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Santos Comments on the "Review of Energy Market Frameworks in light of climate change Policies: 1st Interim Report" by the Australian Energy Market Commission (AEMC)

Santos welcomes the opportunity to provide comment on the 1st Interim Report on the review of Energy Market Frameworks in light of the introduction of the Federal Government's Carbon Pollution Reduction Scheme (CPRS) and the expansion of the Mandatory Renewable Energy Targets (MRET). The implementation of these two schemes will have far reaching implications on the electricity and gas markets in Australia.

Santos is a major supplier of domestic gas in Eastern Australia and has recently announced plans to move into the gas-fired electricity generation market. Santos supports the need for a carbon impost and strongly endorses the implementation of a market based mechanism, such as a cap and trade system like the CPRS, as the lowest cost path to the achievement of emission reductions. As a result of this support for a market based approach, Santos is sceptical of overt government or regulator interventions into the market as it strongly believes these lead to inefficiencies and significantly reduces the benefits of a market based scheme such as the CPRS.

Santos endorses the key initial finding of the review concerning the effect of the CPRS on the wholesale markets and investments, namely:

……. The existing arrangements governing how wholesale electricity and gas are traded appear capable, without fundamental change, of promoting efficient, reliable and secure energy supplies in the context of the CPRS……

Santos believes the regulator should resist major interventions in the market and should work through the existing mechanisms to meet the challenges imposed on the networks by the CPRS and MRET. Though the changes to the electricity and gas network over

time will be potentially quite large, Santos endorses the AEMC's initial findings that the present market mechanisms are, in general, able to cope with these changes and ensure reliability, safety, investment and customer protection for the foreseeable future. The only significant exception to this view is Santos' belief that the gas pipeline infrastructure market is not sufficiently developed to allow the efficient matching of gas supply and large, abrupt changes in demand in the future.

Santos would like to make the following detailed comments on the initial review findings:

Short-term management of reliability

The detailed AEMC Reliability Panel review has suggested a number of excellent modifications that Santos agrees will aid the electricity market in adjusting to the impending future changes. Santos does not see any need for further changes to the relevant mechanisms at this stage.

Transmission investment for new connections

Santos agrees with the Review's findings that there is a need to reduce the friction encountered by new entrants in the electricity generation market due to delays and costs in connecting to the transmission network. It is in the market's interest to ensure this friction is reduced as this has flow on effects on the reliability of the network, particularly as it adjusts to changes in demand and supply patterns. The need for reducing "connection friction" is very important regardless of whether a CPRS or MRET are introduced.

Managing network congestion

Santos agrees with the review findings that the issue of network congestion is closely aligned to network augmentation. Again, Santos believes the correct mechanisms are in place to analyse the cost versus benefits of augmentation and then prioritise network builds that resolve issues such as network congestion. Santos also agrees that the issue of network congestion is worthy of more detailed analysis as it may have a large effect on the profitability of new entrants. However, Santos believes the

important issue for the review is whether the existing funding profile for network augmentation is sufficient given the likely need for network changes as a consequence of the introduction of the CPRS and MRET.

Santos believes a key finding of the AEMC review should be the recommendation of an appropriate capital expenditure level and funding mechanism that enables the networks to meet the key required outcomes of efficiency, reliability, security and consumer value in light of the introduction of the CPRS and MRET.

Santos would be supportive of the review engaging resources to undertake more detailed modelling of likely network congestion scenarios and network augmentation requirements.

Confidential information has been omitted (here) in accordance with section 48 of the National Electricity Law.

Convergence of Gas and Electricity Markets

Santos believes that the Review should re-examine the question of the ability of the existing gas infrastructure to adjust due to the increases in both the level and variability of demand for natural gas with the introduction of the CPRS and MRET schemes.

In relation to question Issue A1, Santos believes the convergence of the gas and electricity markets in the eastern states is a significant issue and deserves further progress in analysis under the review.

The reason for Santos' concern is that the quantum of increase in gas demand due to a commercial sized, gas-fired, base-load, power station is very large compared to the size of the overall Eastern Australian (EA) gas market. In fact a single 500MW unit will increase the demand for gas by 4-5% across the entire EA gas market. This compares to an increase in electricity generation capacity by the same unit of roughly 1% for the EA generation capacity. Santos does not share the Review's confidence that the present gas market framework can efficiently accommodate this

large change in gas capacity, particularly when the demand for electricity may necessitate the commissioning of one of these 500MW units every year in Eastern Australia. Of particular concern are the abrupt changes in the required pipeline capacity, and storage for the delivery these large increases in gas demand.

In Santos' view there is still significant friction in the flow through of future gas demand to the investment in long distance pipeline infrastructure. Santos believes the change to include the overseeing of a lot of the regulation of this infrastructure by AEMO is a positive development. However there is still much work to be done in order to make this a flexible and efficient market.

As outlined in the Review, addressing these issues is particularly important given the likely major role of natural gas in the future electricity generation network. Santos outlines below the key benefits of gas that it believes will drive the increased dependence on the flexibility and reliability of the supply of natural gas.

The Role of Natural Gas in the Electricity Generation Network

In short, natural gas presents the following benefits for Australia in terms of supporting practical solutions aimed at delivering clean, cheap energy:

- It is a clean energy source, with gas-fired power generation emitting between 40 to 70% less GHGs than coal-fired power generation;

- It has a far lower water intensity, using a fraction of the water per Mwh as an existing coal-fire power station;

- Gas-fired power generation has a small environmental footprint (15 hectares for 1,000MW) and hence low community visibility and infrastructure requirements;

- **Gas-fired power generation is an immediately available and reliable energy source, capable of producing peaking, intermediate and baseload power generation;**

- **The flexibility in gas-fired power generation is a perfect partner for intermittent renewable energy sources in ensuring smooth supply-side dynamics in, and the integrity of, the electricity sector;**

- Australia's natural gas reserves are abundant and in close proximity to the major gas demand nodes; and

- It is affordable, with gas-fired power generation competitive against both brown and black coal fired power generation under a modest carbon price.

In its 2007 "Climate Solutions - Vision for 2050" Report, the World Wildlife Foundation (WWF) identified replacing "high-carbon coal with low-carbon natural gas" as having significant short and medium term potential in avoiding locking in higher emissions from coal, and buying time for the deployment of zero-emission technologies.

Santos believes that wherever possible policy makers should seek to establish a level laying field for energy investment in order to provide clear investment horizons for market participants and ensure the lowest cost outcome is achieved. It is important to develop, deploy and then support market-based mechanisms that will then decide on the most efficient generation and network configuration for the Australian economy.

Finally, Santos would like to state that it endorses the views put forward in the submission by the Australian Petroleum Production and Exploration Association (APPEA).