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International Oil Developments

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14 December 1973

INTERNATIONAL OIL DEVELOPMENTS

CURRENT OVERVIEW

Contrary to widespread expectations, the Arabs hardened their stance at the oil ministers' meeting in Kuwait on 8 December. The 5% monthly production cutback, suspended in December, is to be resumed in January,* in spite of the pro-Arab statements made recently by several European countries and Japan. Another meeting will take place this month to hear the report of the Saudi and Algerian oil ministers, who have been visiting Europe and the United States. New decisions probably will be taken at this meeting on the basis of the Arabs' assessments of changes in the military, political, or diplomatic situation.

The major oil consuming nations are little closer to unity than before on the matter of sharing supplies. The Netherlands is appreciative of US promises of aid but so far prefers to rely on oil company maneuvers and under-the-table EC cooperation to meet its needs. The US Government has been told to expect some additional pro-Arab statements from Dutch officials. At the same time, British and French diplomats are expressing concern over the Dutch situation to Arab governments.

The announced further cut in Arab oil exports next month considerably dims the economic outlook for most West European countries and Japan. The full brunt of this cutback will fall on the neutral – that is, not embargoed or favored – nations, which in the aggregate will suffer in January a further reduction of about 8% in their imports of Arab oil. Unless offset by diversions of oil intended for favored nations or the United States, the January cut alone will reduce total energy supplies in West European nations and Japan by 2%-4%.

* The oil ministers also announced that "the friendly African and Islamic states will be given the entire quantities stipulated in their contracts, even if this entails an increase in production." Until this announcement, these states were to receive oil based on their imports during the first nine months of 1973. Although these countries are not large importers of oil and the Arabs have warned them against allowing any diversion of supplies, some may be tempted by high prices to permit diversion.

Note: Comments and queries regarding this publication are welcomed. They may be directed to [redacted] of the Office of Economic Research, [redacted]

In reality, major diversions of oil supplies are already being ordered, mostly by companies trying to maintain supplies for their refineries in the Netherlands. The largest diversion appears to be the shipping to Rotterdam of much larger amounts of Iranian and Indonesian oil than prior to the Arab embargo, with Japan being the principal loser. Other diversions are occurring within Western Europe and away from other Asian and Latin American countries. The size and destination of these movements are not yet clear.

Cuts in Arab production beyond the current level will rapidly change what was probably a painful but manageable energy shortfall for Western Europe as a whole to a situation of severe shortages and pronounced economic disruption. The EC Commission has estimated, on the basis of an expected 20% fall in oil supplies below normal demand, that GNP for the Community in 1974 could decline by as much as 2%-3% and that unemployment could rise from 2% to about 5%. Before the oil crisis, West European economic growth of about 4.5% had been expected.

Although the West European energy shortfall during the first quarter of 1974 is likely to average only about 13%, several nations dependent upon Rotterdam – West Germany, in particular – will suffer declines of 20% or so. More important, if the Arabs' monthly 5% cuts in production continue beyond the first quarter, all of Western Europe (except the favored nations) will suffer shortfalls of at least 20%. Because of the severity of the shortage in West Germany and its importance to regional trade and output, the EC Commission's estimate of the impact appears reasonable.

Japan will be even harder hit by oil losses, particularly because of the large diversion of supplies away from Japan that the companies are undertaking. Japan's oil shortfall in the first quarter is expected to be nearly 20%. Industry – which consumes about three-quarters of Japan's oil – will be hard hit even if favored in oil allocations. Tokyo, which had expected a growth rate of near 10%, now faces the prospect of no growth early next year and a decline in GNP later on, particularly if Arab cutbacks continue. (~~SECRET~~/[redacted])

DIVERSIONS -- A ROUGH ESTIMATE

To date, estimates of the impact of the Arab oil restrictions have been based on the assumption that the rules announced by the Arabs would be followed and that non-Arab oil would flow in the pre-crisis pattern. Evidence recently has begun to accumulate showing that the actual situation is quite different, mainly as a result of changes in the distribution of non-Arab oil.

Information on the actual flow of oil since the Arab cutbacks began in mid-October is still very limited because of the lags both in consuming

Estimated Oil Losses During the First Quarter of 1974, by Region[1]

Percent of Expected Consumption

	(1) Arab Cutback Plan with No Diversions	(2) Import Sharing (Excluding the United States)	(3) Adjusted EPSC Estimate	(4) Current CIA Estimate
United States	13	13	13	13
Western Europe	18	13	16	13
Japan	6	14	14	19
Other	6	9	5	7

1. The estimate for the United States is based on the assumption that the net loss is equal to the initial direct and indirect loss of Arab oil of about 2 million b/d plus some 500,000 b/d for expected growth in imports of Arab oil. Unlike most countries, the United States expected to be short of oil this winter before the Arab cutbacks occurred. Measured against normal demand rather than against the supply expected before the Arab cutbacks, the US shortfall amounts to 17%.

Column (1) shows the volume of oil that would be lost if each country continued to receive its normal imports of non-Arab oil and its allocation from Arab sources based on the Arab formulation.

Column (2) shows what the shortfalls would be if all importers except the United States were to share equally all available oil imports regardless of source; i.e., each country would lose the same percentage of its expected imports. The differences in the percentages reflect varying degrees of reliance on oil imports.

Column (3) shows the losses as recently estimated by the Emergency Petroleum Supply Committee (EPSC). Since the EPSC estimates assumed a 5% cut in December, they have been adjusted accordingly. In the EPSC discussion on 11 December, there was general agreement that the volume of diversions away from the Far East, and particularly Japan, to northern Europe was greater than the report indicated. We believe the Column (4) estimates reflect that discussion. They are also consistent with other reporting from the areas concerned.

countries' receipts of oil on the high seas when the crisis arose and in compiling statistics after the oil arrives. Nevertheless, there is now some information on recent trends in oil shipments, and there is enough information on company plans for the next few months to permit rough estimates for the major world regions. The accompanying table compares our best current estimate of the distribution of the shortfall in the first quarter of 1974 and the estimates of the Emergency Petroleum Supply Committee with the distributions that would occur if the Arab rules were followed (without diversion) and if all available oil exports were shared equally outside the United States.

Company plans indicate that the Far East, which is less reliant on Arab oil than Europe, is clearly going to be losing considerably more oil than the Arab formulation would deny it. We estimate that Japan alone will lose 800,000 b/d more than the Arab formulation would call for. Japanese crude oil imports fell by 8% from October to November and are expected to be down by 12% from the September level in the first quarter of 1974. If the expected growth in demand is included, Japan's loss is 19%. (~~SECRET~~/[redacted])

* * * * *

THE ROTTERDAM SITUATION

The plan to allow Arab oil for other European countries to transit Rotterdam – broached recently by the Saudi and Algerian oil ministers – apparently is being stymied by Dutch-Saudi intransigence. The Saudis are demanding Arab inspectors in the port of Rotterdam to oversee the oil's transshipment, and the Dutch have refused to admit such inspectors. The West German and Belgian governments as well as the major oil companies are pressuring The Hague to modify its stand.

Relaxation of the embargo – when and if it occurs – will do little more than formalize and make easier the under-the-table sharing system established by the oil companies with the acquiescence of most West European governments. The Arab cutbacks and embargoes, as originally instituted, would have cut some 2.3 million b/d from Rotterdam's normal oil inflow of 3.2 million b/d. In fact, the Rotterdam embargo would account for two-thirds of the prescribed cutback for all of Europe. A full embargo has never taken place. Because of company diversions and swaps, oil going into Rotterdam probably has fallen only by 1.0 million - 1.3 million b/d, with Japan being the chief loser.

Oil company data gathered by the Dutch government indicate that refinery throughput has fallen by about 21% since September, as shown in the following tabulation (thousand b/d):

Refinery	Capacity	September Throughput	December Throughput
Total	**1,875**	**1,400**	**1,100**
Exxon	325	242	142[1]
Chevron-Texaco	300	300	145[2]
Gulf	100	N.A.	N.A.
Mobil	130	N.A.	N.A.
Shell	520	450	340
BP	500	N.A.	N.A.

1. According to Exxon sources in the United States, the figure is about 125,000 b/d.
2. Company sources in the United States indicate that December throughput is some 237,000 b/d.

Other evidence suggests that the cut may be as small as 16%. The Hague estimates that refinery throughput will fall to 980,000 b/d in January and 850,000 b/d in February. This compares with total Dutch oil consumption before the crisis of about 800,000 b/d. The Netherlands' net exports of refined products before the crisis were about equal to consumption.

Recent information also gives a clear indication of European dependence on the port of Rotterdam. (For data on the Netherlands, see the tables in the Statistical Survey.) Belgium and Luxembourg depend on the Netherlands for some 60% of their oil requirements, and West Germany relies on it for about 35%. Denmark, Ireland, the United Kingdom, and Sweden also depend on the Netherlands for between 10% and 20% of their supplies. (~~SECRET~~/[redacted])

* * * * *

JAPAN'S ECONOMY FACES SEVERE OIL SHORTAGE

In coming months the oil shortage probably will hit Japan harder than most European countries, even though they depend much more on Arab oil. Its oil supply is being reduced both by the supply cutbacks and by diversion. If the Arabs' monthly production cuts of 5% continue, the Japanese oil supply will fall nearly 20% – and the total energy supply some 15% – below normally expected demand by March.

The greater part of Japan's expected oil losses during the next three months probably will be the result of diversion of supplies, mainly to Europe, by the major international oil companies. The amount likely to be diverted is difficult to pin down. Japanese sources and the oil companies estimate that Japan's oil supply will fall about 1.2 million b/d below normal by March, whereas the Arab allocation formula implies a cut of only about 400,000 b/d. The Japanese seem to be convinced that their oil shortfall will be large and are planning their conservation program accordingly.

Real GNP in the first quarter of 1974 probably will not increase much, if at all, above the level a year earlier. The economic situation will worsen rapidly if the Arab cutbacks persist beyond the first quarter of 1974, with output probably declining sharply by spring. Industry faces the biggest problem. It uses about two-thirds of the country's energy and consequently will have to absorb most of the supply shortfall. The government already has ordered a 10% cut in planned levels of oil and electric power consumption in major industries by the end of December. A further 5%-10% cut is expected in the first quarter of 1974. Although some industries can offset oil cutbacks to some extent by increasing the use of coal and eliminating waste, overall industrial production probably will decline significantly in the months ahead.

A cut in energy supplied for service industries, which account for about one-half of GNP, should have little immediate impact on output. Fuel supplies for home heating can be reduced with little real cost to the economy. So far the government has relied on voluntary conservation measures to reduce private consumption, but mandatory controls probably will be adopted in the near future.

Tokyo is trying to restrain domestic demand because of the expected slowing growth or actual drop in output. It already has ordered a reduction in private spending on plant and equipment of 15% between now and March 1974. It also hopes to reduce consumer demand by raising interest rates on savings accounts and postponing planned tax cuts. Consumer demand will remain strong for the next few months because of large semi-annual bonus payments made in December and because little immediate unemployment is expected to result from the energy crisis. (~~SECRET~~/[redacted])

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THE BIDDING FOR STATE-OWNED OIL

The unprecedented prices being offered for Nigerian and Iranian state-owned oil promise to raise substantially the entire structure of world oil prices.

A new round of government crude oil sales has begun as Nigeria, Iran, and Saudi Arabia place their 1974 allotments on the market. The most publicized current offering is 300,000 b/d for six months of low-sulfur oil accruing to Nigeria as royalties. A price of $16.80 per barrel – one-third more than the highest price previously negotiated anywhere – reportedly has been bid by an American company. The Nigerian bid has been eclipsed by offers of up to $17.40 per barrel for Iran's 470,000 b/d of lower quality crude on six-month contracts. Nigeria thus will probably require a new round of bidding before signing the contract. Following its past practice, Saudi Arabia probably will unilaterally set the price for its 525,000 b/d of state-owned oil on the basis of prices that Iran receives for similar oil.

When the OPEC price meeting is held on 22 December, producing country officials undoubtedly will use the results of recent bidding as support for higher company payments. OPEC leaders are demanding – against stiff company opposition – that future royalty and tax payments be based on actual market prices. Because intra-company sales still account for most of crude oil sold, it is difficult to determine the true market

Market Prices for Selected Sales of Crude Oil

	Iraq	Saudi Arabia	Iran	Abu Dhabi	Libya	Algeria	Nigeria
API gravity (degrees)	35	34	34	39	40	43	34
Sulfur content (percent)	2.1	1.8	1.4	0.7	0.2	0.15	0.14
	US $ per Barrel						
1973							
1 Jan	....	2.13	2.15	2.38	3.28	....	....
1 Apr	....	2.30	2.32	2.75	3.75	3.80	....
1 Jun	....	2.70	2.76	....	4.00	....	....
1 Jul	....	....	....	....	....	....	4.25
1 Aug	3.48	2.88	....	3.20	5.50	....	....
1 Sep	....	....	....	3.00	....	5.00	....
1 Oct	3.00	2.80	2.85	3.25	5.85	....	5.20
16 Oct	3.62	3.65	3.64	4.32	....	....	....
1 Nov	3.66	....	....	....	8.50	6.61	6.84
1 Dec	....	....	16.00-17.40 (bids)	....	....	....	16.80 (bid)

price. Although the producers will maintain that recent bidding gives some indication of the true value of oil, they are unlikely to demand that royalties and taxes be based on a price anywhere near $17 or more a barrel.

Last October the Persian Gulf members of OPEC began negotiations with the companies by demanding a 100% increase in the posted price, to $6.02 a barrel. While the companies were formulating a counteroffer, the governments involved unilaterally issued a take-it-or-leave-it package that raised the posted price to $5.12 and established a rule that henceforth the posted price would be 140% of the market price. This implied a market price of only about $3.65 per barrel at that time. (UNCLASSIFIED)

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IRAQ GOES ITS OWN WAY

Iraq, the fourth largest Arab oil producer, continues to ignore the production cutback scheme. Moreover, it rejected the Middle East cease-fire resolution and refused to attend the Algiers Arab summit conference two weeks ago. Iraq has totally embargoed oil shipments to the United States and the Netherlands, which involved only 50,000 b/d (3% of total exports). At the same time, it has fully maintained oil deliveries to other countries. In October it nationalized the US and Dutch equities in Basrah Petroleum, the sole remaining foreign oil producer in Iraq.

Iraqi oil output has temporarily dropped below capacity only because of damage to export facilities in Syria during the war.

	Million b/d
September	2.2
October	1.8
November	2.0
December	2.1 (est.)

More than half of Iraq's crude oil – 1.2 million b/d – is exported via the Iraqi Petroleum Company (IPC) pipeline to the Mediterranean ports of Banias in Syria and Tripoli in Lebanon. The Banias terminal, which normally handles 700,000 b/d, was closed by the destruction of two-thirds of the tank farm, while Tripoli maintained full loading rates. Repair operations at Banias have permitted total throughput to recover to about 1 million b/d.

Iraq is a maverick for both economic and political reasons. It is much less able to afford extensive production cuts than are most Arab producers. Oil revenues were depressed in 1972 because of the nationalization of IPC in June and the difficulties subsequently experienced in marketing the oil. To maximize revenues for economic development, Iraq is planning to expand oil output by the end of 1975 to 3.5 million b/d, of which about 3 million will be available for export. A planned 10-year expansion program in the oil industry alone will require $1.5 billion. Iraq also has resisted cooperating with the other Arab oil producers because it believes that the supply cutback will earn enemies rather than win friends to the Arab cause. (~~CONFIDENTIAL~~)

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SOVIETS RAISE DEMANDS ON LNG PROJECTS

The USSR has escalated its demands in recent negotiations with US firms concerning a possible multi-billion dollar project for delivery of liquefied natural gas from Yakutsk to the US West Coast. The Soviets requested the following:

- A 50% increase in the f.o.b. price of the gas, from 60¢ to 90¢ per thousand cubic feet, with provision for subsequent annual increases.
- A maximum Soviet down-payment of 10%, the remaining 90% to be financed by loans from the US Export-Import Bank and other US sources at an average interest rate of no more than 6.15%.
- Provision of three complete plants to produce large-diameter linepipe, valves, and pipeline construction equipment.
- Soviet ownership of one-half of the LNG tanker fleet, an arrangement previously ruled out by the United States.
- Additional funds for exploration and full equipping of gas wells.

Similar demands have been submitted to US firms negotiating for delivery of gas from Western Siberia to the US East Coast. (~~CONFIDENTIAL~~)

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GASOLINE RATIONING IN WESTERN EUROPE

Plans to ration gasoline in the Netherlands, Sweden, and Norway in January are proceeding. The Netherlands will allow four gallons per week for private cars, irrespective of size. Extra rations will be available when cars are used in one's job. Trucks used in business will receive special rations of gasoline or diesel fuel. To help avoid a black market, the government will allow people to sell their surplus ration coupons – probably at post offices – for a set price. This rationing plan is intended to bring a 30% reduction in gasoline use by private vehicles. The government is discussing introduction of staggered work hours with labor unions and employers to avoid overloading public transport facilities during peak periods.

The Swedish government has distributed ration cards allowing 21 gallons per vehicle each month. Vehicles in commercial or professional use will receive extra rations. The United Kingdom has delivered ration coupons to post offices and Ireland has issued rationing applications, but neither country has yet announced specific programs. (UNCLASSIFIED)

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NOTES

Peking's Opposition to Joint Ventures Softens

Japanese or US firms apparently have some chance of winning a small role in developing China's offshore oil deposits. Over the past two months, Chinese officials have told Japanese businessmen and overseas Chinese leaders that Peking may consider cooperative schemes to develop oil deposits in the Pohai Gulf. China earlier had turned aside foreign proposals with comments indicating unyielding opposition to joint development ventures. This opposition presumably has been softened by the prospect of earning foreign exchange from oil exports, gaining technology through association with foreign firms, and countering Soviet overtures to Japan. (~~SECRET~~/[redacted])

Arabs Expand List of Friendly Countries

Saudi Arabia has added Taiwan to its list of friendly countries, and Abu Dhabi has added Japan and West Germany to its list. According to the president of the Chinese Petroleum Corporation, Taiwan will get the full amount of crude oil that it previously had been purchasing directly from the Saudis. Although shipments from Kuwait – its other major Arab supplier – have been cut, Taiwan has ample stocks to absorb the reduction without much difficulty. (~~CONFIDENTIAL~~)

[redacted]

Scarcities of Oilfield Equipment May Limit US Drilling

US oil drilling is being hampered by equipment shortages. With drilling activities rising rapidly around the world because of soaring oil prices, demand for oilfield equipment – most of which is of US manufacture – has become very strong. The devaluation of the dollar and US price controls have made exports more attractive than domestic sales. Exports have jumped from $174 million in 1967 to about $395 million this year and should reach some $440 million in 1974. At the same time, production of oilfield equipment is being limited by worldwide steel shortages – a situation that will worsen if steel output is curtailed by fuel shortages. In addition, used equipment, which usually accounts for about 5% of the supply for new US wells, will be scarce because some 30,000 stripper wells that normally would have been abandoned in the past year are being kept in operation. (~~CONFIDENTIAL~~)

Problems with the SUMED Pipeline Project

In an effort to save the SUMED pipeline project, Egypt has agreed to absorb cost increases attributable to the oil boycott, while Bechtel Corporation, the US contractor, would have to absorb all others. Egypt's dissatisfaction with Bechtel's arrangements for US financing and Arab bickering over Kuwait's disproportionately large role in the other financing has been resolved by Egypt's decision to finance half of the project. The main point still at issue is Bechtel's insistence on a force majeure clause for protection from liability in the event of construction delays. The Egyptians rejected a previous European bid to build the line partly because of their objection to such a provision. (~~SECRET~~)

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STATISTICAL SURVEY

World Crude Oil Production

	September 1973		December 1973
	Thousand b/d	Percent	Estimate (Thousand b/d)
Western hemisphere	16,045	27.9	16,250
United States	9,149	15.9	9,200
Canada	1,745	3.0	1,800
Mexico	470	0.8	500
Venezuela	3,395	5.9	3,400
Ecuador	210	0.4	250
Others	1,076	1.9	1,100
Eastern hemisphere	41,438	72.1	37,440
Western Europe	395	0.7	400
Middle East	22,899	39.8	19,360
Abu Dhabi	1,381	2.4	1,040
Dubai	273	0.5	200[1]
Iran	5,793	10.1	5,900
Iraq	2,167	3.8	2,100
Kuwait	3,480	6.1	2,610
Oman	300	0.5	300
Qatar	608	1.1	460
Saudi Arabia	8,534	14.8	6,400
Others	363	0.6	350
Africa	6,163	10.7	5,480
Algeria	1,100	1.9	820
Libya	2,286	4.0	1,710
Nigeria	2,102	3.7	2,250
Others	675	1.2	700
Asia-Pacific	2,303	4.0	2,450
Indonesia	1,350	2.3	1,500
Others	953	1.7	950
Communist countries	9,678	16.8	9,750
China	630	1.1	650
Romania	275	0.5	300
USSR	8,663	15.1	8,700
Others	110	0.2	100
World total	**57,483**	**100.0**	**53,690**
OPEC total[2]	32,406	56.4	28,440
OAPEC total[3]	19,979	34.8	15,490
Arab producers[4]	20,552	35.8	15,990

1. Production reduced by offshore well fire.
2. The members of the Organization of Petroleum Exporting Countries are Abu Dhabi, Algeria, Ecuador, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, and Venezuela.
3. The members of the Organization of Arab Petroleum Exporting Countries are Abu Dhabi, Algeria, Bahrain, Egypt, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, and Syria.
4. Arab producers are Abu Dhabi, Algeria, Bahrain, Dubai, Egypt, Iraq, Kuwait, Libya, Oman, Qatar, Saudi Arabia, and Syria.

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Estimated Pre-Crisis World Oil Trade, 1973[1]

Thousand b/d and Percent of Consumption

	Total Consumption	Domestic Production	Imports														
				Arab Countries													
			Total	Total	Saudi Arabia	Abu Dhabi	Kuwait	Iraq	Libya	Algeria	Other	Iran	Venezuela	Indonesia	Canada	Nigeria	Others
Total	57,000	57,000[2]	34,000	18,600	8,000	1,150	3,100	1,900	2,200	1,100	1,150	5,700	3,400	1,250	1,100	2,000	1,950
Percent	100.0	100.0	59.6	32.6	14.0	2.0	5.4	3.3	3.9	1.9	2.0	10.0	6.0	2.2	1.9	3.5	3.4
United States	17,300	10,900[2]	6,300	1,600	600	150	150	50	350	150	150	400	2,000	250	1,100	550	400
Percent	100.0	63.0	36.4	9.2	3.5	0.9	0.9	0.3	2.0	0.9	0.9	2.3	11.6	1.4	6.4	3.2	2.3
Western Europe	15,500	400	16,000[3]	11,300	4,350	600	1,750	1,300	1,700	750	850	1,900	500	Negl.	....	1,250	1,050
Percent	100.0	2.6	103.2	72.9	28.1	3.9	11.3	8.4	11.0	4.8	5.5	12.3	3.2	Negl.	....	8.1	6.8
Japan	5,400	Negl.	5,400	2,300	1,250	300	650	50	Negl.	....	50	2,050	Negl.	900	....	Negl.	150
Percent	100.0	Negl.	100.0	42.6	23.1	5.6	12.0	0.9	Negl.	....	0.9	38.0	Negl.	16.7	....	Negl.	2.8
Canada	1,750	1,850	900	150	50	50	Negl.	Negl.	50	....	Negl.	150	450	....	....	100	50
Percent	100.0	105.7	51.4	8.6	2.9	2.9	Negl.	Negl.	2.9	....	Negl.	8.6	25.7	....	....	5.7	2.9
Subtotal	39,950	13,150	28,600	15,350	6,250	1,100	2,550	1,400	2,100	900	1,050	4,500	2,950	1,150	1,100	1,900	1,650
Percent	100.0	32.9	71.6	38.4	15.6	2.8	6.4	3.5	5.3	2.3	2.6	11.3	7.4	2.9	2.8	4.8	4.1
Communist area	9,850	9,300	500	400	Negl.	Negl.	....	200	100	50	50	100	....	....	....	....	....
Percent	100.0	94.9	5.1	4.1	Negl.	Negl.	....	2.0	1.0	0.5	0.5	1.0	....	....	....	....	....
Others	7,200	34,550	4,900	2,850	1,750	50	550	300	....	150	50	1,100	450	100	....	100	300
Percent	100.0	479.9	68.1	39.6	24.3	0.7	7.6	4.2	....	2.1	0.7	15.3	6.2	1.4	....	1.4	4.2

1. This table allocates imports on a direct and indirect basis – i.e., refined products from export refineries are traced to the source of the crude oil. The estimates are a yearly average for 1973 and therefore differ from estimates at any specific time. For example, US dependence on Arab oil has increased through the year and in October was nearly 2 million b/d.
2. Including US production of natural gas liquids of 1.7 million b/d.
3. Western Europe's oil imports exceed consumption because it exports substantial quantities of oil outside Europe.

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Estimated Pre-Crisis Arab Oil Trade, 1973[1]

Thousand b/d and Percent of Exports

Arab Oil Producers	Total Exports	United States	Western Europe: Total	West Germany	United Kingdom	France	Italy	Netherlands	Other	Japan	Canada	Communist Area	Other
Total Arab	**18,600**	**1,600**	**11,300**	**1,650**	**1,600**	**2,100**	**1,750**	**1,450**	**2,750**	**2,300**	**150**	**400**	**2,850**
Percent of Exports	**100**	**8.6**	**60.8**	**8.9**	**8.6**	**11.3**	**9.4**	**7.8**	**14.8**	**12.4**	**0.8**	**2.1**	**15.3**
Saudi Arabia	8,000	600	4,350	500	550	600	700	750	1,250	1,250	50	Negl.	1,750
Percent	100	7.5	54.4	6.2	6.9	7.5	8.8	9.4	15.6	15.6	0.6	Negl.	21.9
Kuwait	3,100	150	1,750	100	350	300	300	350	350	650	Negl.	....	550
Percent	100	4.8	56.5	3.2	11.3	9.7	9.7	11.3	11.3	21.0	Negl.	....	17.7
Libya	2,200	350	1,700	500	250	150	400	100	300	Negl.	50	100	....
Percent	100	15.9	77.3	22.7	11.4	6.8	18.2	4.6	13.6	Negl.	2.3	4.5	....
Iraq	1,900	50	1,300	100	100	400	350	Negl.	350	50	Negl.	200	300
Percent	100	2.6	68.5	5.3	5.3	21.1	18.4	Negl.	18.4	2.6	Negl.	10.5	15.8
Abu Dhabi	1,150	150	600	....	200	300	....	....	100	300	50	Negl.	50
Percent	100	13.1	52.2	....	17.4	26.1	....	....	8.7	26.1	4.3	Negl.	4.3
Algeria	1,100	150	750	250	Negl.	250	....	50	200	....	....	50	150
Percent	100	13.6	68.2	22.7	Negl.	22.7	....	4.6	18.2	....	....	4.6	13.6
Other Arab	1,150	150	850	200	150	100	....	200	200	50	Negl.	50	50
Percent	100	13.1	74.0	17.4	13.1	8.7	....	17.4	17.4	4.3	Negl.	4.3	4.3

1. This table allocates imports on a direct and indirect basis – i.e. refined products from export refineries are traced to the source of the crude oil. The estimates are a yearly average for 1973 and therefore differ from estimates made at any specific time. For example, US dependence on Arab oil has increased throughout the year and in October was nearly 2 million barrels per day.

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Selected Consuming Countries' Dependence on Arab Oil
1972

Thousand b/d and Percent of Imports

		Imports											
			Arab Oil										
	Total Consumption	Total[1]	Total	Saudi Arabia	Abu Dhabi	Kuwait	Iraq	Libya	Algeria	Other	Iran	Vene-zuela	Others
Total Western Europe	14,200	14,400	9,902	3,573	369	1,873	867	1,889	684	647	1,648	276	2,574
Percent		100.0	68.8	24.8	2.6	13.0	6.0	13.1	4.8	4.5	11.4	1.9	17.9
Italy	2,005	2,217	1,534	566	....	303	244	421	....	....	353	....	330
Percent		100.0	69.2	25.5	....	13.7	11.0	19.0	....	....	15.9	....	14.9
France	2,315	2,364	1,836	495	227	342	287	196	219	70	142	36	350
Percent		100.0	77.7	20.9	9.6	14.5	12.1	8.3	9.3	3.0	6.0	1.5	14.8
United Kingdom	2,195	2,057	1,411	418	90	399	70	294	22	118	264	100	282
Percent		100.0	68.6	20.3	4.4	19.4	3.4	14.3	1.1	5.7	12.8	4.9	13.7
West Germany	2,885	2,052	1,466	380	....	87	38	570	228	163	196	74	316
Percent		100.0	71.4	18.5	....	4.2	1.9	27.8	11.1	7.9	9.6	3.6	15.4
Netherlands	787	1,810	1,258	608	....	372	8	82	23	165	308	9	235
Percent		100.0	69.5	33.6	....	20.6	0.4	4.5	1.3	9.1	17.0	0.5	13.0
Belgium-Luxembourg	624	879	424	268	....	127	29	....	....	....	100	....	355
Percent		100.0	48.2	30.5	....	14.4	3.3	....	....	....	11.4	....	40.4
Spain	700	775	520	226	....	66	38	62	97	31	48	17	190
Percent		100.0	67.1	29.2	....	8.5	4.9	8.0	12.5	4.0	6.2	2.2	24.5
Portugal	87	80	67	25	....	....	32	....	....	10	6	....	7
Percent		100.0	83.7	31.2	....	....	40.0	....	....	12.5	7.5	....	8.8
Other	2,602	2,166	1,386	587	52	177	121	264	95	90	231	40	509
Percent		100.0	64.0	27.1	2.4	8.2	5.5	12.2	4.4	4.2	10.7	1.8	23.5
Japan	4,800	4,757	2,162	1,067	269	595	30	4	....	197	1,680	8	907
Percent		100.0	45.4	22.4	5.7	12.5	0.6	0.1	....	4.1	35.3	0.2	19.1
Canada	1,665	730	183	77	39	3	16	38	1	9	98	373	76
Percent		100.0	25.1	10.6	5.4	0.4	2.2	5.2	0.1	1.2	13.4	51.1	10.4
United States[2]	16,350	4,750	850	300	100	50	....	250	100	50	200	1,700	2,000
Percent		100.0	17.9	6.3	2.1	1.0	....	5.3	2.1	1.0	4.2	35.8	42.1

1. Imports exceed consumption in some countries because they export products; the Netherlands tranships some crude oil to other West European countries.
2. US imports are allocated on a direct and indirect basis, i.e., refined products from export refineries are traced to the source of the crude oil.

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Recent and Scheduled Reductions in Arab Oil Production[1]

	1973				1974		
	September	October	November[2]	December[2]	January[3]	February[3]	March[3]
	Production (Thousand b/d)						
Total	**20,129**	**18,490**	**15,540**	**15,640**	**14,990**	**14,380**	**13,780**
Saudi Arabia	8,534	7,810	6,400	6,400	6,080	5,780	5,490
Kuwait	3,480	3,110	2,610	2,610	2,480	2,360	2,240
Libya	2,286	2,250	1,710	1,710	1,620	1,540	1,470
Iraq	2,167	1,800[4]	2,000	2,100	2,100	2,100	2,100
Abu Dhabi	1,381	1,360	1,040	1,040	990	940	890
Algeria	1,100	1,050	820	820	780	740	700
Qatar	608	600	460	460	440	420	390
Oman	300	300	300	300	300	300	300
Dubai	273	210[5]	200	200	200	200	200
	Percent Decrease from September 1973						
For all countries	....	8	23	22	26	29	32

1. This table illustrates the effect of the OAPEC decision of 4 November on Arab oil production through March 1974. Iraq did not sign the agreement and has not reduced production; Oman and Dubai, which are not members of OAPEC, are not expected to reduce production.
2. On 4 November, OAPEC agreed to a 25% production cutback in November, based on September production; OAPEC has exempted Japan, the Philippines, and most of Western Europe from December's planned 5% cutback; therefore, we assume no change in production from November in December except for Iraq, which is expected to raise output by 5%.
3. OAPEC plan to reduce an additional 5% each month, based on production during the previous month.
4. Production reduced as a result of war damage to export facilities.
5. Dubai production reduced by offshore well fire.

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Measured against the production that previously had been expected for December 1973 and March 1974, the cutbacks are still larger ——

	Saudi Arabia	Ku-wait	Libya	Iraq	Abu Dhabi	Al-geria	Qatar	Oman	Dubai	Total
	Thousand b/d									
Pre-cutback planned December production[1]	9,400	3,800	2,300	2,200	1,500	1,100	650	300	300	21,550
Production shortfall due to cutbacks										
Volume	3,000	1,190	590	100	460	280	190	....	100	5,910
Percent	32	31	26	5	31	25	29	....	33	27
Pre-cutback planned March 1974 production[2]	9,800	3,400	2,300	2,300	1,900	1,100	700	300	300	22,100
Production shortfall due to cutbacks										
Volume	4,310	1,160	830	200	1,010	400	310	....	100	8,320
Percent	44	34	36	9	53	36	44	....	33	38

1. Company forecasts where available; otherwise, OER estimate.
2. OER estimate.

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Dutch Oil Trade
January-June 1973

Thousand b/d

Imports		Exports	
Total	**3,225**	**Total**	**2,603**
Crude oil	**2,862**	**Crude oil**	**1,282**
Arab	1,999	Western Europe	1,242
Abu Dhabi	75	Belgium-Luxembourg	429
Algeria	36	Denmark	35
Dubai	1	Finland	3
Egypt	26	France	24
Iraq	17	Ireland	20
Kuwait	559	Italy	6
Libya	191	Norway	5
Oman	15	Portugal	6
Qatar	139	Spain	20
Saudi Arabia	900	Sweden	26
Syria	40	United Kingdom	119
Iran	568	West Germany	549
Nigeria	249	East Germany	40
Venezuela	18		
Other	28		
Refined products	**363**	**Refined products**	**1,321**
Western Europe	192	Western Europe	1,019
Belgium-Luxembourg	40	Belgium-Luxembourg	131
France	27	Denmark	57
Italy	45	France	12
Spain	14	Sweden	36
United Kingdom	30	United Kingdom	209
West Germany	26	West Germany	522
Other	10	Other	52
Arab	45	Others and unknown	302[1]
Others and unknown	126		

1. Including bunkers.

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Selected West European Country Oil Imports Through Rotterdam
January-June 1973

	Thousand b/d			Thousand b/d			Thousand b/d		
	Crude Oil Imports	Through Rotter-dam	Percent	Prod-uct Imports	Through Rotter-dam	Percent	Total Oil Imports	Through Rotter-dam	Percent
Belgium-Luxembourg	718	429	60	191	131	69	909	560	62
Denmark	202	35	17	238	57	24	440	92	21
Ireland	60	20	33	75	....	....	135	20	15
Sweden	224	26	12	330	36	11	554	62	11
United Kingdom	2,255	119	5	471	209	44	2,726	328	12
West Germany	2,209	549	25	749	522	70	2,958	1,071	36

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Energy Sources of EC Countries, 1972

Percent

	Ireland	United Kingdom	West Germany	France	Benelux	Italy
Domestic	**23**	**51**	**47**	**31**	**52**	**24**
Coal[1]	21	38	34	14	10	2
Natural gas[1]	....	9	8	7	40	12
Crude oil	....	Negl.	3	1	2	1
Hydro/nuclear	2	4	2	9	Negl.	9
Imported	**77**	**49**	**53**	**69**	**48**	**76**
Coal	8	1	2	3	2	5
Crude oil						
Arab oil	50	33	36	51	29	49
Other	19	15	15	15	17	22

1. Including imports from other EC members.

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Sources of EC Energy

Percent

	1957	1967	1972
Domestic	**79.0**	**48.4**	**37.2**
Coal	74.6	38.8	21.0
Natural gas	1.3	3.2	10.7
Crude oil	1.8	2.1	1.3
Hydro/nuclear	1.3	4.3	4.2
Imported	**21.0**	**51.6**	**62.8**
Coal	0.4	2.7	2.2
Crude oil			
Arab oil	13.8	34.8	42.1
Other	6.8	14.1	18.5

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Summary of Conservation Measures Adopted

Country	Consuming Sector: Transport	Industry	Commercial	Household	Trade
West Germany	All driving restrictions rescinded from 19 Dec - 6 Jan				Imposed export licensing system on oil products
France	Reduced highway speeds, flight cutbacks		Curbs on nighttime lighting of monuments, store displays, and office buildings, limit of 4% increase in heating oil deliveries, reduced television transmission, sale of gasoline in containers prohibited	Voluntary heating restrictions, sale of gasoline in containers prohibited	
Italy	Ban on Sunday driving, raised price of gasoline, banned weekend gasoline sale, reduction in airline speeds, reduction in use of diesel, heating, and residual fuel oils	Reduction in use of diesel, heating, and residual fuel oils	Restricted outdoor lighting and movie showings, early closing of nightspots and government offices, reduction in use of diesel, heating, and residual fuel oils	Reduced television transmission, 20% decrease in heating oil deliveries, reduction in use of diesel, heating, and residual fuel oils	Banned all oil exports, including to other EC nations
United Kingdom	Distributed ration coupons -- not yet in effect, 50 mph national speed limit, 17% aviation fuel cutbacks, 10% bunkering cutbacks	10% reduction in oil deliveries	10% reduction in oil deliveries, banned use of electricity for heating purposes, heating and lighting cutbacks	10% reduction in oil deliveries	Regulating non-EC oil exports
Netherlands	Fuel rationing effective 7 Jan 1974, 4 gallon weekly limit per car, sale of gasoline in containers prohibited, 40% reduction in state road lighting	Deliveries reduced 15%	Deliveries reduced 15%, cutbacks in illumination in shop windows, advertising, and holiday lights	Deliveries reduced 15%, sale of gasoline in containers prohibited	Export licensing for most oil products
Belgium	Ban on Sunday driving, sale of gasoline in containers prohibited	Reduced energy usage	Reduced energy usage	Reduced school week, sale of gasoline in containers prohibited	Export licensing for most petroleum products
Luxembourg	Ban on Sunday driving, reduced speed limit, 40% increase in gasoline prices, reduced gas station hours	Fuel oil prices raised 20%	Fuel oil prices raised 20%	Fuel oil prices raised 20%	
Austria	Substantial price rises, reduced speed limits, voluntary Sunday closing of gas stations, reduce octane contents of premium gasoline	Substantial price rises	Substantial price rises	Substantial price rises	
Denmark	Ban on Sunday driving, reduced speed limits, 20% reduction in diesel fuel supplies	Sulfur content restrictions eased, 25% reduction in oil supplies	25% reduction in heating oil supplies, ban on outdoor lighting	25% reduction in heating oil supplies	

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Summary of Conservation Measures Adopted
(Continued)

Country	Consuming Sector: Transport	Industry	Commercial	Household	Trade
India	Increased prices of gasoline and kerosene		Increased prices of gasoline and kerosene	Increased prices of gasoline and kerosene	
New Zealand	50 mph speed limit, regulations allowing gas stations to refuse unusual sales	Stoppage of all oil-fired power stations	Ban on oil company promotional advertising, oil supplies to fishing vessels cut off		Limited sales to overseas shipping
Costa Rica	Gasoline rationing				
Guatemala	Restricted gasoline sales, reduced speed limits		Ornamental and external lighting on all public and private buildings curtailed		
Angola	13% increase in gasoline prices		Increased prices for petroleum products		
Ghana					Forbade bunkering on non-Ghana flag ships
Malawi	Weekend closing of gas stations, reduced speed limits, limited sales of gasoline in containers		Limited sale of gasoline in containers		
Mozambique	Fuel rationing, weekend and holiday closing of gas stations, reduced speed limits, increase in gas prices		Limited kerosene sales	Limited kerosene sales	
Rhodesia	Gasoline rationing				
South Africa	Weeknight and weekend closing of gas stations, 50 mph speed limit				
Bulgaria	Gasoline rationing, increased gas prices, lowered speed limits	Banned use of heating appliances during peak hours, change of work shifts and days to redistribute power load	15% decrease in heating oil consumption in government and business offices		
Poland	Restrictions on Sunday and holiday driving, speed limits reduced, decrease in gasoline consumption of government vehicles				
Czechoslovakia			Cutback in government energy consumption		
Romania	Gasoline rationing for private vehicles, priority for commercial vehicles, lower speed limits	Rationing and regulation of gasoline, fuel oil, and electricity, temperature reductions	Temperature reductions	Temperature reductions	
Yugoslavia	Increased gas prices, limit on gasoline purchases				

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Summary of Conservation Measures Adopted
(Continued)

Country	Consuming Sector: Transport	Industry	Commercial	Household	Trade
Sweden	Gasoline rationing	Gasoline rationing	Gasoline rationing, advertising lighting banned, street and store lighting restricted		
Spain	20% price rise	20% price rise	20% price rise	20% price rise	Oil exports restricted
Portugal	Limited sales of gasoline, 10% increase in prices, weekend gasoline sales prohibited, increase in diesel oil and high-grade petrol prices	Increased prices	Increased prices	Increased prices	
Greece	Reduced speed limits	Electricity use cut 10%	Electricity use cut 10%	Electricity use cut 10%	
Norway	Gasoline rationing, gas stations closed at night and on weekends, automobile rallies and competitions prohibited, ban on Sunday driving	Gasoline rationing, 25% reduction in heating fuel deliveries between Oct 1973 and May 1974	Gasoline rationing, 25% reduction in heating fuel deliveries between Oct 1973 and May 1974		
Switzerland	Ban on Sunday driving, reduced speed limits, 15% - 20% reduced gasoline allocation by suppliers				
Ireland	Issued gasoline rationing, applications -- not yet in effect, reduced oil supplies by 10%	5% reduction in deliveries	5% reduction in deliveries	10% reduction in deliveries	
Finland					Oil export controls imposed
Canada	Increase in gasoline prices				Minor cutbacks in exports to US
Colombia	Limited sales of jet and marine fuel				
Australia					Banned export of natural gas and uranium
Taiwan	Banned nighttime gasoline sales, limited Sunday and holiday gas sales	3% reduction in line voltage, 25% reduction in energy consumption by all government agencies	3% reduction in line voltage, cutback on outdoor lighting and on air conditioning in public offices	3% reduction in line voltage	
South Korea	Decreased speed limits, increased tolls, banned Sunday gas sales, curtailed operation of buses, taxis, and air service	Fuel deliveries to all industries reduced 25%, strategic industries receiving priority allocation	Television transmission hours cut, reduced shopping hours, closure of commercial indoor swimming pools, external department store lighting banned	Reduced temperatures, sharing of remaining petroleum supplies	Ban on export of petrochemical products, ban on coal exports expected
Japan	Voluntary conservation measures	10% cut in power and oil consumption in most major industries	Voluntary conservation measures	Voluntary conservation measures	

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Summary of Conservation Measures Adopted
(Continued)

Country	Consuming Sector				
	Transport	Industry	Commercial	Household	Trade
Peru	40% aviation fuel price rise				
Belize	40 mph speed limits, weekend closure of gas stations, fuel sales to foreign licensed vehicles forbidden	Daylight savings time	Daylight savings time, early closing of stores, 20% reduction in fuel allocation to government departments	Daylight savings time	
Mexico	100% increase in gasoline prices, increase in POL prices		Increased LPG prices	Increased LPG prices	
Nicaragua	Fuel sales made only to regular scheduled flights				

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