



Submission

Discussion Paper - Carbon Intensity for South Australia's New Electricity Generation

A. About Altona Energy ('Altona' or the 'Company') and the Arckaringa Project

Altona is an Australian based energy company listed on the London AIM. The Company's mission is to create new sources of clean energy based on 'state of the art' commercialised technology and strong commercial partnerships. Altona's primary asset in South Australia is a 49% interest in 3 Exploration Licences covering a 7.8 billion tonne sub-bituminous coal resource in the Arckaringa Basin (1.287 billion tonnes JORC) - one of the world's largest undeveloped Energy Banks. This interest is held through the Company's wholly owned subsidiary Arckaringa Energy.

Currently Altona is conducting a Bankable Feasibility Study ('BFS') for the Arckaringa CTL and Power Project with its JV partner, Chinese energy major CNOOC. The BFS Base Case incorporates an open cut mine up of 15 Million tonne pa capacity to support an integrated 10 Million bbl pa Coal to Liquids ('CTL') and net 560 MW co-generation power plant.

Arckaringa coal quality is suitable for conversion to syngas and derivative products using existing commercial technologies, to produce high value ultra clean fuels and chemical feedstocks plus low cost and low emission power. The Arckaringa Project is ideally poised to help tackle South Australia's growing transport fuel and base load power needs and boost development in the Far North. The State faces a shortage of fuel, base load power and water, both generally and especially for the growing mining sector. In particular, the State has lacked fuel security since closure of the Port Stanvac refinery and is forecast to need more than 1000 MW of additional base load power over the next 10 years.

More information concerning the Arckaringa Project can be found on the company website www.altonaenergy.com

B. Comments on the Discussion Paper

Altona understands that the intended effect of the proposal for an emissions intensity limit of 0.7 tonnes of CO₂e/MWh for new electricity generation is to discourage new 'conventional' coal-fired power stations in SA, and to encourage gas to remain the predominant fuel for electricity generation for the foreseeable future, both base and peaking.

We do not have any quarrel with the need to shift away from conventional coal fired generation. But we also believe that integrated CTL (or GTL) and power plants, with the design capacity to provide electricity over and above the internal power requirements of the project, can also make a strong contribution to the State's drive for more efficient electricity generation, particularly base, and for a lower CO₂ emissions profile. For example, in anticipation of SA's growing power needs and policies and proposals at either State or Federal level to lower CO₂ emissions, Altona's base case design for an integrated CTL and Power plant allows for both significant power production and CO₂ capture/utilisation. This integrated design provides for 10 million bbl pa of fuels, mainly diesel, with overall power plant capacity of 1,112 MW in combined cycle formation, of which 560 MW would be

available for export to the grid, and for the capture of a minimum 41% of CO₂ generated in the project. The BFS will include evaluation of realistic storage options for the CO₂ captured and, given the project's multi product potential, the options available with existing technologies to utilise the remaining CO₂ in the production of commercial fuel products. These options could drive CO₂ capture and utilisation to over 90% of CO₂ generated. It is also notable that synthetic fuels ('synfuel') produced from the Fischer – Tropsch process have a very low emissions profile. F-T diesel, for example, is low in particulate matter, has ultra low sulphur content and when used in engines optimised for it yields 10% higher efficiency than achievable with conventional petroleum diesel, resulting in lower CO₂ emissions overall.

We have two principal concerns about an across the board emissions intensity limit:

1. It is not necessary when broad based climate change policy (emissions trading scheme or carbon tax) is in place

The advent of Federal 'Clean Energy Future' legislation and the commencement of a pricing system in 2012 is designed to force business to reduce their emissions profile. This is precisely the sort of driver that has led Altona to include measures to mitigate the Arckaringa Project's CO₂ emissions. A State based CO₂ emissions intensity limit or any other State based scheme is effectively a "double whammy" and, as a result, would be inefficient and a strong negative signal for investment in the State economy. The Discussion Paper itself, and previous announcements by the SA Government, indicated that the emissions intensity limit would be a 'transitional measure pending the introduction of a national carbon policy'. Now that such a national policy is in place, there is no longer a defensible case for a separate emissions limit.

2. The emissions limit could discriminate, perhaps for inadvertent and technically misjudged reasons, against the electricity generation component of integrated CTL (or GTL) and Power plants and thus discourage investment in an industry which has the strong potential to alleviate the State's imported fuel dependence and base load power shortage.

The Discussion Paper and supplementary report from WorleyParsons highlights the particular case of integrated gasification, synfuels and power production and the technical difficulty in "allocating" emissions between electricity generation and the other processes (gasification, separation, gas clean up, Fischer-Tropsch liquids, final product refining).

We believe that the the SA Government should logically accept the evaluation of its technology consultant, WorleyParsons, and ensure therefore that the integrated process of CTL (associated with the manufacture of syngas and synfuels) and the use of coal as feedstock for the manufacture of other end products such as fertiliser are excluded from any across the board CO₂ emissions intensity limit. At most, Altona would propose that a case by case approach be adopted, in line with the recommendation proposed by WorleyParsons: that is, if the Government accepts that it is not possible to reliably allocate an emissions intensity to electricity generation for CTL and similar integrated *projects*, then *"Accordingly, it is proposed that the emissions intensity threshold for these projects will be considered on a case-by-case basis"*.

However, in considering projects on a case by case basis, the proposal to apply an emissions limit only to "sent out" electricity poses a further risk of unfair discrimination in those cases where power is not only consumed in the project but where there is power available for export to the grid (as is proposed for the Arckaringa Project).

Applying what could already be an arbitrary calculation and allocation of CO₂ emissions just to the "sent out" component of electricity produced would significantly disadvantage integrated CTL and Power technology compared to conventional gas-fired technologies.

Should an emissions intensity threshold be introduced, Altona welcomes the assurance that amendments to the Electricity Act will be sufficiently flexible to accommodate the unique nature of integrated CTL and Power projects. However, we would expect that additional consultation will take place in relation to the specific amendments proposed so that there is no unintended effect of excluding such projects from being deployed.

On other issues, Altona would support

- Scope 2 emissions being excluded from any emissions intensity methodology
- a minimum limit of 30MW plant size for the CO₂ emissions intensity standard, noting that remoteness to the national electricity grid or insufficient capacity of existing transmission infrastructure to meet additional load requirements will mean that diesel power generation is the only economic option available for many remote communities and future mining operations.

Altona Energy
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