ISSN NO. 0114-2720
J4596
PUBLIC VERSION

COMMERCE COMMISSION

Decision No. 432

Determination pursuant to the Commerce Act 1986 in the matter of an application for Clearance involving:

SOLID ENERGY NEW ZEALAND LIMITED

and

TODD COAL LIMITED

The Commission: Dr M N Berry
P R Rebstock
P J M Taylor

Summary of Application: The acquisition by Solid Energy New Zealand Limited of

- Todd Coal's interest in the Greymouth Coal unincorporated joint venture (including the issued share capital in each of Greymouth Coal Limited and Greymouth Coal Operating Limited held by Todd Coal);
- Todd Coal's interest in the Upper Waimangaroa unincorporated joint venture;
- The assignment of Todd Coal's interest in the coal supply agreement with Golden Bay Cement; and
- Todd Coal's interests in the Moody Creek mine.

Determination: Pursuant to s 66(3)(a) of the Commerce Act 1986, the Commission determines to give clearance for the proposed acquisition.

Date of Determination: 28 June 2001

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THE PROPOSAL

1. On 14 May 2001, the Commerce Commission ("the Commission") registered a notice pursuant to section 66(1) of the Commerce Act 1986 ("the Act"), in which clearance was sought by Solid Energy New Zealand Limited, or an interconnected company (together "Solid Energy") to acquire the following assets from Todd Coal Limited ("Todd Coal"):

   - Todd Coal's interest in the Greymouth Coal unincorporated joint venture (including the issued share capital in each of Greymouth Coal Limited ("GCL") and Greymouth Coal Operating Limited ("GCOL") held by Todd Coal);
   - Todd Coal's interest in the Upper Waimangaroa unincorporated joint venture;
   - The assignment of Todd Coal's interest in the coal supply agreement with Golden Bay Cement; and
   - Todd Coal's interests in the Moody Creek mine.

THE PROCEDURES

2. The notice was received on 14 May 2001. Section 66(3) of the Act requires the Commission either to clear or to decline to clear a notice given under section 66(1) within 10 working days, unless the Commission and the person who have notice agree to a longer period. An extension was sought by the Commission. Accordingly, a decision was required by 28 June 2001.

3. In its application, Solid Energy sought confidentiality for specific aspects of the application. A confidentiality order was made in respect of the specific information for a period of 20 working days from the Commission's determination notice. When that order expires, the provisions of the Official Information Act 1982 will apply to the information.

4. The Commission's determination is based on an investigation conducted by Commission staff. In the course of its investigation, Commission staff discussed the application with the following parties:

   - Todd Coal
   - AW Taylor Industrial Coal Limited
   - Kenroll Industrial Coal Limited
   - Milburn New Zealand Limited
   - Golden Bay Cement
   - Francis Mining
   - Cascade Mining
   - University of Canterbury
   - Leiner Davis Gelatine
   - GL Bowron
   - Alliance Meat Works
   - Birchfield Coal
   - Heaphy Mining

- Cascade Mining
- New Vale Coal
- BHP Steel

5. The Commission also sought further information from the applicant.

THE PARTIES

Solid Energy

6. Solid Energy is a state-owned enterprise that is in the business of mining, processing, marketing and distributing coal. It is the largest producer of coal in New Zealand and operates mines in all the major producing regions; the West Coast, Southland/Otago, and the Waikato.

7. In the year ending 30 June 2000, Solid Energy produced around 2.8 million tonnes of coal annually, of which around 1.4 million was exported.[1] Solid Energy's turnover for the year ending 30 June 2000 was $190 million, which gave Solid Energy a surplus after tax of $1.26 million.[2]

8. Exported Solid Energy coal is mainly used in steel production, with a smaller amount used in power generation. There is also a small amount used for specialist product, including the manufacture of silicon and "activated carbon".

Todd Coal

9. Todd Coal is part of the Todd Energy group. Todd Coal interests in coal are limited to its 50% share of the Greymouth Coal joint venture (with Solid Energy), a [ ]% interest in the Upper Waimangaroa joint venture, and 100% ownership of the Moody Creek coal mine (recently decommissioned). Its share of the Greymouth Coal joint venture effectively equates to its share in the Spring Creek coal development in Greymouth.

10. Aside from Todd's involvement in coal, it also has interests in oil, condensate, natural gas, landfill gas, LPG, steam, and electricity. However, these interests are not relevant to the current application.

BACKGROUND

11. The following background information has been extracted from Decision 397 Solid Energy New Zealand Limited/Francis Mining Limited.

General Characteristics of Coal

12. Coal is a combustible, sedimentary, organic rock that is composed primarily of carbon, hydrogen and oxygen. It is formed from vegetation, which has been consolidated between other rock strata to form coal seams. It is altered by the combined effects of microbial action, pressure and heat over a considerable period of time.

13. The physical and chemical characteristics of coal are determined by the nature of the original plant debris and the degree of chemical alteration of the debris. It is the original plant material and any biochemical changes it goes through prior to burial, which

[1] Solid Energy Annual Report 2000.
[2] Ibid.

determine the coal type. The degree of geochemical alteration or coalification during burial determines the ranking of the coal.

14. The result of changes during coalification is a continuous but non-linear development of carbon with the increasing rank of the coal. Peat is very high in moisture and low in carbon content and is the lowest ranking coal. Peat is converted into lignite, a coal type with a low organic maturity. Over time the continuing effects of temperature and pressure produce additional changes in the lignite transforming it into a range of sub-bituminous coal. As the process continues, further changes occur until the coal becomes more mature and is classified as bituminous coal. Under the right conditions, the progressive increase in organic maturity continues to form anthracite.

15. The degree of coalification of coal as it matures from peat to anthracite determines the coal's physical and chemical characteristics. Lower ranked coals, such as lignite and sub-bituminous are characterised by high moisture levels and a low carbon content. This results in a low energy content. Higher ranked coals are generally harder and characterised by increasing carbon and energy contents and decreasing moisture contents.

16. The lower ranked coals are used for power generation and industrial process heating, whilst the higher ranked coals can also be used as a thermal coal or, if they contain the right properties, as a metallurgical coal or coking coal used in steel making.

17. Coal is mined using two methods; surface or 'open cast' mining and underground or 'deep mining'. The type of method used is determined by the geology of the coal deposit. A large proportion of the world's coal reserves are recoverable by underground mining, and currently two thirds of hard coal production comes from underground mining. Surface mining recovers a higher proportion of the coal deposit than the underground mining methods. However, it is only economic when the coal seam is near the surface. The strata between the coal seams and the surface is called 'overburden', and it is the level of overburden that further impacts on the economics of mining. The level of overburden is determined by the 'strip ratio', which is the ratio of over burden to coal. A low ratio reduces mining costs.

18. Once the coal is mined it is processed to remove impurities such as rock and dirt, and cleaned and graded into uniform coal products suitable for the commercial market. The 'blending' of coal is a process whereby more expensive, higher quality supplies are mixed with lower quality coals to produce an average blend suitable for the particular user, at an optimum cost.

New Zealand Coal Industry

Coal Resources

19. Coal is New Zealand's most abundant fossil fuel and has been an important energy source since the late nineteenth century. The total in-ground resource is estimated to be 15,563 million tonnes of which about 55% is recoverable. About 84% of the in-ground coal resource is situated in the South Island, most of it being lignite deposits in Southland. The North Island in-ground resource is mostly sub-bituminous coal. About 90% of the recoverable resource is situated in the South Island.

20. There is a wide variation in coal rank in New Zealand. Coal ranges from high moisture lignite situated in Southland to low volatile bituminous coal situated on the West Coast. Lignite and sub-bituminous coals are the most abundant, accounting for over 90% of the in-ground and recoverable resources.

21. The main coal mining areas in New Zealand are the West Coast of the South Island, Southland and the Waikato region. Table 1 outlines the in-ground and recoverable resource for each of the main coalfields within these regions.

Table 1:
Coal Reserves of New Zealand

Region/Major Coalfields	In-ground Resource (Mt)	Recoverable Resource (Mt)
Waikato	**2078**	**714**
Huntly	1048	314
Others	1030	400
West Coast	**984**	**343**
Greymouth	544	164
Buller	193	118
Reefton	25	12
Others	222	49
Southland	**9392**	**6256**
Mataura	2940	1945
Ashers-Waituna	1357	746
Makarewa	1027	821
Others	4068	2774

Source: "New Zealand Mining", Crown Mineral, March 1999 (from Barry, J.M., Duff, S.W., MacFarlane, DAB 1994, "Coal Resources of New Zealand", Ministry of Commerce Resource Information Report 16).

22. Coal from the Waikato fields are all sub-bituminous and have very little difference in terms of energy content. The highest ranked coals are found in the Huntly fields.

23. There are about 13 coalfields situated on the West Coast, and all of New Zealand's bituminous coal is located within this region. The main areas are Buller, Greymouth, and Reefton.

24. The Buller coalfield is New Zealand's largest producer of bituminous coal, with current annual production of around 1.3 million tonnes. The vast majority of this production comes from Solid Energy's opencast mines at Stockton. The Stockton coal is a premium product on the export market, because of its low ash and sulphur characteristics and its high swelling characteristics.

25. There are several underground mines operating in the Greymouth coalfield. Solid Energy's Strongman mine is the largest producer, followed by Francis Mining's Roa mine. The Spring Creek development is also in this sector. The Greymouth coalfield is generally a high quality coal with low ash and sulphur contents.

26. The Reefton and Garvey Creek coalfields contain a number of small opencast and underground mines. This area encompasses a wide range of coal types including bituminous coals such as Island Block (Solid Energy) to lignite such as Giles Creek (Birchfield Coals). The largest producers in this area are Francis Mining's Echo mine and Solid Energy's Island Block and Terrace mines.

27. The main coalfields in Southland are the Eastern Southland Coalfields and the Ohai coalfield. The Eastern Southland reserves are lignite rank and contain the majority of the region's resource. The main producer in this area is New Vale Coal, which operates the Goodwin and New Vale mine. Solid Energy recently put production on hold at its Mataura mine [ ].

28. The Ohai reserves are a sub-bituminous coal. The Solid Energy Wairaki mine is the largest producer. The coal produced is used for a range of industrial uses and is often blended with lower rank lignite coal because of its higher rank and low ash and sulphur content. Coal is also produced in Otago with the main coalfield being the Kaitangata coalfield. The coal mined in Otago is lignite.

Status of Mines Under Consideration

Spring Creek (Greymouth Coal Limited)

29. The Spring Creek mine has been under development since the early eighties. The original joint venture was formed in 1982 between the Crown, New Zealand Forest Products Limited, Mitsui Mining Overseas Company Limited, and Kanematsu-Gosho Limited. The shares of the joint venture were held through the joint venture company known as Greymouth Coal Limited. Shares in the joint venture changed ownership several times, until the 1999 ownership structure whereby Solid Energy and Todd Coal each had a 50% share.

30. Having conducted geological and feasibility studies, it was decided to begin production. It was anticipated that Spring Creek would have productive capacity of around 500,000 tonnes by 2002, and potential to increase production to up to 2 million tonnes.[3] It is classed as a semi-coking coal and has low sulphur, high calorific value and target ash of 5.5%.[4] The recoverable reserves are estimated to be in excess of 100 million tonnes.[5] The goal was to initially use conventional underground mining techniques but then later switch to "hydraulic mining" where the seam is especially thick.[6] Hydraulic mining is understood to extract a far higher percentage of the coal.

31. Ongoing research and development of the Spring Creek mine revealed unexpected geological problems, that cast doubt on the economic viability of the mine. It was decided in February 2001 to cease production of the mine until its future could properly be assessed. Around [ ] tonnes had been produced at that point.

32. The joint venture partners reached the conclusion that to be economically viable the mine would [

] On that basis, Todd Coal has decided to exit the joint venture and the coal industry altogether.

Upper Waimangaroa

33. The Upper Waimangaroa development is a joint venture development between Solid Energy and Todd Coal. Todd Coal's share is [ ]%. An exploration permit was granted in 1994, and a mining permit in 1998. It is still negotiating access agreements to the area, and a resource consent has not yet been obtained. The coal in the area is understood to be of semi-coking quality with reserves of around [ ] tonnes. The applicant has advised that this mine is likely to be around [ ] years away from production.

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[3] <www.med.govt.nz/crown_minerals/minerals_info/>
[4] Ibid
[5] Ibid
[6] Ibid

Moody Creek

34. The Moody Creek mine was purchased by Todd Coal in 1986 and at the same time assumed the responsibility to supply Golden Bay Cement. Moody Creek produced around 70,000 tonnes annually. [

]. The economically recoverable reserves of Moody Creek ran out in 1999, around the same time Todd Coal won the tender for the new Golden Bay Cement contract. Todd Coal was expecting to use coal from Spring Creek for the contract.

35. Given its current status the acquisition of Moody Creek will not make any difference to the market and will therefore not be considered further.

Relevant Investigations

36. In August 2000, in Decision 397, the Commission cleared an application by Solid Energy to acquire the contracted domestic retail customer base of Francis Mining. Although the acquisition is understood not to have been implemented, the clearance will remain valid until 4 August 2001. The Commission has taken this clearance into consideration when making its decision.

37. The acquisition under this proposal relates to a non-producing resource. The functional market to be affected is likely to be at the production or mining level of the market. In comparison, the proposed acquisition in Decision 397 related to the distribution level of the market. It did not affect Francis Mining's ability to produce or to supply to independent wholesalers. The Commission is of the view that the clearance granted in Decision 397 is unlikely to have any negative effect on the ability of producers to supply the market. As such, it will not be discussed further.

38. Although, Solid Energy is understood to be in discussions with Francis for other supply arrangements, clearance has not been sought for these, so will be subject to Commerce Act scrutiny should they eventuate.

MARKET DEFINITION

Introduction

39. The purpose of defining a market is to provide a framework within which the competition implications of a business acquisition can be analysed. The relevant markets are those in which competition may be affected by the acquisition being considered. Identification of the relevant markets enables the Commission to examine whether the acquisition would result, or would be likely to result, in the acquisition or strengthening of a dominant position in any market in terms of section 47(1) of the Act.

40. Section 3(1A) of the Act provides that:

> ". . . the term 'market' is a reference to a market in New Zealand for goods and services as well as other goods and services that, as a matter of fact and commercial common sense, are substitutable for them."

41. Relevant principles relating to market definition are set out in *Telecom Corporation of New Zealand Ltd v Commerce Commission*,[7] *Commerce Commission v Carter Holt*

[7] (1991) 4 TCLR 473.

Harvey Building Products Limited,[8] and in the Commission's *Business Acquisition Guidelines* ("the Guidelines").[9] A brief outline of the principles follow.

42. Markets are defined in relation to three dimensions, namely product type, geographical extent, and functional level. A market encompasses products that are close substitutes in the eyes of buyers, and excludes all other products. The boundaries of the product and geographical markets are identified by considering the extent to which buyers are able to substitute other products, or across geographical regions, when they are given the incentive to do so by a change in the relative prices of the products concerned. A market is the smallest area of product and geographic space in which all such substitution possibilities are encompassed. It is in this space that a hypothetical, profit maximising, monopoly supplier of the defined product could exert market power, because buyers, facing a rise in price, would have no close substitutes to which to turn.

43. A properly defined market includes products which are regarded by buyers or sellers as being not too different ('product' dimension), and not too far away ('geographical' dimension), and are therefore products over which the hypothetical monopolist would need to exercise control in order for it to be able to exert market power. A market defined in these terms is one within which a hypothetical monopolist would be in a position to impose, at the least, a "small yet significant and non-transitory increase in price" (the *"ssnip"* test), assuming that other terms of sale remain unchanged.

44. Markets are also defined in relation to functional level. Typically, the production, distribution, and sale of products takes place through a series of stages, which may be visualised as being arranged vertically, with markets intervening between suppliers at one vertical stage and buyers at the next. Hence, the functional market level affected by the application has to be determined as part of the market definition. For example, that between manufacturers and wholesalers might be called the "manufacturing market", while that between wholesalers and retailers is usually known as the "wholesaling market".

Relevant Markets

45. The applicant has defined the relevant markets as being for:

- The New Zealand market for the mining and sale of coking coal; and,
- The South Island market for the mining and sale of thermal coal.

Product/Function Market

46. A problem with defining markets (and performing competition analyses) for coal is that it is not a typical commodity product. Rather the various coals produced in New Zealand lie in a multi-dimensional product space. Characteristics of coal include:

- Calorific value – represents energy value.
- Sulphur content
- Ash levels
- Fine content ("fines") – percentage of coal under a given size (generally 3mm)
- Moisture levels

[8] Williams J, 18 April 2000, HC, yet to be reported.
[9] Commerce Commission, *Business Acquisition Guidelines*, 1999, pp. 11-16.

- Crucible swelling number – reflects degree to which the coke of the coal expands under heating

47. Depending on the end-users, these characteristics have differing importance. Calorific value represents the energy content so is generally the most important characteristic. For those users in built-up areas, sulphur content is also an essential consideration. There are also limitations on the level of fines for those who operate boilers with grates but fine content is unimportant for cement manufacturers who grind the coal up prior to burning anyway. The crucible swelling number ("CSN") is important for steel makers as it indicates the coking ability of the coal. There is a strong positive correlation between calorific value and CSN, although generally weak or no correlation exists between other attributes noted above.

48. Each coal produced in New Zealand lies somewhere in a multi-dimensional product space. An implication is that the various coals are not perfect substitutes for each other. Substitutability exists for coals close to each other in the product space, but virtually no substitutability takes place for coals at opposite ends of the product space spectrum.

49. Under some circumstances, a broad market definition can be justified for differentiated products on the basis of the "chain of substitutability" argument. A problem for coal is that there are gaps in the product space in which no single coal exists. Coal producers and wholesalers overcome this problem by blending different types of coal to produce a coal with the desired characteristics. For example, a common blend for supply to Canterbury industrial users is of a coal with high energy content with one with low sulphur content (but low energy).

50. In its definition of the markets, the application has defined separate markets for "coking" and "thermal" coals. The basis of this delineation would appear to be based on the end-user. By the applicants definition, the only purchasers in the coking coal market are two cement makers (Milburn and Golden Bay Cement). Their demand is derived from the need for a very hot type of coal. Other industrial users, with lower heat requirements, are classed as "thermal" coal users. However, in terms of actual coal used in the two market segments, there is significant overlap. Coals supplied to coking coal users, namely cement makers, are sourced from Solid Energy's Stockton, Strongman, Island Block and Terrace mines, Francis Mining's Echo mine and the Cascade mine. All except Stockton, could be classed as semi-coking coals and are also used in the thermal coal market. The only difference between their use for cement makers and other industrial users is that the coal is "blended" with other, lower energy coals to bring the heat down. Therefore, it is difficult to classify a coal as being a "coking" or "thermal" coal because a significant amount of coking coal is used by thermal coal users. The "thermal coal market" would instead appear to be a down-stream market in which various coals in the differentiated market are used in combination for a particular user's needs.

51. The Commission accepts that in some cases it will be appropriate to place coking coal and thermal coal in discrete markets for the purpose of undertaking a competition analysis. As discussed above, semi-coking coals (including Spring Creek) do not fit neatly in either the coking coal category or the thermal coal category. It is therefore difficult to precisely define product markets in this case. To test the competitive impact of the proposal, a pragmatic approach has been adopted to assess where the aggregation occurs. This approach uses a narrow market definition approach but works on the basis that if no problem exist in the narrow market then it is unlikely problems will exist in any wider product market. Accordingly, the Commission has focussed its considerations on the area of the market in which aggregation in reserves will occur, which in this instance

is for semi-coking coals. Therefore, for the purposes of the competition analysis, the market is defined as being for:

- The market for the mining and production of semi-coking coal

Geographic Market

52. The West Coast of the South Island is the only area in New Zealand that coking coal is produced. For this reason, the geographic extent of the market, whether it be for the northern part of the South Island, the South Island, or for New Zealand, will not make a difference to the competition analysis.

Time Dimension

53. The Commission recognises that there is a finite amount of coal in a mine and that over time the ability of market participants to compete changes. Typically, competition analysis considers annual production. With coal, however, a longer time dimension must also be taken into consideration to account for the possibility of mines exhausting their reserves. For the proposed acquisition there is no current aggregation as the Spring Creek mine is not producing. However, there is aggregation in terms of reserves. Reserves represent potential supply and hence an opportunity for new entry and expansion in the future. The acquisition must be considered for its affect on the current and future market.

Conclusion on the Market

54. The Commission concludes that the relevant market is:

- The market for the mining and production of semi-coking coal.

COMPETITION ANALYSIS

Introduction

55. The competition analysis assesses competition in the relevant markets in order to determine whether the proposed acquisition would not result, or would not be likely to result, in an acquisition or strengthening of **dominance**.

56. Competition in a market is a broad concept. It is defined in section 3(1) of the Commerce Act as meaning "workable or effective competition". In referring to this definition the Court of Appeal said:[10]

> "That encompasses a market framework which participants may enter and in which they may engage in rivalrous behaviour with the expectation of deriving advantage from greater efficiency."

57. Section 3(9) of the Commerce Act states:

> "For the purposes of sections 47 and 48 of this Act, a person has … a dominant position in a market if that person as a supplier … of goods and services, is or are in a position to exercise a dominant influence over the production, acquisition, supply, or price of goods or services in that market and for the purposes of determining whether a person is … in a position to exercise a dominant influence over the production, acquisition, supply, or price of goods or services in a market regard shall be had to-

[10] *Port Nelson Limited v Commerce Commission* (1996) 3 NZLR 554, 564-565

(a) The share of the market, the technical knowledge, the access to materials or capital of that person or those persons:
(b) The extent to which that person is … constrained by the conduct of competitors or potential competitors in that market:
(c) The extent to which that person is … constrained by the conduct of suppliers or acquirers of goods or services in that market."

The Dominance Test

58. Section 47(1) of the Commerce Act prohibits certain business acquisitions:

> "No person shall acquire assets of a business or shares if, as a result of the acquisition, -
>
> (a) That person or another person would be, or would be likely to be, in a dominant position in a market; or
>
> (b) That person's or another person's dominant position in a market would be, or would be likely to be, strengthened."

59. The test for dominance has been considered by the High Court. McGechan J stated:[11]

> "The test for 'dominance' is not a matter of prevailing economic theory, to be identified outside the statute."
>
> …
>
> "Dominance includes a qualitative assessment of market power. It involves more than 'high' market power; more than mere ability to behave 'largely' independently of competitors; and more than power to effect 'appreciable' changes in terms of trading. It involves a *high degree of market control*."

60. Both McGechan J and the Court of Appeal, which approved this test,[12] stated that a lower standard than "a high degree of market control" was unacceptable.[13] The Commission has acknowledged this test:[14]

> "A person is in a dominant position in a market when it is in a position to exercise a high degree of market control. A person in a dominant position will be able to set prices or conditions without significant constraint by competitor or customer reaction."

61. The Commission's *Business Acquisitions Guidelines* state:

> "A person is in a dominant position in a market when it is in a position to exercise a high degree of market control. A person in a dominant position will be able to set prices or conditions without significant constraint by competitor {or} customer reaction."
>
> …
>
> "A person in a dominant position will be able to initiate and maintain an appreciable increase in price or reduction in supply, quality or degree of innovation, without suffering an adverse impact on profitability in the short term or long term. The Commission notes that it is not necessary to believe that a person will act in such a manner to establish that it is in a dominant position, it is sufficient for it to have that ability." (p21)

62. The role of the Commission in respect of an application for clearance of a business acquisition is prescribed by the Commerce Act. Where the Commission is satisfied that the proposed acquisition would not result, or would not be likely to result, in an

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[11] *Commerce Commission v Port Nelson Ltd* (1995) 5 NZBLC 103,762 103,787 (HC)
[12] *Commerce Commission v Port Nelson Ltd* (1996) 5 NZBLC 104,142 104,161 (CA)
[13] *Commerce Commission v Port Nelson Ltd* (1995) 5 NZBLC 103,762 103,787 (HC) and *Commerce Commission v Port Nelson Ltd* (1996) 5 NZBLC 104,142 104,161 (CA)
[14] *Business Acquisition Guidelines*, Section 7

acquisition or strengthening of a dominant position in a market, the Commission must give a clearance. Where the Commission is not satisfied, clearance is declined.

63. For this particular case, given the time dimensions concerned, the Commission will look at the current situation in the market, as well as a general long-term view.

The Market for the Mining and Production of Semi-Coking Coal

Market Concentration

64. An examination of concentration in a market provides an indication of whether a merged firm may or may not be constrained by others participating in the market, and thus the extent to which it may be able to exercise market power.

65. The *Business Acquisitions Guidelines* specify certain "safe harbours" which can be used to assess the likely impact of a merger in terms of s 47 of the Act -

> "In the Commission's view, a dominant position in a market is generally unlikely to be created or strengthened where, after the proposed acquisition, either of the following situations exist:
>
> > the merged entity (including any interconnected or associated persons) has less than in the order of a 40% share of the relevant market;
> >
> > the merged entity (including any interconnected or associated persons) has less than in the order of a 60% share of the relevant market and faces competition from at least one other market participant having no less than in the order of a 15% market share." (p 17)

66. These safe harbours recognise that both absolute levels of market share and the distribution of market shares between the merged firm and its rivals is relevant in considering the extent to which the rivals are able to provide a constraint over the merged firm. The Commission went on to state that:

> "Except in unusual circumstances, the Commission will not seek to intervene in business acquisitions which, given appropriate delineation of the relevant market and measurement of shares, fall within these safe harbours."

67. Although, in general, the higher the market share held by the merged firm, the greater the probability that dominance will be acquired or strengthened (as proscribed by s 47 of the Act), market share alone is not sufficient to establish a dominant position in a market. Other factors intrinsic to the market structure, such as the extent of rivalry within the market and constraints provided through market entry, also typically need to be considered and assessed.

68. Table 2 below, lists some attributes of the coals currently being produced on the West Coast. Generally, the most important attributes are the energy content (reflected by the calorific value) and the sulphur content. The third column shows the coal Crucible Swelling Number ("CSN") that indicates whether the coal could be classed as a coking coal. The coals with CSN of 9 are proper coking coals, whereas coals with CSN of 3-4 are classed as semi-coking coals. As shown, Spring Creek is a semi-coking coal with high energy and low sulphur. This is the area of aggregation and hence will the area of the market most closely examined by the Commission. From the table, coals that are likely to be closest to Spring Creek in the product space are Echo, Strongman, and Cascade.

Table 2:
Approximate CV and Sulphur Levels for West Coast Mines

Owner/Mine	Calorific Value (Mj/kg)	Sulphur levels (%)	CSN
Solid Energy -			
Terrace	24.81	0.85	1
Island Block	30.44	1.22	4
Strongman	30.55	0.21	4
Spring Creek	29.00	0.30	4
Stockton	32.04	1.30	9
Francis			
Echo	30.43	0.51	4
Roa	31.65	0.30	9+
Birchfield Coal – *Giles Creek*	18.92	0.47	0
Radiant	29.11	0.61	3
Heaphy – *Heaphy*	23.45	1.90	0
RJ Banks – *Hutt Creek*	30.64	0.73	3
Cascade	30.29	0.45	3

Source: "Analysis of New Zealand Industrial Coals", Coal Research Association of New Zealand, 1999.

69. While some users require the actual coking characteristic of a coking coal, thermal users require coking coal for its energy content. That is, even though a coal is classed as a semi-coking coal, thermal coal users demand it for its heat – not its coking attributes. Thermal coal users, therefore, do not generally term these coals as being coking coals but rather as "high energy coals" or "hot coals".

70. In assessing possible market power gained by the proposed acquisition, the Commission has used two measures of market power. The first, in Table 3 (over page), illustrates current production of "hot" or "semi-coking" coals on the West Coast. This reflects the current ability of a firm to compete. The second measure, later in Table 4, assesses reserves of the competitors in the market, reflecting their ability to compete in the future.

71. The demand for semi-coking coal is derived from two main areas: cement makers and thermal coal users. Cement makers use around [ ] tonnes annually, while thermal coal users collectively use around [ ]. Therefore, the total demand for semi-coking or hot coal is around [ ] tonnes. The Graph titled "Demand/Supply of Semi-Coking Coal of Previous Year" in Appendix A illustrates how this demand is satisfied, using the data from Table 3.

72. Table 3 attempts to gauge the market power of Solid Energy in this area of the differentiated product space, that being semi-coking coal. If market share was assessed in the wider market, Solid Energy's share would decrease. However, this would not necessarily reflect Solid Energy's market power in the area of semi-coking coals.

Table 3:

Estimated Contribution to Domestic Coking Coals over Last Year

	Supply		Demand		
Firm/Mine	**Production**	**Imports**	**Export**	**Domestic**	**Domestic Share (%)**
Solid Energy:					
Terrace/Island Block	[ ]		[ ]	[ ]	
Strongman	[ ]		[ ]	[ ]	
Spring Creek	-		-	-	
					[ ]
Todd Coal	[ ]		-	[ ]	[ ]
Imports		[ ]		[ ]	[ ]
Francis Mining					
Echo	[ ]		[ ]	[ ]	[ ]
Radiant	[ ]		0	[ ]	[ ]
Hutt Creek (RJ Banks)	[ ]		0	[ ]	[ ]
Cascade	[ ]		0	[ ]	[ ]
Total	[ ]	[ ]	[ ]	[ ]	100

73. There would be no aggregation in the current productive capacity by virtue of acquiring the Spring Creek mine or Upper Waimangaroa reserve. During Spring Creek's brief production life, Todd Coal supplied Spring Creek coal to a cement maker (Golden Bay Cement) and thermal coal users via a Canterbury wholesaler (AW Taylor). However, the Spring Creek mine is no longer in production and hence Todd Coal no longer makes a contribution to the market for the production and mining of semi-coking coal. The Spring Creek reserves, however, represent a valuable resource which could facilitate the entry of a new competitor or enable a current competitor to become a more vigorous one. The same applies to the acquisition of Todd Coal's share of the Upper Waimangaroa development. It is at a very early stage of development but could potentially be an opportunity for new entry or expansion in the future.

74. If the proposed acquisition goes ahead, Solid Energy will take over the Golden Bay Cement contract. This contract will require supply of around [ ] tonnes per year. The effect of this is shown in Appendix A in the graph titled "Likely Market Composition". This illustrates the likely composition of the market should the proposed acquisition be implemented. Although Solid Energy's market share has increased significantly, this does not amount to aggregation in supply because Solid Energy will use its existing resources rather than Spring Creek for the contract. That is, there will be no aggregation in current productive ability.

75. Despite no aggregation occurring in the current market supply, Solid Energy is acquiring potential supply in the form of coal reserves. The Commission must, therefore, consider whether the acquisition could strengthen or create a position of dominance either in the current market or in the future. In particular, if Solid Energy is already dominant, acquiring the reserves is likely to amount to a strengthening of dominance by eliminating an opportunity for new entry or expansion.

Current Competition

76. Market participants were of the view that competition in high calorific value, low sulphur coal is currently weak. These attributes are particularly important for supply to built-up areas as they satisfy emission laws while keeping transport costs down. The closure of Spring Creek and subsequent withdrawal of Todd Coal from the market has contributed to the weakness of competition. Spring Creek coal has a calorific value of 29.0 and sulphur content of 0.3%. These specifications are very suitable for blending with lower ranked coals for supply to the thermal coal users.

77. Solid Energy has the best resources of hot coals in the market. It currently produces around [ ] tonnes of semi-coking coal to the market through its Terrace, Island Block, Strongman, and Stockton mines. Around [ ] tonnes of this is used in cement manufacture and the remaining [ ] for supply to thermal coal users. In terms of total supply of hot coals, it would account for around [ ]% (see Table 3). The acquisition of Spring Creek will add to its reserves and its potential supply.

78. Solid Energy's closest current competition for hot coal comes from Francis Mining. It operates the open-cast Echo mine (among others) in the Reefton area. The Echo mine has a high energy content and low sulphur. Production from this mine is used for supply to international markets, domestic cement makers and thermal coal users. It accounted for around [ ]% of the domestic semi-coking coal market in the last year.

79. The Echo mine supplied [ ] tonnes in the previous year, as noted in Table 3. In the last year Todd Coal purchased around [ ] tonnes from Francis Mining to satisfy its Golden Bay Cement contract. Under the terms of the acquisition, Solid Energy will take over the Golden Bay Cement contract. The productive capacity of [ ] tonnes will thus return to Francis should the proposed acquisition be implemented.

80. Francis Mining hires independent contractors to extract the coal, and has advised the Commission from its annual base supply of [ ] tonnes, it could increase production at the Echo mine by around [ ]% without difficulty by hiring more contractors. This equates to excess capacity of around [ ] tonnes.

81. Cascade Mines is likely to provide some constraint. It currently supplies around [ ] tonnes of high energy, low sulphur coal to Milburn cement in Westport and has around [ ] tonnes of reserves. It has also been supplying Todd Coal with consignments of coal to satisfy its contract to Golden Bay Cement. It is in a similar position to Francis Mining in that it will gain productive capacity should the proposed acquisition be implemented. Cascade believes it could supply around [ ] tonnes annually of suitable coal to the thermal coal users. Cascade recently [

]. The ability of Cascade to supply coal to the market is likely to provide some constraint on Solid Energy. It is noted that Cascade is [

].

82. Competition also comes to a lesser degree from the Radiant mine and the Hutt Creek mine, both of which produce high calorific value, low sulphur coals. These mines are only likely to provide limited constraint however. The Radiant mine is understood [

]. Although this mine is currently producing, the amount of coal it can extract is limited and too uncertain to be able to rely on. Hutt Creek coal has good specifications but is [

].

83. Although the above current producers have the ability to expand production this must be considered in the context of overall demand. This is illustrated in the graph titled "Potential Capacity of Independents" in Appendix A. The graph would tend to indicate that the independent producers would struggle to constrain Solid Energy implementing a general price increase. This issue, however, is discussed further in conjunction with "Countervailing Power of Cement" makers below.

Conclusion

84. The ability of current competitors to offer a substitutable product and to expand their operations is likely to provide some constraint to Solid Energy.

Countervailing Power of Purchasers

85. Golden Bay Cement and Milburn Cement are likely to have a significant degree of countervailing power by virtue of the volumes they purchase and their options for supply of energy. Golden Bay Cement purchases around [ ] tonnes of semi-coking coal annually, and Milburn around [ ].

86. Golden Bay Cement has advised the Commission that [

]

87. Milburn was of the view that Solid Energy currently operates as if in a competitive environment in terms of prices and service. Milburn Cement did not have concerns over the acquisition. It has advised the Commission that it has options that would constrain Solid Energy from raising its prices. It notes the following constraints:

- It has three suppliers rather than one to ensure competition remains between the suppliers. It can immediately identify a drop in standards by any of the suppliers;
- [ ];
- Milburn notes that it has previously purchased a mine as a threat. It believes it could do it again.
- Its plant at Westport currently burns used motor oil to supply around [ ]% of its energy requirements. Milburn believed it could increase this to around [ ]% without difficulty.

88. This countervailing power is likely to provide strong constraint on Solid Energy for supply to cement makers. This power has important implications for the ability of independents to constrain Solid Energy. Given market power is unlikely to be able to be exerted on cement makers (for the reasons given above), it is sufficient that independent suppliers can constrain Solid Energy in respect to supply to thermal coal users to ensure Solid Energy would not have a dominant position. The graph titled ""Potential Capacity of Independents" in Appendix A would indicate that there is sufficient independent supply to constrain Solid Energy. Potential supply from independents is around [ ] per annum compared with total thermal coal demand of [ ]. In addition, the Commission

has taken a conservative approach and assumed that demand by thermal coal users is fixed. In reality, some thermal coal users are likely to have flexibility in the blend of coal they use, depending on the specifications of their boiler.

Conclusion on Countervailing Power

89. The countervailing power of cement makers are likely to provide strong constraint on Solid Energy. In addition, independent suppliers will be likely to constrain Solid Energy in the thermal coal area of the market.

Reserves of Competitors

90. As noted earlier, it is not sufficient that Solid Energy is constrained in the current market. The Commission must also be satisfied that the relative level of competition will remain for the reasonable future. Table 4 below estimates life spans of current mines in production based on estimated reserves and current production.

Table 4:
Estimated Reserves of Semi-Coking Coals

Firm/Mine	**Reserves (tonnes)**	**Expected Prod. (tonnes)**	**Implied Life* (years)**
Solid Energy:			
Strongman	[ ]	[ ]	[ ]
Reefton	[ ]	[ ]	[ ]
Spring Creek	[ ]	0	-
Upper Wai.	[ ]	0	-
Todd Coal – *Spring Creek*	[ ]	0	-
Francis Mining:			
Echo	[ ]	[ ]	[ ]
Radiant	[ ]	[ ]	[ ]
Hutt Creek (RJ Banks)	[ ]	[ ]	[ ]
Cascade	[ ]	[ ]	[ ]

*Implied life is simply reserves divided by expected production.

91. Table 4 shows reserves of producers in the market. From the table the reserves controlled by Solid Energy are far in excess of its current competitors. However, two caveats are noted. First, although Solid Energy stands to gain significant reserves through the acquisition, the domestic demand for such coal is relatively small. As such, other competitors are likely to retain their current level of competitiveness well into the future (as shown by "Implied Life" in the table above), despite having relatively small reserves. A second point is that the Commission has taken a conservative approach by including the Upper Waimangaroa reserves in the table but not included the Pike River and Te Kahu developments. Pike River has estimated reserves of around [ ] tonnes and Te Kahu [ ] tonnes. These are both understood to be coking coals but are as yet unproven in terms of economic feasibility. It is also unclear whether these coals would be suitable for the domestic market.

92. The estimates in Table 4 would suggest that virtually all of Solid Energy's competitors have sufficient resources to enable production well into the future. The exception is [ ] whose reserves at [ ] are expected to be exhausted in

around [ ] years. [ ], however, has advised the Commission that it has [ ].

93. There is little reason to suggest that demand will change substantially in the near future. Demand will fluctuate as new businesses enter the market and businesses exit the market. However, on balance demand for coal is likely to remain reasonably consistent and grow with the economy. There are not likely to be significant increases in demand. One possible change to the market is the introduction of a carbon tax. If this were to be implemented the likely effect will be a substantial drop in the quantity demanded for coal, in favour of other energy sources. At this stage there is no indication if and when the carbon tax will be introduced.

Conclusion

94. On this basis, it would appear that level of competition to Solid Energy is likely to remain. Even if individual competitors were to leave the market the resource will still remain and be available to a new entrant. If attempts were made by Solid Energy to acquire new resources in the future, they will be subject to Commerce Act consideration at that time.

Constraint from Potential Competitors

95. The Commission considers that potential competition to the market, from new entry or expansion by existing market participants can act as a constraint on the behaviour of the merged entity in that market. An assessment of conditions and barriers to entry is considered below. In addition, in order for the threat of market entry or expansion to be a sufficient constraint so as to alleviate concerns of market dominance, the Commission needs to be satisfied that entry or expansion in response to the exercise of market power will be likely, sufficient in extent, timely, and sustainable.

Conditions of Entry/Expansion

96. In general, the Commission considers the conditions and barriers to entry to be high. These include:

- High start-up and development costs that are likely to be sunk. This includes feasibility studies and commissioned studies to satisfy resource consent demands;
- Obtaining necessary exploration and mining licenses, permits, and resources consents which collectively can take several years; and,
- Inherent risks in developing a mine.

97. Over the longer term history has shown that entry does occur. Spring Creek (although having difficulties) is one example. There are also several projects at various stages of development, including Pike River and Te Kahu. Although it is not known whether these mines will be fully developed or will be suitable for domestic supply it illustrates that over the longer period, new entry is likely to occur. According to coal reserve estimates (see Table 1) and anecdotal evidence from market participants there are still significant resources in the ground.

98. As well as the likelihood of new entry over the longer period, Commission enquiries have revealed the following examples of potential resources that could be developed in the short term:

- [

  ]
- [

  ].
- [

  ]

99. The Commission recognises that the likelihood and risks associated with these developments and has been cautious in relying on them in terms of constraint provided. Only the [ ] development, which is reasonably verifiable, has been relied on to any significant extent. Other examples have been used to illustrate the likelihood of new resources being developed over the reasonable future.

Conclusion

100. In conclusion, the Commission is of the view that in the longer term new developments are likely to occur that will add to the stock of reserves, and create new competitors. Various competitors in the market also would appear to have resources able to be developed in a timely manner. The control of Spring Creek or Upper Waimangaroa by Solid Energy is not likely to significantly affect the opportunity or propensity of new entry to the market in the longer term.

Constraint from Imports

101. As part of its efforts to maintain the Golden Bay Cement contract, Todd Coal purchased two barges of coal from Australia totalling [ ] tonnes. Todd Coal is of the view that although unlikely to be currently economical, importation could be viable over the long-term. For the Todd Coal contract Golden Bay Cement pays a price relating to gigajoules. However, a per tonne cost is approximately $[ ]. In comparison, Todd Coal advised that the following prices in Table 5 were paid (per tonne) for the consignments of coal.

Table 5:
Prices Paid for Coal Imports

Barge	Price ($US)	Exchange Rate	Price ($NZ)	Transport	Total
1	[ ]	[ ]	[ ]	[ ]	[ ]
2	[ ]	[ ]	[ ]	[ ]	[ ]

102. The Commission understands that over the last year there has been a significant rise in international coal prices. At the same time, the New Zealand dollar has fallen. [

]. However, Todd Coal was of the view that international coal prices are at a peak and likely to come down. If exchange rates improve as well, importation could become economical. As an example, at a price of [ ] and an exchange rate of [ ] cents, a barge would cost approximately [ ] per tonne making it cost competitive to import. However,

this does not take into account the effect of the drop of the world price might have on domestic prices.

103. One difficulty noted was that Golden Bay Cement requires a regular flow of coal. Overseas coal suppliers are often unwilling to supply such small quantities of coal.

104. The Commission has queried why Todd Coal imported coal at high cost rather than seek supply from domestic suppliers, and whether that suggested domestic suppliers were constrained in their ability to increase supply. The Commission has been advised that the coal was imported late last year and at the time there was no suitable coal available domestically. For example, [

].

Conclusion

105. The Commission is of the view, that if a cement maker were to enter into a long-term arrangement with appropriate foreign exchange cover, under some circumstances importation could be possible in the future. However, given the uncertainty, the Commission does not rely on importation to provide a constraint, in making its decision.

Conclusion on the Market

106. The following key points are noted:

- In the short-term cement makers will have strong countervailing power;
- The inability of Solid Energy to exert market power on cement makers will enable current producers to constrain Solid Energy for supply to thermal coal users;
- These competitors have sufficient reserves to retain this level of constraint; and
- New developments are likely in the longer-term.

107. Given these constraints, the Commission is satisfied that the proposed acquisition would not result, or be likely to result, in any person acquiring or strengthening a dominant position in the market.

OVERALL CONCLUSION

108. The Commission has considered the effect of the acquisition in the following market:

- The market for the mining and production of semi-coking coal.

109. Having regard to the various elements of section 3(9) of the Act, and all other relevant factors, the Commission concludes that it is satisfied that the proposal will not result, or will be likely to result in any person acquiring or strengthening a dominant position in any market.

DETERMINATION ON NOTICE OF CLEARANCE

110. Accordingly, pursuant to section 66(3)(a) of the Commerce Act 1986, the Commission determines to give clearance for the proposed acquisition by Solid Energy of:

- Todd Coal's interest in the Greymouth Coal unincorporated joint venture (including the issued share capital in each of Greymouth Coal Limited and Greymouth Coal Operating Limited held by Todd Coal);
- Todd Coal's interest in the Upper Waimangaroa unincorporated joint venture;
- The assignment of Todd Coal's interest in the coal supply agreement with Golden Bay Cement; and
- Todd Coal's interests in the Moody Creek mine.

Dated this 28th day of June 2001.

Dr M N Berry

Deputy Chair