NATIONAL AUDIT OFFICE

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Pergau Hydro-Electric Project

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John Bourn
Comptroller and Auditor General

National Audit Office
13 September 1993

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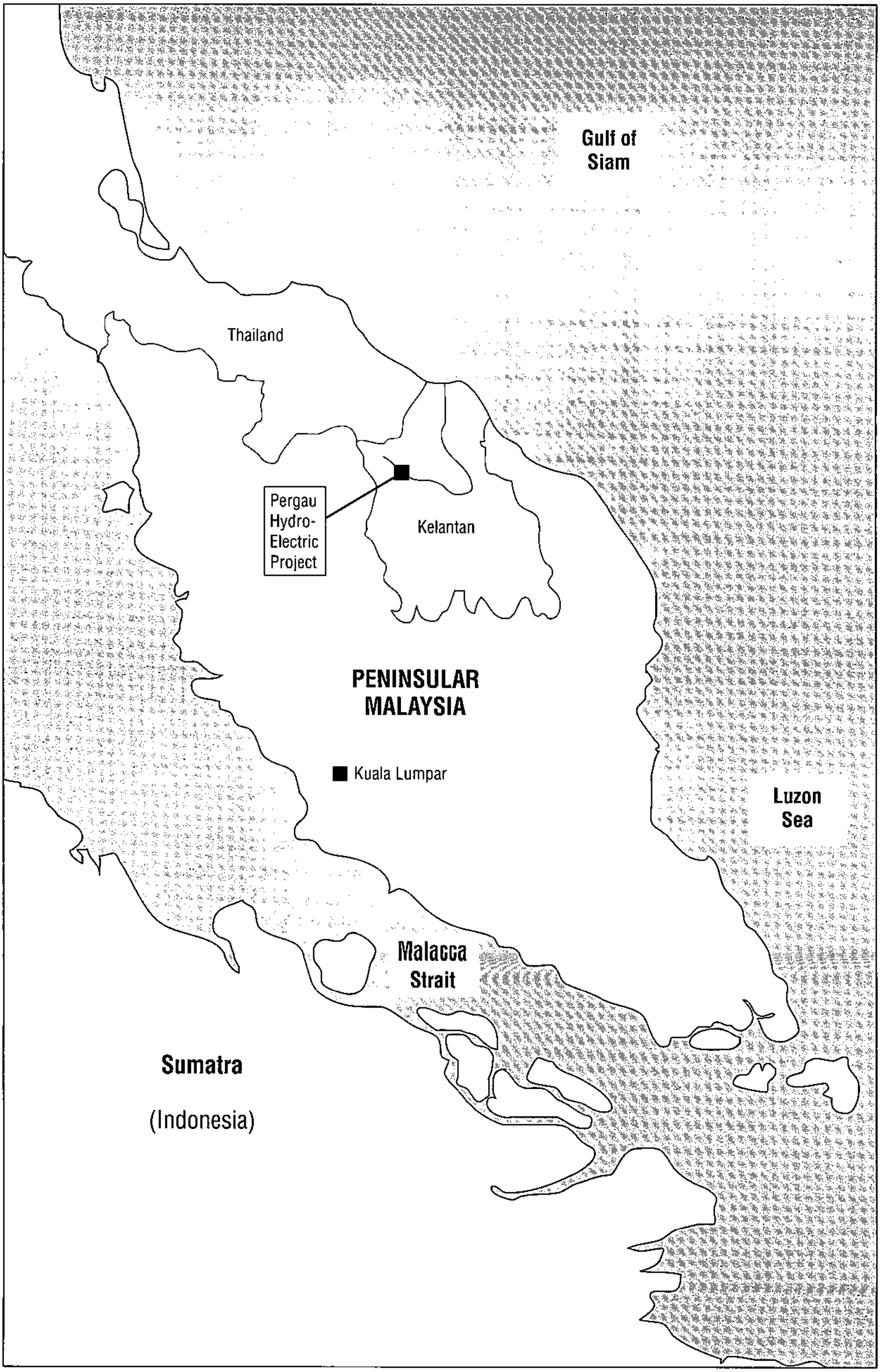

Gulf of
Siam
Thailand
Pergau
Hydro-
Electric
Project
Kelantan
PENINSULAR
MALAYSIA
Kuala Lumpar
Luzon
Sea
Malacca
Strait
Sumatra
(Indonesia)

Report

1 The Pergau hydro-electric project involves the largest cash sum ever provided for a single scheme under the Overseas Development Administration's Aid and Trade Provision. This Report considers the events leading up to the decision to proceed and the initial stages of implementation.

2 The project provides for the construction of a 600 megawatt hydro-electric power station on the river Pergau in Kelantan State, Malaysia. It will be used to meet peak load requirements, normally for four hours a day. Balfour Beatty are co-operating in a joint venture with Cementation International Ltd, which is the principal subsidiary to the main contractor, Kerjaya Balfour Beatty Cementation. This is a Malaysian-registered company, whose contract is with Tenaga Nasional Berhad, the Malaysian electricity authority.

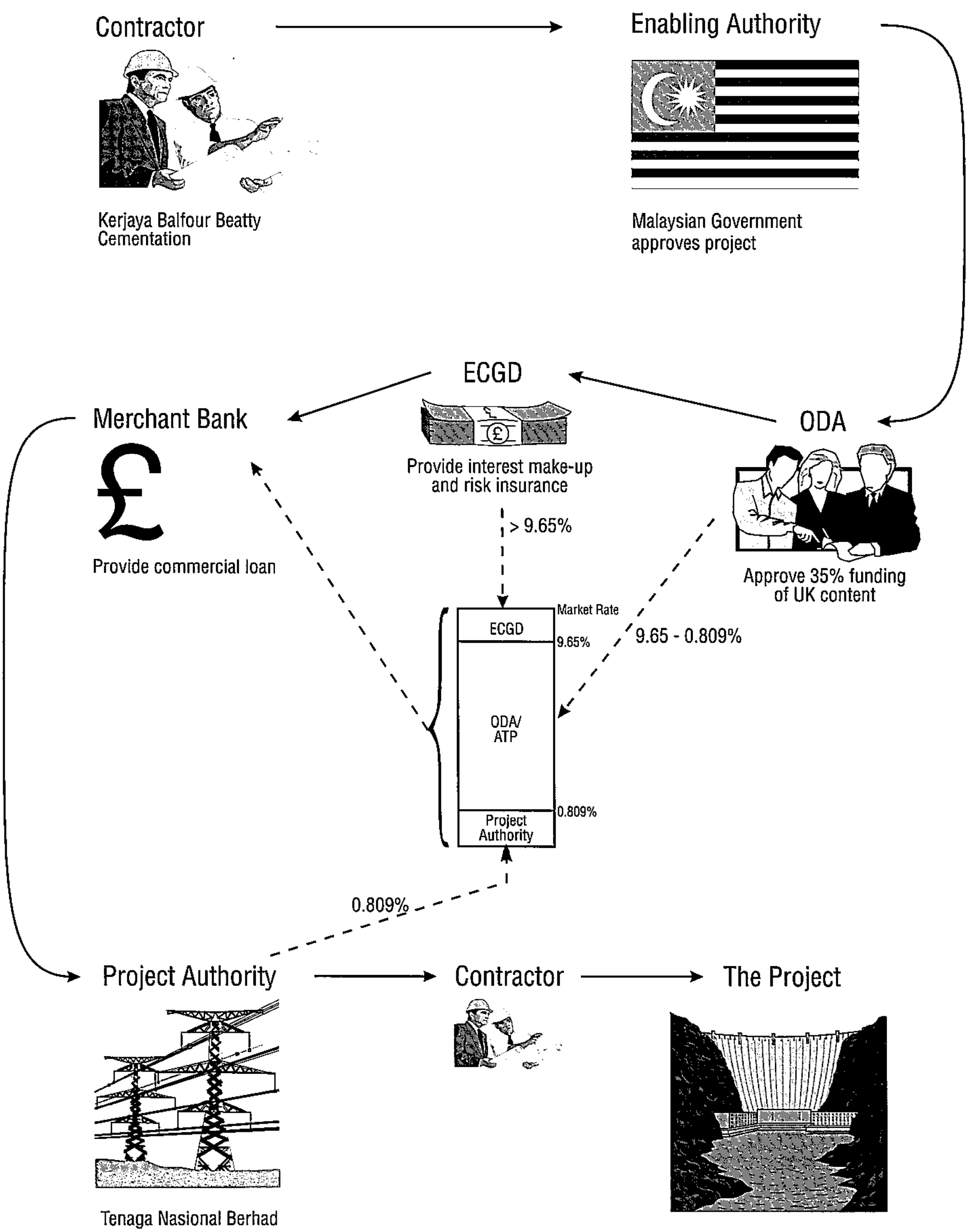
Background

3 The Aid and Trade Provision is the responsibility of the Administration and they make all the payments; but the scheme is administered jointly with the Department of Trade and Industry. It supports overseas aid projects of developmental value which are of particular industrial and commercial importance to the UK. Support is not available for business which could reasonably be expected to be won on normal commercial terms nor may it be used to subsidise uncompetitive prices. Under a code of practice agreed within the Organisation for Economic Co-operation and Development, any tied aid credit must have a concessionality level, as defined internationally, of at least 35 per cent.

4 When the Aid and Trade Provision was started in 1977, aid was provided in association with an export credit (known as a mixed credit). In 1985 Ministers decided that Aid and Trade Provision funds could also be used to enable private banks to provide long-term concessional loans, guaranteed by the Export Credits Guarantee Department, to developing country governments to finance agreed projects. This was to meet the perceived preferences of certain developing countries and to provide an instrument similar in effect to that available from some other donors. Support, therefore, may be provided in one of two ways or by a combination of both.

- A mixed credit, consisting of a cash grant from the Aid and Trade Provision, usually associated with a loan supported by the Export Credits Guarantee Department. (The Export Credits Guarantee Department provide interest make up on the loan element of the mixed credit, the make up being paid on the difference between the appropriate consensus interest rate — the rate agreed by the Organisation for Economic Co-operation and Development — and the commercial interest rate;) or
- A soft loan, whereby the Aid and Trade Provision provides an interest subsidy to enable private banks to make a long-term loan at a concessional interest rate to an overseas government. The Aid and Trade

Figure 1: Funding arrangements for Pergau



Provision provides the interest subsidy to cover the difference between the concessional loan rate to the borrower and the consensus interest rate. The Export Credits Guarantee Department provide interest make up on the full loan between the consensus rate and the commercial interest rate.

5 The arrangement for funding soft loans, which was introduced in 1986 and lasted until 1992, enabled the Administration to spread the cost of Aid and Trade Provision projects over a long period of time. Within a given annual budget, therefore, more projects could be supported in the short term, albeit at greater cost in the long term (see Appendix 2). Soft loans have generally been provided only to developing countries with a clear preference for that form of finance or where Aid and Trade budgetary considerations required it.

6 Aid and Trade Provision proposals are usually identified by British firms and submitted to the Department of Trade and Industry, who consider the industrial and commercial benefits. If the Department are satisfied that these benefits would be worthwhile, they recommend the proposal to the Administration. Notwithstanding such recommendations, Aid and Trade Provision projects must meet all the Administration's normal aid criteria, including economic and environmental considerations, and represent value for money.

7 Proposals are subject to the same levels of delegated financial authority within the Administration as other aid projects; proposals over £5 million are submitted to Ministers but, until 1993, were not scrutinised by the Administration's Projects and Evaluation Committee. Project framework documents — which set out project aims and objectives, inputs and outputs, and anticipated impacts — were also not obligatory for Aid and Trade Provision schemes until 1993 and one was not produced for this project.

Project identification

8 The World Bank's 1987 power sector report on Malaysia recorded Pergau as a possible 211 megawatt hydro-electric power station. The report concluded, however, that Malaysia should concentrate entirely on gas-fired electricity generation until the turn of the century.

9 In April 1988, the Snowy Mountains Engineering Corporation, operating on behalf of the Australian International Assistance Bureau, completed a feasibility study for a 600 megawatt power station on the river Pergau. They estimated that the project, much larger than that envisaged by the World Bank, would cost between £140 million and £150 million at December 1986 prices.

10 The Department of Trade and Industry told the Administration in October 1988 that Pergau was a likely candidate for Aid and Trade Provision support. Balfour Beatty/Cementation International provisionally estimated the cost of the project at between £200 million and £300 million, with a UK content of up to £200 million and potential Aid and Trade Provision support of £70 million as part of a mixed credit. The Diplomatic Wing of the Foreign and Commonwealth Office said that the Malaysian Government

fully supported the proposal and were keen to proceed but that this was dependent on the availability of the aid.

Project appraisal

11 At the time, the Administration used, as far as possible, the same appraisal procedures for Aid and Trade Provision projects as for other aid proposals. However they recognise that it has not always been possible to carry out a detailed appraisal where speedy decisions are necessary because of commercial pressures.

12 Towards the end of November 1988, following an economic appraisal, the Administration decided to take a cautious approach to the Pergau project because it was large and in economic terms would be of only marginal benefit in relation to costs. They considered that, if aid were to be offered, the project would require a full appraisal.

13 In January 1989 Balfour Beatty/Cementation International prepared a firm contract proposal, revising its estimate to £316 million. It included a UK element of £195 million. On the basis of these figures, the Administration considered that the project's justification presented major problems in terms of size, price and timing. They made it clear that further information would be essential to their appraisal.

14 Accordingly the Administration sent an appraisal mission to Malaysia to assess the project. It began work on 13 March 1989. To enable Ministers to be briefed for a visit to London by the Malaysian Prime Minister, an advance oral report was provided on 14 March. On the basis of this the Administration made an aid offer to the Malaysian Government of £68.25 million, being the minimum 35 per cent of the estimated UK content. This was, however, conditional on a full economic appraisal.

15 The appraisal report was produced on 20 March. It concluded that there was a reasonable developmental case on the basis of the Snowy Mountains estimate of £140 million to £150 million at 1986 prices (equivalent to £208 million at 1989 prices). Although recognising that Balfour Beatty/Cementation International's costs were not yet firm, the appraisal noted that, at £316 million, they were more than 50 per cent higher on a direct comparison of equivalent constant prices. Taking account of partial offsetting savings from lower transmission costs, the appraisal concluded that the economic viability of the project at this price was marginal.

Revised Estimates

16 On 31 March 1989 Balfour Beatty/Cementation International submitted a revised contract proposal of £397 million. This took account of adverse geological factors not recognised in earlier assessments, the additional cost of ancillary equipment and of all work to final commissioning. The Administration told the consortium that the economic viability of the project had been marginal but acceptable at the earlier estimate of £316 million. The increased price meant that this was no longer so and that the economic case would need to be reviewed.

Formal aid offer

17 In April 1989 the UK Government made a formal aid grant offer to Malaysia, open for six months, of £68.25 million as part of a mixed credit (paragraph 4) to finance the UK content of the earlier estimated contract price of £316 million. They also indicated a willingness to consider an increased level of support, though they thought that the Malaysian Government might not wish to proceed with the project at the revised contract price.

Investigation of contract price

18 The Administration undertake price investigations where contract proposals are — as in the case of Pergau — on a negotiated basis, not subject to competition. These investigations seek to establish the basis of all aspects of the contract price structure.

19 The Pergau price investigation, completed in May 1989, was based on the consortium's earlier estimate of £316 million. It was subject to time constraints and was able to give only a preliminary overview of project costs. It recommended reductions of the order of £29 million, which included fees for agency services and negotiating margins. Contingency and escalation factors were left for later discussion. The report noted that a more detailed investigation would be required when the final contract became available. It regarded the project as being at a preliminary stage in terms of the scope for assessing its value and viability.

Subsequent developments

20 The offer of aid expired in October 1989 but was renewed for a further six months. In February 1990, after further economic appraisal, the Administration concluded that Pergau, at the higher price of £397 million, would be "a very bad buy" and a burden on Malaysian consumers. They considered that it should be delayed for nine years or deferred indefinitely. Nevertheless, when the aid offer, still based on the £316 million price, expired again in April 1990, the Administration renewed it for a second time.

21 The following month the Malaysian Government confirmed that Tenaga Nasional was to be privatised and sought an assurance that aid would be available for several power projects. In response, the Department of Trade and Industry proposed a review of the whole Malaysian power sector.

22 In October 1990 the aid offer again lapsed. The Administration decided not to extend it until they had considered the results of the power sector review, completed later that month. In the light of this, the Administration concluded that Pergau would be an uneconomic investment before 2005 at the earliest and, if proceeded with in the near future, would — over its 35 year life — cost Malaysia about £100 million more in electricity costs compared with less expensive alternatives.

23 In December 1990 the Malaysian Government confirmed that they were to proceed with Pergau.

24 Later that month the Administration commissioned consultants to carry out a desk study of the environmental aspects of Pergau, at a cost of £2,500. The

consultants had a number of concerns about the depletion of forest resources, encroachments into ecologically sensitive areas and the risk of disease transmission which might result from the project. The Administration therefore sent a consultant to Malaysia in January 1991 to discuss the risks with the Malaysian authorities. Following the consultant's report the Administration concluded that environmental aspects were being treated seriously.

Letter of award

25 In January 1991 Tenaga Nasional issued a "letter of award" to Balfour Beatty/Cementation International to enable certain work, such as design, to proceed. Neither side, however, was prepared to enter into a full contract without an assurance that aid support would be forthcoming. The letter set a price ceiling of Malaysian $1.8 billion, worth £417 million. The further price increase of £20 million was mainly to reflect the inclusion of the £12 million Export Credits Guarantee Department's insurance premium and £5 million for the personal taxation of expatriate staff. The latter is not admissible as UK eligible costs supported by aid funds and is payable directly by Tenaga Nasional.

Further investigation of contract price

26 The Administration carried out a second investigation of contract price in January 1991, based on the updated project cost estimate of £417 million. They considered that, despite the time constraints placed on them by Tenaga Nasional's letter of award, they were able to carry out a sufficiently detailed study to cover the price structure and the major sub-contractors' costs.

27 The investigation concluded that the level of fees for agency services now incorporated in the contract price was not excessive for a project of such scope and duration. These had been further reduced by eliminating duplication of agents' fees for sub-contractors, although a small increase was made for inflation in main contractor and agents' costs. Other reductions in sub-contract values were offset by increases in the scope of the contract covering revised geological data.

28 The investigation drew attention to the possibly substantial financial risk which the consortium faced from the fixed price elements in the contract for work which was subject to uncertainty; this left relatively small margins to cater for any unforeseen construction problems. The investigation concluded that, bearing in mind the risks, the price was reasonable and could be accepted, but recommended that a monitoring team be set up to verify interim and progress payments. A few discrepancies were found which were passed to the consortium for adjustment in the final pricing — mainly a £6 million reduction in the main sub-contracted element. Subsequently the sub-contracted element was reduced by £4 million, allowing for other late changes. In practice, further final adjustments, including a transfer of £5.8 million from local to UK costs, left the contract price and the UK element unchanged.

29 In total the Administration calculate the savings from the two price investigations at £43 million: £29 million from the first investigation (paragraph 19), £4 million from the second (paragraph 28) and £10 million attributable to the resultant lower exposure for escalation.

Further project appraisal

30 Later that month the Administration reviewed the project at the proposed price of £417 million. The value of goods and services eligible for support with UK finance was £308 million, giving rise to potential Aid and Trade Provision grant of £108 million under the mixed credit option (paragraph 4). In their analysis the Administration drew on Tenaga Nasional's own investment forecasts which indicated that Pergau should not be commissioned until well into the next century, given the latest indication of project costs.

31 The Administration found the project uneconomic. Their conclusions confirmed the earlier view that it would result in Malaysian consumers paying over £100 million more for electricity over its 35 year life than if the money were invested in an alternative. The alternative of gas turbine generation was at the time being considered by the Department of Trade and Industry following proposals by Northern Engineering Industries for Aid and Trade Provision support for seven gas turbine projects in Malaysia.

Project approval

32 By early 1991 there was sufficient information to reach a decision on whether the UK would make a further offer to support the project at the higher price. Following inter-departmental consultations, the case for proceeding was:

- failure to support the project could have serious consequences for British relations with the Government of Malaysia. It was argued that the original aid offer had been renewed twice, and in terms that did not encourage the Malaysians to think that the UK's reservations were of a fundamental nature. The UK's credibility would be seriously damaged if the earlier offer were withdrawn and to do so in terms which suggested that the UK believed that the Malaysian Government's priorities were wrong could be counter productive.

The case for not making a further offer was:

- the project was uneconomic;
- the project had the potential to crowd out other possible projects from Aid and Trade Provision support, such as gas turbines, which could be of greater benefit to the UK and present better opportunities for attainable follow-up business; and
- proceeding with the project would reduce the Export Credits Guarantee Department's ability to offer insurance cover in Malaysia as the review limit for exposure in the country would be exceeded by almost half.

33 The Accounting Officer, in accordance with paragraph 14 of the Treasury memorandum setting out his responsibilities (Appendix 1), emphasised to Ministers that his responsibility was to ensure that aid funds were administered in a prudent and economical manner and believed that providing aid funds for Pergau would not be consistent with this. He therefore concluded that the project should not be supported.

34 Ministers concluded that support from the Aid and Trade Provision should be provided because of the commitments given by the UK. The Accounting Officer therefore sought an instruction to incur expenditure.

Funding arrangements

35 The Administration had originally intended to use an Aid and Trade Provision grant of £68.25 million as part of a mixed credit (paragraph 4) for the Pergau project. However they concluded that the Aid and Trade Provision budget would not be able to stand the revised cost of a grant of £108 million over five years without putting a stop to just about all other projects under the Aid and Trade Provision. Two other proposals for funding Pergau, which reduced high early expenditure, were therefore considered involving soft loans under the scheme introduced in 1986.

36 The first option was a combination of a soft loan and a mixed credit (paragraph 4), with the former element drawn down first to reduce expenditure in the early years (Appendix 2). It had an estimated cost of £162 million to the Administration spread over 14 years. In addition there was an expected cost of £45 million to the Export Credits Guarantee Department.

37 The second option was for a soft loan only. This provided for a concessional rate of interest of 0.809 per cent against a consensus interest rate (paragraph 4) of 9.65 per cent and for a five-year grace period after project completion before repayments began. This would involve an estimated cost to the Administration of £234 million over the 14 year loan period. The cost to the Export Credits Guarantee Department was estimated at £46 million.

38 The Administration calculated the net present values of these options at:

	ODA	ECGD	Total
First option	£107.2m	£24.7m	£131.9m
Second option	£132.6m	£25.9m	£158.5m

They did not calculate the net present values of the February 1991 mixed credit proposal (£108 million, paragraph 35). The National Audit Office assessed these on a pro rata basis as:

ODA	ECGD	Total
£84.1m	£18.0m	£102.1m

Each of the options conferred different degrees of benefit on the aid recipient: higher costs to the Administration were reflected in increased benefits to the recipient through reduced debt servicing costs.

39 The Administration chose the second option to minimise the impact on the Aid and Trade Provision budget in the early years, although they acknowledged that even this option could still preclude support for other major projects. And it would absorb a significant proportion of available funds in later years.

40 The standard practice is for aid agreements to be concluded between the UK and sovereign governments concerned; and for the aid funds to be passed through the same channel. In the case of trading activities, such as an

electricity undertaking, the recipient government is normally encouraged to lend the funds to the project authority at commercial rates. This maintains a financial discipline on the undertaking in setting its tariff policy; furthermore, the developing country government retains the benefit of the concessionality in the finance.

41 However the Malaysian Government asked for the Pergau loan agreement to be arranged directly with Tenaga Nasional. They considered that to do otherwise would be bureaucratic and that the project would not be commercially viable if the authority were required to borrow at commercial rates. Although Tenaga Nasional was to be privatised, the Malaysian Government took the view that, at the time, it was still a public body and was therefore entitled to benefit from preferential loans. The Administration considered that, in principle, the concessionality in the loan finance should be reflected in the value of Tenaga Nasional on privatisation and could be recouped by the Malaysian Government on the sale.

42 The Administration agreed to this unusual funding arrangement but insisted that the Malaysian Government should guarantee the loan and ensure Tenaga Nasional's compliance with the terms of the agreement.

43 On 4 July 1991, the Secretary of State for Foreign and Commonwealth Affairs instructed the Accounting Officer to incur expenditure of up to £234 million against the Aid Programme. The aid arrangements were embodied in an agreement reached between the two governments on 8 July.

Project progress

(a) Physical works

44 Work on the five year contract began in July 1991. By 31 March 1993, the Administration had spent £9.953 million on the project from their Aid and Trade Provision.

45 The Aid Agreement provides for comprehensive project monitoring by the Administration, with full access to the site and to project records. To assist this work, the Administration have appointed specialist consultants for project, financial and environmental monitoring. The British High Commission in Kuala Lumpur also provide general information on progress.

46 Progress to date has been generally satisfactory. The British High Commission have, however, reported two causes of delay. The first concerned a dispute about ownership of land and water rights. Twice, in February 1992 (for two days) and July 1992 (for 11 days), the State Government of Kelantan barricaded access to the main road to the site. This stopped work for nearly two weeks. In August 1992 Tenaga Nasional agreed to provide compensation of M$121 million (£28 million) to the State Government over the 35 year life of the project.

47 The second delay involved a dispute with small landowners about loss of ownership. For three days in May 1992 and for two and a half months from July 1992 the contractor was denied access to parts of the site and work on specific activities stopped. On 26 September 1992 Tenaga Nasional agreed to pay compensation to the landowners and work restarted in October 1992.

Neither delay has had a significant effect on the implementation schedule of the project.

(b) Project monitoring

48 The Administration appointed three experts to form a Design Review Panel, one drawn from Binnie and Partners, and two from Sir William Halcrow and Partners, to examine and review the design specifications and methods of construction of the project, with particular reference to safety aspects. The contract is for three years and is re-negotiated annually; it cost £50,000 in the first year.

49 Matters have so far proceeded smoothly though underground rock conditions will require more steel lining in the power tunnel than originally envisaged. The expertise of the Panel has recently been augmented by the temporary appointment by the Administration of a rock mechanics expert. The Panel has made several recommendations about the design of the project, the most important of which relate to the design of the dam itself; these have been taken up by the contractor.

(c) Financial monitoring

50 The Administration are employing Shaw and Hatton, and Sir Alexander Gibb as joint consultants, at a cost of up to £625,000 over five years, to carry out financial monitoring. Their brief is to monitor contractual payments and ensure that contractual provisions relating to price escalation and the drawdown of the loan are properly applied. They are required to carry out quarterly site visits and to examine and report on monthly and quarterly engineers' reports.

51 So far the consultants have been satisfied that physical progress has been commensurate with payments made to the consortium. They have noted, however, that claims for delays arising from the site access problems are likely. Following their visit to the site in April 1993, they reported that progress appeared to be satisfactory; a report on their most recent visit in August 1993 is in preparation.

(d) Environmental monitoring

52 The Administration appointed consultants, now known as Environmental Resources Management, to carry out environmental monitoring, initially at a cost of £87,000 over 13 months. The consultants have recommended a number of improvements which are being implemented: the Administration have purchased equipment for monitoring water quality; Tenaga Nasional are commissioning health screening studies for villagers displaced by the project; and training in environmental good practice for two Tenaga Nasional staff has been provided in the UK, with further training planned in Malaysia. The Administration have drafted terms of reference for the next three years of the project.

Review of aid and trade provision

53 In 1989, a review of the soft loan facility led to Ministers concluding that soft loans should continue, but that the financing mechanism should be changed to avoid the commitment of future administrations to substantial public expenditure for many years beyond the period of the Public Expenditure Survey and long after the project had been implemented. A system of lump sum funding was therefore negotiated with the banks in place of annual interest subsidy payments to allow Aid and Trade Provision funds to be drawn down during the implementation period of the project. The effect for the new system is to bring the costs to the Aid and Trade Provision of soft loans more in line with those of mixed credits. The new system became operational in 1992.

54 In the light of the difficulties encountered on Pergau, the Administration considered that it was appropriate to take stock and consider what lessons should be drawn. The following steps were recommended: a tightening of procedures — in particular, improved inter-departmental consultation and decision making; the avoidance of informal approvals which fell short of firm commitments; better appraisals; more openness with aid recipients: and the need to demonstrate the affordability of projects in terms of the aid budget and to take greater account of the effect of price increases on proposals. Ministers later commissioned a review of the Aid and Trade Provision system which took into account the findings of the Pergau review.

Findings and conclusions

55 Since the Aid and Trade Provision began in 1977, the largest sums provided for an individual scheme have been £59 million for the Malaysian Rural Water Supply project (1986–92) and £59 million for the Ankara Natural Gas Conversion project (1988 to date). At the time Pergau was approved there were 66 projects underway with Aid and Trade Provision support of £576 million and 13 further projects approved in principle with promised support of £127 million. The cash cost of Pergau exceeds each of these by a significant margin.

56 The Accounting Officer drew attention to the value for money implications of supporting this project and was given a clear ministerial directive to incur expenditure on it. It is not for the National Audit Office to question the merits of this policy decision. The National Audit Office do, however, note that in implementing the Ministerial directive the Administration would, under the most economical option, have spent £108 million over five years. Because of limitations on their finances, they will spend £234 million in cash terms over 14 years. Even if costs were discounted to their present values the chosen method of implementation would cost the UK £56 million more than it might otherwise have done.

57 The Administration pointed out that the soft loan facility then available was, by its nature, more costly than a mixed credit arrangement. They said that because of budgetary constraints it was the only avenue open to them to secure the Government's policy objectives; and Tenaga Nasional was the beneficiary of the enhanced level of concessionality of the soft loan.

Appendix 1
Extract from "The Responsibilities of an Accounting Officer"

12 An Accounting Officer has particular responsibility to see that appropriate advice is tendered to Ministers on all matters of financial propriety and regularity and more broadly as to all considerations of prudent and economical administration, efficiency and effectiveness. He will need to determine how and in what terms such advice should be tendered, and whether in a particular case to make specific reference to his own duty as Accounting Officer to justify to the PAC transactions for which he is accountable.

13 If the Minister in charge of the department is contemplating a course of action involving a transaction which an Accounting Officer considers would infringe the requirements of propriety or regularity (including where applicable the need for Treasury authority), the Accounting Officer should set out in writing his objections to the proposal, the reasons for his objection and his duty to notify the Comptroller and Auditor General should his advice be overruled. If the Minister decides nonetheless to proceed, the Accounting Officer should seek a written instruction to take the action in question. Having received such an instruction, the Accounting Officer must comply with it, but should then inform the Treasury of what has occurred, and should also communicate the papers to the Comptroller and Auditor General without undue delay. Provided that this procedure has been followed, the PAC can be expected to recognise that the Accounting Officer bears no personal responsibility for the transaction.

14 If a course of action is in contemplation which raises an issue not of formal propriety or regularity but relating to the Accounting Officer's wider responsibilities for economy, efficiency and effectiveness set out in paragraph 6, it is his duty to draw the relevant factors to the attention of his Minister and to advise him in whatever way he deems appropriate. He may think it right to refer to the possibility of criticism by the PAC. If his advice is overruled, he should ensure that both his advice and the overruling of it are apparent clearly from the papers. The Accounting Officer is not obliged to send the papers to the Comptroller and Auditor General, but he should ensure that the National Audit Office is made aware of the Ministerial direction if it is conducting any relevant enquiry.

Appendix 2
Expected expenditure patterns of Aid and Trade support

1 The Table below illustrates how the three funding options considered by the Administration would be financed.

These are:

original proposal: Mixed credits (Report, paragraphs 4 and 35) involving grant payments over the period of project implementation.

option 1: A combination of mixed credits and soft loan (Report, paragraphs 4 and 36) involving grant payments over the period of project implementation and interest subsidy payments over the 14 year life of the loan.

option 2: Soft loan (Report, paragraphs 4 and 37) involving interest subsidy payments over the 14 year life of the loan.

2 The project price is £417 million. This is a negotiated fixed price contract which includes a capped provision for expected escalation of £92 million. The contract price is common to all the funding options.

3 The UK element within the contract is £308 million, which is eligible for funding from the Aid and Trade Provision. The remaining £109 million comprises mainly local costs in Malaysia with a small amount of other foreign country expenditure.

4 To conform with the rules agreed within the Organisation for Economic Co-operation and Development, support under the Aid and Trade Provision must represent a minimum grant element of 35 per cent. The grant element is calculated in relation to the level of concessionality in the finance being received by the developing country.

5 Under international rules, the concessionality of a tied aid package must be a minimum of 35 per cent. The internationally agreed definition of concessionality contains a number of simplifying but artificial assumptions. This results in concessionality underestimating the subsidy element of any tied aid package:

- in the case of mixed credits, concessionality — as defined internationally — is equal to the grant, that is, at least 35 per cent of the total mixed credit. This understates the subsidy element by ignoring the Export Credit Guarantee Department's interest make up which is paid on the export credit element. Interest make up is the difference between an internationally agreed interest rate (the consensus rate) and the commercial interest rate.

- in the case of soft loans, concessionality — as defined internationally — is calculated using the difference between the rate of interest charged to the borrower and a different internationally agreed interest rate (the differential discount rate) which is related to the consensus rate. At the time the Pergau loan was agreed, the differential discount rate was below UK commercial interest rates and therefore the concessionality calculation understated the subsidy cost to the UK.

6 Although mixed credits and soft loans have the same degree of concessionality — as defined internationally — soft loans have, in general, been more expensive to the UK than mixed credits. The main reasons are that:

i in the case of soft loans, the Export Credits Guarantee Department's insurance premiums on maturities in excess of 10 years are absorbed by UK and are not passed on as an additional cost to the exporter/borrower.

ii the UK pays more interst make up on soft loans because they are of longer maturity and interest make up is due on the full value of the loan rather than the maximum of 65 per cent in the case of mixed credits.

Year	February 1991 proposal (mixed credits)	First option (soft loan + mixed credits)	Second option (soft loan)
	£m	£m	£m
0	0	2.1	2.7
1	10.2	13.0	9.9
2	70.5	54.5	20.3
3	23.5	24.9	25.7
4	1.5	10.9	26.9
5	2.3	11.5	27.0
6		9.7	26.2
7		8.5	23.0
8		7.4	19.9
9		6.2	16.7
10		5.0	13.5
11		3.8	10.3
12		2.7	7.2
13		1.5	3.9
14		0.3	0.8
ODA cash cost	108.0	162.0	234.0
ECGD cash cost	35.1[b]	45.4[b]	45.8[b]
Total	143.1	207.4	279.8
Present values (Report § 38)	102.1	131.9	158.5

Notes: (a) The data relate to contract years and cannot therefore be related directly to the Administration's financial years.
(b) ECGD cash costs would also be spread over 14 years but are shown in total for simplicity.
(c) In each of the above options, the subsidy provided by the UK is shown below.

Option	Subsidy provided by the Administration	Subsidy provided by the Export Credits Guarantee Department	Total subsidy provided by the UK
	%	%	%
Original proposal	35	7	42
Option 1	42	9	51
Option 2	49	10	59