Solid Energy and Ravensdown plan Southland lignite-to-fertiliser plant

28 September 2009 - Plans for a $1.5 billion coal-to-fertiliser plant in Eastern Southland based on the area's huge lignite resources have been announced by energy producer Solid Energy and agricultural fertiliser supplier Ravensdown.

The two Christchurch-based companies said they are jointly investigating the viability of building a urea fertiliser plant capable of producing up to 1.2 million tonnes a year of the nitrogen fertiliser from up to 2 million tonnes a year of lignite from Solid Energy's large lignite resources in the Mataura-Gore area.

The project could start as early as 2014 and make New Zealand an exporter of urea fertiliser as well as supply domestic farming needs.

The fertiliser project may be followed by a second bigger project to produce diesel from Eastern Southland lignites. Solid Energy is at the pre-feasibility stage for a lignite-to-diesel plant.

The Solid Energy-Ravensdown study will consider the economics and possible location of the plant. The lignite deposits are central to the fast-growing Southland-Otago dairying region and just 10 km north of the world's largest milk-processing plant at Edendale. This Fonterra plant uses Solid Energy lignite for part of its energy supply.

The fertiliser project could create up to 500 permanent new jobs from both the mine and the plant with many more people involved in construction.

Solid Energy and Ravensdown expect to complete the study in early 2010 when they will decide whether to proceed to the next stage of a feasibility study. Following engineering design, and subject to consenting and financing, construction could start by 2012, and the plant could be operational by late 2014.

Solid Energy's chief executive officer Dr Don Elder said "We believe this is a tremendously exciting announcement for New Zealand. Agriculture is our most important economic sector and its global importance is growing every day.

"Urea is a key input to increased farm productivity, but is mostly imported at present, which exposes our farmers to world supply volatility, and prices that can fluctuate widely."

The technology would be based on converting lignite into a versatile high-energy synthesis gas from which high value products such as transport fuels, fertilisers, methanol, electricity, or hydrogen can be made.

Solid Energy said the urea and diesel plants could form the basis of a "syngas park". This would supply clean syngas to multiple downstream applications including diesel and urea.

Dr Elder said a lignite-to-urea plant would be fully carbon compliant from day one with whatever greenhouse gas emissions legislation New Zealand ever has.

Solid Energy is already investigating a range of options for managing CO2 emissions from our planned coal-to-liquid plant including carbon capture and storage, biosequestration and biofeedstock options.

New Zealand currently imports about 500,000 tonnes of urea a year, mostly from the Middle East (gas based) and China (coal based). About 40% of New Zealand's ammonia-urea is produced at the Kapuni plant of Ballance Agri-Nutrients using natural gas as a feedstock.

Source: Solid Energy and Lindsay Clark

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