

Information

European
Investment
Bank



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EIB financing operations rise to 1 273 million u.a. in 1976

An increase in financing operations to a total of 1273.3 million units of account (u.a.) is shown in the European Investment Bank's preliminary figures for 1976. This compares with 1006.5 million u.a. in the previous year.

For the first time loans and guarantees provided by the Bank within the Community passed 1000 million u.a. to reach 1086 million, against 917.5 million in 1975.

In pursuit of the principal task given to the Bank under the Treaty of Rome, three-quarters of the funds went towards investments which will help the development of less favoured regions of the Community.

Under its second main role, the Bank continued to support projects which are of common interest to several Member Countries or to the Community as a whole, notably in the energy sector.

Outside the Community, lending rose to 187.3 million u.a. (against 89 million in 1975) principally because of the rhythm of new activity under the Lomé Convention, signed between the EEC and African, Caribbean and Pacific (ACP) States, and under the agreement to provide financial assistance to Portugal.

An upswing in lending to industry was a marked feature of the Bank's operations within the Community last year: it rose to 297.8 million u.a. from the 1975 figure of 138.2 million.

Particularly welcome, seven new global loans totalling 61.2 million u.a. (against 10 million in 1975) were granted by the Bank to intermediary financial institutions for on-lending to aid small and medium-scale industrial ventures. Credit provided during the year from the new global loans, and from others previously granted, amounted to 47.5 million u.a. and helped to finance 86 ventures.

This progress in lending to industry, despite a generally low level of industrial investment, was the

growth area in the Bank's operations within the Community last year; the volume of finance provided for infrastructure investments remained at roughly the same level as in 1975 (788.2 million u.a. compared to 779.3 million).

The production and transmission of energy, which appear as infrastructure in EIB statistics, accounted for 376.5 million u.a. The majority of this concerned the exploitation of North Sea oil and gas resources and development of nuclear power, both of which will reduce the Community's dependence upon hydrocarbon imports.

Substantial funds were made available for improvements to telecommunications (200.1 million u.a.), transport (107.2 million u.a.) and water supplies/irrigation (104.4 million u.a.), most of the projects being designed to support economic growth in less developed regions.

820 million u.a. for less favoured regions

About 820 million u.a. went towards industrial and infrastructure projects in less favoured regions, against 670.6 million in 1975.

Finance for investments serving a «common interest» totalled 438.6 million u.a., about the same as in

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the previous year; this includes 172.6 million for investments which will also help to alleviate regional problems and which are taken into account in the total of 820 million u.a. for regional development.

It is estimated that around 12 000 jobs should be directly created, and 7000 more safeguarded, by the investments which the Bank helped to finance within the Community in 1976. This takes no consideration of the longer term effects of many infrastructure projects, such as those concerning telecommunications and energy supplies, which in themselves provide relatively little direct employment, except during the construction period, but which lay down the base for industrial growth.

Ireland, Italy and the United Kingdom, the three countries with the most acute regional development problems, accounted for over three-quarters of the total finance provided for investments within the Community.

In the **United Kingdom** lending by the Bank rose to 417.6 million u.a. (£259 million) – 38.5% of all operations within the Community.

The improvement of energy supplies accounted for almost half of the total (191.2 million u.a.) with loans provided for extensions to the natural gas transmission system in Scotland, the North and South West of England, construction of a pumped storage power station at Dinorwic in North Wales, production installations in the Beryl and Thistle oil fields in the North Sea and an oil pipeline from the Ninian oil field to the Sullom Voe petroleum harbour in the Shetlands.

Finance was also provided for important water supply schemes in the North and South-West of England, for improvements to telecommunications in Scotland and North-East England, and for several steel industry modernisation and expansion projects in Scotland, Northern England and Wales.

To help to improve communications between the UK and other Member Countries the Bank granted loans for enlargement of two hovercraft operating on the cross-Channel Dover-Calais, Dover-Boulogne routes and for the introduction of a new car/passenger ferry on the Holyhead (Wales) – Dun Laoghaire (Ireland) service. It also provided finance for a high technology railway project, the construction of three Advanced Passenger Trains – capable of running at up to 250 kph on existing track – which will improve links between Scotland, Northern England and the South.

In **Italy** loans granted totalled 382.6 million u.a. (Lit 342 000 million), equivalent to 35.2% of EIB financing within the Community. Over 80% of the funds went to investments in the Mezzogiorno and the Bank also provided finance, in the form of a global loan, to help the recovery of small and medium-scale industrial ventures in the Friuli region, which was hit by earthquakes in 1976.

The share which went to industry rose sharply to a total of 137.5 million u.a., equivalent to 36% of all EIB lending in Italy last year, which compares with 53 million u.a. (14.8%) in 1975.

Loans provided by the Bank concerned a wide range of activities, in particular chemical industry projects in Sicily, Sardinia, Campania and Apulia, steel industry plants in Apulia and Lombardy, installation of pollution control equipment at steelworks in Campania and at an electrolytic zinc plant in Calabria, which was also extended. Other industrial projects for which the Bank provided loans during the year include a diesel motors factory in Apulia, which involves French as well as Italian interests; a factory in Molise which will produce components for prefabricated buildings; two factories in Basilicata and the Marches which are concerned with producing conveyor belts, pipes and other rubber goods.

For the financing of small and medium-sized industrial ventures the Bank granted five global loans totalling 40.2 million u.a. to ICIPIU (Istituto di Credito per le Imprese di Pubblica Utilità), ISVEIMER (Istituto per lo Sviluppo Economico dell'Italia Meridionale), IRFIS (Istituto Regionale per il Finanziamento alle Industrie in Sicilia), CIS (Credito Industriale Sardo) and to Mediocredito per le Piccole e Medie Imprese del Friuli-Venezia Giulia.

To facilitate industrial and agricultural development, loans were made to finance improvements to port installations and water supplies in the Syracuse area of Sicily, the extension of irrigation in southern Basilicata, the reduction of pollution in the Bay of Naples, improvements to the port, road and rail infrastructure serving the Taranto and Manfredonia industrial zones in Apulia and for major improvements to the telecommunications networks in Apulia, Calabria and Basilicata.

Loans were also provided for several projects which will improve energy supplies, including extensions to natural gas distribution systems in Calabria, Basilicata and Molise, the linking-up of a «junction» of major gaslines in Lombardy and conversion of an old gas field for storage purposes. For the first time the Bank also granted a loan for the mining of uranium deposits, which are found in a mountain area in the province of Bergamo.

Last year saw EIB activities in **Germany** again; they reached 110.8 million u.a. (DM 325 million), the major part of this (101.6 million

Conversion rates of the Unit of Account

Since the end of 1974 the conversion rates between the EIB's unit of account and national currencies used in preparing the balance sheet, accounts and statistics of the Bank are those relating to the European Unit of Account (EUA).

For statistical purposes, the conversion rates adopted by the Bank are those obtaining on the last working day of the previous quarter and, in 1976, were as follows:

1 unit of account =

	1st quarter	2nd quarter	3rd quarter	4th quarter
DM	3.05382	2.85778	2.83513	2.70755
£	0.575973	0.587723	0.618268	0.662883
Ffrs	5.21981	5.25740	5.22189	5.49043
Lit	797.769	946.666	925.592	957.268
Fl	3.13120	3.02710	3.01347	2.86030
Bfrs	46.0606	43.9793	43.7116	41.8478
Lfrs	46.0606	43.9793	43.7116	41.8478
Dkr	7.19697	6.84758	6.77311	6.51988
£lr	0.575039	0.587174	0.618268	0.662673

u.a.) in the form of guarantees for the financing of the Gundremmingen nuclear power station in Bavaria. A loan was also made for the restructuring of a steelworks at Neunkirchen in the Saar.

In **France** 60 million u.a. (Ffrs 321.4 million) was provided to assist regional development by improving telecommunications in Aquitaine, the Auvergne and Finistère.

Three loans totalling 57.4 million u.a. (£1r 35.4 million) were granted in **Ireland**. They went towards the building of a plant near Cork, which will produce ammonia and urea, principally for use in fertilisers; the modernisation of telecommunications; and for the opening up of new peat bogs to increase supplies of this fuel to power stations.

In the **Netherlands** the Bank made available a total of 30.4 million u.a. (Fl 91.6 million), partly in the form of a guarantee, for the financing of a power station at Maasbracht in the province of Limburg.

In **Belgium**, a global loan of 17.9 million u.a. (Bfrs 750 million) was granted to Société Nationale de Crédit à l'Industrie (SNCI) - Nationale Maatschappij voor Krediet aan de Nijverheid (NMKN) to help to finance small and medium-scale industrial ventures in less developed regions of Belgium and parts of the country facing industrial conversion problems.

A total of 9.1 million u.a. (Dkr 59.5 million) was provided in **Denmark**. The Bank supported the construction of a new factory in North Jutland which will produce insulation materials and the expansion of a woodworks on the Isle of Falster; it also granted a global loan to the Danish Government, the proceeds of which are being passed to the Regional Development Board to help to finance small and medium-sized industrial ventures.

Large increase in EIB activities outside the EEC

The other main sphere of Bank activities - the provision of development aid to countries outside the Community under the terms of cooperation agreements with the EEC - showed a vigorous expansion, operations more than doubling to 187.3 million u.a. (89 million in 1975).

During the past year loans in **Portugal** totalled 90 million u.a., equi-

valent to over half the 150 million u.a. «exceptional emergency aid» which the Community offered to that country at the end of 1975 in the form of long-term credit from the EIB.

The aim of the Bank's interventions is to help to re-establish in Portugal, at a time of particular economic difficulties, a climate favourable to both public and private investment. Thus, to improve electricity

supplies which will be needed for future industrial growth, the Bank helped to finance, through two loans, the construction of a new thermal power station at Setubal, near Lisbon, the erection of high-voltage transmission lines, which connect with the Spanish network, and the building of a hydroelectric power station on the Douro river. A loan was provided for a large metallurgical industry project at Barreiro, near Lisbon, and a global loan was

FINANCING PROVIDED BY THE BANK IN 1976 Breakdown by country

	Number of operations	Amount (million u.a.)	% of total	% Member Countries
Ordinary operations				
Member Countries				
Belgium	1	17.9	1.4	1.6
Denmark	3	9.1	0.7	0.8
Germany	3	110.8	8.7	10.2
France	3	60.1	4.7	5.5
Ireland	3	57.4	4.5	5.3
Italy	34	382.6	30.1	35.2
Netherlands	2	30.4	2.4	2.8
United Kingdom	24	417.6	32.8	38.5
Total (of which guarantees)	73 (3)	1 086.0 (118.2)	85.3 (9.3)	100.0
Outside the Community				
Portugal	4	90.0	7.1	
AASMM - OCTD (Yaoundé II)	2	10.9	0.8	
Togo	1	5.9	0.4	
New Caledonia	1	5.0	0.4	
ACP-countries (Lomé)	5	41.5	3.2	
Cameroon	1	13.5	1.1	
Ghana	1	10.0	0.8	
Mauritius	1	2.0	0.1	
Kenya	1	2.0	0.1	
Togo	1	14.0	1.1	
Total	11	142.4	11.2	
Ordinary operations total	84	1 228.4	96.5	
Special operations (1)				
Turkey	2	6.0	0.5	
AASMM - OCTD (Yaoundé)	5	18.6	1.5	
Ivory Coast	1	1.0	0.1	
Gabon	1	7.0	0.5	
Congo	1	3.6	0.3	
Senegal	1	4.6	0.4	
New Caledonia	1	2.4	0.2	
ACP-countries (Lomé - risk capital contributions)	7	20.2	1.6	
Cameroon	1	2.3	0.2	
Upper Volta	2	4.4	0.3	
Chad	1	7.5	0.6	
Togo	3	6.0	0.5	
Special operations total	14	44.9	3.5	
Grand total	98	1 273.3	100.0	

(1) Financed from the resources of Member States (Turkey) and the European Development Fund (AASMM-ACP-OCTD) and accounted for in the Bank's Special Section.

granted to the Banco de Fomento Nacional, the proceeds of which will be on-lent to help to finance small and medium-sized industrial and tourism ventures. As foreseen in the aid offer, all the loans carry a 3% interest rebate paid for directly from the Community budget.

The year saw the transition from the last operations (29.5 million u.a.) under the old Yaoundé II Convention, signed between the EEC and the Associated African States, Madagascar and Mauritius (AASMM), to the first loans (61.7 million u.a.) under the far more comprehensive Lomé Convention, concluded with 46 **African, Caribbean and Pacific (ACP) States**, embracing the former AASMM.

The EIB reached the ceiling of 90 million u.a. fixed under Yaoundé II for loans to the AASMM from the Bank's own resources by helping to finance a clinker production plant in Togo, which will provide this country and its neighbours, Ghana and the Ivory Coast, with the raw material for most of their combined cement requirements. A loan was also provided for expansion of nickel mining in the French overseas territory of New Caledonia. From the resources of the Community's European Development Fund, five loans on special conditions (18.6 million u.a.) were made available under the provisions of Yaoundé II; these concerned a water supply scheme in the Ivory Coast, the Owendo-Booué section of the Trans-Gabon railway and other railway works in the Congo, irrigation and market-gardening in Senegal and construction of a highway in New Caledonia.

The Lomé Convention, which came into effect on 1 April 1976, provides for the EIB to lend up to 390 million u.a. from its own resources. It gives the Bank responsibility for managing 100 million u.a. for use as interest subsidies and a further 95 million u.a. to be employed for risk capital financing, these sums being provided by the Member States via the European Development Fund.

Loans from the Bank's own resources which were granted last year under the Convention totalled 41.5 million u.a. (all provided with 3% interest rebates). These went towards the construction of hydroelectric power stations in Cameroon and Ghana and a thermal power station in Mauritius; a global loan was granted to the Development Finance Company of Kenya Ltd. – the Bank's first operation in an Eng-

lish-speaking African country – to finance small and medium-scale industrial ventures; a further loan was provided for the clinker plant in Togo, which the Bank had already supported under Yaoundé II, this project being considered of particular importance as the first large-scale regional industrial venture in West Africa.

Risk capital assistance in the form of subordinated and conditional loans totalling 20.2 million u.a. was provided for two sugar refineries in Upper Volta and Chad, an oil mill in Cameroon, and to assist the governments of Togo, Ghana and the Ivory Coast to finance their shares in the preference capital of the company formed to operate the joint-venture clinker plant in Togo, this last illustrating the different types of financial aid which the Bank can employ to the benefit of the same project.

In **Turkey** two loans on special conditions were granted for a total of 6 million u.a. These were used to make an additional contribution to an important forestry development

scheme in the Mediterranean region of Turkey, including the creation of an industrial complex to produce paper and wood, which will eventually provide work for over 7500 people, and to help to finance pre-investment studies for industrial and infrastructure projects in the public sector.

Lending in Turkey was limited by the gradual depletion of the 195 million u.a. made available under the second EEC-Turkey Financial Protocol for finance on special conditions; the two operations last year raised to 188.7 million u.a. the amount so far provided.

748.9 million u.a. raised on the capital markets

The Bank raised the majority of the funds required to carry out its financing operations by borrowing on the financial markets a total of 748.9 million u.a., mostly through public or private issues on the international markets and on national markets of certain countries outside the Community.

FINANCING PROVIDED WITHIN THE COMMUNITY IN 1976

Breakdown by economic policy objectives
as laid down in Article 130 of the Treaty of Rome

	Amount (million u.a.)	%
Regional development	820.0	100
Belgium	17.9	2.2
Denmark	9.1	1.1
Germany	9.2	1.1
France	60.1	7.3
Ireland	57.4	7.0
Italy	347.1	42.3
Netherlands	30.4	3.7
United Kingdom	288.8	35.2
Common interest to several Member Countries	438.6	100
Energy	376.5	85.9
Thermal power stations	30.4	6.9
Hydroelectric and pumped storage stations	42.1	9.6
Nuclear energy	111.3	25.4
Development of oil and gas deposits	60.5	13.8
Solid fuels	3.3	0.8
Gas and oil pipelines	128.9	29.4
Transport	16.4	3.7
Shipping	16.4	3.7
Industrial cooperation	25.9	5.9
New technology	19.7	4.5
Deduct: financing justified on the basis of a double objective: regional development (1) and common interest to several Member Countries (2)	-172.6	-
Total	1 086.0	

(1) Paragraphs (a) and (b) of Article 130 of the Treaty of Rome
(2) Paragraph (c) of Article 130 of the Treaty of Rome

Using water to store electricity

In the heart of rugged North Wales, at Dinorwic, not far from Mount Snowdon, engineers are tunnelling into the side of a mountain to build an underground power station which will be the largest of its kind in Europe. It will work on the «pumped storage» principle, which is a means of using water to store large quantities of electricity.

Cheaper off-peak electricity, produced during the nighttime by base-load power stations, will be used to pump water from one lake to another, at a higher altitude, constituting a reserve of energy which can be released as and when needed by allowing the water to fall down again, at up to 300000 litres per second, to drive turbines and generate electricity.

This huge, challenging project, which is costed at some 480 million u. a., will begin to come on stream

at the beginning of the next decade, with a generating capacity of up to 1675 MW, equivalent to the output required to meet the maximum electricity demand of a city of more than a million people.

It is one of six pumped storage power stations which the European Investment Bank has helped to finance with loans totalling 118 million u. a. out of more than 1000 million u. a. which the Bank has so far provided for improvements to the Community's electricity supplies.

The Bank's involvement in the financing of these projects merits closer attention. Interest is being focussed on the pumped storage principle as a method of obtaining maximum benefit from the nuclear power stations which have been and are being built in the Community.

Unfortunately, the pattern of electricity consumption does not provide for the most economic generation. Consumption rises and falls according to the time of year and varies considerably at different hours of the day.

Although most electricity authorities offer reduced tariffs during slackest periods to try to smooth out the peaks and troughs in consumption, there is a limit to what this can achieve. It is not even possible to predict the variations accurately, since too many different factors are involved.

The constant fluctuation of demand is difficult to reconcile with the fact that electricity generation is best carried out at a uniform rate. The capital costs of power stations demand steady, high utilisation of equipment to reduce the unit price of electricity as far as possible. This is even more true of nuclear power stations which require a heavy initial investment but offer low operating costs; indeed, frequent variations in their output can lead to technical problems.

Naturally, power stations with the lowest running costs, in particular large nuclear stations and also modern coal-fired plant, are utilised to the maximum to provide the base load. Older, smaller oil-fired and coal-fired plant and gas turbines, which are more costly to run, are brought in only as required to meet rising demand.

Were it technically possible, the ideal answer would simply be to store electricity produced by the most efficient power stations during the hours of minimum demand for release at busier times.

However, no way exists of accumulating large quantities of electricity as such. It is first necessary to convert it into another form of energy and the most practicable is that of water pumped to a high level: it can be kept indefinitely until electricity is required, and this is generated – virtually within seconds – in the same way as in any conventional hydroelectric station. i. e. the water runs down, by the force of gravity, to turn turbines.

The process involves certain losses but with modern engineering these can be kept relatively low; about three units of electricity are produced for every four burned during the pumping operation.

The role of pumped storage stations is complex but basically it is to meet three main objectives, although to differing degrees, according to the plant concerned and the producer's operating requirements:

- they provide power during the normal peak periods when extra generating capacity is needed;
- their output can be swiftly stepped up to regulate the grid when there are sudden, unexpected surges in demand;

- they constitute a reserve generating capacity which can be exploited at any moment should there be failures in other plant.

Hydroelectric stations drawing their power from reservoirs which are filled naturally, without need for pumping, are obviously superior but there are few sites left within the Community where large new units could be built.

Pumped storage systems have been in public service since the 1920s but their significance has increased recently with the growth of nuclear energy.

As a complement to nuclear power stations, which in the future are destined to generate a larger share of base-load power, they can in due course help to replace thermal generating capacity and in this way assist the drive to reduce the Community's excessive dependence on hydrocarbon imports.

Unfortunately, the number which can be built at a cost justifying the investment is somewhat limited by the problem of finding suitable locations (mountainous or hilly country, preferably near to centres of high electricity consumption).

Various other methods of storing energy have been and are being considered, such as to use electric power to compress gas which, when released, would provide a form of

energy which could be used to generate electricity.

For the present, however, pumped storage, while not a perfect solution, remains in the absence of alternatives a proven and practical way of meeting a problem which troubles all electricity producers, to a greater or lesser extent: how to cope with fluctuating demand as economically as possible.

In a nutshell, it enables the accumulation of low-cost electricity for supply at periods when it would otherwise be more costly to generate.

* * *

One of the first loans to be made by the European Investment Bank, in 1959, was for a pumped storage power station in Luxembourg, in the north of the country at Vianden.

Here the water resources are provided by the river Our which forms the frontier between Luxembourg and Germany; the construction of the station was undertaken by Société Electrique de l'Our (SEO), the major shareholders of which are the Luxembourg Government and a German electricity company, Rheinisch-Westfälisches Elektrizitätswerk (RWE).

The Bank provided a loan of 4 million u. a. for a project which is impressive today and was then even more so. A barrage was built across the Our to form a lower reservoir of 10 million m³. Almost 300 m higher, on the plateau of Mont St. Nicolas, a huge excavation was carried out in two stages to create a second reservoir of 7 million m³. Nine turbines, their generating capacity totalling 900 MW, were installed with the pumps in a chamber hewn out of the rock at the side of the river valley. Since the original works, the plant has been expanded and today its generating capacity is 1 100 MW.

The off-peak power to work the pumps is provided by RWE which in turn receives about three-quarters of the electricity generated by the Vianden station to meet demand at its busiest times. Power is also supplied for consumption in Luxembourg or transmitted to the Belgian, French and Dutch grids. In 1971 Electricité de France received a 16 million u. a. loan to help to finance a pumped storage station in the Ardennes at Revin, near Charleville-Mézières, a project which was complementary to the two nuclear power stations built at Chooz

(France) and Tihange (Belgium), each of which provides half of its output to the network of the other country.

A 7 million m³ reservoir has been formed in the valley of the river Fau, a tributary of the Meuse. An upper reservoir, of the same size, was constructed on the plateau of Marquisesades de St. Nicolas.

Four reversible pump-turbines, which have a total output of 720 MW when acting as turbines, are installed underground. The total cost of the scheme was about 90 million m³.

The EIB has helped to finance two pumped storage systems in Southern Italy with loans totalling 39 million u. a. which were granted in 1974 to ENEL - Ente Nazionale per l'Energia Elettrica.

In Sardinia a 240 MW station is being built at a forecast cost of 58 million u. a. as a further development of a hydro-electric scheme on the Taloro river which the Bank has already helped to finance. The other project, a 129 MW pumped storage station, is included within a programme of works in Calabria, estimated to cost about 100 million u. a., designed to improve exploitation of the water resources of the Massif de la Sila, both for energy production and irrigation.

In Germany, also in 1974, the Bank provided a loan of 16.6 million u. a. to Schluchseewerk AG - the major shareholders are Rheinisch-Westfälisches Elektrizitätswerk (RWE) and Badenwerk AG - for construction of a 855 MW pumped storage station in the southern Black Forest.

The lower reservoir is in the Wehr valley, the upper reservoir near the village of Hornberg. The RWE and Badenwerk supply much of the off-peak power for the pumping operations from the nuclear power stations of Biblis and Philippsburg, both of which the Bank has helped to finance.

The benefits of the scheme, which has cost about 158 million u. a., extend beyond Germany as part of the power generated is transmitted to the French and Swiss grids. In this way, through cross-frontier connections, the Schluchseewerk, Vianden and Revin power stations all contribute to strengthening the continental electricity transmission system.

Dinorwic, the latest and largest pump storage scheme which the EIB has helped to finance, with two

loans totalling 42 million u. a., will use the resources of two natural lakes, Marchlyn Mawr at the upper level and Llyn Peris at the lower, each of which will be developed to increase capacity to about 6.7 million m³.

The six reversible pump-turbines will be installed deep underground in a chamber 153 m long, 55 m high and 23 m wide, with access via two tunnels over 550 m in length; this gives an indication of the feat of engineering involved. The generating capacity will be equivalent to about 1675 MW over five hours and the pumping operation to refill the top lake will last about 6½ hours.

The promoters, the Central Electricity Generating Board, are paying special attention to environmental considerations as the project is situated in the Snowdonia National Park.

A very careful and sympathetic regard has been paid to the countryside. Landscape architects have been employed to ensure that the two dams being built to enlarge the capacity of the lakes will be compatible with their surroundings. The transmission lines to the nearest junction with the grid will be buried underground for much of their length. There will be a certain amount of tree-planting and rubble remaining from an old slate quarry will be removed. Power and beauty should not be in conflict.

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Cementing industrial cooperation in West Africa

Three West African countries – Togo, Ghana and the Ivory Coast – are presently engaged in a joint industrial venture designed to assure the majority of their total cement requirements over the years ahead, guaranteeing stability of supplies and saving precious foreign exchange which would otherwise have to be spent on imports.

Cement consumption is virtually a barometer of economic growth: developing countries with ambitious plans to industrialise and faced with rapid urbanisation, both of which call for the building-up of infrastructure, are inevitably sensitive to factors affecting the availability and, above all, the cost of the supplies they need.

Given that cement and clinker (which is ground to produce cement) are hardly the most practical of commodities to move long distances, it is not surprising that a very small part of world production – less than 5% on average – is internationally traded.

Countries which depend on this segment of the market are in an exposed position: should demand increase faster than production, then available surpluses will contract and rise in price; there may also be increases in production costs and freight charges over which they as consumers can have no control.

For those which have the raw materials, and a market large enough to justify the investment, the argument in favour of setting up local production facilities, reducing dependence upon imports, is therefore often very convincing.

This is the background to a treaty concluded between Togo, Ghana and the Ivory Coast in December 1975, which laid down the basis for the joint development of substantial limestone deposits recently discovered at Tabligbo, near Lomé, in Togo, and construction of a clinker production plant.

The venture is being undertaken by «Ciments de l'Afrique de l'Ouest – CIMAO», owned 92%, in equal shares, by the three governments, the remaining shareholders being the French cement manufacturers Origny-Desvoise – which will provide management services and technical assistance – and two local companies which grind clinker to produce cement, Société des Ciments d'Abidjan (Ivory Coast) and the Ghana Cement Company Ltd. The British group Associated Port-

land Cement Manufacturers Ltd. will be responsible for the engineering.

Situated about 80 km. from Lomé, the limestone deposits extend over almost 20 km² and reserves so far proven would cover 40 – 60 years at the scheduled rates of extraction. In this single location are to be found the raw materials (limestone, clay and sand) needed for the production of clinker for Portland cement.

The clinker plant will be equipped with two kilns with a total production capacity of around 1.2 million tons per year. This would already make it one of the largest in Africa south of the Sahara, but it has been designed with the possibility in mind of adding a third kiln, in which case capacity would be boosted to 1.8 million tons per year.

Under the treaty it is foreseen that the three States will take up all the production which will be sold at a single basic price to clinker crushing plants operating in the respective countries.

International cooperation

The total cost of the scheme is estimated at the equivalent of around 245 million u.a. (1976 prices), about 190 million of this for the industrial part of the project, for which CIMAO is responsible, and 55 million for railway, port and energy infrastructure which the operation of the plant will call for and which will be provided by the Togolese Government. The funding of investments of this magnitude – more than 80% of which must be paid for in foreign currencies – has involved cooperation between development finance institutions on a truly international scale.

Apart from the European Investment Bank, finance for the industrial investments is being provided by the World Bank (IBRD), the Caisse Centrale de Coopération Economique (France), the Arab Bank for Economic Development in Africa and the African Development Bank, in addition to the company itself, from its own resources.

This is the first large-scale regional industrial project in West Africa and it meets with one of the most important economic and political objectives in the area, the forging of stronger links between English and French-speaking countries. The European Investment Bank has provided support with finance totalling the equivalent of 25.9 million units of account.

For the infrastructure development, the financing plan envisages participation of the Community's European Development Fund, the Canadian International Development Association (CIDA), the African Development Bank and the Kreditanstalt für Wiederaufbau (Germany).

For its part, the European Investment Bank, in March last year, granted to CIMAO a 15-year loan of 5.925 million u.a.; with this operation the EIB reached the ceiling of 90 million u.a. which had been set on loans from the Bank's own resources under the terms of the second Yaoundé Convention between the EEC and the Associated African States, Madagascar and Mauritius (AASMM).

In December last year, the Bank followed up with further support totalling 20 million u.a., provided under the framework of the Lomé Convention, which had come into force in the meantime (1 April).

This Convention, concluded between 46 African, Caribbean and Pacific States, makes provision for the EIB to lend 390 million u.a. from its own resources. The Bank also has the responsibility for managing 100 million u.a. from the resources of the European Development Fund, for use as interest subsidies of 3%, and a further 95 million u.a. to be employed for risk capital financing.

Of the above 20 million u.a., 14 million was provided from the Bank's own resources in a loan to CIMAO for 14½ years at an interest rate of 6%, after allowing for a rebate of 3%. Three risk capital operations, in the form of subordinated loans (repayable only after senior loans have been paid off), were concluded with the three States to help them to finance their shares in the preference capital of CIMAO; these loans, each the equivalent of 2 million u.a., were for 20 years, including a 14-year grace period, at an interest rate fixed initially at 2%. This illustrates how, under the Lomé Convention, the Bank can employ diffe-

rent but complementary forms of financial aid to support the same project.

Economic benefits

The close cooperation in production and marketing of a commodity which is basic to their economic development is expected to bring many benefits to Togo, Ghana and the Ivory Coast.

Apart from surety of supplies – the plant should cover over 70% of their estimated combined requirements when it comes into operation in 1981, and it is capable of further expansion – cement prices will no longer depend entirely on the ups and downs of the world market.

Togo, the host country and the least developed of the three, is expected to gain substantially in terms of its balance of payments, but also by virtue of the fact that the exploitation of these resources will help to diversify an economy which is heavily dependent upon only three exports, cocoa, coffee, and phosphates, earnings from which have fluctuated considerably according to world market conditions. In addition, 600 permanent jobs should be directly created with possibly as many as a further 400 related to the plant in one way or another. At the peak of activity, construction work will provide temporary jobs for up to 3000 people.

Ghana will be able to offset part of the purchase costs of clinker by supplying the Tabligbo plant with power from the Akosombo hydro-electric station on the Volta river and, at a later stage, from the Kpong power station which is now being constructed with international financial assistance including a loan from the EIB. Insofar as the CIMAO plant involves a certain transfer of technology, there is an additional benefit for the three countries.

However, perhaps the most important aspect of the project, although difficult to quantify, is the stimulation given to regional economic development and cooperation in a part of Africa where, historically, links between anglophone and francophone zones have been limited. The CIMAO project may be seen as a pointer to the wider dimensions of industrial activity which can result from closer collaboration between different countries and a measure of pooling resources and national markets.

New appointments

The Board of Governors of the European Investment Bank has appointed two new Members to the Board of Directors, Mr. Maurice Horgan, Assistant Secretary at the Irish Department of Finance in Dublin, and Baron B. F. van Ittersum, Director (External Finance) at the Netherlands Ministry of Finance in the Hague.

Mr Horgan succeeds Mr Sean Murray who died on 9 October last year. Baron van Ittersum replaces Mr Anthony J. A. Looijen who, in January this year, became an Executive Director of the World Bank for Cyprus, Israel, Netherlands, Roumania and Yugoslavia.

Baron van Ittersum was previously an Alternate Director of the EIB, nominated jointly by the Benelux countries. He is succeeded in this position by Mr P. C. Maas, Managing Director of the Nationale Investeringsbank N. V. in the Hague.

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The title of Honorary Vice-President has been conferred by the Governors upon two former Vice-Presidents of the Bank, Mr Sjoerd Boomstra and Mr Luca Rosania, in recognition of their valued service over many years.

Mr Boomstra, who relinquished his post in September 1976, for personal reasons, had served on the Bank's Board of Directors from 1958, when the Bank was created, and was appointed a Vice-President in 1970. Mr. Rosania was a Vice-President of the Bank for six years until June 1976.

Interest rates

As the European Investment Bank works on a non-profit-making basis, its interest rates are close to the average which it has to pay to procure its own funds by borrowing on capital markets inside and outside the Community.

In the majority of cases loans are disbursed in several currencies (those of the nine EEC Member States and other convertible currencies, United States dollars representing the largest proportion) which are selected by the Bank after consultation with the borrower. However, within certain limits, the Bank may agree to make payment solely in United States dollars or Swiss francs.

The term of the loan depends on the type of project, the normal depreciation period for the equipment financed and on the conditions prevailing on the capital markets. While the duration is normally between 7 and 12 years there are, at present, limited possibilities of lending for up to 20 years, for certain infrastructure projects.

At 15 February 1977 the following interest rates were in force:

Loans disbursed in several currencies

up to 8 years	8 ¹ / ₄ %
over 8 years and up to 12 years	8 ⁷ / ₈ %
over 12 years	9 ¹ / ₈ %

Loans disbursed in a single currency

Duration in years:	5	6	7	8	9	10	11	12	13-15	16-20
Swiss Francs										
5 to 8 years	5 ⁷ / ₈ %	6%	6 ¹ / ₈ %	6 ¹ / ₄ %						
US dollars										
6 to 20 years		8 ¹ / ₄ %	8 ³ / ₈ %	8 ¹ / ₂ %	9%	9 ¹ / ₈ %	9 ¹ / ₄ %	9 ³ / ₈ %	9 ¹ / ₂ %	9 ⁵ / ₈ %

A brochure entitled «Loans and Guarantees in the Member Countries of the European Economic Community» is available, free on request (see address on page 6), for those who would like more detailed information concerning how the Bank operates and the terms of its finance.