding. Discussions may lead to negotiations in particular institutional frameworks. The general aim is to promote economic development throughout the region by reducing barriers to trade and facilitating the movement of people, services and technology and promoting favourable conditions (but not necessarily free movement) for cross-border investment. Priorities are established and individual countries voluntarily submit their action plans for review. Issues are reviewed collectively. There are no mandatory procedures. Many of the "issues" on which action plans are based are also WTO issues. There is an energy working group, an associated energy business forum, and a programme of Energy Ministers meetings, which have so far focussed on energy investment requirements, energy efficiency, and the environment (the "3 Es"). There is no specific programme for trade issues or for collective dialogue with Mid-Eastern energy exporters (Canada, Russia and Mexico are member of APEC Energy Working Group). APEC has not so far collectively addressed the question of a framework of gas pipeline investment which could affect the direction of natural gas trade flows in North-East Asia.

Association of South-East Asian Nations (ASEAN)

Like APEC, ASEAN has broad economic objectives, of which energy is a minor part. ASEAN energy ministers did however, agree a Memorandum of Understanding for a framework of agreements necessary to establish conditions for the proposed Trans-ASEAN Gas Pipeline project. ASEAN Ministers work with Ministers from Japan, China and Korea in "ASEAN + 3" energy meetings.

North East Asia Energy Initiative

These intergovernmental meetings have the capacity to address any issue of common interest, such as a common approach to building strategic oil stocks, but overlap bilateral discussions on various pipeline proposals (discussed in the investment section of this paper). At the present time a variety of political differences between the countries concerned is inhibiting progress in energy co-operation in this area.

Shanghai Co-operative Organization

There is a formal framework for cooperation between Russia, China, and the Central Asian states in the “Shanghai Co-operative Organization”, with a hierarchy of contacts at the level of Heads of State, Foreign Ministers, Heads of Agencies and National Co-ordinators. The main focus is on security and anti-terrorism with “a new concept of partnership instead of alignment”. There is however an agenda for broad economic co-operation, which China has proposed be made more specific and which will include energy, linking trade with investment.

ENERGY MARKETS AND REGULATION

Four issues have implications for energy, trade and cross border investment, which involve government intervention, and therefore potentially might be the subject of producer-consumer dialogue:

Taxes

Most energy importing countries impose taxes on fuel consumption, their form and rationale are of four main types:

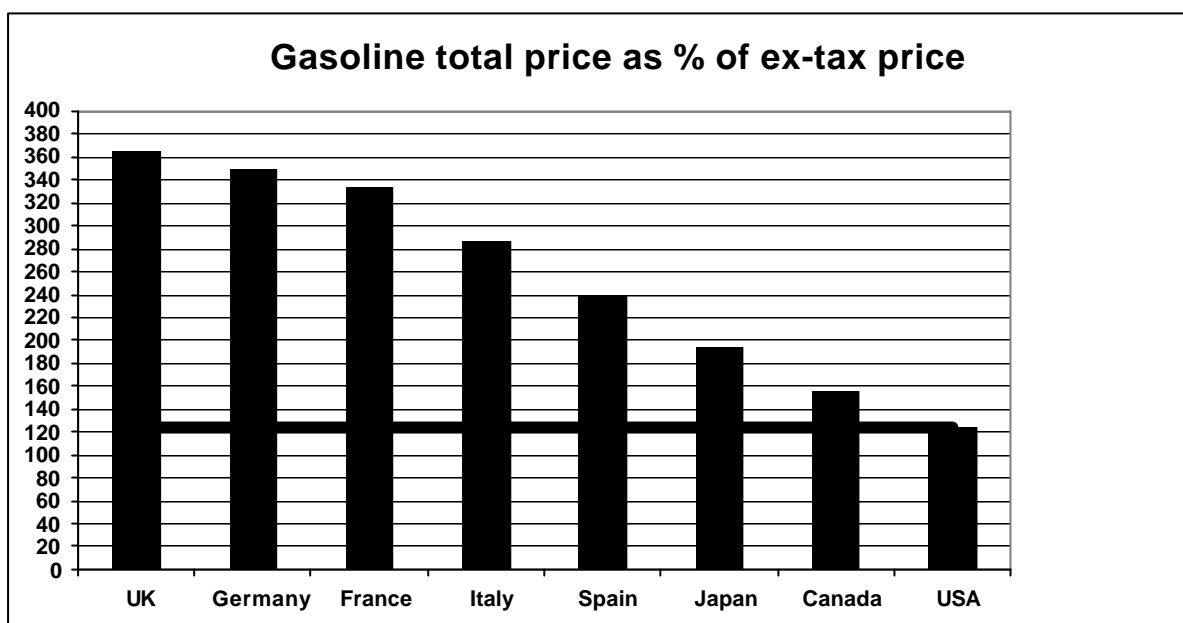
- Customs duties on imported energy products. In developed countries, these are generally low and are relatively unimportant sources of revenue but in some small developing countries with few other sources of revenue taxes may be both high, relative to the poverty of the country and important for the government budget.
- General sales or value-added taxes which apply to fuels as well as other goods and services sold to final consumers, and are calculated on a percentage of the final selling price.
- Specific excise duties, mainly on oil products, which are collected by refiners, importers or retailers and are generally defined as fixed duties per litre rather than percentage of value. In some countries, part or all of such taxes, when applied to transport fuels, are justified as a user fee to the users of public roads and infrastructure, and in a few countries, including the US and Japan, the taxes are designated by law for this purpose and are paid into separate "Highway funds" rather than into the general Federal or State budget. In most European countries, such "hypothecation" is contrary to the principles of public finance and there is no actual connection between revenues collected from the transport sector and money spent by public authorities on transport infrastructure.¹⁵
- Some countries (and some NGOs) justify or promote additional excise taxes, especially on transport, to make the consumer pay for the "externalities" imposed by the transport sector on the rest of society in terms of greenhouse gas emissions, pollution and related public health costs. In some countries public transport theory justifies high taxes on private vehicle users to provide subsidies for public transport. Every category of these taxes is open to argument from consumers, industrial users, and from the suppliers of fuels.

From the point of view of fuel producers, all such taxes are likely to distort and diminish the demand for their product. To the extent that taxes on fuel exceed general consumption taxes or "user" fees justified by the infrastructure of other costs. The level of taxes on transport fuels in Europe and Japan attracts especial criticism from exporting governments. In the US it can reasonably be argued that there are no significant taxes on oil products except for general sales taxes and the fees which are collected for the Highway fund. In most European countries, and Japan, there is no connection between the excise taxes and the expenditure in highways and the revenues from the excise duties far exceed the expenditure on highways. They may even exceed the (very uncertain) estimates of "external" damages.

A rough indication of such "excess" consumption taxes can be derived by comparing the percentage of tax in the final consumers' price in various countries. The US can be taken as a benchmark because of the lower level of taxes and because the taxes there are either general sales taxes or are hypothecated to expenditure on transport infrastructure. The following two graphs show the situation for premium gasoline and automotive diesel in the principal OECD consuming countries in March 2005.

¹⁵ For elementary discussion, see J.V. Mitchell and Müge Dolun, The Fuel Tax Protests in Europe 2000, Chatham House 2001

Figure 7 – Gasoline total price as a % of ex-tax prices in March 2005



Source" OECD Energy Prices and Taxes, March 2005

In the UK, which has the highest gasoline taxes in the world, the price of premium gasoline was over 360% of the ex-tax price, whereas in the US it was 120%. The inference is that UK gasoline consumers pay an "excess" tax of around 240%, subject to some adjustment for direct cost of highway expenditure.

Oil exporting countries in the WTO could seek to negotiate commitments on excise taxes from importing countries, as has been done for some tropical products. This would require concessions by the exporting countries. For the EU, there would be the difficulty that, unlike customs duties, for which the Commission has exclusive authority, the European Commission proposals to harmonise fuel taxes require unanimity and member states who are reluctant to limit their freedom to tax oil products except within a very wide band. Exporters would face the problem of negotiating with each country individually. It is possible that a political approach within some broader framework of energy security might persuade some of the higher-taxing countries to modify their transport-related taxes in ways that would be less damaging to oil demand. However, it is difficult to see how this problem can be addressed except by some specific initiative from the exporting countries, within a negotiating framework such as the WTO rather than by rhetoric.

Subsidies

The counterpart of oil exporters' complaints about consumption taxes on transport fuels is the question of subsidies for oil consumers in oil exporting countries where domestic consumption of oil products is supported, either through direct subsidies passing through the budget, or through pricing policies of the state-owned monopoly refining and producing companies. Such subsidies create consumption which would not otherwise occur and reduce the supplies of oil available for export, to the disadvantage of the importing countries. The subsidies are not negligible. IMF estimates of the cost of oil subsidies in Iran in 2003 were around \$11 bn – around 10% of the gross national product (GNP). Other exporting countries with significant subsidies in domestic prices are Iraq, Nigeria, Libya, Venezuela, Angola, and Kuwait. Subsidies or "deficit prices" for domestic kerosene are widespread in developing countries, evening importing countries. Since there are domestic reasons for exporting countries to reduce subsidies on their own consumption,

it is possible that commitments in this could be linked to any negotiations about taxes in importing countries.

Trade restrictions

In most major OECD importing countries, commercial law or competition policy prohibits suppliers of commodities from imposing restrictions on the resale of their products. Such restrictions might also be challenged under the WTO if they resulted in the diversion of trade. It is however normal practice for most Middle East oil exporting countries to impose such restrictions on all or most of their exports. This enables the exporters to segment their markets, even for specific grades of crude, and to exercise price discrimination. The most obvious example of this is the discrimination which appears for many years to have allowed certain Middle East export sales to Asia to be sold at prices which, netted back to the Gulf, were higher than similar netbacks from the US (the so-called "Asian Premium"). It may be that this problem will diminish as more Middle East exporters become members of the WTO.

Environmental taxes and "border adjustments"

The EU and other countries who impose environmental taxes - such as carbon or energy taxes - face the problem that when such taxes are applied to fuel for industry they may affect the international competitiveness of energy intensive industries. So far, such industries have tended to benefit from tax exemptions. As the need to achieve emissions reductions becomes more urgent it is possible that governments will apply such taxes to energy intensive industries such as chemicals or refining and rebate them on export sales from the energy-using industry, and/or apply tax adjustments surcharges against imports from energy-intensive industries in oil or gas exporting countries where no such taxes apply. Such "border adjustments" can be challenged within the WTO depending on technical questions about "like products", on whether in fact the adjustments are discriminatory between third countries, and whether they divert trade.

Incentives for spare capacity

Liberalisation of electricity and gas markets in North America and Europe – followed in various ways in Japan and other countries, raises the question of incentives for investing in reserve power generation or infrastructure network to cover operational swings in demand, unusual surges in consumption, and the risks of disruption of the network or a power generator. Under earlier regulatory regimes reserve capacity could be built by the investors and its costs recovered through regulated tariffs of monopoly suppliers, pipelines or the electricity grid. This route still exists for the final retail networks which remain under regulation, but at every other stage the application of third party open access and arms lengths tariffs on transmission and pipelines, and of spot markets for electricity generation, mean that there is no automatic incentive to build spare capacity. This problem was in most cases deferred or concealed while the spare capacity created by earlier, controlled systems was being run down.

Lack of investment in cross-border infrastructure may be damaging to consumer security of supply, and to exporters' long running interest in market development. There seems to be little consensus about how to deal with this problem in general terms. In some specific cases, governments retain ownership or control of export infrastructure. In some importing countries, there is sufficient market power among the importers (e.g. of natural gas) to share the burden and benefits of investment in spare capacity. Where no such market power exists, the importing and exporting governments at the ends of the supply chain may need to agree some bilateral incentives for the market actors.

Scope for producer-consumer co-operation

In the five cases mentioned above, it is difficult to see opportunities for producer-consumer initiatives outside existing international procedures:

- The question of excess consumer taxation could in theory be addressed by negotiating proposals from exporters in the WTO, but exporters would then have to offer something in exchange;
- The question of excess subsidies in exporting countries will be addressed partly by exporting governments' own need to improve their fiscal positions and partly by the influence of the IMF in the same direction within negotiations with those countries involved in IMF programmes.
- The question of border adjustments for environmental taxes (or lack of taxes) is at the present mainly theoretical. It may take some hard cases to bring this up the agenda. Then, in principle, affected countries could mount a challenge through the WTO.
- Responsibility for spare capacity starts as a problem for domestic power generation, transmission and gas pipelines. The small number of new cross border gas pipeline projects are likely to be dealt with on a case by case basis by the governments whose agreement is necessary to underpin the general arrangements for pipeline financing, operation and tariffs.

ENVIRONMENT, CLIMATE, AND SUSTAINABLE DEVELOPMENT

Sustainable development

Governments of energy importing and exporting countries are involved (together with the few without significant energy trade) in a number of general international initiatives and treaties on sustainability and climate change which recognise the need to use energy to achieve economic growth as well as the need to tailor the benefits of growth to achieve environmental sustainability.

The main internationally agreed documents¹⁶ provide declarations of principles and objectives for a variety of energy topics. They also:

- Recognise that “Fossil fuels (coal, oil and natural gas) will continue to dominate the energy supply situation for many years to come in most developed and developing countries...” (Resolution 19/21 of 1997 on Agenda 21);
- Call for a level playing field between “renewable energy, energy efficiency, advanced energy technologies, including advanced and cleaner fossil fuel technologies...” Johannesburg Plan of Implementation (para. 20 j); and
- Call for promotion of advanced and cleaner fossil fuel technologies alongside renewables and conservation. (Johannesburg Plan of Implementation: para. 20 (e)).

The UN Millennium Development Goals¹⁷ and the Johannesburg Plan of Implementation require the setting up of national plans and procedures for “peer review”. The IMF has incorporated a review of progress towards meeting the Millennium Development Goals (mainly concerning human health, welfare and education) in its reviews of countries who are involved in IMF programmes. Some oil exporting countries have set up offices within their national governments to develop implementation plans for Agenda 21.

The IEF Amsterdam meeting recognised the importance of the WSSD process and envisaged increased participation by energy ministers in this process. There was some informal discussion in the associated Business Forum meeting of the scope for energy-led contributions to poverty reduction. There are, at present, no specific producer consumer initiatives in this area. One way in which some energy specifics could be injected into the existing sustainable development and climate initiatives might be to consider a capacity-building initiative to enable poor countries to take advantage of the clean development mechanism (CDM).

Development

“Fuel poverty” is an item on the agenda of many initiatives aimed to help the least-developed countries. Objectives related to drinking water and electricity for poor households depend on actions within the power generation and distributions systems of poor countries – by some combination of reforming state providers, allowing decentralized power generation and independent power production, and local production possibly based on the use of wind turbines or small hydroelectric schemes. It is difficult to involve international capital and technology in such projects except through aid, through supplier credits for contracts for plant and equipment for aid-assisted enterprises, and in investments under the CDM mechanism. In general, electricity for the

¹⁶ The section on Energy (para. 20) in the UN General assembly Resolution 19/21 on the Implementation of Agenda 21 (19th Special Session, June 1997)

A Framework for action in energy Working Group for the Johannesburg World Summit on Sustainable Development (WSSD), Aug. 2002;

Johannesburg Plan of Implementation, Chapter 111: unsustainable patterns of consumption and production: Para 20 (2002).

¹⁷ General Assembly Resolution 55/2 of Sept.2000

poor depends on what happens in the national power sector rather than on the actions and policies of the supplier of imports. However, poor countries which import oil for power are particularly vulnerable to short-term oil price surges. Exporters and aid-giving government might look, with the international financial institutions, at the idea of short-term financial assistance for least-developed countries when oil prices surge. Mechanisms for very selective financial assistance are now more acceptable than they were in the 1970s. The international institutions might perform an intermediating function so that assistance to poor importers when prices surge could be reversed towards poor exporters when prices collapse.

Climate

Under the UN Framework Convention on Climate Change (UNFCCC) (1992), governments, including those of energy exporting and importing countries, agreed:

- To gather and share information on greenhouse gas emissions, national policies and best practices
- To launch national strategies for addressing greenhouse emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries
- To cooperate in preparing for adaptation to the impacts of climate change.

The UNFCCC, under article 8, also commits parties to “give full consideration to what actions are necessary under the Convention, including actions related to funding, insurance and the transfer of technology, to meet the specific needs and concerns of developing country Parties arising from the adverse effects of climate change and/or the impact of the implementation of response measures, especially on:

“(h) Countries whose economies are highly dependent on income generated from the production, processing and export, and/or on consumption of fossil fuels and associated energy-intensive products...”

The subsequent history of climate change policy is well known. Scientific research continues to try to reduce the uncertainties about the detailed causes and effects of the phenomenon of global warming.

The Kyoto Protocol of 1997 has (2005) come into effect, following ratification by Russia, but has not been ratified by the US. The European Union has set up an emissions trading scheme linked to the emission “caps” submitted to the Commission by national governments. Many national plans have been prepared. Some actions have been taken or are planned within the Annex 1 (developed and economies in transition) parties under the Joint Implementation Initiative. There are programmes for approving projects under the (CDM) to enable emission reductions achieved outside the Kyoto countries to be credited against emissions under “caps”. A number of projects in China are being developed, based on CDM economics.

In the United States several state governments have introduced, or have announced their intention to introduce caps on carbon dioxide emissions and to allow trading of emission permits. A voluntary exchange (CCX) has been set up in Chicago to promote this. California is considering a similar scheme. Some power generators are investigating the possibility of capturing CO₂ emissions for resale to oil producers for enhancing oil recovery.

Many inconclusive discussions are scheduled about the scope for “post-Kyoto” negotiations to deal with the period after the Kyoto commitment period (2008-12) with the object of attracting participation from major developing countries and the US. The US Government announced in July 2005 a joint initiative with the Governments of Australia, China, India, Japan and South Korea to

co-operate in the development of technology to enable greenhouse gas emissions to be reduced without damaging economic growth and without commitments to the Kyoto-style cap and trading process. There may be scope for other oil producing countries to be associated with this initiative, which does not involve "Kyoto" type commitments.

Some oil exporting countries, such as Norway and Algeria, are already undertaking carbon sequestration projects (which may also profit from the CDM). Many are investing to reduce gas flaring, mainly for economic reasons but with beneficial consequences for the "Greenhouse" which the world shares. The World Bank's Prototype Carbon Fund is supporting a methane capture project in China. China has adopted EU standards on vehicle emissions and voluntary targets for the manufacture of efficient vehicles.

EU member governments have taken a variety of steps which will contribute to emission reduction, general sustainability of the energy systems, and undefined "security" issues, by promoting the use of renewable energies and the adoption of energy-efficient technologies in buildings and transport systems. These involve direct government interventions of various kinds, including taxes on carbon, taxes on energy (not strictly related to greenhouse gases), and regulations requiring power generators to use a proportion of renewable or "green" energy inputs. In some countries hydro-electricity and nuclear power are excluded from benefiting from such regulations. In some countries there are direct government subsidies for "renewable" power sources. The effect of these interventions in Europe has generally been to encourage the development of wind farms.

There are also strict EU regulations on the thermal efficiency of new buildings, now being extended to retrofitting of old buildings. The European Commission has begun a formal process on consultation on the scope for imposing emission restrictions on the aviation industry, which is the fastest growing sector of demand for oil.

It is also likely that in the near future the question of new nuclear power plants will be raised in some EU countries where new generation capacity needs to be built, and where difficulties in meeting the Kyoto targets (or any subsequent emission reduction targets) become more and more acute

Interventions in the power sector mix of fuels are not standardized across the EU. In theory, questions may arise in future as to whether the differences in incentives for renewables will distort the workings of the European internal energy market, such as it is. Similar questions might arise under the WTO if the measures were trade distorting, discriminated between national and non-national suppliers, and differentiated between "like" products¹⁸. No WTO challenges have been mounted so far.

The effect of recent high oil prices

Most of the policies and measures adopted in importing countries to promote renewable energy and limit greenhouse gas emission were developed and put into place in the world of \$15-25 /barrel oil, with gas prices related to that. If oil prices are sustained in an even higher band, the economics of all alternatives, particularly nuclear energy, will improve, and all the non-commercial issues relating to the diffusion of civil nuclear power will become more acute.

In principle, higher oil prices will reduce the need for government intervention to promote the economics of renewables and emission reduction. This does not necessarily mean that the intervention policies will be dismantled: they will simply cost less while prices are high, and protect the renewables industries when prices fall. The economics of coal for power generation will also improve. Governments who wish to restrict increases in its use may need to consider

¹⁸ See Lodefatte and Story "Climate Measures & WTO rules in subsidies", Journal of World Trade 39:1 Feb 2005
Producer-Consumer Dialogue: What can energy ministers say to one another?
John Mitchell (November 2005)

taxes more specifically targeted on carbon content. The need will remain to loosen the link between economic growth and emissions by developing “low-carbon” paths to growth.

Issues for co-operation between energy exporters and importers

The international debating chambers are not short of places to talk about sustainable development or climate change. The coming into force of the Kyoto Protocol means that certain tactical negotiating and debating positions no longer serve a useful purpose. There is a very wide range of possibilities for future discussion. Exporters and importers might wish to consider together what they might do co-operatively to address some of the key themes in the sustainability and climate arenas. The time may be ripe for exporters and importers to decide what they would like to do together and then promote their ideas in the appropriate forums, rather than reacting to the knock-on effects of previous international negotiating processes. Examples might be:

- Making a broad collective effort on some technology-based climate measure – such as carbon sequestration, using CDM facilities where appropriate;
- Articulating the possibility of compensatory measures under Article 8 (h) so that some positive ideas could be advanced during the post-Kyoto international negotiations;
- Developing criteria for “fairness between fuels” in the design of emission reduction policies in importing countries: Energy taxes and consumption taxes currently tend to bear heavily on sectors such as transport, where demand is relatively inelastic, rather than on sectors such as power or industry, where switching to less emission-prone fuels is possible.

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