

Information

European
Investment
Bank



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In his address to the Board of Governors the President of the European Investment Bank sketched

The outlook for 1975

The Board of Governors of the European Investment Bank met in Luxembourg on 16 June 1975 and approved the Bank's Annual Report for the financial year 1974. The President of the EIB, Mr Yves Le Portz, outlined the Bank's activities during the past year and then turned to the prospects for the current year. Bank lending had totalled 416.4 million units of account during the first half of 1975 which was well up, to the extent of 100 million, on the previous year's performance at half-year. The key passages of the President's speech are given below.

Mr Chairman, Gentlemen,

.....

Following the guidelines laid down last year and subsequently confirmed by the Board of Directors, the Bank's activity within the Community this year will be concentrated on:

- (a) regional development, especially in the least favoured regions of the Community, and
- (b) priority investments in the energy sector.

1. The current recession presents a most serious threat to the less favoured regions of the Community, arising in part from a reduced level of investment; in part from the return of unemployed migrant workers and from the problems affecting the balances of payments of countries which need to take major restructuring measures.

But needs continue to be urgent both in the short and the medium term. Comparative regional statistics are not wholly accurate, but it is estimated that the 22 million or so people who live in the Mezzogiorno and Ireland, representing about 9 % of the entire population of the Member Countries, have an income per head only one third of the average income per head of the 9 % of the population living in the most prosperous regions of the Community.

A steady improvement in this state of affairs requires heavy capital investment: in the Mezzogiorno alone, planned investment programmes in the coming five years amount to around 30000 million u. a., including 16000 million for operations to be managed by the Cassa per il Mezzogiorno.

Between its foundation in 1958 and the present day the European Investment Bank has been the sole institution for Community financing to have regional development as its principal mission. Last year, the Community recognised the urgent need for giving a fresh impetus to support for the regions by setting up the European Regional Development Fund with resources of 1300 million u. a. for the period 1975 to 1977. The Bank will seek to establish an effective cooperation with this new source of funds once it comes into operation, particularly if States which receive aid from the Fund use it, as they may under the agreements establishing it, to subsidise the interest rate on Bank lending.

The Bank will, of course, continue to accord the highest priority to regional development projects.

The measures brought in by Italy to facilitate financing of public sector

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investments and special projects in the Mezzogiorno have borne fruit this year, and I have pleasure in informing the Governors that, during the first half of 1975, there has been a large increase in Bank lending for projects in Italy.

Loans to the United Kingdom are also increasing appreciably, while there is every reason to suppose that, as last year, Ireland will again rank first among Member Countries in terms of EIB finance received per head of population.

2. The decisive part played by the energy crisis in sharpening the problems of inflation, recession and balances of payments amply justifies the priority recently given to investments in the energy sector.

In all the Member Countries, the programmes designed to diversify the sources of Europe's energy supplies have been enlarged and accelerated.

Their aim, approved by the EEC Council, is to reduce the Community's dependence on external sources of energy from 62 % in 1973 to 50 % and if possible 40 % by 1985, and this could well imply investments in 1975 to 1980 alone of more than one hundred thousand million units of account at current prices, some 60 % of which would be channelled into electricity production, transmission and distribution. So far, the funds required have been raised mainly through self-financing and from national resources. Outside finance has been purely supplementary.

It is to meet these supplementary requirements that the Bank has, in recent years, expanded its lending operations in support of the energy sector. Such operations last year amounted to over 400 million u. a.

In 1975 the bulk of the Bank's lending in support of the energy sector will go to France, the United Kingdom and, to a lesser extent, Italy. German investors in this sector are unlikely to seek funds from outside sources as long as domestic interest rates remain below those applying on the international market.

The Bank has, to date, been able to meet all the requests with which it has been presented in this sector and should, for the most part, be able to cope with foreseeable increases in applications for additional finance in coming years.

As so much capital is raised through self-financing and recourse to domestic markets, and in the light of the current borrowing plans of electricity producers on other markets, estimates of investments give only a partial indication of future needs for supplementary external finance, which moreover tend to arise only gradually. At all events, the EIB will continue to keep in close contact with the authorities, electricity producers and banks so as to be constantly informed of requirements as they develop.

If additional finance is required by the Community in this sector and new machinery is needed to cope with the situation, it would obviously be a good thing if that machinery were to be closely coordinated with the Bank from the start, so that it should strengthen and complement what the Bank is already doing. Should the occasion arise, the Bank must be prepared to cooperate in devising and implementing this new machinery.

Investment in nuclear power stations is likely to amount to 17 000 to 20 000 million u. a. over the period 1975-1980, although the execution of the programmes of investment in nuclear energy is still in its initial stages.

The Board of Directors of the EIB decided in 1967 that financing of nuclear power stations should be treated as being of common interest to the Community countries, and there has been a steady increase in the amount of finance advanced under this heading. Over the past two years this item has accounted for 15 % to 20 % of all lending in Member Countries. Since 1967, the European Investment Bank has made loans totalling 475 million u.a. toward the construction of nuclear power stations located in five of the Member Countries, in particular France, Germany and the United Kingdom, and has thus given its support to the provision of 11.4 GW of installed capacity.

In the opinion of the Management Committee, the most helpful form of financial machinery would be the provision of guarantees, especially if these were used to facilitate the execution of major multinational nuclear projects.

The Bank will, of course, continue to finance other projects of general European interest such as:

- (a) projects involving economic and technical cooperation between firms in several Member Countries;
- (b) communications projects for forging major links between Member Countries;
- (c) projects that make an outstanding contribution towards safeguarding the environment.

Nevertheless, the total earmarked for projects of this kind during 1975 is bound to be considerably less than the amount which will be going to the priority areas to which I referred a moment ago.

3. Cooperation between the Community and the developing countries is one of the most constructive facets of recent Community activity. The Governors of the EIB have agreed that the Bank should contribute large sums to this process.

The level of Bank lending in the Associated States will nevertheless decline in 1975 as a result of the expiry of the existing association agreements. This can only be partially and temporarily offset by the resumption of operations in Greece, for which 56 million dollars is still left over from the original Financial Protocol. The decline will become more marked throughout the transitional period until the agreements and protocols recently signed or yet to be negotiated actually come into effect.

All the same, in the medium term, the Community's policy of substantial increases in development aid is bound to involve a considerable widening of the Bank's activities outside the Community.

The Lomé Convention and its annexes provide for an increase to 400 million u. a. over 5 years of the ceiling on the Bank's lending operations from its own resources in support of the 46 African, Caribbean and Pacific countries which are signatories to the Convention, together with various overseas countries, territories and départements. It was also agreed that the Bank would manage a further 100 million u. a. provided by the European Development Fund for contributions to risk capital promoting the industrial development of these same

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countries. This would bring the total amount to close on 15 % of all Community aid to the countries in question.

Association agreements currently under negotiation with the three Maghreb countries should call for substantial lending from the Bank's own resources.

It is quite likely that the negotiations which started recently on a second Financial Protocol with Greece will include a request for a considerable increase in finance from the Bank. The renewal of the Financial Protocol with Turkey which expires in May 1976, will also provide the occasion for reviewing the scope for the Bank's operations in that country.

There are in addition certain discussions, which have only just started, which could lead to cooperation between the Community and other developing countries, and thus involve further widening of the Bank's responsibilities.

The Community has recognised that for the Bank's operations from its own resources to constitute a genuine aid to the developing world, they should be supplemented by a measure of budgetary aid, making it possible to tailor the grant element in each Community aid package to the needs of the country concerned. Hence the decision taken under the Lomé Convention to make it a general rule to grant flat-rate subsidies on loans from the Bank is a distinct step forward.

All in all, a considerable expansion of the European Investment Bank's extra-Community activities is in prospect. In addition to funds raised on the capital markets, the EIB will also be able to avail itself of such resources as Member States or the Community decide to place under its management, using the formula already adopted for Turkey and for contributions to the formation of risk capital in the African, Caribbean and Pacific countries.

Regional development, energy investments, and development finance for countries receiving Community aid are thus likely to be the principal concerns of the Bank's activity in the near future.

The Bank works alongside the political organs which conceive and determine the broad lines of Community policy, and which exercise the powers of decision and regula-

tion and responsibility for budgetary control; for its part it enjoys the degree of autonomy necessary for the implementation of new policies to meet Community needs with a banker's approach to the appraisal of projects, and has been able to establish and develop its role as the general Community institution for providing finance for investments of common European interest. Experience has shown that such a division of tasks between political and administrative agencies and a banking institution handling specific financing operations was a sound delegation of responsibilities.

The Management Committee believes that the experience of the EIB and the strength of its credit standing should enable it to continue expanding at a rate that is at once moderate and compatible with the fact that the membership of the Community has risen from six to nine, that the number of non-member countries receiving aid is likely to rise from twenty to over fifty, and that each passing year shows an ever stronger will on the part of the Member States to increase aid to less favoured regions, provide financing for major programmes of common interest, and to cooperate with the countries of the developing world.

Funds are available on the capital markets up to amounts that the Bank's borrowings have yet to reach and it is up to the Bank to find them and deploy them in financing priority projects.

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Mr Chairman, Gentlemen,

Your Annual Meeting is taking place a few days after the favourable outcome of a referendum which confirmed the confidence felt by the peoples of the Community in our institutions' attempts to overcome their present difficulties and ensure a brighter future. I for my part am confident that the activities of your Bank in 1975, like those of the last financial year described in the report submitted to you by the Board of Directors, will contribute to these ends by a series of operations designed to meet the more pressing needs of Member Countries and, I hope, on a steadily increasing scale.

IN MEMORIAM

On 12 April 1975 the EIB was deeply saddened by the death of Mr. Armel Bellec. Armel Bellec had been Manager of the Department for Loans in Member Countries since 1972 after occupying the post of Deputy Manager from 1966 to 1968. Despite his all too brief period of service with the Bank he made an outstanding contribution to the EIB's development. His ability and great humanity were appreciated by all.

The illness which claimed him at the age of 58 put a cruel end to a brilliant career, a large part of which had been devoted to the Banque de France where he had been Inspecteur Général Honoraire. From 1958 to 1963 Armel Bellec devoted himself to the development of the Third World, working for the United Nations for whom he carried out a series of important assignments notably in Laos, Guinea and Zaïre.

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* *

LENDING RATE CUT TO 9.25 %

At its meeting on 16 June 1975 the Board of Directors of the European Investment Bank decided to lower the rate of interest on the EIB's ordinary loans to 9.25 % per annum, irrespective of the term of the loan. The rate had already been cut from 10.5 % to 9.875 % in February and then reduced again to 9.5 % in April.

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* *

The need for Nuclear Energy in Europe

It was in the 'fifties that the industrial countries of western Europe began to lose their independence as consumers of energy. Until then coal had been their mainstay and virtually the backbone of their economic development up to the second world war. With petroleum prices falling steadily and mines becoming ever more costly to operate, imports of oil from overseas gained a competitive edge, and Europe came to rely on these for its industrial development. Thus by the early 'seventies the whole of western Europe found itself heavily dependent on outside energy supplies. In 1973, energy imports accounted for 61,5 % of all Community consumption, with some countries almost wholly reliant on oil imports, mainly from the Middle East, e.g. Denmark with 88 % of consumption, and Italy with 72 %.

Between 1971 and 1973, the world petroleum situation was marked by events that not only underscored the need to reduce this excessive dependence on outside energy supplies, but also, because of the increases in oil prices, made nuclear power stations much more competitive with conventional thermal power stations.

Since then, most European countries have endeavoured to diversify their sources of energy supply, looking to nuclear energy for electricity production, this now having become competitive with conventional thermal production, and being ready for the step from research and pilot plants to commercial stations. However, different countries have handled energy policy in different ways: some have concentrated investments on nuclear power stations using proven reactor types, while others have redoubled efforts to improve their own reactors.

The decision taken by Member States of the Community to embark on a major programme of constructing nuclear power stations so as to cushion the impact of imports on energy consumption calls for the deployment of technical, industrial and financial resources on a very large scale. At the same time, there are misgivings among the public at large that will have to be allayed.

Community targets and national programmes

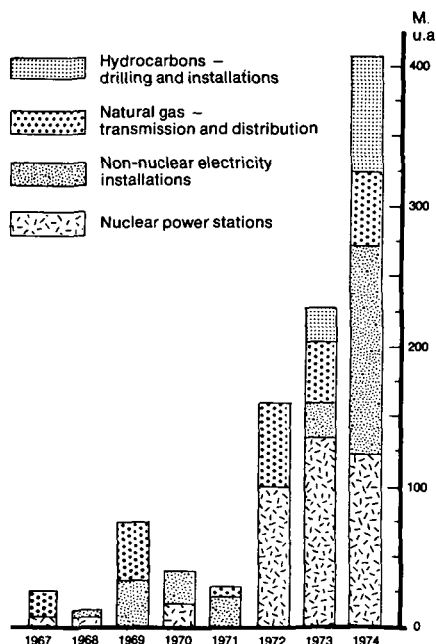
These considerations have guided both national and Community authorities in setting their objectives for the development of nuclear power.

The Community's aim is to reduce its dependence on imported energy

Nevertheless, up to the end of this century, nuclear energy will be the only alternative to oil: to re-open the debate on the development of nuclear power stations now would be to risk a halt to economic growth.

E.I.B. Loans for Energy Projects in the Community

(Total per annum, 1967 - 1974)



from the 1973 level of 61.5 % to 50 %, or if possible 40 %, by 1985, which presupposes the achievement by the latter date, in the Community at large, of a total installed capacity of 160 GW (1) and if possible 200 GW.

The next stage is to integrate these general objectives into the investment programmes of electricity generating authorities in Member States; in fact, taken together, these programmes already cater for an installed nuclear capacity of around 150 GW for 1985, not far short of the objectives set.

These programmes vary considerably in range from one country to another: those of France and Germany alone represent more than two thirds of the total power involved.

The following is a rough guide, broken down by Member Countries, to the timing of commissioning dates for nuclear power stations in the Community (2):

- 5 to 6 phases per annum in France, each of 900 to 1 300 MW.
- 4 to 5 phases per annum in Germany of about 1 200 MW.
- 3 to 4 phases per annum in Italy of about 1 000 MW.
- 1 phase per annum in Belgium between 1979 and 1985, of 900 to 1 000 MW.
- 3 power stations in all in the United Kingdom, each of 1 320 MW, excluding the 5 stations scheduled for completion between now and 1980.
- 3 phases in all in the Netherlands of 1 000 MW.
- 1 each in Denmark, Luxembourg and Ireland (all in planning stage).

Investment requirements

The specific cost of a (light water) nuclear power station at the beginning of 1975 (3) is reckoned in Europe to vary between 250 and 285 u.a. per kW net. Construction of the nuclear power stations planned under national programmes will call for investments across the Community of around 17 000 million u.a. in all between 1975 and 1980. This sum does not all represent addi-

(1) 1 GW (1 Gigawatt) = 1 million kW.
1 MW (1 Megawatt) = 1 000 kW.

(2) One power station may consist of one or more reactor and turbine sets, each of which in itself constitutes a phase of construction.

(3) As for an order placed in 1975, excluding interest during construction and the cost of the first fuel charge.

tional outlays, as nuclear power plants will be in substitution for conventional thermal power stations that would otherwise have had to be built to meet the growth in demand. At the same time, there are plans to speed up the phasing-out of some oil-fired stations.

Massive though they are, these nuclear investments constitute a part of the general investment programmes of the electricity utilities, representing about 30 % of these up to 1980, and perhaps 40 % thereafter. To implement them should not, in macro-economic terms, lead to any appreciable increase in cost to the Community generally. Total investments in electricity from 1975 to 1980 look like absorbing almost the same proportion of gross domestic product as in the period 1965-1970, i.e. 1.0 to 1.1 %.

Over the same period, however, total investment in the energy sector should rise to around 100 000 million u.a., or 1.7 % of the Community's gross domestic product, as against

1.4 % between 1965 and 1970. The provision of natural gas supplies seems likely to involve investments larger than those required either for nuclear power stations or for oil supplies.

The EIB and nuclear power station financing

As the Community's long-term financing institution, the European Investment Bank has a direct interest in the financing of investments in the energy sector, especially in nuclear power.

It is the task of the EIB under Article 130 of the Treaty of Rome to grant loans which favour the development of less advanced regions and conversion areas in the Community, or which support projects of common interest to several Member States.

Under the heading of regional interest, it may finance any project in the energy sector that is located in a region facing difficulties.

As a matter of common interest, it may also provide finance for investments of direct benefit to two or more Member Countries (joint power station projects or interconnected networks etc.). In more general terms, it may support any project that furthers implementation of a common policy, such as the Community's energy policy under which heading the EIB advances funds for projects securing improved Community energy supplies (nuclear and hydro power stations, tapping of oil and gas fields, gaslines etc.) or leading to the application of new technology.

Since its foundation, the EIB has provided financial support for energy projects and up to 30 June 1975 its total lending in this area approached 1240 million u.a., i.e. more than a quarter of its financing inside the Community.

EIB Financing Operations in the Energy Sector (in the Community between 1967 and 1975 in million u.a.)

	1967		1968		1969		1970		1971		1972		1973		1974		1975 at 30.6.	
	loan	u.a.	loan	u.a.	loan	u.a.	loan	u.a.	loan	u.a.	loan	u.a.	loan	u.a.	loan	u.a.	loan	u.a.
<i>I. Projects of common interest (1)</i>																		
- Nuclear power stations	1	6.3	1	6.3	-	-	1	16.0	-	-	4	100.6	7	134.7	6	123.3	4	87.8
- Hydroelectric power stations	-	-	-	-	1	16.2	2	23.4	1	16.0	-	-	1	16.2	6	99.6	-	-
- Gaslines	1	16.2	-	-	3	39.9	-	-	1	5.0	2	59.7	2	43.3	3	51.8	2	4.9
- Tapping oil and gas deposits - drilling equipment	-	-	-	-	-	-	-	-	-	-	-	-	1	24.4	7	83.3	2	31.4
- Coal mining	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	13.4
- Nuclear power station installations	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	4.6
Total I	2	22.5	1	6.3	4	56.1	3	39.4	2	21.0	6	160.3	11	218.6	22	358.0	10	182.1
<i>II. Other projects (2)</i>																		
- Thermal power stations	-	-	1	5.0	1	18.2	-	-	1	5.5	-	-	1	3.3	2	29.4	-	-
- Transmission lines	-	-	-	-	-	-	-	-	-	-	-	-	1	5.9	2	19.5	-	-
- Other	1	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total II	1	2.5	1	5.0	1	18.2	-	-	1	5.5	-	-	2	9.2	4	48.9	-	-
Total I + II	3	25.0	2	11.3	5	74.3	3	39.4	3	26.5	6	160.3	13	227.8	26	406.9	10	182.1

(1) Some of these projects are also of regional interest.

(2) Warranted by regional interest alone.

Out of this total, 788 million were granted in loans for power stations, more than half of this for nuclear plants (see graph and table).

In 1967, the EIB took the view that the construction of nuclear power stations was of sufficient general interest to the Community to justify a contribution to financing this activity.

In 1967 and 1968, when various Community Member Countries were becoming seriously interested in light water reactors, the EIB financed the construction of two prototype power stations in West Germany, at Lingen and Obrigheim, rated at 240 MW and 328 MW respectively. Then in 1970 an initial loan was granted towards the SEMO commercially-rated station at Tihange in Belgium (870 KW), built jointly by the Belgian and French electricity companies, followed by two further loans in 1972 and 1974. Since then, the EIB's financing operations have expanded, mainly in support of proven reactor types, but without neglecting more advanced-technology configurations, such as the Uentrop prototype high-temperature gas reactor in West Germany (see list of power stations financed).

The recent redefining of Community energy policy has confirmed and lent added weight to this investment policy. It is indeed not for the EIB to finance all, or even the larger part of these nuclear investments, as it is quite clear that self-financing should be the main source of funds and that the electricity utilities should be able to charge for their supplies at rates leaving them sufficient margin for this. The Bank's function is in any event to provide finance to supplement that raised in the usual way from the capital markets and the banking system.

In total, the European Investment Bank has lent 475 million u.a. in support of 13 nuclear power stations, in Germany, France, Belgium, the United Kingdom and Italy. It has thus far been able to meet all the requests for loans submitted to it for projects of this kind, and will probably prove itself equal to foreseeable increases in demand, at least in the next few years. It seems quite likely that these operations will account for an increasing proportion of a steadily growing total activity.

In the last two years, nuclear power station financing has accounted for

15 to 20 % of EIB loans in Member Countries. Moreover, far from confining itself to nuclear plants, the EIB has widened its operations in the various other fields of energy, either on grounds of interest to the Community, or for purposes of supporting regional development. Its lending operations in respect of the various projects falling within the broad heading of energy thus amounted to 48 % of all the loans granted by the European Investment Bank in Member Countries of the Community in 1974.

**Nuclear Power Stations Part-financed by the EIB
(at 30.6.1975)**

Country	Power Station	Reactor (1)	Net installed power MW (2)	Year	Amount	
					millions nat. currency	millions u.a.
Belgium	Semo-Tihange (Liège)	PWR	870	three loans between 1970 and 1974	2230 FB	46.5
Germany	Lingen-Darme (Lower Saxony)	BWR	240	1967	25 DM	188.3
	Obrigheim (Baden-Württemberg)	PWR	328	1968	25 DM	
	Brunsbüttel (Schleswig-Holstein)	BWR	770	1972	91.5 DM	
	Philippsburg (Baden-Württemberg)	BWR	864	1972	105 DM	
	Biblis B (Hesse)	PWR	1180	two loans in 1973	153 DM	
	Neckarwestheim (Baden-Württemberg)	PWR	775	three loans in 1973	153 DM	
	THTR-300-Uentrop (North Rhine-Westphalia)	HTGR	300	1973	90 DM	
				642.5 DM		
France	Fessenheim (Alsace)	PWR	890	1972	166.7 FF	123.0
	Bugey-Saint-Vulbas (Rhône-Alpes)	PWR	1850	five loans in 1973 and 1974	518.6 FF	
					685.3 FF	
Italy	Caorso-Piacenza (Emilia-Romagna)	BWR	840	1975	24100 Lit	29.6
United Kingdom	Hartlepool (North-east England)	AGR	1250	two loans in 1974 and 1975	23.4 £	87.4
	Hunterston (Scotland)	AGR	1250	two loans in 1975	23.4 £	
					46.8 £	
GRAND TOTAL :						474.8

(1) See article on nuclear reactors.

(2) Net electric power.

Nuclear Reactors

In all types of reactor used for producing electricity by nuclear means the energy used is the heat produced during the fission of nuclei of heavy elements, which serve as the fuel in the «nuclear reactor». This fuel may be natural uranium, slightly or highly enriched uranium, or plutonium, an artificial element extracted from waste from reactors using uranium as fuel.

The heat produced in the reactor is removed by a flow of coolant over the fuel elements. This coolant may be carbon dioxide or helium gas, ordinary pressurised or boiling water, or liquid sodium.

The coolant then releases its heat inside steam generators, except in the case of boiling water reactors, which produce steam directly. The steam thus produced is used, as in a conventional thermal power station, to drive a turbine which is coupled to an alternator set.

Finally, for the reaction to be sustained, the neutrons must, except in the case of fast breeder reactors, be slowed down by what is termed a moderator, consisting of either graphite, light water or heavy water.

The reactor types described below have all been developed for commercial use, or are capable of being so developed. Some are in fact already obsolescent, while others are still in the prototype stage (1).

(1) LIGHT WATER REACTOR SYSTEMS (LWRs)

These at the present time are the most common reactors, likely to be used up to the end of this century.

(a) Pressurised Water Reactor (PWR)

In this type of reactor, ordinary water is used both as moderator and coolant, maintained at high pressure to prevent boiling. Its heat is transferred in heat exchangers/ steam generators.

(b) Boiling Water Reactor (BWR)

Like the above type, this reactor uses slightly enriched uranium as fuel. It differs from the other in that in principle, but calls for quite compression, so that this vaporises in the reactor and, in the most advanced versions, drives the turbine directly. The system is very simple in principle, but calls for quite complex safety features, mainly because of the risk of corrosion due to radioactivity in the water.

(2) CARBON GAS REACTOR SYSTEMS (CGRS)

These systems seem to be assured of future development, above all in

(1) *The EIB's terms of reference extend only to appraisal of loan requests submitted to it, and the advance of funds for the implementation of projects. The choice of reactors is strictly the province of the electricity utilities, and this article is offered purely by way of illustration.*

the form of high-temperature reactors.

(a) Carbon Gas Reactors (CGR)

One feature of this type of reactor is that it produces large quantities of plutonium. After a considerable amount of development work in both Britain and France, however, this system was abandoned because of the high cost of construction per unit yield, attributable to the rather low reactor exit temperature of the system (400 °C).

(b) Advanced Gas-cooled Reactor (AGR)

The use of slightly enriched uranium produced an improvement in the energy output of the system, with the gas achieving an exit temperature of 640 °C.

The United Kingdom was moving towards adoption of this highly sophisticated reactor type, but has since suspended its building programme, until the performance of the phases already under construction can be assessed.

(c) High Temperature Gas Reactor (HTGR)

The difference between the HTGR reactor and those already described is that it uses highly enriched uranium with thorium as an additive, and helium as its coolant instead of carbon dioxide, making it possible to achieve very high gas exit temperatures (750 °C at Uentrop), perhaps of even as much as 1000 °C in the future, when it would become possible for the helium to actuate a turbine directly. However although the tem-

perature makes for a very good turbine performance, both investment and fuel costs are high.

These reactors are only at the prototype stage, and seem likely to be developed commercially, by virtue of their high efficiency.

The two most advanced prototype reactors are located in the United States (this has just gone critical) and at Uentrop in West Germany (under construction)

(3) HEAVY WATER REACTOR SYSTEMS (HWRs)

(a) Heavy Water Reactor (HWR)

This operates on the same principle as the pressurised water reactor, but in place of light water there is heavy water (i. e. water in which the ordinary hydrogen atom is replaced in the molecule by a deuterium atom), which facilitates the reaction and enables natural uranium to be used as fuel.

These reactors have been developed in Canada as the Candu system, and are technically satisfactory, although the heavy water in particular makes for the high costs.

(b) Pressure Tube Steam Generating Heavy Water Reactor (SGHWR)

This type is still in the experimental stage, although like the boiling water reactor, it uses light water as its coolant, while heavy water is employed as the moderator. The reaction occurs less readily than in the Candu system, and enriched uranium has to be used. On the other hand, consumption of heavy water is virtually nil, and this makes for lower costs. In Britain, a 100 MW prototype reactor is already functioning, and this type has been selected for the new programme.

(4) FASTBREEDER REACTORS

These reactors produce more fissile matter than they consume, and so guarantee the better use of fuel. They have thus aroused considerable interest, even though they involve higher investment costs. The breeder reactor will enable better use to be made of uranium. This optimal use of fuel will be of direct benefit in improving Member Countries' security of energy supplies.

Unit of account

The EIB uses European unit of account

Articles 4 and 7 of the Statute of the European Investment Bank, which is an integral part of the Treaty of Rome, define the unit of account to be used in preparing the accounts and balance sheet and lay down the rules for conversion of national currencies into this unit of account at their gold parities. The validity of this statutory procedure has been overtaken by developments in the world monetary system, and steps have been taken to amend the Statute in order to define new rules.

Meeting together on 10 July 1975 as representatives of the Governments of the Member States the Finance Ministers signed a treaty modifying those provisions in the EIB's Statute which concern the unit of account. When it comes into force, after ratification by each of the Member States, this treaty will enable the Governors, on proposal from the Board of Directors and by unanimous decision, to alter the definition of the unit of account.

However, the Bank's immediate need is for a perfectly clear and unambiguous basis on which to draw up its financial statements. This requires the conversion of national

currencies into units of account at rates that reflect economic and financial reality.

As an interim measure, pending formal adoption of the revised Statute, the Board of Governors has therefore authorised the Bank to use a new system of conversion by reference to a basket consisting of the following amounts of Member States' currencies:

<i>Deutsche Mark (DM)</i>	: 0.828
<i>Pounds sterling (£)</i>	: 0.0885
<i>French francs (Ffrs)</i>	: 1.15
<i>Italian lire (Lit)</i>	: 109
<i>Dutch guilders (Fl)</i>	: 0.286
<i>Belgian francs (Bfrs)</i>	: 3.66
<i>Luxembourg francs (Lfrs)</i>	: 0.14
<i>Danish kroner (Dkr)</i>	: 0.217
<i>Irish pounds (£Ir)</i>	: 0.00759

The composition of this basket is such that at 28 June 1974 the sum of the component currencies would

have been equal in value to the International Monetary Fund's Special Drawing Right when calculated on the same basis as the latter, and hence the same as the Bank's statutory unit of account, by virtue of the common gold content of the unit of account and the SDR, i. e. the equivalent at that date of US\$ 1.20635.

The Council of Ministers of the European Communities has decided to apply the same system of conversion for calculating the amount of financial aid to be provided under the terms of the Lomé Convention, including loans financed from the resources of the Bank.

As the value of the new unit of account is fixed on a day-to-day basis the EIB has thought it preferable to adopt stabler conversion rates for accounting and statistical purposes, as illustrated below:

	rates at 31 December 1974 applied for 1st quarter 75	rates at 31 March 1975 applied for 2nd quarter 75	rates at 30 June 1975 applied for 3rd quarter 75
1 unit of account =			
DM	3.01774	3.04474	3.02333
£	0.534530	0.538633	0.583942
Ffr	5.57964	5.48706	5.18942
Lit	815.517	821.313	809.278
Fl	3.13445	3.11230	3.13108
Bfr	45.4137	45.0405	45.2730
Lfr	45.4137	45.0405	45.2730
Dkr	7.06637	7.09212	7.03769
£Ir	0.534530	0.538633	0.584093

Nuclear reactors (continued)

This type of reactor is markedly different from others, most noticeably in that it has no moderator. It uses fast neutrons, accelerated to around 20000 km/sec., compared with 2 km/sec when slowed down.

The very large concentration of heat to be removed has led to the use of liquid sodium in preference to gas as a coolant. In the first prototype reactor, the 250 MW Phénix at Marcoule in France, a dual-circuit configuration was used. The primary circuit heats a second circuit, also filled with liquid sodium, which in turn transfers its heat to the steam generators at around 500 °C, making for a high yield in terms of electricity. In spite of technological problems attendant upon the use of sodium, Phénix has proved sufficiently viable in operation for a decision to be taken to construct a new series of 1200 MW Superphénix reactors, to

be built by NERSA, a consortium of French, German and Italian contractors. Another prototype reactor is under construction at Kalkar in West

Germany, while a third is currently undergoing uprating trials at Dounreay in Scotland.

EIB's capital is increased

A decision to raise by 75 % the subscribed capital of the European Investment Bank, from 2025 million to 3543.75 million European units of account, was taken by the Board of Governors of the European Investment Bank at their meeting in Brussels on July 10 1975.

Article 18 of the Statute of the EIB stipulates that the total amount outstanding of loans and guarantees granted by the Bank shall not exceed 250 % of its subscribed capital. This total had already reached 3700 million u.a. at the end of 1974 and thus the increase will enable the Bank to continue its financing operations in the years ahead.

The increase of 1518.75 million u.a. is subscribed by the Member States in proportion to their share of the already subscribed capital, as follows:

Germany	337 500 000	Italy	270 000 000	Denmark	45 000 000
France	337 500 000	Belgium	88 875 000	Ireland	11 250 000
U. Kingdom	337 500 000	Netherlands	88 875 000	Luxembourg	225 000 000

As provided for under Article 5, paragraph 2, of the Statute, the Governors decided that the Member States should pay in 10 % of their share of the increase decided (i.e. 10 % of the sums above, making a total of 151 875 000 u.a.). Payments will be made in the national currency of each Member Country in eight half-yearly instalments, the first on 30th April 1976.