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An International Analysis

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Russia's well problem

Andre Konoplyanik, Deputy Minister of the Russian Federation Ministry for Fuels and Energy proposes its solution.

The Ministry for Fuels and Energy proposes a concept of foreign investments' involvement in Russian oil and gas

It is obvious, that oil-producing and oil-refining industry of Russia is in crisis.

The major high-yield deposits of the exploitable fund which form the basis of available resources have to a large extent been exhausted. The level of exhaustion of reserves at those deposits has reached 60-90 per cent. Accordingly the extraction of oil has dropped significantly. The fact that the development of the deposits was carried out an inadmissibly rapid rate (6-12 per cent of the initial reserves) also contributed to the fall in extraction levels. As a result of the intensive and by no means efficient application of methods to increase oil yields there was a sharp growth in the quantity of water in the volumes of extracted liquid. This led to a large number of deposits being taken out of use and to an increase of the proportion of marginal reserves.

The quality of new reserves additions have also sharply deteriorated. Not one major high-productive deposit has been opened recently. The average daily productivity of one new well in the Tyumen region (Russia's main oil province) fell from 138 tonnes in 1975 to 12-13 tonnes in 1992. Thus the financial and material and technical costs of creating 1 tonne per day of new production capacity has risen 10 times in 17 years.

There has been a drop in financing for geological exploratory work. Thus, in Western Siberia, where the level of development of potential resources is around a third, from 1989 onwards financing for geological work dropped by 30 per cent, and volumes of exploratory drilling were reduced by the same amount. As a result the growth in proved reserves in that region fell one and a half times.

The sector is in dire need of high-productive technology and extraction and drilling equipment. Depreciation of most of technical resources is at over 50 per cent; only 14 per cent of machines and equipment meet world standards; 70 per cent of the stock of drilling installations is outdated and in need of replacement, and a third of well-repair units were taken out from manufacturing 5-7 years ago. At the same time domestic industry satisfies only 40-80 per cent of the sector's requirement for the principal types of material and technical goods.

After the collapse of the USSR the situation in supplies of oil industry equipment from CIS republics deteriorated: being monopoly producers of many types of goods (Azerbaijan alone currently makes around 37 per cent of material and technical goods produced for oil-workers), factories in these republics are inflating prices and cutting supplies of equipment to Russia.

Low domestic oil prices have made it impossible for oil-producing enterprises to finance themselves. This situation remains the same despite a series of increases in oil prices which due to the decrease of Rb/$ exchange rate corresponded only to 1/10 of the world price in the end of 1992 (see table). At the same time the high rate of reserves depletion has created the need for an accelerated rate of compensation for the disposal of extraction capacities.

As a result there has been a sharp deterioration in material and technical, financial and currency provision for the sector. In 1992 alone the total volume of investment in the oil industry fell by 25-30 per cent (compared with 1991). At the same time the volume of budget appropriation (previously the main source of financing) fell by over 40 per cent. The sharp reduction of centralized investment, the shortage of hard currency resources at enterprises' disposal and the rupture of economic relations with some republics of the former USSR have led to a sharp decrease in supplies of oil production, drilling and other equipment and to a reduction in the volume of drilling work. Thus, in order to maintain Russia's current level of oil production, new capacities must be introduced providing for the extraction of 118 million tonnes a year.

Russia's whole energy prices, end-November 1992

Energy resources	Domestic price Rb/tonne	Domestic price $/tonnes[1]	Domestic price as % of North-Western Europe International price
Crude oil	6,100	13.6	11
Gasoline	16,900	37.6	18
Gas/diesel oil	15,100	33.5	19
Residual fuel oil	8,000	17.8	20
Coal	1,120	2.5	-
Gas (per 1,000 m^3	200	0.5	-
Electricity (per 1,000 kWh)	1,350	3.0	-

1 At the Rb/$ exchange rate - 450

This will require the drilling of 62 million metres of development wells. In 1991 only 27.6 million metres were drilled, i.e. 2.2 times fewer.

During the last few years oil and gas producing enterprises have been consistently subject to short supplies of material and technical resources needed to keep their wells functioning. Moreover, equipment supplied by domestic factories is of a low quality, leading to an unjustifiable increase in the volume of repair work. The number of inactive wells has therefore increased sharply — to more than 25,000 (17.3 per cent of the available fund), as of March 1, 1992, of which 12,400 were above the technically justifiable norm. In some Western Siberian oil producing enterprises the portion of idle wells has exceeded 30-40 per cent (see table). The average daily flow of inactive wells according to a minimum estimate is about 8 tonnes of oil. For that reason alone at least 30 million tonnes annually remain unextracted from these abnormatively idle wells.

Idle oil wells in Russia as of 1 March 1992

	Total number (000s)	% of production fund
Total Russia	>25.0	17.3
incl. abnormatively idle	12.4	
Western Siberia	17.9	25.3
incl. abnormatively idle	10.7	
Western Siberia Production units:		
Nozhnevartovsk		21.7
Yugansk		23.6
Tomsk		29.3
Variegan		36.5
Noyabrsk		36.8
Kogalim		42.7

In the long term it is impossible to solve problems of fuel and energy complex without restructuring the whole system of energy utilization and wide implementation of energy-saving technologies. Just that — considerable raising of energy use efficiency — is our strategic task. But nowadays the greatest task in the short term is to prevent further rapid decrease in oil production. Otherwise the country should very soon face the necessity to import crude and products.

Nowadays one of the most effective ways to stabilize the situation in Russian oil industry must be the attraction of foreign investments.

Taking into consideration the specific importance of the named sector for the whole Russian economy, the Government has adopted on June 1, 1992 decrees N368, 369 and 372, which defined short and medium-term (till 1997) requirements in external financing for oil production and refining equal to $30 billion.

$60-70 billion

Required value of financing can not be provided exclusively at the expense of loan agreements (in this case more than 50 million tonnes of oil would be additionally required for export during 1993-1998). It is necessary to look for attracting new foreign financial and technological potential, not on the loan basis only, but to look first of all for direct foreign investments. According to expert assessments, foreign investors could invest as much as $60-70 billion into the oil industry of Russia, and this would exceed the short term requirements.

It is obvious that we cannot expect that investments will immediately flood into the Russian oil industry for several reasons. Presently there is an excessive demand for investments in the world financial markets. Therefore many firms and financial institutions prefer to invest in the traditional oil countries with stable economic environment: in the Middle East, in South-East Asia, in America.

The Russian market attracts potential oil and gas investors due to large resource base of mineral industries, not the worst level of production costs compared to world standards, high qualification of production works, conversion possibilities of former military and industrial complex to produce oil and gas producing equipment etc. But one can expect considerable reallocation of financial flows to Russia only after creation of the investment climate in this country, so that it is at least not less favourable than in the traditional oil and gas producing regions.

That is why we have drawn very serious attention to creation of the necessarial legal basis: "The Law for subsoil resources" and the Decree "About the procedure of licensing for resources utilization" has been adopted in June and September 1992 correspondingly. The laws "About oil and gas" and "About Concession and Production-Sharing Arrangements" are being prepared. Negotiations have been carried on for the package of legally binding documents of the European Energy Charter.

We think the concept to attract foreign investments in Russian oil industry should be based on the following main principles:

Relations with all countries should be developed on principles stated in European Energy Charter and in its legally binding documents (Basic Agreement and the Protocols with Oil and Gas Protocol among the latter), according to which the common energy and legal and economic environment should be formed in the whole industrially developed zone of the world economy. The common "rules of the game" will function for all the participants of the European Energy Charter, including problems of access to energy resources and their markets, transportation, including transit, access to technology and capital market etc. These rules will be based on the balance of interests of host countries and potential investors concerning both the investment regimes and trade-related issues.

Economics of 12.4 thousand abnormatively idle oil wells' revitalization

Average oil flow	8-10 t/well/day
Total annual volume of "non-produced" oil	30 million tonnes
Annual value of "non-received" hard currency earnings (if exported)	$3.6 billion
Unit repair cost	$80-100 thousand/well
Total cost of repairs	$1.4 billion
Average pay-back period	3-4 months/well

Directions and forms of attracting foreign investments are determined according to priority and urgency of problems to be solved.

Every step in slowing-down oil production decline from the existing fields is the most vital problem in the short term. The most rapid return with guaranteed for western investors repayment of investments during 3-4 months may be received through restoration of idle wells (see table). Western investors (and what is most important — small and medium size firms) can be attracted here with direct investments on service contract basis. But in many cases it is preferable for the country to use western credits to buy necessary equipment which will be used in that case by our domestic oil producers with repayment for credits by export revenue of the portion of additionally extracted oil.

New fields

The medium term (3 to 5 years) envisages the arrest of the decline in oil production by a large-scale development of the already discovered deposits which are not yet under development due to lack of investments. The foreign companies will participate in their development on the tender basis and receive guarantees for investment reimbursement in the form of right to export a part of extracted oil or/and with possible reinvestment of the profit into the shares of created joint venture and domestic joint-stock companies.

The involvement of foreign investors in the development of both the marginal and high-yield perspective deposits and areas, needs a new approach that will make it possible to drastically cut the time of their commencement to run at full capacity as well as to maximize economic rent for the Russian side.

The tender terms should be equally applied to both the foreign and domestic state and private investors, including local oil-producing associations, operating in the areas where new deposits will be developed.

In the long term (8 to 10 years) one can expect that a reverse in current production decline will take place only as a result of new yet undiscovered large oil deposits exploration and their development. The attraction of foreign firms (as a rule large ones or in the form of consortiums) should be carried out on risk-contract basis. Until the rouble is convertible, the preferable form of risk-type agreement is the production-sharing contract, which allows the foreign partner to take responsibilities for all E&P costs and risks and to cover the expenditures in kind at the expense of production sharing.

The medium and long investment terms for oil industry should be used to involve foreign finance and technology potential as much as possible in the process of Russian defence industry conversion and creation of facilities necessary for oil producing equipment.

The expected foreign investments offered, as a rule, jointly by consortiums of interested firms — producers of equipment and investment banks will total at the initial stage as much as $1 billion, according to the US Goldman Saks investment bank.

One must proceed with legislative initiative to provide the foreign investors in Russia with guarantees against any worsening of the economic conditions caused by introducing those or other measures in this field by domestic authorities.

In this connection, one should insert a reservation into the existing law on foreign investments guaranteeing non-deterioration of conditions within predetermined period of time, since the registration of an enterprise with foreign investments as a legal entity; the so-called "grandfathering" clause. This juridical term should be also applied to the domestic investors taking into account the principle of "national treatment of investments" according to Russian legislation. This will substantially decrease the risk of investment in Russian oil industry.

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This paper, was presented at the Conference, sponsored jointly by Ministry for Fuel and Energy of Russia and International Energy Agency, Moscow, November 1992.

Global tours

Petroleum Finance Corporation wanted the Iraqi oil minister to speak. One problem: They would not let him in to the USA ...

Two things can be said with relative certainty about the international oil and gas business in the coming years — becoming and remaining a player in the energy trade will be both more expensive and more complicated than it has been in past decades. At least that was the opinion of speakers at an early March conference in Washington, D.C., sponsored by Petroleum Finance Corp. and *Petroleum Intelligence Weekly* in conjunction with investment bankers J. Henry Schroder Wagg, Ltd. of London and Wertheim Schroder Inc. of New York.

Perhaps the most troubling complications confronting the oil and gas industry are political ones, and they are major factors in nearly every energy producing country around the world. That fact of life was underscored when the conference's most controversial scheduled international speaker — Iraqi Oil Minister Osama Abdul Razzak Al-Hiti — was denied a visa by the U.S. State Department at the last minute.

Clearly the most troubling conjunction of economic and political factors affecting the future course of international activities by energy companies is the ever-changing state of political affairs in the former Soviet Union. Many of the economists, petroleum industry analysts, and international energy industry executives addressed the vast promise of the energy reserves in Russia and the new republics of the erstwhile Soviet bloc, but each cited the equally vast complications involved in trying to get a foothold in those largely virgin — but potentially immensely profitable — prospects.

Vladimir Ulyanov, chair of the Council of Peoples' Deputies in the Tyumen region of Russia — home to the large majority of Russia's gas and oil reserves — called the reports of terminal rifts between Russian President Boris Yeltsin and the Supreme Soviet "exaggerated," but his remarks came some ten days before the mid-month Moscow confrontation stripping Mr. Yeltsin of much of his authority, and precipitating a possible constitutional crisis.

"I hope you're not scared" of investing in the former Soviet republics, said Ulyanov, emphasizing repeatedly that the Tyumen region, at least, wants to work with foreign companies seeking cooperative oil and gas production ventures, rather than at cross purposes with them.

While acknowledging that there are obvious barriers to foreign investment, he insisted that "removal of those barriers is a high priority." As an indication of that commitment, he noted that Russian officials were in Texas and in the process of receiving 11 tenders for exploration and development of Russian oil fields during the first week of March. Ulyanov said that his own talks with officials of the U.S. Departments of State and Commerce had resulted in a decision to establish a U.S.-Tyumen trade office to promote further commercial deals.

Ulyanov also cited the White Nights joint drilling venture in his region as an example of successful international cooperation, a view sharply at odds with that of many oil company executives. The latter have made no secret of their belief that White Nights is a disastrous failure largely due to Russian government recalcitrance and reluctance to recognize economic realities. Still, industry observers at the conference conceded that there are still a number of oil companies in the U.S. and elsewhere who are waiting in the wings to pick up the pieces should Phibro (the prime sponsor of the White Nights project) decide to throw in the towel.

Yet another school of thought, one not widely expressed publicly, is that it might be worthwhile for the international energy firms to simply abandon Russian exploration efforts, albeit just long enough for economic conditions in Russia to get sufficiently bad that a different sort of "white knight" with deep pockets will be welcomed with more favourable trade terms and concessions. The jury is still very much out on whether this course would be more or less productive, and the answer is likely to depend critically on the degree of success Mr. Yeltsin has in perpetuating his economic reforms.

"Risk in some of the most interesting markets is very high," said Charles Dallara, managing director of the J.P. Morgan investment banking firm, citing the Yeltsin-Parliament struggle in Russia as a prime example. He said Morgan's near-term strategy involves pursuing venture opportunities in the Central Asian republics, where joint ventures may be "more attractive" than in Russia. But he pointed out that more than 90 per cent of former Soviet gas production, and perhaps three-quarters of oil production remains in the Russian republic.

Beyond the obvious and important political issues in the former Soviet Union, Dallara noted the parallel problem of an inadequate and poorly maintained transportation infrastructure. He suggested repeatedly that "equity investment is the core" of new oil and gas projects, while observing that the Russian government — though eager to secure new foreign investment — seems more attuned to debt financing. Few U.S., European or Japanese banks are willing to even consider term financing for new energy exploration, production, and transportation projects without considerable support from international financing agencies, he added.

Exim

Tom Moran, vice president of the Europe and Canada division of the Export-Import Bank of the U.S., noted that promotion of Russian-American trade was a prime reason why Eximbank was founded nearly 60 years ago, and said Russia and the CIS republics remain a principal focus of the bank's activities. Moran, who has long experience in supervising funding for international energy projects such as the Algerian liquefied natural gas export facilities, said the bank's prevailing attitude toward ventures in Russia and the post-Soviet republics is now "somewhat more conservative" than it was as recently as 1990.

It was in that year that then-President George Bush waived the so-called Jackson-Vanik amendment, which had precluded Eximbank support of exports to the Soviet Union for nearly two decades. The waiver produced what Moran termed "a flood of applications" and during the first half of 1991, Eximbank funded some $2 billion worth of exports related to Russian projects. The coup brought that activity to a sudden halt, with funding activities not resumed until this past year.

Moran emphasized strongly that the Eximbank financing support has been limited, both in type and duration. To date, all energy project support has been medium-term (five years, with allowances for grace periods of up to two years) and restricted to ventures with sovereign risk guarantees. Besides Russia, such financing packages have been approved since last June for individual republics of the former Soviet Uñion, including the Kazakh, Belarus, Turkmen, and Uzbek republics. Although it hasn't done so yet, Eximbank has been considering project risk guarantees, Moran said.

Eximbank has been frankly puzzled, said Moran, that two of the three types of funding it has available for U.S.-Russian trade deals have had virtually no takers. Nearly all the bank's funding has been under sovereign-risk agreements through Russian banks. The two unused support vehicles are conventional lines of credit through New York and Moscow banks, and a small fund for short-term lines of credit.

Moran said the bank has also established a framework to speed approvals for financing oil and gas equipment exports. This mechanism is designed not for individual projects, but rather to spur broader equipment sales by encouraging manufacturers to establish footholds in the Russian markets. Here, as in other aspects of encouraging trade with all the republics of the former Soviet Union, Moran admitted that putting deals together has been "vastly more complicated than we anticipated."

Norman Davidson Kelly, managing director of Lasmo, was even less sanguine about prospects for Russian hydrocarbon development, calling the CIS republics "unattractive and unstable for investment." He added that Lasmo's focus has moved from the last word of its acronym name — oil — to natural gas. Less than half (48 per cent) of Lasmo's business is now in oil; while roughly one-third is LNG, and 17 per cent is conventional natural gas production.

33% gas

Lasmo's belief that the importance of gas in the world energy economy will grow steadily was echoed by several others at the Petroleum Finance conference. Marcello Colitti, president of Ecofuel and an advisor to the chairman of ENI, suggested that "natural gas, together with oxygenated products, has been the star of the energy market." He predicted that gas will increase its share of the world energy market from just over 20 per cent in 1991 to just under one-third in 2020, with the rate of increase in total annual gas demand running at 2.4 per cent. Meanwhile, he expects oil demand to rise by only about 1.4 per cent a year, reaching a worldwide level of 100 million b/d by 2020.

The change from national and regional prohibitions on gas use has come swiftly, Colitti said, to the point where "new electricity will come largely from gas." The reason is simple, he argued: gas simply costs less. A gas-fired combined cycle plant is more economical than a typical coal-fired power plant at delivered gas costs up to $4.30/MMBtu. "Gas at $3/MMBtu will produce a kWh at 20 per cent less cost, and gas at $2.50/MMBtu will produce a kWh at 26 per cent less cost" than a coal plant, he said.

In Europe, Colitti expects the "gas deficit" to nearly triple by 2020, reaching 350 million tonnes of oil equivalent. He projects that as much as 60 per cent of this deficit will be filled by gas from the Russian federation, which will "make an extra effort" to accommodate these needs. An additional 30 per cent of the shortfall will be made up by Algeria, but as the calendar nears 2020, he expects the Arabian Gulf will be "the logical choice" for additional gas supplies.

The political problem of European dependence on the Gulf "is already so serious that it will not be made more so by adding gas coming from the Gulf to cover the extra needs of the European market," Colitti said. "We can only hope that a better way to tackle the problems of that area may be found while we are still in time," he concluded.

Elf Aquitaine president and CEO Loik Le Floch-Prigent suggested that new gas for Europe will inevitably be farther away and more expensive than traditional supplies, and will be saleable only if its cost is averaged in with older, cheaper supplies. European gas interests are counting on the environmental advantages of gas to support increasing sales even at prices higher that those of competing fuels. Environmental concerns will be increasingly important in the financing of energy projects, he predicted, although he added that financing is frustrated by the fact that there is "too little money for too many good projects."

For the American perspective, the meeting heard from both the most recent Republican Deputy Secretary of Energy and the most recent Democrat to hold the same post — in the Carter administration, since President Bill Clinton has not yet got around to naming subcabinet officials at the Department of Energy. Lynn Coleman (the Democrat) and Henson Moore (the Republican) are now both attorneys with major energy-related law firms, and both offered similar views on the current U.S. energy policy situation.

Coleman cautioned that the Btu-based energy tax proposed by President Clinton as a cornerstone of his deficit-reduction scheme may prove too attractive as a "permanent long-term revenue machine" to fund administration spending on new initiatives, adding that once it is in place, "it's easy to raise it when you need more revenue."

President Bush crafted a "very good energy bill" last year, Coleman conceded, and as a result, energy wasn't a big issue in last fall's election campaign. He predicted that Mr. Clinton's team will wind up supporting most environmentalist priorities, possibly with some "tempering" to make those views fit reality.

Moore found fault with the proposed energy tax, saying "we'd be the first country in the world to tax raw energy," and predicting that the Btu tax would lower GNP and impose undue hardships on a variety of industries unable for competitive reasons to pass through new taxes to consumers.

Clinton's energy policy is "contradictory," Moore charged. "Let's use more natural gas but not drill for it." It is counter-productive to praise gas while continuing moratoria on offshore drilling and keeping the Arctic National Wildlife Refuge (ANWR) off limits for exploration, he added. "ANWR may be the last elephant we have," he said, calling an energy policy "drawn up by environmentalists, and not the Treasury Department" a bad blueprint for resolving energy problems.

Both agreed that a broad-based consumption tax, on the lines of a value-added tax system and designed to yield large revenues, might be the revenue enhancement option least injurious to the U.S. economy, although Moore maintained that before such a course is undertaken, more spending cuts should be made.

In the U.S. and elsewhere, there is clearly more uncertainty than confidence that current and looming energy questions can be resolved without incurring still further economic dislocations. This latest in the continuing series of meetings on international energy restructuring and finance issues produced an extraordinary number of questions, many options for varying sectors of the energy industries, and few clear indications of what combination of policies and actions is the right one to rationalize existing economic imbalances. **Paul Feine**

Testing to destruction

Is there no limit to British incompetence? Apparently we cannot even test our cars and vans without disaster. Picture this: you take your comfortably middle-aged light diesel van in for a routine UK Ministry of Transport roadworthiness test (MOT). This test is obligatory to keep your car on the road, but life is good. The van gives you no trouble and you expect no problems with it passing. Twenty minutes later a sorrowful man in overalls comes over and breaks the awful news — your engine has blown up during the new exhaust test. Your van has become an insurance write-off!

Since new smoke emission tests for light diesels were introduced on 1 January, under an EC directive, the Department of Transport (DoT) has received 34 reports of "engine failure" during the test. This is out of approximately 45,000 tests. Owners of light diesels with weak hearts and natures not given to gambling will be reassured to learn the test has now been suspended until the exact problem is pinpointed.

According to the Vehicle Inspectorate, during the test a smoke meter is attached to the vehicle by a probe in the exhaust pipe and measures the density of exhaust passing across a light source. This is state-of-the-art stuff, with which the UK is a leading light; however, the problems start when the engine is revved from idle speed to its maximum limit up to ten times in order to measure the exhaust under "the whole rev range". A "poorly-maintained engine may not stand the stresses of the test and the cam shaft drive belt can snap" a spokesman told *FTEE*.

Considering most drivers of light diesels do not routinely wind their motors off the clock up to ten times as they are sitting at the lights, this is not normally a problem. Not many cam shaft drive belts snap spontaneously. According to manufacturers' instructions, the belts should be replaced regularly but this being quite a complicated and expensive task it is not always adhered to. However, if "poorly-maintained" equals dodgy belts, it is probably better to replace it than risk it shattering your engine during an MOT.

The DoT insists there are no claims pending against it for "failed" vehicles and says the costs would normally be covered by insurers. However, few insurance companies can be pleased at the prospect of numerous claims produced by an obligatory test designed by the government.

According to the EC directive relating to roadworthiness tests (exhaust emissions), the limit values of the co-efficient of absorption will be 2.5 per metre for naturally aspirated diesel engines and 3.0 per metre for turbo-charged diesel engines, from 1 January 1996. From that date it is hoped exhaust limits will be harmonised throughout the EC, at more stringent levels than currently tolerated (3.2/metre and 3.7/metre respectively, in the UK). This directive cites minimising environmental pollution as its main concern and intends to "maintain emissions at a low level throughout the useful life of a vehicle by means of regular exhaust emission tests and to ensure vehicles which are major polluters are withdrawn from service until they are brought to a proper state of maintenance." The aim was to get the worst polluters off the road. Now, however, the smoke test would seem the perfect solution to ridding UK roads of potential 'major polluters' by quietly blowing them up in the garage!

In the UK, emission tests for petrol vehicles, commensurate with EC environmental directives, began in November 1991, and for heavy goods and passenger service vehicles, in September 1992.

So far, Switzerland is testing exhaust at full engine speed and Austria at up to 75 per cent full speed, and neither country has reported any problems. "Only good old UK has had the difficulty", says Concawe, the oil companies' organisation for environmental and health protection in Brussels. So are UK garages being over-zealous? One disgruntled west London garage does not think so. It has spent around £3,000 for the new equipment, which has to be calibrated every year for another £60, and is now sitting idle while the DoT investigates. Although this particular garage had no engine failures it now cannot use the equipment until the summer at least, when the DoT hopes the tests can be re-introduced. Meanwhile, the cost of an MOT has climbed another £3 to £24, and emissions are simply checked 'by eye'.

As the UK Automobile Association most succinctly said: "The last thing you want with an old but perfectly good vehicle is a destruct test". **Christine Griffiths.**

Taxing times

The UK is coming into line with the rest of Europe by putting VAT on energy. The likelihood here is that this will be used to veto the introduction of an EC carbon/energy tax. Equally, it is not an encouragement to the use of demand-side management. However, since the tax redistributes money from the poor to the rich by increasing indirect taxation, it may now be in everybodies' interest to get on with insulating the homes of the poor.

The British Chancellor of the Exchequer, Norman Lamont, has announced that the British will pay 8 per cent value added tax (VAT) on domestic gas and electricity from next year, and in the year after this the figure will be 17.5 per cent. In short the British are to join the European norm (see table). Predictably however, the move brought cries of rage and anger from numerous directions, most notably from charities for the old, who point — quite rightly — to the fact that in Britain a great many poor old people suffer from hypothermia. As a result, the government was forced to re-emphasise that it planned to subsize such poor people to the tune of around £1 billion a year in new benefits. Not least of the problems is that providing a social security system that can directly compensate for a VAT increase is likely to be increasingly complex to administer. The social security system is already hideously complicated and already includes payments for cold weather.

The anger was really par for the course. Nobody likes paying new taxes, and fuel is an essential. Since the tax will not be levied for a year, its immediate effects will not be felt. However, what was perhaps more bizarre was that the share prices of the new regional electricity companies (RECs) shot up on the news of the VAT extension to fuels. The City of London dealers do not believe that their favourite shares will suffer for the simple reason that nobody will actually use less electricity. VAT as a mechanism for environmental correctness is not the most effective means to save the planet. For one thing, it is only the end consumer that gets done by VAT. Companies just claim it back from each other, making the tax one of the most labour-intensive to collect. Equally, as the government's own research suggests, the tax will actually reduce Britain's carbon dioxide output by less than 1 per cent.

There is, however, something rather more interesting going on than outrage about new taxation, or even that few anticipate that it will really have much impact on demand. By this means the British Government has rather stuck a spoke in the wheels of the EC carbon tax out of Brussels and more or less has said so. This followed directly after a meeting by European Finance Ministers on the 15th March to try and pin down the plan for the tax. At Danish insistence the ministers are due to meet again on April 23rd to have a further crack at an agreement. Yet in spite of this, Lamont told his Parliamentary audience that he "remained unpersuaded of the need for a new European Community tax. Tax policy should continue to be decided here in this House — not in Brussels."

This may sound like rhetoric, but the truth is that no British Chancellor, having just imposed 17.5 per cent VAT on fuel for 1995, is then going to turn around later and demand another $3 to $10 a barrel of oil equivalent at the same time. Yet to sustain an antagonism to the carbon tax, the minimum demand from the rest of Europe was surely that the British should pay VAT on fuel. Facing the rest of the Community across the negotiating table and saying "no" to any Community energy tax was clearly not going to be easy, if the British continued to deliver gas and electricity free of the usual Community charge. This suited the government's revenue needs so in it came.

The other rather embarrassing semi-anti-environmental aspect of the VAT business is that it may also put paid to the demand-side management (DSM) plans that are increasingly under discussion. Making the assumption that the UK is to achieve its target of cutting 10 million tonnes of carbon from its emissions by 2000, then the Department of the Environment's research suggests that the newly formed Energy Saving Trust will need to spend between £300 and £400 million a year on household insulation. While this might seem a useful idea, it is rather more in financial terms than the RECs and British Gas are happy to pay the Trust under current conditions, which is £6 million. The only effective way in which the companies are likely to reach into their pockets for this kind of loot is if the regulators allow them to pass through the cost of efficiency measures to the general consumer, via the famous proposed "E" factor.

However, to raise a figure like £400 million a year would effectively mean a further 4 per cent increase in fuel bills, on top of the new VAT payment. The whole DSM business was expected to emerge from seclusion relatively shortly. The electricity regulator, Stephen Littlechild had approved the idea in principle by saying that it was "in the spirit of economic purchasing" for the RECs to consider such heretical and dangerous ideas.

The point here is that direct taxation on fuels has a redistributive effect that may on the whole be self-defeating in revenue raising terms on the current format. Compared with direct taxes on income, the poor are proportionally hit harder by VAT on necessities. The wealthier proportion of society, now being bombarded by newspaper advice on how to save energy, have the resources to insulate their homes and use energy efficient equipment, including lighting. It is they that can reduce demand. The poor, faced by an increase in heating and lighting costs, did not have the ability to afford the necessary capital costs of such measures previously. Increases in tax, further reduces this capacity. Consequently, the proportion of total energy used by the poor increases. Yet it is to the poor that the subsidies in social security must go to protect them from the political scandal of hypothermia in winter. In short the VAT paid by the wealthy declines, as they save energy, while the government needs to spend tax-payer's money subsidizing the poor.

There is another twist to this. VAT on fuels will increase disconnections for non-payment, unless the government pays through social security. The cost to the utilities of this problem is already extensive and is going to increase. Getting the money, with 17.5 per cent on top, is going to become more difficult; a cost that the companies will need to study. Not least of the lessons from the US on DSM, or least cost planning, is that the poor figure very largely in the schemes to reduce consumption at the consumer level, through insulation and efficient lighting. It is the poor who are profligate with energy and DSM is most effective in this social strata. Given that the government is going to have to pick up the social security bill for this, it is consequently greatly in its own and the utilities' interest to allow the pass through of cost on any DSM measures that the RECs and British Gas propose, even if this does shift up bills even further. The extra few per cent can be borne by the wealthy and will proportionately help the less well off.

VAT in the EC

Country	Electricity (%)	Gas (%)	Liquid and solid fuels (%)
Belgium	19.5	19.5	(Coal) 6.0
Denmark	25.0	25.0	25.0
France	18.6	Fuel 18.6 Standing charge 5.5	18.6
Germany	15.0	15.0	15.0
Greece	18.0	18.0	18.0
Ireland	12.5	12.5	12.5
Italy	9.0	9.0	9.0
Luxembourg	6.0	6.0	(Solid fuels) 12.0
Netherlands	17.5	17.5	17.5
Portugal	8.0	8.0	8.0
Spain	15.0	15.0	15.0