The Treasury

Solid Energy Information Release

March 2013

Release Document

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THE TREASURY
Kaitohutohu Kaupapa Rawa

Treasury Report: Solid Energy New Zealand Scoping Study Report

Date:	4 November 2011	**Report No:**	T2011/2373

Action Sought

	Action Sought	Deadline
Minister of Finance (Hon Bill English)	**Note** the contents of this report	Friday 11 November 2011
Minister for State Owned Enterprises (Hon Tony Ryall)	**Note** the contents of this report	Friday 11 November 2011
Associate Minister of Finance (Hon Steven Joyce)	**Note** the contents of this report	Friday 11 November 2011

Contact for Telephone Discussion (if required)

Name	Position	Telephone		1st Contact
Peter Ryan	Principal Advisor, Commercial Transaction Group	[1]		✓
Andrew Blazey	Manager, Commercial Transactions Group	[1]		

Minister of Finance's Office Actions (if required)

None.

Enclosure: **Yes (attached)**

Treasury Report: Solid Energy New Zealand Scoping Study Report

Executive Summary

The Solid Energy New Zealand (Solid Energy) scoping study concludes that an Initial Public Offering (IPO) of Solid Energy, which could meet the MOM objectives, requires a focus on the core coal mining business with:

- downsizing of the New Development activities particularly around the large scale projects associated with the Southland lignite resources (coal- to- fertilizer (CTF) and coal-to liquids (CTL) for liquid fuels)
- sale of the renewable businesses (biodiesel and wood pellets)
- increased expenditure on drilling to prove up the level of coal reserves to meet equity market requirements, and
- repayment of Solid Energy's debt at time of listing to meet the debt free norm for listed coal companies.

Solid Energy's Board would need to adopt this new strategy and drive the required changes at the CEO and senior management level, with reductions in corporate head office and overhead costs.

At this stage the Board's response is positive in that they have stated that they have instructed management to consider the findings of the scoping study and review the company's strategy, operations and scope of business. The Board's intention is to achieve an enterprise valuation significantly in excess of the scoping study valuation and prepare the company for an IPO to meet the MOM objectives by mid 2013.

By the end of November 2011, following the Board meeting in the third week of November, the company will be in a position to discuss its direction and plans for the next 12 to 18 months.

[5]

Net proceeds to the Crown at the time of IPO will depend on the extent of repayment of the company's debt, sale of surplus assets, the outcome of Solid Energy's bid for Pike River, valuation increases from implementing a lower cost business plan post restructuring and the ability to carry its current debt levels post restructuring.

Communications

In preparing the scoping study, UBS had access to market sensitive company information. We have agreed with the company that the scoping study reports will not be publicly released.

Recommended Action

We recommend that you **note** the contents of this report.

Andrew Blazey
Manager, Commercial Transactions Group

Hon Bill English
Minister of Finance

Hon Tony Ryall
Minister for State Owned Enterprises

Hon Steven Joyce
Associate Minister of Finance

Treasury Report: Solid Energy New Zealand Scoping Study Report

Purpose of Report

1. This report summarises the:

   - conclusions of the scoping study of Solid Energy prepared by investment bank UBS, and

   - response of the Solid Energy Board.

2. This report is more extensive than comparable Treasury reports to Ministers on the findings of scoping studies given the significant implications for operations, management and Board of Solid Energy.

Conclusions of the Scoping Study

3. The scoping study provided a capital market perspective of Solid Energy and its readiness for an IPO to meet the objectives of the extension of the Mixed Ownership Model. The scoping study provided the following:

   - an investor perspective of Solid Energy's business operations

   - detailed financial modelling for each of Solid Energy's business segments and a discounted cash flow valuation of Solid Energy

   - impediments to and matters to be addressed prior to an IPO of Solid Energy

   - valuation of the business and proceeds from an equity market IPO perspective, and

   - IPO offer structure and demand assessment.

Equity Investor Perspective of Solid Energy's Business Operations

4. The Solid Energy scoping study identified the following business areas:

   - The core **Coal Mining Business** comprising high quality coking coals, for the international steel industry, from the West Coast of the South Island and thermal coal from the Waikato region in the North Island. The latter is supplied primarily to NZ Steel (as inputs to steelmaking from iron sands) and Genesis Energy (as fuel for the Huntly power station).

   - **Renewable Energy** businesses involving biodiesel (Biogold) and solid wood pellet fuel (Nature's Flame).

   - A number of **New Developments** at various stages of commercial investigation and development, as follows:

     - Gas developments involving the harvesting of methane natural gas from coal fields (coal seam gas or **CSG**) and underground coal gasification (**UCG**). The latter is an unconventional, but as yet commercially unproven, coal mining technology which produces synthetic gas (**syngas**) from controlled underground burning of coal for use as a fuel for electricity generation or as a feedstock for chemical production.

- Lignite conversion projects covering:
  - production of low moisture, higher energy lignite **briquettes**
  - coal -to-fertilizer (**CTF**) production of urea, and
  - coal-to-transport - fuels (**CTL**) for diesel and aviation fuel production.

5. The investor attraction of Solid Energy lies in its long established exports from the West Coast mines of high quality metallurgical coking coal to key international steelmaking clients such as SAIL, Mittal Steel, Tata, Baosteel and Mitsubishi. These are among the largest steel companies in India, China and Japan. The North Island thermal coal mines diversify Solid Energy's coal operations, [2],[5]

6. Consolidation in the international coal sector over a number of years has resulted in a very small number of listed metallurgical coal producers at a time of strong future demand for internationally traded coking coal. This is the result of robust Chinese and Indian demand and a global shortage of high quality reserves.

7. Solid Energy's investment case also includes its core competencies in the exploration, development and extraction of New Zealand coal. The company has unconstrained access to transportation infrastructure and as the major user has access level certainty which few coal companies have internationally. In addition Solid Energy has a proven ability to operate safely in the difficult geological conditions on the West Coast and to manage resource consents and community stakeholders within New Zealand.

8. The Renewable Energy businesses and the New Developments activity shift Solid Energy outside its core coal competencies into new energy product processing, distribution and end market applications. Investors will be concerned that Solid Energy is taking significant steps outside its core competencies, with the number and scale of these potential non-core investments appearing larger than the underlying coal business. [2],[4],[5]

9. Most Australian listed coal companies comparable to Solid Energy focus purely on coal mining. However a select number of companies do have traditional coal mining activities and alternative energy activities. The equity market ascribes only minimal value to expenditure on the early stage non-traditional energy businesses until there is acceptable clarity on the underlying economics, commercial viability and path for commercial development.

10. In the interim potential equity investors in Solid Energy would be concerned over strategic direction, diversion of management and cash flow resources from the core coal business and the potential capital requirements.

Financial Modelling and Discounted Cash Flow Valuations

11. UBS modelled annual financial statements for each of the business operations over approximately 25 years to produce consolidated accounts. The financial accounts for each of the business segments were used to value each of the business segments using detailed access to Solid Energy's operating assumptions and valuation parameters to reconcile the model output to the company's valuation analysis. The models were then rerun to incorporate standard capital market assumptions and valuation parameters (such as a market consensus price path). The latter were used as the basis of capital market valuations and assessment of proceeds from an IPO.

Discounted Cash Flow Valuations

12. Discounted Cash Flow (DCF) valuations are the primary tool used to value coal companies since coal mines have a finite life based on available coal reserves (economically mineable coal) and the future conversion of resources (the existence of coal).

13. The DCF valuations are enterprise valuations i.e. the value of the expected tax paid cash flows after investment requirements available to the providers of both debt and equity. This is the value of the company's assets (working capital and fixed assets component of the balance sheet). The discount rate is calculated as the blended after tax cost of debt and equity weighted in proportion to the value of debt and equity (the capital structure or composition of the liabilities and equity components of the balance sheet). Deducting debt from the DCF enterprise value results in the equity valuation which is the focus of an IPO.

14. The DCF enterprise valuations were produced using both Solid Energy and equity market assumptions and parameters. Since these assumed 100% control and ownership by a single shareholder these valuations will be modified by equity market analysts to reflect value as minority shareholdings in listed portfolio investments. That analysis will include comparison with valuation parameters observed in comparable listed coal companies, particularly on the Australian Stock Exchange. The latter include various earnings or profit multiples to enterprise and equity values and enterprise value per tonne of reserves and resources.

15. In addition to DCF valuations for operating mines, UBS ascribed a value for projects with Joint Ore and Reserves Committee (JORC) compliant resources by applying a market based multiple of comparable listed exploration stage companies to the tonnes of resources. JORC sets the NZX and ASX standard for reporting mineral reserve and resource estimates.

Core DCF Valuation and Sensitivity

16. [2],[5]

17. [2],[5]

Reconciliation of Solid Energy and Scoping Study DCF Valuations

18. [2],[5]

19. The valuation differences between the Solid Energy and the UBS scoping study analysis arise from:

- Solid Energy utilising commodity price path assumptions for coal and oil for its lignite conversion project products that are very significantly above the consensus views of analysts which formed the basis of the UBS analysis. [2],[5] . UBS sought, but was unable to obtain, documentation and analysis from Solid Energy to support the latter's view on commodity price paths. Annex B summarises these key differences.

- Solid Energy's risk and return assessments for its lignite development projects being lower than equity or investment market expectations for such early stage, large scale, and high risk projects.

Impediments to IPO and Investor Expectations

20. The scoping study identified a number of business issues within Solid Energy that investors would expect to be mitigated or resolved prior to any IPO. Moreover resolution of these issues could increase returns from an IPO. These issues fall into the following categories:

Coal Mining

- Increasing the level of documented coal reserves.
- Adjustment of mining operations and development to the economics of a lower price path assumption.
- [2],[5]
- Operational uncertainty over the Spring Creek mine on the West Coast.

Strategic Business Positioning

- Scale of investments and capital investment in New Developments.
- Renewable Energy investments go beyond core competencies in the value chain.
- Diversion of cash flow and management resources from the core coal business.

Cost Structure

- Head office overhead significantly larger than comparable Australian listed companies.
- Adopting a new corporate structure to assist in transitioning to a project based, multi-resource developer.

Other Matters

- Board composition.
- Capital structure.

Coal Mining

21. Average mine lives among comparable listed Australian coal companies exceed 30 years. In moving to a listed company Solid Energy would need to bring forward planned exploration and drilling to define its West Coast resources and reserves to the extent necessary to provide investors greater assurance over mine lives. [2],[5]

22. Solid Energy's business plan assumes coal prices significantly higher than current consensus prices and as a result higher operating and capital expenditure than would be economic at lower consensus prices. Solid Energy will need to prepare a modified mine and overall coal business plan for review by a technical expert for the purposes of a prospectus.

23. The Rotowaro and Huntly East mines service domestic customers [2],[5],[7]

24. [2],[7]

25. [2],[7]

26. [2],[7]

27. [2],[7]

28. Solid Energy is looking to acquire 100% of the Spring Creek mine by buying out its joint venture partner Cargill. The Spring Creek underground mine has a design capacity to produce 800,000 tonnes per annum of semi-soft coking coal for blending with hard coking coal from Stockton. The mine has been unable to meet production targets due to the inability to advance development, in part because of the joint venture partner's underinvestment in operational and capital expenditure. Complete ownership by Solid Energy will avoid lengthy and unscheduled shutdowns to develop more coal to mine and to assess safety conditions in the mine.

Strategic Business Positioning

29. In order to mitigate investor concerns around Renewables and New Developments the scoping study recommends that:

- the Renewable Energy businesses are sold prior to IPO, and
- the costs and resources of New Developments are materially reduced to annual expenditures of no more than [2],[5] (operational and capital expenditures plus overhead allocation) on projects that have not reached a defined feasibility study stage.

In the absence of such disciplined actions investors will discount the value of the coal business.

30. Since 2005 Solid Energy has directly spent an estimated NZ$165 million on its Renewable Energy and New Development activities ([2],[5]) but excluding unallocated corporate office costs. Overhead and development expenditure for the June 2012 year is expected to be [2],[5] approximately equally allocated between the UCG and CTF projects.

31. The Renewable Energy projects are yet to generate earnings before interest, tax and depreciation and investors will not likely identify linkages between these businesses and Solid Energy's core competencies.

32. For New Developments Solid Energy should focus on finding promoter and operator partners for economically viable projects and constrain expenditure to exploration and development activities. The CTF and CTL projects should be put on hold unless external analysis demonstrates materially improved project economics using market based commodity price expectations and valuation parameters.

Cost Structure

33. Solid Energy's head office overhead is significantly larger than comparable Australian coal companies. [2],[7]

The scoping study notes that some of this difference can be explained by the scale up of resources to develop the New Developments and Renewable Energy business and less focus on allocation of costs to the projects to which they relate e.g. unallocated corporate costs to business units, unallocated exploration costs within the coal business and the low level of head office costs allocated to New Developments relative to the time UBS understands is being invested in these projects.

34. The scoping study recommends a detailed review of head office costs in order to identify:

- head office costs that cannot be directly allocated to business units
- areas of cost saving, and
- operating cost structure differences versus Australian coal mining companies.

Other Matters

35. The scoping study recommends reducing the Board from eight to six members given the size is large in comparison with Australian coal companies of a similar size. It proposes than two Board members have direct coal mining experience and an international director with large scale oil and gas development and processing experience should be considered.

36. The scoping study also recommends that Solid Energy should have no debt at the time of IPO. The majority of listed Australian coal companies have positive cash balances because of the inherent volatility in coal mine cash flows and the substantial cash requirements for new mine developments. [5]

IPO Valuation and Proceeds

37. [2],[5]

[2],[5]

38. [2],[5]

IPO Offer Structure and Demand

39. The scoping study concluded that an IPO of Solid Energy on the NZX and ASX would be readily absorbed by the market and executed in a standard manner. In order to achieve widespread NZ participation the scoping study proposes that retail investors have:

- preferences for allocation
- [5]
- a loyalty bonus for those who retain their shares [3],[5]

[3],[5]

40. The scoping study notes the inherent volatility of coal equities compared with the broader equity market. This is in part due to volatile commodity prices and exchange rate fluctuations. [5]

41. The scoping study also notes that retail investor participation in New Zealand and Australian coal companies is lower than in sectors which are inherently more stable. The retail composition of Australian coal company share registers is approximately 24% compared with 35% for Australian utilities. The retail composition of the Pike River share register was 23% prior to the disaster.

42. The scoping study concludes that Solid Energy's restructuring to ready itself for an IPO would require at least 12 months.

Solid Energy Board Response to the Scoping Study

43. At this stage the Board's response is positive in that they have stated that they have instructed management to consider the findings of the scoping study and review the company's strategy and scope. The Board's intention is to achieve an enterprise valuation in excess [5] nd prepare the company for an IPO to meet the MOM objectives by mid 2013.

44. By the end of November 2011, following the Board meeting in the third week of November, the company will be in a position to discuss its direction and plans for the next 12 to 18 months.

Treasury Comment

45. As noted above the scoping study has challenged the Board of Solid Energy with useful insights and perspectives for the future management and development of the company. In particular it has highlighted to the Board the need to restructure the operations of the core coal business and provide a more disciplined approach to the management of the Renewable Energy and New Development activities.

46. The scoping study also:

- Questioned Solid Energy's views on the oil and coal commodity price paths from a capital market perspective. Given the importance of Solid Energy's views for strategy, operations and generation of shareholder value it was concerning that UBS was unable to obtain evidence of internal or external documentation, analysis or review appropriate to support Solid Energy management and Board views on commodity price paths.

- Highlighted the continuation of Solid Energy's ambitions to become a project based, multi-resource developer in order to maximise value for New Zealand through responsible custodianship and development of strategic natural resources. In part the high level of corporate overheads reflects resourcing of the company's ambition to be an integrated natural resources company. Moreover, expenditures incurred for these broader public or national interests are not valued by investors.

- [2],[5]

- Indentified that the company's free cash flow has been reinvested in the business, particularly the Renewable Energy and New Developments. As a result dividend payments to the government have been funded by increasing debt.

47. The ability of Solid Energy to carry some level of debt at IPO should be assessed post restructuring. The Crown Advisor believes a coal focussed Solid would be able to carry some debt [2],[5],[6]

48. [2],[5],[6]

49. [5]

50. In addition to its role in assessing the MOM policy in regard to Solid Energy the scoping study provides independent confirmation of issues identified in previous Treasury reports on the performance of Solid Energy.

Next Steps

51. Treasury will report to Ministers in December 2011 on the Board's response to the scoping study following the Board meeting at the end of November 2011. There are likely to be restructuring implications for governance, management and operations given the:

- apparent lack of investigation and scrutiny of management's price path assumptions, given the importance of that parameter in driving the company's strategy, investments, operations and costs
- high level of corporate overheads and staffing, and
- focus on generating value for the Crown that investors will recognise in an IPO.

52. We anticipate that Treasury and Ministers will need to engage more intensively with Solid Energy over the next three to six months to ensure that the restructuring will contribute to the MOM objectives in a timely manner.

[2],[5],[6]

Annex B

Export coal pricing

Forward coal price estimates used in the DCF valuation are based on broker consensus forecasts for thermal coal, semi-soft coal and hard coking coal.

Exhibit 2 Broker consensus coal prices

US$/t	FY12	FY13	FY14	FY15	LT[1]
Hard coking	260	225	196	172	158
Semi-soft coking	191	161	142	128	113
Thermal	123	120	113	101	90

Source: Broker reports

Note:
1 Real prices at FY11. LT = long-term

Solid Energy uses several scenarios when estimating future coal prices and foreign exchange rates based in large part on an assumed oil price. [2],[5]

[2],[5]