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ENERGY SUPPLY

Prospects for the International Oil Market

by Jochen H. Mohnfeld, Paris*

The OPEC price conference in Geneva on May 25-26, 1981 did not resolve the disagreement among OPEC member countries over official prices. As a result of this stalemate, Saudi Arabia with its intention to moderate prices will in the foreseeable future probably not be prepared to make substantial reductions in its high volume of production with which it puts pressure on prices. What short- and medium-term perspectives for the international oil market arise from this situation?

As a result of the failure to come to a price agreement the conference could only decide to leave prices unchanged. Price rises were in any case unthinkable because of the existing oil glut. Saudi Arabia had tried, without success, to persuade those countries with the highest prices (Libya, Algeria and Nigeria at \$ 40-41 per barrel¹; cf. list of prices in Table 1) to reduce their prices and would have been prepared in return to raise its prices by \$ 2/b (from \$ 32 to \$ 34 for Saudi Arabian Light).

The high price countries and several other OPEC countries who loosely orientate their prices on a hypothetical reference price of \$ 36/b, had demanded a reduction of Saudi Arabia's production in order to relax the pressure on prices. However, as long as the OPEC price structure is not based in an economically justifiable way on a unified reference price, a cut-back in production in order to raise prices is not in the interest of the oil-producing countries with high reserve/ production ratios. Saudi Arabia and several other oilproducing countries with large reserves are interested in a long-run maximization of their oil income, whereas those countries with relatively low reserves want to maximize their profit in the short run. These different economic interests are, however, in practice mingled with other, usually politically dominated interests so that at the last price conference Saudi Arabia fought alone

for a reduction of the top prices. The compromise offered by Saudi Arabia would, in any case, only have been a first step towards a rational price structure. If spot market prices for products are taken as a basis, differences in quality and transport costs between Saudi Arabian oil and light, low-sulphur oil from North Africa account for \$ 2.50/b on average and \$ 3.50/b at most, whereas list prices show a gap of \$ 8-9/b.

Since Saudi Arabia was not prepared to cut back its production, the remaining OPEC countries tried in vain to create an artificial scarcity by announcing a production cut of 10 %. Iran and Iraq were exempted from this decision since their output had in any case been impaired by their war. The cut-back decision remained, however, completely ineffective since the production levels from which the reductions were calculated had not been reached at that time. The theoretical cut-backs of approximately 1.2 mbd in total were in most cases nothing more than a justification of reductions which had already been enforced by the market. Only in a few cases (United Arab Emirates, Venezuela, Qatar) did the decision mean a genuine cutback, whereas other countries (especially Nigeria, Libya and Algeria) even would have to increase their production (in some cases considerably), in order to

^{*} International Energy Agency (OECD).

¹ 1 Barrel = 159 litres; in the following abbreviated to b or bbl; 1 million barrels per day (mbd) is approximately equivalent to 50 mn tons per year.

Including 0.3 mbd NGLs — Natural Gas Liquids.

reach the fictitiously reduced level. The sum of the supposedly reduced outputs is on balance still marginally higher than the actual volume of output immediately before the conference.

The Present Market Situation

The supply picture continues to be dominated by Saudi Arabia's high level of production. It was about 10.3 mbd² in July; reports according to which output was to be reduced slightly (by 0.45 mbd) at the beginning of July, have not been confirmed. The present level has now reached 43 % of total OPEC output, compared to 28 % in 1978 (cf. Table 1). The output of a number of other countries, on the other hand, is kept below desired levels, because the general weakness of demand is concentrated on oil producers with the highest prices. Nigeria, Libya and Algeria are especially affected with at least 1 mbd, but also Mexico and a larger number of smaller producers with a further 0.5-1.0 mbd. Furthermore, there are signs that production in Iran and Iraq is not only restricted as a result of war, but that both countries are also suffering from genuine marketing problems.

The production surplus which is frequently quoted is, above all, a surplus of production *potential* which is involuntarily not being used, but secondly it is also an unwanted increase in stocks on the demand side. The worldwide increase in stocks of approximately 2 mbd in the second quarter and 1 mbd in the third quarter (cf. quarterly figures in Table 2) is not unusual for this time of year. But many oil companies, who are suffering severe losses in their marketing operations, would prefer to reduce rather than to increase stocks because of costs. Due to current contractual obligations, or due to their fear of disturbing long-term supply relations, they find themselves unable to reduce their purchases by the desired amount.

There is no evidence of a revival in oil demand in the industrial countries. According to preliminary estimates demand in the 21 IEA countries³ in the second quarter of 1981 is 5.7 % below the corresponding period in 1980, which again was 8 % below the second quarter of 1979. The second quarter of 1981 shows a decline of about 11 % compared to the first quarter. The present reduction in demand is thus not only due to seasonal factors, but is also affected by sluggish economic activity and on-going structural substitution away from

oil. To what extent the non-seasonal reduction in demand is attributable to a reduced level of economic activity, and to what extent to structural changes, can only be roughly estimated. The cyclical downturn of the world economy was certainly not the only factor, although it played a role, in particular because of underemployment in the energy-intensive industries. On the other hand, since the industrial countries' real GNP still grew by an estimated 1.6 % in the first half of 1981⁴, a decisive part of the reduction in demand for oil must be attributed to shifts in consumption patterns evoked by the steep rise in oil prices since early 1979.

Table 1
Development of Crude Oil Prices

as of End of June 1981

Type of	Gravity	Produc			
crude oil		tion	1978	1Q81	2Q81
OPEC					
Arabian Lt.	34°	6.67	12.70	32.00 ¹	
Arabian Med.	31°	0.92	12.32	31.45 ¹	
Arabian Hv.	27°	2.67	12.02	31.00 ¹	
Iranian Lt.	34°	0.67	12.81	37.00	
Iranian Hv.	31°	0.68	12.49	36.00	
Abu Dhabi M&Z	39°	1.55	13.26	36.56	
Iraq Basrah	35°	0.50	12.60	35.96	
Iraq Kirkuk	36°	0.50	12.82	36.18 ²	
Kuwait	31°	1.26	12.22	35.50	
Libya	40°	1.45	13.85	41.00	
Algeria	44°	0.80	14.10	40.00^3	
Nigeria	34°	1.30	14.10	40.00	
Venezuelan Lt.	34°	0.83	13.99	38.06	
Venezuelan Med.	26°	0.78	12.72	32.88	
Venezuelan Hv.	17°	0.51	11.38	27.95	
Indonesia	34°	1.58	13.55	35.00	
Qatar	40°	0.45	13.19	37.42	
Total production		23.12			
average GSP ⁴			12.93	34.84	34.56
Spot sales		0.7		37.75	32.00
Premiums/Discounts ⁵		2.0-3.0		38.10	33.00
Ave. OPEC price					00.00
(GSP, spot, premium,					
discount)				35.45	34.31
% increase GSP⁴					
over end of 1978				169.5	167.3
over Dec. 31, 1978				33.4	32.3
over end 4 Q. 1980				8.8	7.9
Non-OPEC					
Mexico ⁶	32°	2.35	13.10	38.50	34.50
North Sea	36°	2.10	14.00	39.25	35.00
Ave. price of					22.00
internationally					
traded oil					
(OPEC and Non-OPEC)				35.98	34.16
(OF EGANGINOIFOFEO)				33.30	

Retroactive to Nov. 1, 1980.

³ International Energy Agency: almost all Western (OECD) industrial countries except France, Finland and Iceland.

⁴ Compared to the first half of 1980; the average annual rate of growth expected by the OECD Secretariat is 1.2 %,

^{2\$ 37.29} for Kirkuk blend fob Mediterranean Sea, at present only exports of Kirkuk 36° fob Mediterranean Sea at \$ 37.50. Pipeline charges were, however, reduced by \$ 0.57/b as of June 1.

³A surcharge for exploration of \$ 3/b was imposed for some time in 1980 and was reintroduced at a lower level (\$1.50/b) at the beginning of 1981; the surcharge may possibly continue to be raised.
⁴GSP (Government Selling Price): official list price.

⁵Average estimated volume with discount and the few remaining contracts with surcharges.

contracts with surcharges.

Price for lsthmus; the prices for all crude oils were reduced by \$ 4/b as of mid-June, but the Mexican Government is trying to raise prices again in 3 Q. 81.

After the fruitless OPEC conference prices on the international oil market weakened further, due to the continuing overhang of production capacity. The downward pressure on prices can be seen most clearly on the market for freely available spot quantities. Since the beginning of the year decreasing spot market prices have been reflecting the weakness of demand. In the middle of June the spot price for Arabian Light fell back to the official list price of \$ 32/b for the first time since the end of 1978, and in the meantime even less has been paid for some single cargoes (cf. chart 1). Whether the \$ 32 mark represents a support line for the crude oil spot market is not yet certain. A substantial fall below this level appears, however, improbable since Saudi Arabia

Table 2
World Oil Supply and Demand¹

	1979	1980	1981				
		preli- ~ min.	Q1	Q2	Q3	Q4	Year
1. World- demand for oil ² IEA (without							
processing gains)	38.3	35.4	35.8	31.5	32.0	35.0	33.6
Remaining OECD Others (incl.	2.8	2.6	2.4	2.1	2.2	2.3	2.3
OPEC) ³	10.2	10.8	10.5	10.4	10.5	10.7	10.5
Processing gains	0.5	0.6	0.6	0.6	0.6	0.6	0.6
World (incl. processing gains, excl. Centrally Planned Economies)	51.8	49.4	49.3	44.6	45.3	48.6	47.0
2. Non-OPEC	51.0	43.4	43.0	44.0	45.5	40.0	47.0
oil supply⁴ IEA/OECD Developing	14.4	14.9	15.2	14.8	14.7	14.7	14.8
countries Net exports of Centrally Planned	5.2	5.6	6.2	6.3	6.3	6.3	6.3
Economies Processina	1.1	1.0	8.0	8.0	8.0	0.8	8.0
gains	0.5	0.6	0.6	0.6	0.6	0.6	0.6
Total	21.2	22.1	22.8	22.5	22.4	22.4	22.5
3. Additional requirements	30.6	27.3	26.5	22.1	22.9	26.2	24.5
OPEC production ⁴ Saudi Arabia	9.5		10.2	10.3	10.3	10.3	10.3
Iran Iraq Kuwait Others⁵	3.1 3.4 2.3 13.3	1.5 2.7 1.5 11.9	1.5 0.7 1.5 11.7	1.3 1.0 1.1 10.5	1.3 1.0 1.1 10.1	1.3 1.0 1.2 10.4	1.4 0.9 1.2 10.7
Total	31.6	27.6	25.6	24.2	23.8	24.2	24.5
4. Net changes in stocks (Residual)	+1.0	+0.3	0.9	+2.1	+0.9	-2.0	0.0

¹Forecast level at end of June 1981. Minor differences in the totals are due to rounding. The estimates assume an average rate of economic growth in the IEA countries of 1.2% in 1981.

Lincl. bunkers.

controls the means to keep spot market prices on the same level as its official prices. For the remaining oil-producing countries the difference between list prices and spot quotations has grown further (cf. chart 1). The size of the gap for light, low-sulphur African oils at the beginning of July was \$ 6-7/b, for light Gulf oils \$ 4.30-5.20/b and for heavy, high-sulphur varieties \$ 6.25-7/b.

Downward Pressure on Prices

These large discrepancies put heavy pressure on contract prices, since the oil companies which are suffering downstream losses from processing expensive crude oils, threaten to reduce or discontinue their crude oil purchases. The following price reductions have taken place to date:

- ☐ First of all, since the beginning of this year official and inofficial surcharges on top of the list prices have been eliminated. Whereas in January surcharges of, on average, \$ 3.30/b were being charged on about 4 mbd, this practice has now disappeared.
- ☐ Several smaller oil-producing countries, who usually react more flexibly to the state of the market, have been reducing their prices by smaller or larger steps since the early spring.
- ☐ The most important reduction of official prices up to the present was made by Mexico⁵, Great Britain⁶ and Norway in mid-June with reductions of around \$ 4/b (cf. Table 1). With this decision, the British prices are orientated on Saudi Arabia's level, thus strengthening the latter's price position.
- ☐ Finally, the last front on which the oil buyers are fighting against unrealistically high prices are OPEC official prices. Up till now no OPEC country, with the exception of the smallest producer Ecuador, has been prepared to make a reduction of official prices. The question of saving face when confronted with the Saudi position certainly plays an important role in this context. But evidence is increasing that several OPEC countries are prepared to grant hidden price reductions in the form of discounts or the extension of payment periods. In a number of oil-producing countries the prices for the third quarter have to be re-negotiated within the framework of current supply contracts, and it would not be surprising if buyers could achieve greater price cuts than up till now, at least inofficially.

³The estimates for 1981 are somewhat less than for 1980 in order to take account of the possibility of lower consumption in Iran and Iraq. ⁴Incl. NGL (Natural Gas Liquids).

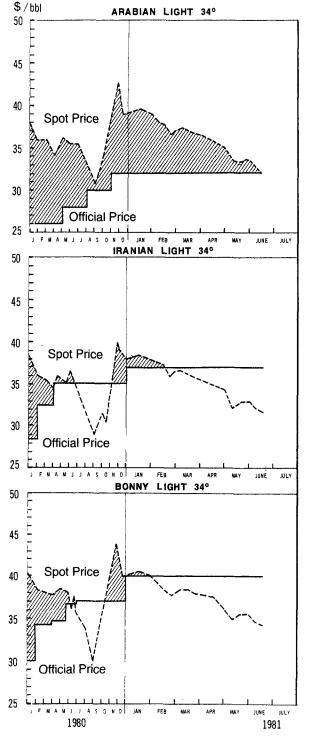
⁵Incl. the Neutral Zone.

⁵ The Mexican government declared a few days after this decrease, however, that it is intending to recover as much as possible of the reduction on contract deliveries for the 3rd quarter.

⁶ The prices are not determined by the government, but by the national oil company BNOC, which is obliged by contract to take the state of the market into account. At the end of June Norway followed with price decreases of 10 % (approximately \$ 4).

Even without official price reductions the average OPEC price went down from \$ 34.84/b in the middle of the first quarter of 1981 to \$ 34.56/b at present, due to the increasing weight of the relatively inexpensive

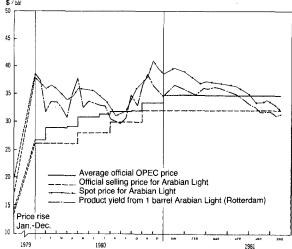
Chart 1
Official and Spot Prices 1980-1981



Saudi oil. Since during the same period spot market prices declined rapidly (by \$ 5-6), and premiums were reduced and in some cases even hidden discounts were granted, the average OPEC price was reduced by more than \$ 1/b (cf. Table 1). However, this cutback in prices reduced the huge rise of almost 170 % since the beginning of 1979 by just 2.2 %. The average price for oil traded on the world market, including non-OPEC producers, fell somewhat more rapidly from almost \$ 36 to \$ 34.16/b (- 5 %).

In chart 2 the development of the weighted average OPEC price is compared with the list price and the spot price for Arabian Light. In spite of all its efforts Saudi Arabia has been unable to reduce the gap between its prices and those of the other countries. But after a turbulent development of the market which lasted two and a half years the spot price for Arabian Light for the first time corresponds again to the official price. Chart 2 also shows that the present consolidation phase has already progressed further than the easing of the market in September 1980, which was then interrupted by the outbreak of war between Iran and Iraq. Chart 2 also contains a curve depicting the development of the average product yield which could be derived from one barrel of Arabian Light on the Rotterdam spot market. The product yield of around \$ 32/b is only about \$ 1.50/b above the low recorded at the end of September 1980. The trends of the individual products have, however, varied considerably. Gasoline and, consequently, other light products are quoted firm because of the summer demand peak, while heavy fuel oils continue their downward trend. Furthermore, due to the low demand for fuel oil, refinery throughput is

Chart 2
Average Prices for Crude Oil and Products
1979-1981



reduced (partly by closures) to such low levels that companies have to buy light products on the spot market and this stabilizes prices.

Spot product prices which are related to spot crude prices put considerable pressure on domestic refinery prices in markets with free price formation. Since an essential part of refinery throughput depends on contract supplies of crude oil at the distinctly higher official prices, the oil industry world-wide has come under a strong profit squeeze and in countries with (relatively) free price formation it is suffering unprecedented downstream losses. The oil industry particularly feels the effects of the OPEC countries' price inflexibility at a time of supply surplus.

Continuation of Surplus Capacity

It is not difficult to foresee a continuation of a supply situation favourable to the oil consumer as long as Saudi Arabia maintains its high level of production. A substantial cutback in production is not to be expected as long as the aim of rationalizing the OPEC price structure has not yet been achieved. The precondition for such a development, however, is the dominance of economic factors in the decision-making process. In view of the latent political unrest in the Middle East this is not at all self-evident. Light was recently cast anew on the importance of political motives in oil policy when various Arab countries urged Saudi Arabia to use oil as a weapon against Israel and the USA after Israel had destroyed the Iraqi nuclear reactor. Saudi Arabia could also be forced to give in on the price issue and thus reduce its production for other political reasons - e.g. for the sake of keeping on good neighbourly terms with the Arabian Gulf states. Another potential source of disturbance in the Middle East is the possible intensification of the war between Iran and Iraq which could happen at any time and paralyze completely the exports of both countries.

An attempt is made in Table 2 to quantify the foreseeable development up to the end of the year, without taking account of potential political disturbances. With regard to the level of production of individual OPEC countries, the supply/demand balance is more of a scenario nature. The oil-producing countries which have been involuntarily affected by the drop in demand are only waiting for Saudi Arabia to reduce its production in order to fill the gap themselves, as in a communicating system. If there are no political disturbances a tight world oil market is not to be

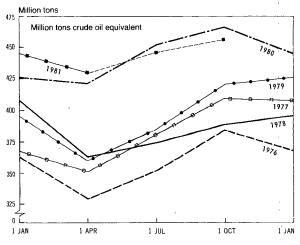
expected in the short and medium term in view of the production capacities of some 2-3 mbd involuntarily shut down within and outside OPEC, and the possibility of a reactivation of an additional potential in Iran and Iraq of some 3.5-4.0 mbd, now shut down because of the war.

Low Demand Continues

The reduction in oil consumption experienced in the first and second quarters of 1981 will probably continue throughout the rest of the year, according to present estimates. Consumption in the IEA countries in 1981 could be about 5 % or 1.8 mbd below the 1980 level which has already declined by almost 8 % over the previous year (cf. Table 2). This forecast already assumes a real increase in GNP in OECD-countries of 1.2 % in 1981⁷.

A further forecasting uncertainty results from the possibility that effective demand could be reduced by a decrease in stocks or at least by a seasonally too small increase. The evidence is contradictory. The IEA's stock reporting system, which includes the planning for the next three months, shows a seasonal increase only slightly below normal in the second and third quarters whereas some oil industry representatives declare they do not intend to increase their stocks, but rather, if possible, to reduce them in order to take account of falling demand and the high costs of stocking. Chart 3 shows preliminary estimates for the IEA area for 1981 and compares them to previous stock cycles. A development as forecast at present for IEA countries would result in a slight increase in crude and product stocks. The coverage of consumption in the quarter following October 1, 1981 (expressed in days of consumption) would rise slightly from 95 to 96 days.





OECD Secretariat's estimate.

A historical comparison demonstrates the key role of stocks in overcoming disturbances in supply. The Iranian crisis at the beginning of 1979 had such sharp price effects because stocks were at a very low level, whereas the almost equally large disruption of exports from Iran/Iraq in the autumn of 1980 did not cause a buyers' panic, since they were confident that the disruption could be bridged over by their unusually high stocks.

Structural Change - Will it last?

The process of the relative decoupling of the Western economies from oil could continue not only in the short but also in the medium term. According to present estimates, oil consumption in the industrial countries could stagnate in 1982, after its 5 % decline in 1981, despite a slight acceleration of economic growth to 2.2 % on an annual basis8 in 1982. However, since oil prices in most industrial countries probably will decline in real terms in the second half of 1981 (in as far as a reduction of the nominal dollar prices is not cancelled out by currency devaluations), and since there is a good chance that this trend will continue in 1982, a slowingdown of the adjustment process in the near future can at least not be ruled out. This will depend decisively on medium- and long-term price expectations. Most European countries are, however, at the moment still confronted with the problem of overcoming the additional price increase caused by the devaluation of their currencies in relation to the dollar (e.g. 21 % for the Federal Republic of Germany in the first half of the vear).

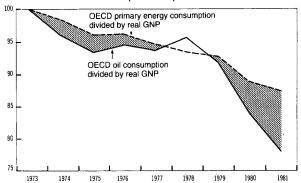
The oil price shock of 1979/80 appears to have surpassed for the time being a threshold of tolerance for many consumers, and has thus resulted in greater savings than those following the price rises of 1973/74. Table 3 compares the trend of oil consumption and oil imports following both oil price shocks. The far stronger

Table 3

Effects of the 1st and 2nd Oil Price Shocks on Consumption and Net Imports of the IEA Countries

	Oil	Net imports	Real GNP (%)	
	consumption (mbd)	(mbd)		
1973	37.0	24.0		
1975	34.1	21.8		
1973/75	-2.9	-2.2	+0.1	
1979	38.3	24.5		
1981	33.6	18.6		
1979/81	-4.7	-5.9	+2.1	

Chart 4 Specific Oil and Energy Consumption per Unit of GNP (1973 = 100)



Note: The shaded area indicates a net substitution of oil by other sources of energy.

reaction from 1979 to 1981 is firstly caused by the far greater *absolute* size of the increases (nominal⁹ price of crude oil 1973/74 plus \$ 7.50/b compared to 1979/80 plus \$ 20/b), secondly by the general expectation, aroused since 1973, of further oil price increases in the long run, and, finally, simply by an acceleration of investments which were already underway. The question remains, how long this positive trend will continue.

The development of oil consumption in relation to real GNP since 1973 is shown in chart 4. The use of oil per unit of GNP dropped by 16.3 % from 1973 to 1980 and could fall by a further 5.8 % by the end of 1981. It should be emphasized that during the period of declining real oil prices following the first oil price shock, the oil intensity of the economy increased temporarily (1975, 1977). During this period the consumers basked in false self-complacency. In order to avoid new abrupt rises in the price of oil in a few years' time when the growth rates of the Western economies and, thus, the consumption of oil, hopefully will increase again, it will once more be necessary to avoid a slowdown of the structural change "away from oil". The Ministers for Energy of the 21 IEA countries pointed out this danger at their last conference on June 15.

Since high risks for the oil supplies from the Middle East continue to exist, and the long-term structural change in energy production and consumption is by no means guaranteed, the present situation can at best be characterized as "Easing without Security" 10.

⁸ OECD Secretariat's estimate.

 $^{^9}$ Because of the low basis the percentage increase 1973/74 was approximately 400 %; 1979/80 it was "only" 170 %.

¹⁰ Statement by Federal Economics Minister Count Lambsdorff at the IEA Ministers' Conference on June 15, 1981.