THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA

JOINT COMMITTEE OF PUBLIC ACCOUNTS

197th REPORT

COAL EXPORT DUTY

Australian Government Publishing Service
CANBERRA 1982

Coal Export Duty

Report

197

Joint Committee of
Public Accounts

Parliament of the Commonwealth of Australia 1982

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JOINT COMMITTEE OF PUBLIC ACCOUNTS

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DUTIES OF THE COMMITTEE

Section 8.(1) of the Public Accounts Committee Act 1951 reads as follows:

8.(1) Subject to sub-section (2), the duties of the Committee are:

(a) to examine the accounts of the receipts and expenditure of the Commonwealth including the financial statements transmitted to the Auditor-General under sub-section (4) of section 50 of the Audit Act 1901;

(aa) to examine the financial affairs of authorities of the Commonwealth to which this Act applies and of intergovernmental bodies to which this Act applies;

(ab) to examine all reports of the Auditor-General (including reports of the results of efficiency audits) copies of which have been laid before the Houses of the Parliament;

(b) to report to both Houses of the Parliament, with such comment as it thinks fit, any items or matters in those accounts, statements and reports, or any circumstances connected with them, to which the Committee is of the opinion that the attention of the Parliament should be directed;

(c) to report to both Houses of the Parliament any alteration which the Committee thinks desirable in the form of the public accounts or in the method of keeping them, or in the mode of receipt, control, issue or payment of public moneys; and

(d) to inquire into any question in connexion with the public accounts which is referred to it by either House of the Parliament, and to report to that House upon that question,

and include such other duties as are assigned to the Committee by Joint Standing Orders approved by both Houses of the Parliament.

PREFACE

At an early stage of this inquiry, the Committee was advised that while the Department of Business and Consumer Affairs is responsible for duty collection, policy aspects and rate determination is the responsibility of the Deparment of Trade and Resources. The Committee examined both departments in public hearings and also requested submissions from the New South Wales and Queensland coal authorities and major coal exporting companies. Discussions were held with mining companies and representatives of the New South Wales Combined Colliery Proprietors Association. Arising from these discussions, the Committee briefly examined other forms of taxation for mining industries. The results of this investigation are in Chapter 4 of this Report.

This inquiry has indicated a need for the development of a consistant and stable policy on the Coal Export Duty and that considerable uncertainty within the Industry has been generated by the almost annual changes. The Committee suggests in the Report that benefits could be achieved if a co-ordinated approach involving discussions with all interested parties, was developed for the fair and equitable taxation of the industry.

For and on behalf of the Committee,

David M. Connolly, MP
Chairman

M.J. Talberg
Secretary
Public Accounts Committee
Parliament House
CANBERRA ACT
9 March 1982

COAL EXPORT DUTY

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CHAPTER 1

BACKGROUND

Introduction

1.1 Paragraph 2.3.2 of the Auditor-General's Report for 1979-80 referred to unsatisfactory features relating to the Department of Business and Consumer Affairs administration of the Coal Export Duty. In particular the Auditor-General commented on the Department's operating procedures, refunds of revenue, reconciliations, procedural instructions and internal audit.[1]

1.2 As a result of these comments, the Committee decided to conduct a public inquiry into the administration of the duty. At an early stage of the Inquiry the Committee was informed that while the Department of Business and Consumer Affairs is responsible for administration and collection of the duty, policy aspects and rate determination is the responsibility of the Department of Trade and Resources.[2] Consequently the Committee decided to examine both Departments, and public hearings on the Duty took place on 12 and 14 May 1981. The Committee also requested submissions from the New South Wales and Queensland Coal Authorities, and major coal mining companies. Discussions were held with mining companies and representatives of the New South Wales Combined Colliery Proprietors' Association.

1.3 In the course of the Inquiry the Committee visited coal mining and export operations at Moura, Goonyella and Hay Point in Queensland, and inspected coalfields at Appin and Westcliff in New South Wales. Further details of these discussions and inspections are provided at Appendix A.

1.4 The Committee decided, as part of its inquiry to examine not only the issues raised by the Auditor-General, but also whether it would be cost effective to merge the administrative and policy aspects of the duty into a single department. Appropriate forms of taxation of the coal mining industry were also discussed by the Committee.

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1 Australia, Parliament, Report of the Auditor-General upon the financial statements prepared by the Minister for Finance for the year ended 30 June 1980 and upon other accounts, Parliamentary Paper 157/1980, Canberra 1980 pp. 12-14

2 Public Accounts Committee File 1980/9. Auditor-General's Report 1979-80, Coal Export Duty, Part B(5).

History of the Duty[3]

1.5 Coal Export Duty is levied under the authority of the Customs Tariff (Coal Export Duty) Act 1975 which came into operation on 19 August 1975. At the time of introduction, the then Treasurer, Mr Hayden, indicated that coal prices had risen dramatically in the two previous years, that very large windfall profits were being earned by the export sector of the coal industry, and that the Government considered it reasonable that part of these increased profits should be channelled to the community by means of an export duty. The proposed duty rate at that time was $6.00 per tonne on high quality coking coals (those with a carbon content above 85% on a dry ash free basis) and $2.00 per tonne on other coals.

1.6 In October 1975 the then Government announced that in the light of representations from coal producers on the effects of the duty, it had decided that steaming coals with an ash content above 14% and a crucible swelling number not greater than 3 should be exempted from the duty as its effects on this coal could have priced it out of markets in Britain and Europe and led to termination of contracts.

1.7 The 1976/77 Budget removed the duty from non-coking coal and the rate for high quality coking coal was reduced from $6.00 to $4.50 and other coking coal from $2.00 to $1.50. In the Budget Speech of 17 August 1976, the then Treasurer, Mr Lynch, stated that the Government regarded the Coal Export Duty as an entirely inappropriate form of tax, in that its effects fell in a quite haphazard manner, marginal fields paying the same or greater rate of duty as economically more profitable fields. He also said that it was the intention of the Government to remove this particular levy, but for budgetary reasons it is not possible to remove it at one stroke. In September 1976 the Government reiterated that it regarded the duty as an entirely inappropriate form of tax and that it was the Government's intention to phase out the duty over 3 years.

1.8 The 1977/78 Budget reduced the duty on high quality coking coal to $3.50 per tonne, and the rate for other coking coal to $1.00 per tonne. In the Budget speech the then Treasurer re-affirmed the Government's intention to remove the remaining duty in the next year in accordance with its previous undertaking. On 15 September 1977 the then Minister for Special Trade Negotiations and Minister Assisting the Prime Minister, again confirmed that it was the Government's intention to remove the remaining duty next year.

3 Joint Committee of Public Accounts, Auditor-General's Report 1979-80, Department of Business and Consumer Affairs and Department of Trade and Resources, Coal Export Duty, Minutes of Evidence, AGPS Canberra 1981, pp. 111-115.

1.9 In the 1978/79 Budget Speech of 15 August 1978 the Treasurer, Mr Howard announced that the Government had decided to delay the phasing out of the remaining duty on coal exports and that the duty will now not be abolished until midnight on 30 June 1979. On 24 May 1979 the Treasurer announced that because of the difficulty of the budgetary situation and the essential requirement to bring down the deficit, the Government was unable to proceed with the planned lifting of the coal export duty on 30 June 1979. Mr Howard further stated that he was unable to give any commitment as to the future abolition of the duty.

1.10 In the 1979/80 Budget the Government announced major changes to the duty. These changes can be summarised as:

- the existing duty of $3.50 per tonne on high quality coking coal and $1.00 per tonne for other coal will remain unaltered for open cut mines in production by 30 June 1980;
- the $3.50 per tonne duty on high quality coking coal would be reduced to $1.00 per tonne for coal obtained by underground methods from 1 November 1979; and
- the $3.50 per tonne duty would be reduced to $1.00 per tonne for coal mined from major expansions of existing open cut mines or from new open cut projects where production from the major expansion on the new project commences after 30 June 1980.

1.11 On 13 November 1979, the Government announced further amendments to the duty. These are as follows:

- coal which contains an ash content of more than 12% would be exempt from the duty; and
- high quality coking coals extracted from existing open cut mines at a depth greater than 60 metres will attract a rate of duty of $1.00 per tonne in recognition of the high cost of specialised technology necessary to extract open cut coals from those depths.

1.12 Following from these changes, the Department of Business and Consumer Affairs experienced difficulties in assessing duty from mines in Queensland, where individual shipments comprised a mixture of coals dutiable at different rates. Complex procedures were needed to be developed quickly to determine the correct ratio of coal in each duty category for these shipments.

1.13 The 1981/82 Budget imposed a duty of $1.00 per tonne on all previously exempt categories of coal exported after 18 August 1981. A table summarising the coal export duty rates since its inception is at Appendix B.

1.14 Coal Export Duty is a significant source of revenue for the Commonwealth. In 1979/80 the duty raised approximately $90.7m.0 and in 1980/81 receipts were approximately $84.9m. The 1981/82 estimate, after accounting for the Budget decisions, is in excess of $100 m. Of the 1979/80 revenue the Utah Development Company paid approximately 70%, and the Thiess Dampier Mitsui Company paid approximately 10%. Other companies, principally based in New South Wales accounted for the remaining 20% of revenue.[4]

Auditor-General's Report

1.15 In his 1979/80 Report the Auditor-General stated:

> An audit examination was undertaken in New South Wales and Queensland in June 1980 to evaluate the departmental systems operating to control the collection of the duty. Various matters, which were represented to the department following the audit, together with the departmental responses are referred to hereunder.
>
> Operating procedures
>
> The Department's Central Office had set a target date of 31 March 1980 to finalise operating procedures to determine the correct rate of duty on coal exported and to replace iterim ratios adopted to calculate the duty. Action proposed included: site inspections; establishment of formula for the percentage split between open cut and underground production; documentation; and the determination of the length of the settlement period. At the time of the audit in Queensland these actions had not been finalised and interim ratios were still in operation.
>
> In response, the Department stated that on-site inspections were not completed at the 3 mining companies during February and March, as originally planned, due to untimely staff shortages, changes and retirements. Further delays were occasioned by a miners' strike for several weeks in early May. Since January 1980, discussions were actively pursued with technical and administrative staff of mining companies. There was little technical experience to assist in determining the correct amount due in a multi-duty situation. This meant that the Department had to develop its own expertise independently of other sources. The period for the operation of the interim ratios, which were acceptable to the mining companies, was extended as the ratios slightly favoured the Department and revenue was not at risk.
>
> Given the time which had elapsed since the Budget announcement of the differing rates of duty, and in the light of other priorities, reasonable progress has been made towards the implementation of proper control methods for coal export duties.
>
> The Department also informed my Office that, prior to the enactment of the legislation, it had reported to the Government on the administrative difficulties likely to be encountered in connection with the collection of duty following amendment of the Act.
>
> Refunds of revenue
>
> Procedures had not been developed to evaluate claims by mining companies for refunds based on the difference between duty paid on the agreed iterim basis and duty assessed by the companies as payable on the basis of actual production.
>
> The Department stated that applications for refunds should not be a feature of the coal export duty administration; appropriate duty should be paid as it becomes due. Companies have been advised to notify the Department of changes to particular mining operations so that necessary checks can be conducted to allow the payment of appropriate duty at the time rather than rely on refund adjustments subsequently. The Department also advised that normal checking criteria will allow officers in liaison with company officials to strike a ratio between coal mined above and below 60 metres for duty calculation purposes and thus avoid applications for refunds of duty.
>
> Reconciliations
>
> Reconciliations had not been performed between coal export records and the financial ledger.
>
> The Department accepted the need for a reconciliation and stated that a system of monthly reconciliations has now been introduced.
>
> Procedural instructions
>
> Uniform procedural instructions had not been issued for the use of field staff involved in the examination of company shipping documents. The bases and frequency of inspections carried out also varied from port to port.
>
> The Department advised:
>
> . It considered uniform procedural instructions for the examination of company shipping documents at the 3 ports would not provide for differences in the recording and accounting systems of the exporting companies and the differing departmental establishments;

4 Public Accounts Committee File 1980/9, Part B(5).

- The varying bases of checks performed and the inconsistencies noted in the extent of documentation of the results of checks of company shipping documents are now under review and will be standardised as much as practicable; and

- The varying frequency of inspection of company shipping documents at the ports examined is caused by different priority assessments made by supervisors based on an evaluation of the company's past performance, risk assessment, volume of transactions and availability of staff.

Internal audit

Internal audit coverage programmed to examine payments of duty was not considered to be adequate having regard to variations in the legislative provisions.

The Department stated it recognised the need for regular systems-based audits of the coal export operations, particularly as the legislation involved is complex and comparatively new; regular audits of coal export operations will be carried out.

Comment

While my Office appreciates the difficulties encountered by the Department in implementing proper control methods for export coal duties it is important that the Department's actions achieve satisfactory controls at the earliest possible date.

CHAPTER 2

COAL EXPORT DUTY INQUIRY

2.1 As a result of the Auditor-General's comments the Committee decided to conduct a Public Inquiry into the administration of the duty. At an early stage of the Inquiry the Committee was informed that while the Department of Business and Consumer Affairs is responsible for administration and collection of the duty, policy aspects and rate determination is the responsibility of the Department of Trade and Resources. Consequently the Committee decided to examine both departments and public hearings on the duty took place on 12 and 14 May 1981. This chapter provides details of the action taken by the Department of Business and Consumer Affairs to improve the administration of the Coal Export Duty since the Auditor-General's comments were published in September 1979.

Implementation of 1979 Legislative Changes

Background and short term arrangements

2.2 In its submission to the Committee of 16 January 1981,[1] the Department of Business and Consumer Affairs stated that administration of the coal export duty in New South Wales was reasonably straight forward but in Queensland it was most complex, as in that state there are three separate areas where open-cut, underground and below 60 metre mines exist within the one complex and where coal from all sources is washed at the one preperation plant. Coal does not become dutiable until it reaches the point of exportation where it can be an admixture of coal at a number of rates of duty.

2.3 The complexities relating to the Queensland operation did not exist prior to the 1979 legislative amendments as duty was levied on only high quality coal. The matter of mining source, that is whether mining was either open-cut or undergound was not relevant, the 60 metre criterion did not apply and coal was found to be high quality or otherwise by virtue of independent analysis of samples drawn at the port of shipment. This analysis was carried out by internationally recognised marine surveying organizations, who value their independance and reputation for independance, and whose results are accepted by both buyers and sellers of coal.[2]

2.4 So as to collect revenue without causing disruption to normal mining operations, or insisting that sophisticated measuring aparatus be installed, the Department of Business and Consumer Affairs decided, in co-operation with individual

1 Minutes of Evidence, op. cit., pp. 91-110
2 Ibid., pp. 116-117, 125-126

mining companies, to set up arrangements, based on company records and procedures, which will allow as accurate an assessment as possible of the correct amount of duty due. The Department adopted a back allocation system. On the basis of company accounting procedures, historical production records and future mining plans, agreed ratios were established for each company over a given settlement period which reflected the likely proportions of coal to be produced under each duty category. These ratios were used to calculate the correct amount payable on each export shipment.[3]

2.5 At the end of each six monthly settlement period the Department received actual production figures from companies and, if agreed that they were substantially different to the provisional figures calculated from the ratios, an appropriate adjustment to duty was made. The appropriate amendment was made in conjunction with the Company's first payment in the next settlement period.[4]

2.6 As the changes which were to take effect from 1 November 1979 were not introduced into Parliament until 25 October 1979, the Department did not write to the mining companies involved until 31 October 1979 although discussions with them were held as early as 5 October 1979. At that time it considered that there was no practical alternative other than the setting up of short term arrangements to cover the period 1 November 1979 to 31 March 1980 during which the Collector of Customs, Queensland would:[5]

- accept for duty purposes ratios submitted by the three companies as to open cut/underground production based upon figures up to 1 November 1979;
- arrive at agreed procedure statements of operations with the companies;
- arrive at agreed formulae for determining open cut, underground and below 60 metre ratios for future periods with the companies;
- make any plus or minus duty settlements for the iterim period (1 November 1979 - 31 March 1980), and
- decide as to the length of the ongoing/forecasting duty settlement periods for the longer term.

Long term arrangements and technical expertise

2.7 In its submission the Department of Business and Consumer Affairs stated that it had set a date of 31 March 1980 as the timetable within which it should work to determine

3 Minutes of Evidence, op. cit., pp. 99, 121-122
4 Ibid., pp. 131-132
5 Ibid., pp. 92-93

a proper basis for collecting duty from the three mining companies in Queensland. This timetable was unable to be realised due to untimely staff shortages, changes and retirements, as well as a miners' strike of several weeks.[6]

2.8 Furthermore, discussions with mining companies revealed that Departmental officers had little technical expertise in the coal export industry and there existed more sensitive factors such as the basis of ratio determination for consideration in reaching an acceptable solution to the problems than had been originally contemplated. Also, two of the three mining companies requested the extension of the interim period to 31 May 1980 and a settlement period six monthly thereafter to coincide with their accounting periods. This was acceptable to the Department as the interim ratios slightly favoured the Commonwealth and revenue was not at risk.[7]

2.9 The Department of Business and Consumer Affairs witness explained that the major difficulty in relation to the duty arises because of the difference in rate applicable to coal because of the level at which it is mined. In order to determine the amounts of coal which are mined above and below 60 metres it is necessary to take account of company records of the operation, its plans for production and its actual production. To do this effectively requires expertise in quantity surveying and mining engineering. These skills, whilst available within companies, do not exist within the Department of Business and Consumer Affairs. As a result, although companies provide the Department with detailed plans and projections of the location of mining and the percentage of coal mined below 60 metres, the department does not have any independent assessment to show that the Company's data is completely reliable. While the department was able to examine company records, it was unable to undertake the various technical controls such as check surveys. Consequently, the Department of Business and Consumer Affairs has found it necessary to place significant reliance upon the production accounting records which the coal industry uses for its own purposes.[8]

2.10 In order to overcome this deficiency the Department has recently approached several departments to discover whether appropriate mining engineering skills exist within the public service, without response. The Department, intends then to recruit appropriately qualified personnel from the private sector. The Department informed the Committee that when it has access to these technical skills it will be able to satisfactorily assess calculations of the duty owed, and to

6 Minutes of Evidence, op. cit., p. 102
7 Ibid., p. 105
8 Ibid., p. 118

have a sound basis for resolving any areas of dispute which *may occur.*[9]

2.11 The Department also considers that its expertise will improve with experience gained in evaluation of company documentary submissions and field investigations, with the result that officers will be able to achieve a high standard of technical knowledge of the coal export industry.

Dispute with Thiess Dampier Mitsui Coal Pty Ltd (TDM)

2.12 On 12 May 1981 the Committee received a telex from the above Company which, in part, stated:[10]

> Discussions with the Department and TDM mine officials resulted in the development of the formal monthly presentation. The presentation is titled 'Assessment of Metallurgical Coal Produced per Mine' and is currently prepared monthly and a copy forwarded to the Customs Department, Brisbane. The presentation ties in with the formal mine reporting system and as such is routine....
>
> The system has floundered at present due to the Department's refusal to accept the differential and estimated recoveries. Discussions have been carried out with the Department who at present apply a flat, or average recovery factor to raw coal production. As a result they do not carry the system forward through stockpiles but establish the proportion of underground and open cut coal at this point. This ignores both differential yield and retention in stockpiles.
>
> The Company does not agree with this modification to the method and is preparing a submission to the Department. That submission will be presented to an independent authority of such technical standing and integrity as to be mutually acceptable to both parties. Relating to this matter TDM is currently in disagreement with the Collector of Customs of approximately $100,000 relating to the first thirteen months under the new system. The differential recovery figures are those used by the Company for its normal day to day use. They are used for budget estimates and accounting and have in practice found to be accurate.

2.13 In evidence given to the Committee on 14 May 1981,[11] the Department of Business and Consumer Affairs witness stated that the basis of the dispute is quite detailed and technnical. It relates to the determination of the ratio of open cut and underground mining. This in turn is dependant on the separate yield factors for those two sources of mining.

9 Minutes of Evidence, op. cit., pp. 122, 162
10 Ibid., pp. 200-201
11 Ibid., pp. 191-192

2.14 The Collector is aware that with other companies sampling in conjunction with the determination of yields involves samples on run-of-mine raw coal. These are samples taken from the raw coal between the point of its production and processing. In this case the company does not sample in this way, but resorts to core sampling which takes place before mining operations begin.

2.15 The Collector contends that this form of sampling is not as accurate as the sample taken from raw coal and therefore has applied a common yield factor to coal coming from both open cut and underground sources. That yield factor is applied to what the company regards as the yield from open cut coal. While it is generally accepted in the industry that coal from underground sources produces a better yield than coal from open-cut, the company is claiming that the yeild factor is being applied to all coal at the open cut rate. Consequently, it is being overcharged on duty. The Collector has said that until he is further satisfied on the technical aspects involved, he is prepared to allow only a yield related to yields from open cut mining.[12]

2.16 As at the date of this Report the Department had not received the submission from TDM, and the dispute is continuing.

Refunds of Revenue

2.17 The Department of Business and Consumer Affairs informed the Committee that it believed the Auditor-General's concern on this matter related to a refund claim in excess of $500,000 which was submitted by a mining company in early 1980. This claim concerned mining below 60 metres. The Department explained that at the time of the amending legislation which reduced the duty on deep open cut mining, it *was of the view that no company* would be in a position to mine below 60 metres for a considerable period. Consequently the Department set provisional ratios for all companies which did not take account of the 60 metre provision.

2.18 However, unbeknown to the Department, one Company was immediately able to mine below 60 metres, and initially paid duty in accordance with the provisional ratio. At a later stage, when and a more appropriate ratio had been developed, the company claimed a refund for the proportion of coal *previously exported which* was dutiable at the lower rate. After examination by the Department, this claim was accepted and an appropriate credit[13] adjustment was made to the Company's next duty payment.

12 Minutes of Evidence, op. cit., pp. 191-192
13 Ibid., pp. 177

2.19 The departmental witness informed the Committee that the aspect of refunds is not a feature of the duty scheme. In the setting of provisional ratios and the adjustments of those ratios at the end of a period, there will be plus or minus adjustments, and these will be affected not by way of refund but by way of an adjustment in conjunction with the Company's next duty payment. Should a cash refund ever be required by a Company, there is provision in the Customs Act.[14]

Reconciliations

2.20 The Department informed the Committee that reconciliations to ensure that moneys received from coal export duty had been credited to the correct head of revenue had not been performed from 1975 to the time of the Auditor-General's query in 1980.

2.21 Since that time the Department has introduced a reconciliation system based upon a return which is received monthly from the Department of Finance. This return is a statement of balances, and these balances are checked with entries relating to duty received by sub-collectors. These reconciliations are currently up to date, and have disclosed only isolated instances of where moneys have been credited to the incorrect head of revenue.[15]

Procedure Statements

2.22 The Department informed the Committee that comprehensive documents had been prepared for each mine which identified company procedures and calculations involved in taking production tonnes of coal at mines to shipment tonnes at the port at differing rates of duty. These documents also identified problem areas and suggested ways in which they might be overcome and at what stages technical assistance might be provided. Apart from being procedure statements, the documents were also intended to serve as the basis for future interdepartmental discussions to determine what technical expertise is available within the Public Service and the Joint Coal Boards, and how such expertise can be used in overcoming problems related to the coal export duty. These documents have been made available to the Committee and have been circulated to policy departments and the Auditor-General.[16]

Internal Audit

2.23 The Department advised that it had undertaken an extensive audit of the coal export duty procedures in New South Wales, and that no major problems were found in that state. The Department further stated that they had not yet

14 Minutes of Evidence, op cit., pp. 95, 177
15 Ibid., pp. 173-176
16 Ibid., p. 160

undertaken an internal audit of the Queensland operations, mainly because of the results of the Auditor-General's extensive audit and because the various systems and procedures in Queensland were changing.

2.24 The Committee has also been informed that an internal audit of coal export duty will be conducted at least annually until such time as the procedures settle down and have proven to be effective. When this stage is reached the Department will re-appraise the frequency, manner and depth of its internal audits in this area.[17]

Interdepartmental discussions

2.25 During the Inquiry the Committee was concerned that the 1979 legislative amendments to the coal export duty had been implemented by the Government very quickly notwithstanding the administrative complexities involved particularly with respect to the 60 metre decisions. The Committee therefore examined both the Department of Trade and Resources and the Department of Business and Consumer Affairs to determine whether adequate interdepartmental discussions and consultation had taken place to ensure that the Government received adequate advice as to the administrative difficulties which would result from the proposed changes.

2.26 The Department of Business and Consumer Affairs informed the Committee that it had not been consulted in relation to the Budgetary decisions of August 1979, but that consultations had taken place with policy departments prior to the announcement of the November 1979 decisions. In the view of this Department the consultation that occurred in this period was adequate and that the views of the Department regarding the administrative difficulties related to the amendments were placed before the Government prior to its decision in 1979.[18]

2.27 The Department of Trade and Resources informed the Committee that they were not the only policy department involved in the determination of the coal export duty, and that the 1979 decisions were taken against the background of various views taken by interested departments. As the duty is a revenue raising matter, budgetary considerations were important in the making of the Government's decisions. Concerning the 60 metre decision the Department of Trade and Resources advised the Committee that it was made as a result of representation from industry regarding the high cost of the technology required to mine open cut below this depth.[19]

17 Public Accounts Committee File 1980/9 Part B(5)
18 Minutes of Evidence, op. cit., pp. 143, 161, 166
19 Ibid., pp. 143, 144, 165

CHAPTER 3

TAXATION ISSUES

3.1 In the course of the Inquiry the Committee had discussions with representatives of coal mining companies and the New South Wales Combined Colliery Proprietors' Association. The Committee also inspected coal mining and export operations at Moura, Goonyella and Hay Point in Queensland, and at Appin and Westcliff in New South Wales. The Chairman of the Committee, Mr D.M. Connolly, MP, also visited coal mining operations at Blackwater in Queensland. As a result of the views expressed at these discussions and inspections, the Committee decided to briefly investigate appropriate forms of taxation of the coal mining industry.

Private Sector Views

3.2 During the Inquiry and inspections, the Committee received representations from several coal producers, based both in New South Wales and Queensland. All of the representations opposed the levy as being discriminatory to one mining industry, and arbitrary in that the rates of duty did not take account of world prices for coal or the different profitability factors affecting individual mines.

3.3 The Utah Development Company, which currently pays about 70% of the duty from its export operations in Queensland advised the Committee that commercial arrangements which took place concerning the development of their Norwich Park mine were concluded having regard to the Government's unequivocal statement on coal export duty in the 1976/77 Budget Speech. The Company further stated that it was most disconcerting to them that the Government has, contrary to this statement now taken decisions which have significant adverse effects on the financial projections for the Norwich Park Mine, and that stable, fair, tax laws and confidence in Government commitments are but two of the necessary factors to ensure development of major resource projects. The Utah Development Company does not experience any major problems with the Department of Business and Consumer Affairs collection and administration of the duty.[1]

3.4 In a submission to the Committee (copy at Appendix C) the New South Wales Combined Colliery Proprietors' Association stated:

> the coal export levy is a discriminatory tax which applies in an ill-conceived manner, to only a part of the total mining industry in Australia. In particular, within the coal mining industry, the levy discriminates specifically against the producers of lower quality thermal coals, especially labour intensive underground mines.

1 Minutes of Evidence, op. cit., pp. 199, 202-205

The Association further informed the Committee that:

> the application of the coal export levy imposes a new element of uncertainty in the planning process. Prior government commitments to phase out the duty have been abandoned and it seems possible that continued falls in oil levy revenue and growth in thermal coal export could result in pressure for future ad hoc increases in the coal export levy. Sudden changes in the levy after a project has been committed and during the construction phase could have a disastrous impact on project economics.

3.5 In relation to the collection and administration of the duty the Association informed the Committee that their members had experienced no major difficulties prior to the 1981/82 Budget.

3.6 The Thiess Dampier Mitsui Company, which pays approximately 10% of the duty, currently has a dispute with the Collector of Customs on technical aspects relating to differential yields between open cut and underground mining. This dispute was discussed above.

Current Taxation Levels of the Coal Export Industry

3.7 State and Commonwealth Governments both levy a variety of taxes and charges on the coal industry. The level of this taxation is extremely difficult to quantify, as each mining project is subject to different taxation levels depending on its location, profitability, and type of coal extracted.

(a) Commonwealth Taxes and Charges

The Commonwealth Government levies the following taxes and charges on the coal industry.

- Normal corporate income tax on company profits, which is currently 46%;
- Coal export duty, which is $1.00 or $3.50 per tonne of coal exported, depending on quality and depth of extraction; and
- Long service leave excise and coal research levy - a charge of $.25 cents per tonne of coal mined is levied by the Commonwealth and paid in to specific funds to provide for miners long service leave and research.

(b) State Government Taxes and Charges

The New South Wales and Queensland State Governments levy the following taxes and charges on the coal industry. No rates are given for these charges as they can differ between mining projects.

- Royalties - a charge levied by State Governments for the right to extract coal.
- Super royalty - an additional royalty levied by the New South Wales Government on a mining project basis. Marginal coal leases pay little or no super royalty, whereas rates on profitable leases can be quite high;
- Rail freight charges - there is a taxation component in the charges levied by State Rail Authorities for the transport of coal from the mine to the export port;
- Ship loading charges and wharfage fees; and
- Harbour deepening levy - a charge of $1.00 per tonne of coal exported through the port of Newcastle is levied by the NSW Government to pay for the deepening and dredging of the port to accommodate large bulk coal carriers.

3.8 In its submission of September 1981 to the Committee (Appendix C), the New South Wales Combined Colliery Proprietors' Association estimated that for a typical Hunter Valley thermal coal project, charges by governments and their instrumentalities (excluding Commonwealth income taxes) amounted to $12.93 per tonne of coal exported, an increase of 34.5% since December 1980.

3.9 A calculation made by the Utah Development Company and published in its 1981 Annual Review indicated that in 1981 the total government share of its income, including estimated rail freight profit, was 71.6% or $333.94m. Of this amount the Commonwealth's share was $217.22m and the Queensland Government's share was $116.72m. The company's share of income was $132.64m or 28.4%.[2]

3.10 During the Inquriy the Committee could find little evidence of any Federal-State Government co-ordination or co-operation in the taxation of the coal export industry. In the absence of this co-ordination it is possible for a situation to develop whereby the industry suffers from a proliferation of taxation systems through the action of each sector of government maximising its own revenues from coal

2 Public Accounts Committee File 1980/9, Part B(8)

export receipts without paying sufficient regard to the total taxation burden of the industry.

3.11 Furthermore, the tendency of Federal and State Governments to increase and extend coal export taxes frequently, often at short notice, cause a significant distortion in mining cost structures, could adversely affect the profitability of some mining projects as well as creating considerable uncertainty within the industry. This uncertainty can result in a reduction in coal mining investment, the deferment or cancellation of new projects, and the possible closure of existing mines which, before tax increases, operated at a low level of profitability. This could result in undesirable social and economic consequences such as increased unemployment within the industry, particularly in New South Wales where many marginal mining projects are highly labour intensive.

3.12 The Committee is particularly concerned that Governments do not appear to have taken account of complex revenue and cost factors such as the profitability of mining different grades of coal, fluctuating world prices and the ability to effectively compete in the international market when formulating taxation policies for the industry.

Other Taxation Options

3.13 The Committee recognises that the present system whereby the duty is levied on a flat rate per tonne of coal exported, while comparatively easy to administer, is not necessarily the most appropriate form of taxation for the coal industry, as it fails to take account of the profitability of individual mines, or the fluctuations in world prices for different grades of coal.

3.14 The Committee believes that the following information on alternative mineral taxation options could provide a useful basis for discussions between the Government and the Coal Industry on the desirability of changing the basis of the current duty system. The Committee has not commented on the merits of individual systems.

3.15 In February 1981 the Northern Territory Minister for Mines and Energy presented a Green Paper on Mining Royalty Policy.[3] This paper provided a comprehensive economic analysis of the more common types of mineral taxation or royalty systems used throughout the world. Chapter 10 of this paper evaluates these systems in terms of their equity, revenue adequacy and revenue stability. An edited version of this Chapter is at Appendix D.

3 Green Paper on Mining Royalty Policy for the Northern Territory, Department of Mines and Energy, Darwin, February 1981.

3.16 These alternative systems can be categorised into the following basic types:

- Specific Taxes or Royalties

  Specific taxes levy a flat rate per tonne exported. This is the system currently used for the coal export duty.

- Ad valorem Taxes or Royalties

  An ad valorem taxation system yields to the Government a percentage of the revenue earned by the mining venture.

- Proportional Profits Taxes or Royalties

  Under a proportional profits taxation scheme the Government receives a specified proportion of the profits earned by the mining venture.

- Progressive Profits Taxes or Royalties

  A progressive profits taxation scheme is similar to the proportional profits scheme, except that the Government's proportion rises as profit increases.

- Surplus Profits Taxes or Royalties

  Under a surplus profit taxation scheme the Government receives a proportion of the returns above full costs, including cost of capital, with taxation collections when cash flows are positive and refunds when cash flows are negative.

- Resources Rent Taxes or Royalties

  Resources Rent Taxes impose proportional or progressive rates of tax on returns above full costs, including cost of capital, with deferment of tax payments until all investment is recouped with interest.

- Lump Sum Bidding

  Lump sum bidding is the auction of rights by the Government to explore and mine particular areas for front end payment.

- Royalty Bidding

  Royalty bidding is an auction based on royalty rates rather than front end payment. The company which is prepared to pay the government the highest royalty

rate receives the right to mine a particular area.

- Equity Royalties under an Equity Royalties system, Royalties are paid or partially paid to Government by means of shares in the Company,

Senate Standing Committee on Trade and Commerce

3.17 The Committee notes that the Senate Standing Committee on Trade and Commerce is presently conducting a detailed inquiry into the Australian Export Coal Industry. This Inquiry will include an examination of coal pricing policies, and taxation of the industry. A copy of the Senate Committee's terms of Reference is at Appendix E.

CHAPTER 4

CONCLUSIONS AND RECOMMENDATIONS

4.1 The Committee is satisfied that given the complexity of the duty, particularly following the 1979 amendments to the Customs Tariff (Coal Export Duty) Act 1975, the Department of Business and Consumer Affairs has developed satisfactory administrative and control procedures for the collection of Coal Export Duty. The Committee however trusts that the Department will obtain the appropriate technical advice as soon as possible to enable the expert checking and verification of mining companies records and procedures, especially where mining is below 60 metres.

4.2 The Committee recommends that the Department of Business and Consumer Affairs and the Thiess Dampier Mitsui Company act quickly to resolve the dispute which currently involves duty payments of over $100,000. Should an independant technical arbitrator be required to achieve this, the Committee recommends that any fees involved (excluding company costs) should be a charge on the Commonwealth.

4.3 The Committee is satisfied with explanations given by the Department of Business and Consumer Affairs on refunds of revenue, reconciliations, procedural instructions and internal audit. The Committee is also satisfied with the present arrangement whereby the Minister for Business and Consumer Affairs is responsible for administration of the duty and the Minister for Trade and Resources is responsible for policy aspects.

4.4 The Committee however believes that there should have been greater initial consultation between the Department of Business and Consumer Affairs and the Department of Trade and Resources prior to the introduction of the 1979 legislative changes. This is particularly so in view of the fact that the Department of Business and Consumer Affairs had indicated that there would be substantial administrative problems associated with the proposals.

4.5 Whilst the Committee follows the fundamental principal that it does not concern itself with Government policy, in this instance it had difficulty in understanding the Government's intentions in relation to the Coal Export Duty. From 1976 to May 1979 the Government had given unequivocal assurances that the duty would be abolished, but since then for budgetary and other reasons the duty has been retained and extended. This has had the effect of creating considerable uncertainty with regard to the duty in the coal export industry.

4.6 The Committee considers that the Government should develop a consistant and stable policy on the Coal Export Duty and that the mechanism of collection should only be changed after consultation with the industry. The Committee regards the present situation where the rates and conditions of the duty are changed almost yearly as unsatisfactory as the industry requires long lead times to develop new or expanded mining operations.

4.7 The Committee considers that the decision to reduce the duty on high quality coking coal mined by open-cut methods below a vertical depth of 60 metres from the ground, from $3.50 per tonne to $1.00 per tonne has resulted in considerable administrative and technical difficulties for the Department of Business and Consumer Affairs. The Committee therefore suggests that the Government review this decision to determine if there is any less complex method for the collection of duty which will not discourage the use of high cost specialised technology in open cut mines. To this end, the Committe recommends a close examination of the methods used by surveyors of ships at the port of export, and accepted by both buyers and sellers of coal.

4.8 The Committee suggests that, following the release of the Senate Standing Committee on Trade and Commerce Report on the Australian Export Coal Industry, the Commonwealth Government should enter into substantial discussions with State Governments, the Coal Industry and other interested organisations, with a view to developing a co-ordinated approach to the fair and equitable taxation of export coal. There may be advantages in changing the structure of the duty from the current specific tax system.

APPENDIX A

DETAILS OF PUBLIC ACCOUNTS COMMITTEE COALFIELDS INSPECTIONS

Saturday July 18 1981

Inspection of the Utah Development Company and Thiess Brothers' mines at Blackwater by the Chairman, Mr D.M. Connolly, MP.

Monday July 20 1981

Inspection of Thiess Dampier Mitsui Coal Pty Ltd mine at Moura and discussions with Company officials.

Tuesday July 21 1981

Inspection of Utah Development Company's mine at Goonyella and coal export facilities at Hay Point near Mackay.

Discussions with Utah Development Company officials.

Tuesday September 22 1981

Discussions with representatives of the New South Wales Combined Colliery Proprietors' Association.

Friday September 25 1981

Inspection of BHP's coal mine at Appin and discussions with Company officials.

Discussions with officers of Kembla Coal and Coke Pty Ltd at the Company's Westcliff mine.

APPENDIX B

COAL EXPORT DUTY RATES

DATE	HIGH QUALITY COKING COAL (1)	OTHER COKING COAL	NON-COKING COAL (2)
10 Aug 1975	$6.00	$2.00	$2.00 (3)
17 Aug 1976	$4.50	$1.50	Exempt
16 Aug 1977	$3.50	$1.00	Exempt
1 Nov 1979	$3.50 (4)	$1.00 (5)	Exempt
18 Aug 1981	$3.50 (4)	$1.00	$1.00

(1) Carbon content above 85% (dry ash free basis)

(2) Swelling number not above 3

(3) Exempt if ash content above 14% (air dried basis)

(4) Coal produced from undergound mines, by open-cut below 60m or from new open-cut projects after 1 July 1980 now levied at the rate of $1.00 per tonne

(5) Excluding coal with an ash content greater than 12% (air dried). A duty of $1.00 per tonne for this coal was introduced from 18 August 1981.

APPENDIX C

NEW SOUTH WALES COMBINED COLLIERY

PROPRIETORS' ASSOCIATION

SUBMISSION TO THE JOINT

COMMITTEE OF PUBLIC ACCOUNTS

COAL EXPORT LEVY

16th September, 1981

COAL EXPORT LEVY

INTRODUCTION

Prior to the 1981-82 Budget, the coal export levy applied only to coking coal at rates of $1 or $3.50 per tonne. The higher rate applied only to high quality coking coal (based on ultimate dry ash free carbon content) mined by open cut methods at depths of less than 60 metres from collieries operating before 1st July 1980; those rates continue to apply. Since the last Budget exports of all black thermal coal have also been dutiable at the rate of $1 per tonne.

The New South Wales Combined Colliery Proprietors' Association (N.S.W.C.C.P.A.) maintains that the coal export levy is a discriminatory tax which applies in an ill-conceived manner, to only a part of the total mining industry in Australia. In particular, within the coal mining industry, the levy discriminates specifically against the producers of lower quality thermal coals, especially labour intensive underground mines. The tax is now applied in such a haphazard way that it cannot be justified as part of a rational Australia-wide energy policy.

ADMINISTRATIVE PROBLEMS

Association members did not experience any major administrative difficulties related to the application or collection of the coal export levy as it operated prior to the last Budget. However, a particular administrative problem associated with the introduction of the thermal coal export levy has since been reported. Members have apparently been charged $1 per tonne on the bill of lading weight for various shipments. Obviously that weight contains a penalty moisture content which varies between shipments. The equitable solution to that problem should be for the levy to be paid on the tonnage for which the producer is credited by the customer.

The uniform rate of levy for all thermal coals presents a further equity problem. All thermal coals are levied at the rate of $1 per tonne regardless of ash content or thermal qualities, which can vary significantly between mines and have an impact on prices received. Since one of the bases for the amount of levy charged on coking coals relates to ultimate dry ash free carbon content, it seems reasonable that the amount of levy on thermal coals should also relate to coal quality.

COAL INDUSTRY PROFITABILITY

The coal export levy was first introduced in 1975 during a short period of abnormally high profitability for some Australian coal exporters. However, since that time despite some minor gains in productivity in parts of the industry, rapidly rising wages and capital costs and declining real coal prices (i.e. an adverse movement in the industry terms of trade) have significantly reduced industry profitability. Table 1 presents N.S.W. data for the late 1970's regarding industry value of production and wage levels compared with movements in the deflator for non-form gross domestic product.

TABLE 1

New South Wales Coal Industry

	1975-76	1976-77	1977-78	1978-79	Av. annual rate of growth
Pit top value per tonne ($)	18.19	19.42	20.66	21.50	5.7%
Av. wages & sallaries per employee ($)	254	312	340	349	11.2%
Index for gross non farm product deflator	116.1	128.8	139.7	149.9	8.9%

Sources: Joint Coal Board, Black Coal in Australia 1979-80

Australian Bureau of Statistics, Quarterly Estimates of National Income and Expenditure, March 1981, Cat. No. 5206.0

A study conducted by Arthur Andersen and Co. in 1980 for the Australian Coal Association illustrates the decline in profitability of coal exporters during the late 1970's, and points to the impact of the coal export levy as it operated in those years (reference tables 2 and 3).

TABLE 2

Australian Coal Exporters - Net Profit as a Percentage of Sales Revenue

TIME PERIOD	PERCENTAGE
6 mths ended Dec. 31, 1975	23.0
Year ended Jun. 30, 1976	18.7
Year ended Jun. 30, 1977	17.3
Year ended Jun. 30, 1978	17.6
Year ended Jun. 30, 1979	14.7
6 mths ended Dec. 31, 1979	12.9

TABLE 3

Australian Coal Exporters - Rate of Return on Gross Assets

TIME PERIOD	PERCENTAGE		
	Highest Rate	Lowest Rate	Median Rate
Year ended Jun 10, 1976			
- with levy	38.2	*	13.4
- without levy	50.0	*	19.3
Year ended Jun 30, 1979			
- with levy	25.8	*	9.2
- without levy	34.2	2.1	12.1
6 Mths. ended Dec. 31, 1979			
- with levy	27.5	*	4.2
- without levy	32.4	*	6.3

* negative rate of return

The study concluded that the coal export levy has a far more damaging effect on the less profitable companies included in the analysis, than it does on the larger companies, which produce a far greater share of total export tonnage.

The introduction of the $1 per tonne export levy on thermal coals is likely to have a significant impact on the profitability of mines producing those coals, especially in New South Wales. Although some existing contracts

provide for the coal export levy to be recouped through escalation clauses, producers cannot ultimately pass the levy on to customers. N.S.W. thermal coals are competing for international markets against coals from the U.S.A., Canada and South Africa, and it seems certain that when contracts are re-negotiated in early 1982 variations in the coal export levy will be excluded from escalation clauses.

Further, it seems inevitable that the introduction of the thermal coal export levy will result in the postponement or cancellation of a number of projects. At least one N.S.W. coal miner has informed the Minister for Trade and Resources that one of its thermal coal projects is likely to be abandoned because of the impact of the levy on project economics. Australian thermal coal exports are currently around 12 million tonnes per annum; the Department of Trade and Resources[2] estimates that thermal coal exports may reach 30-40 million tonnes by 1985. For the sake of relatively small short term revenue gains the Federal Government is jeopardising substantial new industry development and creation of new employment opportunities.

Equity considerations demand that any advantages accruing from the so-called "resources boom" should be shared by the whole community. However, an export levy imposed at varying rates on one particular mineral is not the appropriate method to adopt. Rather government imposts should be on above normal profitability in particular industries or firms. Such a system does not discriminate between industries and does not influence basic project economics.

The advantage of taxation of company profits is that it does less to detract from the competitive position of the company exporting coal. Futher, it means that in periods of market downturn the company is not as severely disadvantaged. This is an important consideration given the historically cyclical nature of the coal industry.

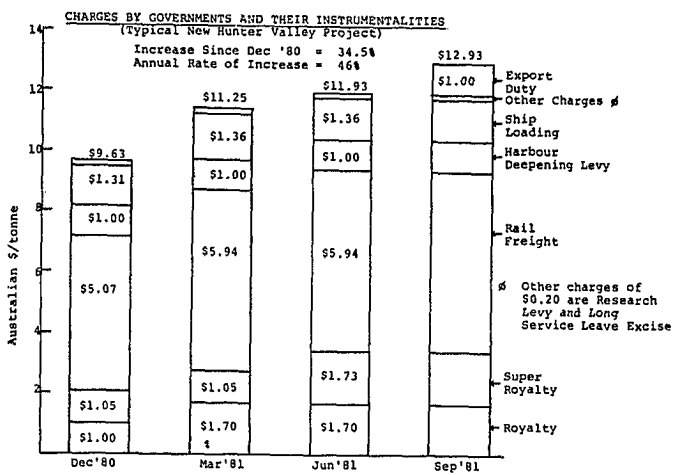
PLANNING NEW PROJECTS

Financial evaluation of new coal mining projects involves making assumptions about future levels of inflation (especially for mining captial equipment and materials used in the mining operation), wages, output prices, exchange rates and output quantities. The industry generally has the expertise to derive reasonable estimates of those variables, based on an

understanding of stated government economic policy in Australia and knowledge of trends in international economic activity.

However, the application of the coal export levy imposes a new element of uncertainty in the planning process. Prior government commitments to phase out the levy have been abandoned and it seems possible that continued falls in oil levy revenue and growth in thermal coal exports could result in pressure for future ad hoc increases in the coal export levy. Sudden changes in the levy after a project has been committed and during the construction phase could have a disastrous impact on project economics.

The willingness of governments, both State and Federal, to increase imposts on export coal is illustrated in the chart below, reproduced from the Australian Coal Report, September 1981. For a typical Hunter Valley thermal coal project, charges by governments and their instrumentalities have increased by 34.5% since December, 1980.



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1. Arthur Andersen & Co., Report for the Australian Coal Association on coal industry profitability, March 1980.

2. Department of Trade and Resources, Coal Demand Study, June, 1981.

3. Australian Coal Report, September 1981.

APPENDIX D

ALTERNATIVE ROYALTY SYSTEMS AND RATES: EQUITY AND REVENUE ADEQUACY AND STABILITY[1]

1. INTRODUCTION

A well designed royalty system should provide an equitable distribution of the nett value of minerals between mining companies and the community. Such a royalty system should also yield stable, real revenue commensurate with the revenue potential of the mining industry. Royalties should not be so high that the development of a substantial long term base for royalties would be jeopardised. Alternative royalty systems are evaluated below in terms of the above criteria.

2. SPECIFIC AND AD VALOREM ROYALTIES

Specific and ad valorem royalties cannot be levied at high rates without significantly affecting incentives to recover minerals, invest and explore. In the long run, high rates would reduce the size of the industry and therefore erode the tax base, causing royalty revenues to fall.

Specific royalties are completely unresponsive to a changed revenue raising climate. If specific royalty rates are not raised, their real value is likely to be eroded by inflation. If mineral prices and profits soar, royalty revenue does not change automatically. By the time the royalty rate could be altered to exploit the situation, the revenue raising opportunity may have disappeared. In addition, frequent adjustments to royalty rates create uncertainty and thereby discourage investment. This may also lead to erosion of the tax base in the future.

Revenue from ad valorem royalties will move with mineral prices and output. This may avoid the problem of real revenue being reduced by inflation, but royalty revenues would be as volatile as mineral prices or more so.

3. PROPORTIONAL PROFITS ROYALTIES

An advantage of a profits royalty over specific and ad valorem royalties is that revenue yield automatically adjusts to changes in prices and costs. Moreover, a profits royalty collects the greatest revenue from the most profitable mines. However, in the case of projects producing minerals subject to significant price fluctuations, the yield of a profits royalty is likely to be more volatile than an ad valorem royalty.

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1 Green Paper on Mining Royalty Policy for the Northern Territory, Department of Mines and Energy, Darwin, February 1981.

High rates of royalty under a proportional profits system are less likely than equal short term yield specific and ad velorum royalties to cause erosion of the tax base in the long run by adversely affecting incentives. It follows that setting profits royalty rates to yield additional revenue on the average to the specific and ad valorem royalties of the States, would not cause diversion of exploration and investment capital to the States unless rates were raised to a level significantly above short term parity.

The closer a particular profits royalty system is to meeting the objective of minimizing resource allocation inefficiencies, the higher the long term yield is likely to be. While full loss offsets would be required for this purpose they could place a severe strain from time to time on revenues. It would also provide significant opportunities for avoidance. In fact, full loss offsets are almost never allowed in practice. Carry forward of losses would be preferable on revenue adequacy grounds.

Extension of the full loss offsets facility to include exploration expenditures could place a severe drain on revenues in the short term when mining production is still relatively low, income is not large and exploration activity is increasing rapidly. In addition, full loss offsets for exploration outlays would not correct the royalty revenue base erosion problem arising from premature exploration. These problems could be overcome by writing off exploration expenditures over the life of the mine.

A project basis of assessment would be preferable to a company basis on revenue adequacy grounds. For firms with existing profitable operations, the latter would provide the equivalent of full loss offsets and an extension of that facility to exploration outlays. The consequences follow from the preceding discussion.

If company income tax is deductible for profits royalty purposes, the royalty revenue base will be smaller than if such a deduction is not permitted. Therefore, the royalty rate will need to be higher in the former case to achieve a particular revenue target. However, increasing the royalty rate may encourage management inefficiencies and transfer of business ability to areas with lower royalties. Royalty revenue may suffer in the long term.

If company income tax is not deductible, a profits royalty may adversely affect investment decisions that are marginal after tax but supra-marginal before tax. However, it is unlikely that the royalty revenue consequences would be significant since such investments could provide little revenue.

If interest is not deductible, a lower royalty rate would be required to yield the same revenue in the short term as if

interest was deductible.[2] While the lower rate could reduce adverse effects on the efficiency of operations in the short term, the inclusion of interest in the royalty base would adversely affect investment decisions. Therefore, the royalty yield would be lower in the long term when interest is not deductible.

4. PROGRESSIVE PROFITS ROYALTIES

A progressive profits royalty with the same yield as a proportional profits royalty in the short term, is likely to yield less in the long run. The reason is that the former is more likely to reduce incentives to recover minerals, invest and explore and therefore more likely to reduce the base for royalties in the long run. The above comments about full loss offsets, treatment of exploration and the basis of assessment apply to a progressive as well as a proportional profits royalty. Volatility of revenue yield would be potentially greater than under a proportional system.

5. "SURPLUS" PROFITS ROYALTY

A "surplus" profits royalty would lead to dissipation of the revenue base by encouraging premature exploration. In addition, at high rates, incentives to be efficient would be adversely affected and incentives to formulate tax avoidance schemes would be enhanced. Significant dissipation of the nett value of minerals could occur. The problem is exacerbated by the fact that rates of royalty may need to be set at high levels to compensate for the provision of substantial cash rebates for exploration and mine investment expenditures.

Another problem is that such a full loss offsets scheme is likely to be beyond the financial capabilities of Government. For example, if the royalty rate was set at 50 per cent to obtain a reasonable long term yield, the government would be required to provide cash rebates equal to 50 per cent of the cost of all exploration and mine investments undertaken. Revenues would accrue to Government when mines come into production. Although the severe drain on revenue would be offset to some extent if the 50 per cent royalty rate was applied to the cash flows of existing mines, the scheme would still be unattractive in view of government's

2 Assuming equal revenue yields, the relationships between the two royalty rates is given by $\frac{r'}{r} = 1 - \frac{i}{p} \cdot d$ where

' is the royalty rate without interest deductibility,
r is the royalty rate with interest deductibility,
i is the interest rate,
p is the rate of return on total funds employed,
d is the ratio of debt to total funds employed.

financial capabilities and the current rapid expansion phase of the industry.

The revenue yield of a "surplus" profits royalty is likely to be highly volatile. Not only would revenue fluctuate with changes in prices and operating costs, but also it would be affected significantly from time to time by the provision of full loss offsets for new investments.

The revenue adequacy implications of choosing between the pre- and post-company income tax versions of the "surplus" profits royalty are similar to those for a proportional profits royalty system. It is not necessary to repeat the arguments here.

6. RESOURCE RENT ROYALTY SYSTEMS

Even if resource rent royalty systems are crudely applied, it appears that they will distort incentives to invest and explore to a lesser extent than specific and ad valorem royalties. Therefore, they could be expected to have less effect on the long term revenue base.

Long run revenue yields of rent royalty schemes are problematical. Dowell has argued that small departures in either direction from the appropriate threshold rate of return are likely to cause significant reductions in royalty revenues. He pointed out that these losses are likely to be particularly severe if the threshold rate is set too high.[3]

Garnaut and Clunies Ross[4] also have expressed concern about revenue adequacy. They indicate that careful selection of multiple royalty and threshold rates could overcome this problem. However, there are great theoretical and practical difficulties involved in seting the rates at appropriate levels. It is not clear whether the rates suggested by Garnaut would overcome these difficulties.

Resource rent royalties, in conjunction with imperfect pre-development tenure, encourage dissipation of the royalty revenue base unless steps are taken to ensure that interest on early exploration outlays is subject to royalty.

If the aim was approximate parity of long term revenues under proportional profits royalties and the resource rent royalty schemes, the rates in the latter cases would need to be higher

3 Dowell, R. "Profits Based Royalties and Productive Efficiency" Resources and Energy, February 1980, pp. 5, 20-21.

4 Garnaut, R. and Clunies Ross, A., "Uncertainty Risk Aversion and the Taxing of Natural Resource Projects", Economic Journal Vol 85, No. 338, June 1975, pp. 272-287.

because of the smaller royalty base. That is, the larger deductions, at least in the early years, mean that royalty rates would need to be higher to compensate. It follows that application of the rent royalty schemes to the cash flows of existing mines at such rates without allowing deductions for the market values of exiting assets would tend to yield substantially more revenues in the short term than proportional profits royalties. Because of rapidly increasing exploration activity this could be offset in the case of the variant that calculates royalty liability on a company basis rather than a project basis. New investments by one or two firms with existing mines could significantly reduce total royalty payments for a number of years. This problem would not arise in the case of a project basis of assessment, because only investments directly related to existing mines would be allowed immediate deductions.

A characteristic of rent royalty schemes is that royalty is not payable until outlays on exploration and mine investments have been recovered with interest at the threshold rate(s) of return. A number of years may elapse before royalty is payable. In addition, if existing mines are allowed deductions for the market values of existing capital assets under the rent royalty schemes, royalty may not be payable by existing mines for several years.

The revenue yield of a resource rent royalty is likely to be less stable than that of a proportional profits royalty for two reasons. First, the existence of thresholds in the former case will add to volatility. The existence of more than one threshold and royalty rate would tend to accentuate this. Second, the immediate deductibility of exploration and other investments could cause revenues to fluctuate significantly between years. A company basis of assessment would be more susceptible to this problem than a strict project basis of assessment.

It is conceivable that a resource rent royalty system without deductibility of company income tax could levy royalties on a mine or extension of a mine that is marginal after tax and render it sub-marginal. However, this is unlikely to have significant royalty revenue consequences since such an operation could yield little revenue in any event.

If company income tax is not deductible, the base for royalty revenue will be higher than if such a deduction is permitted, unless the threshold rate of return is set at significantly higher rate to compensate. However, if the appropriate pre-tax threshold rate or supply price of capital is quite close to the appropriate post-tax rate then, the royalty rate required to yield a particular target revenue would be significantly higher when tax is deductible for resource rent

royalty purposes than when it is not. Such higher rates would encourage managerial inefficiencies and transfer of business ability elsewhere. This would reduce the base for royalty revenues.

7. LUMP SUM BIDDING

Given perfect competition and perfect knowledge of the potential value of mineral bearing lands, the winning bid will be equal to the nett value of minerals. However, in reality, winning bids are unlikely to coincide with the true nett value of minerals.

First, perfect knowledge of the potential value of mineral deposits will not be available. On the assumption that firms tend to be risk averse, bids for the right to explore and mine will be smaller, the greater is the risk and uncertainty concerning an area at the time of bidding. While optimists might over-bid in particular situations, this is likely to be the exception rather than the rule. The industry will not, time after time, over-bid on all areas. This means that, in general, unless substantial information is available concerning the geology and potential of an area, the auctioning of rights to explore and to mine is likely to yield bids far below the realizable nett value of minerals in the area.[5]

Another aspect of the imperfect information problem is that all bidders may not have equal information concerning an area. This would occur if information obtained by companies who have explored adjacent areas is kept confidential. Companies with confidential superior information could win an area with a lower bid than if the same information was available to all bidders. On the other hand, firms without confidential superior data that downgrades the potential of an area might make higher bids. Once again, this is likely to be the exception rather than the general rule. Full disclosure of information will be necessary if competitive cash bidding is to realize its full potential as a royalty system.[6]

Second, the extent of competition for rights to explore and mine is uncertain. The more intensive is the competition and the greater is the number of competitors, the higher the successful bid is likely to be. The converse also applies.

5 Henderson, A.G., "Royalties and the Confiscation of Economic Rent in Australian Mining" (Resources Policy Series No. 5), Economic Papers, Economics Department, Faculty of Economics, ANU, July 1972, pp. 9, 13.

6 Crommelin, M., Pearse, P.H. and Scott, A., "Management of Oil and Gas Resources in Alberta: An Economic Evaluation of Public Policy", Natural Resources Journal, Vol. 18, No. 2, April 1978, p. 367.

Mead has argued that if competition is weak, sealed bidding would be preferable to oral bidding. Sealed bidding wouldreduce the effectiveness of collusive arrangements to hold down bids. In addition, under a sealed bidding system, a bidder is more likely to offer his maximum bid since he will not know how many competitors he has or who they are. If only one bidder is present at an oral auction he will bid the minimum amount necessary to secure the rights.[7]

McDonald has argued that permitting joint bidding in the case of small firms could increase competition and bids significantly. This view is supported by analysis of the results of lease auctions in the United States. The intuitive explanation of this result is that joint bidding will inducethe entry of firms that would benefit from the expert opinion of partners; would not be able to bid alone because of the heavy front end payment; or would tender only if they are able to spread risk by bidding on a large number of prospects. Excluding large firms from joint bidding helps to ensure that the number of independent bids does not fall.[8]

Allowing payment of bids by installments and forgiveness of unpaid installments on relinquishment of the lease would be another means of increasing competition at auctions. This scheme would reduce the significance of front end payments for unsuccessful exploration targets and make it easier for small firms to enter and compete.[9]

Little information is available on the likely degree of competition under a lump sun bidding syatem. Crommelin, Pearse and Scott pointed out that little research has been undertaken on this matter in Canada and elsewhere.[10] However, Mead has produced evidence that suggests that, in the United States, competition "for oil and gas leases is sufficiently strong to protect the public interest in obtaining competitive values for its oil and gas resources".[11] It may not be valid to conclude that competition would be adequate since competition in the mining industry in Australia does not appear to be as strong as in the highly competitive exploration phase of the oil industry in the United States.

7 Mead, W.J., "Cash Bonus Bidding for Mineral Resources" in Crommelin, M. and Thompson, A.R. (Eds), "Mineral Leasing as an Instrument of Public Policy", Vancouver: University of British Columbia Press, 1977, p. 49.

8 McDonald, S.L., "The Leasing of Federal Lands for Fossil Fuels Production", Baltimore: John Hopkins University Press, 1979, p. 107.

9 Ibid., p. 112.

10 Crommelin, M., Pearse P.H. and Scott A., op. cit., p. 366.

11 Mead, W.J., op. cit., p. 55.

A third reason why winning bids are unlikely to coincide with the true nett value of minerals is that lump sum bidding applies front end payments before exploration and development in contrast to conventional royalty systems, which collect revenue after production commences. This difference affects the distribution of the burden of risk and uncertainty. Under a lump sum bidding system, mining companies must bear more risk and uncertainty than in the case of conventional royalty systems. Consequently, the allowance made for risk and uncertainty when estimating the nett value of minerals will be greater in the case of lump sum bidding. Because of this, the potential overall Government take (in nett present value terms) will be lower in the case of lump sum bidding than relatively non-distorting ex-post royalties.

This disparity could be reduced by permitting joint bidding by small firms or payment of bids by installments with forgivenes of unpaid installments on relinquishment. As well as increasing competition, these devices would assist firms to spread or shift risks. This would tend to induce higher bids.[12] Joint bidding would allow firms to bid on a wider range of prospects or to share risk with a number of other firms. It also allows firms to pool geological knowledge. The installment scheme would allow some risk sharing with the government. It would reduce the dispersion of possible financial outcomes on a prospect by reducing front end payments when economic deposits are not discovered.

The disparity between potential revenues from lump sum bidding and conventional royalties does not mean that the latter are necessarily preferable. In the latter case, the risk borne by the government is higher. Whether or not conventional royalties are preferable to bidding because of the different distribution of risk will depend on whether or not companies are more risk averse than the government and the extent to which companies and the government can shift or reduce risk by various means.

Unfortunately, it is not clear whether mining companies or governments are likely to be more risk averse. The relative abilities of mining companies and the government to spread risks are also unclear.

Garnaut and Clunies Ross have argued that lump sum bidding is likely to generate very little revenue in Australia because of risk aversion.[13] However, there are areas in Australia and the Territory where lump sum bidding could be highly successful because there is considerable knowledge of the geology and potential of the areas and competition is likely

12 McDonald, S.L., op. cit., pp. 197, 112.
13 Garnaut, R. and Clunies Ross, A., op. cit., p. 200.

to be strong. Examples are the Alligator Rivers Region of the Northern Territory, coal bearing areas in Queensland and New South Wales and areas with potential for petroleum in Bass Strait.

Lump sum bidding could be attractive on equity and revenue grounds in the long term. First, it does not adversely affect decisions to invest and explore which determine the long term base for royalties in the industry. Second, competitive cash bidding corrects the royalty base disipation problem without adversely affecting incentives in other ways. Third, as knowledge of the geology and potential of Australia increases and as interest in the mineral potential improves, bids are likely to move closer to the realizable nett value of minerals.

So far attention has been focused on equity and revenue adequacy considerations, but there are also revenue stability problems associated with lump sum bidding. Because circumstances in which use of this system would be appropriate would arise only occasionally, it could not provide a source of regular, stable income. Instead, at irregular intervals, unpredictable but possibly large amount could be yielded. In the short term, it could be imprudent to rely exclusively on this method. Apart from knowledge and competition problems, this system would yield no revenue from existing mines. Nevertheless, it could be used successfully in conjunction with another royalty system that performs well in respect of equity and revenue objectives when knowledge about the geology and potential of an area is good and competition is strong.

8. ROYALTY BIDDING

Royalty bidding reduces the degree of risk borne by explorers relative to the situation under a lump sum bidding system. In the former case, only exploration outlays are lost if a commercial deposit is not discovered. Therefore, the dispersion of successful outcomes is reduced relative to the lump sum bidding case. Higher bids (in present value terms) could be expected.

In addition, the avoidance of the front end payment applying under lump sum bidding eliminates a barrier to entry, particularly for small firms. This could be expected to result in greater competition for tenements. This, in turn, could lead to higher winning bids (in present value terms) than under lump sum bidding.

The performance of royalty bidding in terms of the equity and revenue adequacy and stability objectives will depend on the system used when bids are made. The relative merits of the various syatems are discussed in preceeding sections.

An advantage of royalty bidding is that it is likely to

eliminate the tendency towards dissipation of the royalty base through premature exploration. This occurs because tenure does not depend on discovery when rights to explore and mine are allocated according to bids. This conclusion holds even if bids are based on either a "surplus" profits or rent royalty scheme.

It is not clear whether or not royalty bidding will yield more revenue than fixed royalties. The answer would depend on the system, the magnitude of the fixed rates, the information available about the area, the attractiveness of the prospect and the degree of competition.

To the extent that excessively optimistic bids occurred from time to time royalty bidding might rule out investments and recovery of mineral that could be commercially attractive under normal royalties. This would mean revenue losses.

The revenue yield of royalty bidding is problematical. In addition, this system would not yield any additional revenue from existing mines. Therefore, it would not be wise to rely exclusively on this method. Nevertheless, royalty bidding could perform creditably in terms of equity and revenue objectives as a supplementary source of royalty and as a means of allocating rights to explore and mine, provided that bids are made in terms of a royalty system that performs well in respect of the same objectives.

9. CONCLUSIONS

Proportional profits royalties perform relatively well in terms of equity and revenue objectives, provided at least that immediate deductibility and full loss offsets for exploration outlays are not permitted. In terms of long and medium term revenue raising capacity, proportional profits royalties are superior to other systems. However, revenue yield is likely to be more volatile than in the case of specific and ad valorem royalties.

The "surplus" profits royalty scheme is unlikely to be suitable in terms of equity and revenue objectives. The full loss offsets aspects of the scheme could be beyond the financial capabilities of the Treasury. There are also doubts about the long run revenue raising capacity of the scheme, and revenue yield is likely to be volatile.

The long run revenue yields of the resource rent royalty schemes are problematical because of various factors tending to dissipate the revenue base. In addition, new projects may not yield royalty revenue for many years. If existing mines are allowed deductions for the market values of existing assets, these projects also would not pay royalties for many years. On the other hand, if existing projects are not granted deductions for past capital expenditure, royalty

yields could be high in the short term from these schemes. Revenue is likely to be more volatile than for a proportional profits royalty. A resource rent royalty using a project basis of assessment and multiple rates appears to be the best variant of rent royalties in respect of equity and revenue adequacy objectives.

Lump sum bidding does not adversely affect decisions concerning investment and exploration which determine the long term tax base in the mining industry. Therefore, it could be attractive in terms of revenue objectives in the very long term, particularly as knowledge about the geology and potential of Australia increases. In the shorter term, it would not yield revenue from existing mines and would be a poor provider of revenue from other sources. However, when knowledge about the geology and potential of an area is good, lump sum bidding could be used successfully in conjunction with another royalty system. Joint bidding by small firms or an installment payment variant of the scheme allowing forgiveness of outstanding payments on relinquishment would improve the performance of lump sum bidding on equity and revenue grounds.

Royalty bidding also would not be suitable as a replacement for fixed royalties. It would not yield revenue from existing mines. Until knowledge of the geology and mining potential of Australia increased considerably, royalty rates bidding may not reflect commercial prospects. Therefore, the revenue yield would be problematical. Nevertheless, when knowledge of the prospects and geology of Australia increase, bidding in terms of a royalty system that performs well in terms of the equity and revenue objectives, could provide a valuable supplement to fixed royalties.

APPENDIX E

AUSTRALIAN SENATE

STANDING COMMITTEE ON TRADE AND COMMERCE

PARLIAMENT HOUSE
CANBERRA, A.C.T. 2600
TEL. (062) 72 6571

AUSTRALIAN EXPORT COAL INDUSTRY INQUIRY

TERMS OF REFERENCE

On 23 May 1980 the Senate referred the following matter to the Committee for inquiry and report:

> The present state and prospects of the Australian export coal industry with particular reference to its contribution to the economy.

As part of the inquiry, the Committee is seeking information on the following matters:

- Ownership of the resource
  (royalties)
- Coal pricing policies
- World markets
  (directions of trade)
- Commonwealth/State Governments' involvement
  (export controls and levies
  taxation
  other legislation)
- Infrastructure
  (transport
  coal loaders
  port facilities)
- Environmental considerations
- The industry's contribution to the economy.

MEMBERS OF THE COMMITTEE:

Chairman:	Senator B.R. Archer	(LP - TAS)
	Senator R.N. Coleman	(ALP - WA)
	Senator S.J. Collard	(NCP - QLD)
	Senator B.K. Childs	(ALP - NSW)
	Senator M.E. Lajovic	(LP - NSW)
	Senator J.R. Siddons	(AD - VIC)

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