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The Mount Alexander Sustainability Group submission to the Cleaner Future for Power Stations Interdepartmental Task Group on an Emissions Standard for power generation in Australia.

The Mount Alexander Sustainability Group (MASG) is grateful for the opportunity to provide a submission in response to the Cleaner Future for Power Stations Interdepartmental Task Group discussion paper.

We propose the following recommendations for the future emissions standard for power stations:

1. That the standard be technology or fuel source neutral and should apply to all new generators built from 1 January 2011.
2. That current best practice electricity generation emission standards be used starting at 0.4 tCO_2e/MWh for all new entrant generators from January 1st 2011, consistent with the emissions profile of current commercially available combined cycle gas generators, dropping to (ZERO) 0.0 tCO_2e/MWh from 1st January 2015
3. That the policy is applicable to actual emissions from their first day of operation and no special exemption provisions are made for generators that may be able to be retrofitted with Carbon Capture and Storage or other as yet commercially unproven technologies
4. The calculation of the emissions intensity of the generator should be on the sent out emissions measurement basis, consistant with the *Technical Guidelines: Generator Efficiency Standards* currently in operation.
5. All generators should be included in the Energy Efficiency Opportunities Program from January 1st 2011.
6. Electricity generators provide NGERS data at a facility level effective from the next NGERS reporting period commencing on 1 July 2011.
7. Expansion or refurbished generators should be required to meet the new emissions standards as at January 1st 2011.

We understand that the scientific consensus on climate change from leading climate scientists is that urgent emissions reductions are required if we are to avoid a 2°C rise in global temperature.

Nationally, there are 11 proposals for new coal fired power stations with a combined capacity of approximately 7,000 MW. Given that electricity generation accounts for almost 40% of Australia's total greenhouse pollution construction of these new generators will substantially increase the abatement needed in other sectors of the economy to meet Australia's current 2020 emissions targets of 5 - 25 per cent emissions reduction target and even greater cuts from other sectors would be required if we are to meet emissions reduction targets that reflect current climate science requirements.

An emissions performance standard will provide investment certainty for electricity generation developers. This will minimise energy price increases driven by lack of a pollution price, and minimise energy security risks created through delayed investment. It would substantially improve investment certainty in the electricity generation sector and avoid locking in long-life; high emission developments that would make it more costly to meet Australia's emissions targets now and in the future.

The Australia Government therefore has a responsibility to develop a standard strong enough to send a signal for investment in power generation that will result in development of power stations that will meet anticipated emissions standards into the future and that don't run the risk of becoming stranded assets.

Technology or fuel source neutral.

MASG understands that the actual product or service of electricity generators, whether coal, gas or powered by Renewables is electricity. It is electricity that is required by Australian's and we should evaluate the emissions generated by the production of this service irrespective of the actual generation source. We therefore request that an emissions performance standard should apply to all new generators built from 1st January 2011 irrespective of fuel source.

In that context therefore we question the premise that the review concentrate on "*Best practice emissions standards for new coal-fired power station"* but suggest that this policy should apply to all electricity generation stations that dispatch their electricity to the national grid and are of a size (30MW or larger) that are governed by the rules and guidelines of the National Electricity Market.

Current best practice emission standards

Low emissions baseload electricity can be provided entirely by commercially available renewable energy, as demonstrated in the award winning Australian Sustainable Energy Zero Carbon Australia Stationary Energy Plan produced by the Energy Research Institute of Melbourne University and Beyond Zero Emissions[1]. This plan highlights how within a decade that it is technically feasible and financially prudent to transition the Australian electricity generation to renewable energy.

The next lowest commercially available electricity generation emissions profile is from integrated combined cycle gas generators, with a profile of 0.4 tCO_2e/MWh.

We therefore suggest that the "Best practice emissions standard" should be ZERO emissions, as this technology is already commercially available and operating.

We also understand that during the transition of Australia's generation infrastructure to zero emissions that some interim peaking plants may be required to be built operating on fossil fuel gas or biogas. We would therefore propose a phased implementation of an emissions standard over the next decade to acknowledge that possibility.

An interim emissions standard should be set at a limit of 0.4 tCO_2e/MWh for all new entrant generators from January 1st 2011, consistent with the emissions profile of current commercially available combined cycle gas generators, dropping to (ZERO) 0.0 tCO_2e/MWh from 1st January 2015.

This would ensure that all generators built use current commercially available low emission "best practice" energy generation technologies. This policy would not exclude future developments of new coal or fossil gas fuelled generation plants fitted with operating Carbon Capture and Storage technology that reduces their profile to the emissions standard set.

No exemptions for hypothetical future Carbon Capture & Storage (CCS) or other technologies

MASG notes that there exists NO commercially available CCS power plants operating anywhere in the world. If the technology is proven commercially

1 See http://www.beyondzeroemissions.org/zero-carbon-australia-2020

viable then future Australian electricity generation could be supplied by fossil fuel generation plants with CCS. Whether such plants would be competitive is not certain as costs of electricity generation from renewable energy such as wind and solar thermal are declining dramatically. The policy should be technology or fuel source neutral and operate from the first day of the generators operation. It should not have allowances to enable new coal or gas plants to be built on the condition that they MAY be CCS ready at some undefined future date as this technology is not currently commercially available and may never be commercially competitive with current renewable electricity generation options. Allowing generators exemptions to operate over the standard on the premise that they may be retrofitted with an unproven technology at some future time that may never eventuate is ridiculous policy making.

Sent out emissions measurement basis

The Federal Government emissions standard should be set on a "sent out emissions measurement" basis, in line with the industry standard set out in the Federal Government's *Technical Guidelines: Generator Efficiency Standards*[2] and the reporting requirements of the National Energy and Greenhouse Reporting Scheme. This insures reporting consistency with current reporting guidelines and transparency in implementation of the policy.

Inclusion in the Energy Efficiency Opportunities Program (EEO)

Inclusion in the EEO program will highlight the opportunities for improved performance and assist with improving the performance of existing generators to whom the proposed emissions standard does not currently apply. This would complement a price on greenhouse pollution. All existing and new electricity generators should be included in the EEO from 1st January 2011.

National Energy and Greenhouse Reporting

2 Department of Environment and Heritage and the AGO Technical Guidelines: Generator Efficiency Standards http://www.environment.gov.au/settlements/ges/publications/pubs/technical.pdf (p 45) December 2010

One of the objectives of the *National Energy and Greenhouse Reporting Act* 2007 is to provide a mechanism for reporting greenhouse pollution to "underpin the introduction of an emissions trading scheme in future" and "inform government policy formulation and the Australian public". Reporting of NGERS data at facility level for energy generators is consistent with these two objectives and therefore MASG supports publication of NGERS data at a facility level for energy generators, effective from the next NGERS reporting period commencing on 1 July 2011.

Refurbishment or expansions of existing power stations

Investment in refurbishment or expansion of existing power stations should be covered by this policy. Failure to do so would otherwise place an unfair commercial advantage to those plants that are increasing their production yet are exempt from the policy and will place an unfair burden on other sectors of the economy to met emission reduction targets. Allowing refurbishments or expansion of units at existing power stations to be exempt from the new standard will also continue to delay investment in low emissions technologies.

This is pertinent as demonstrated by the approval for the refurbishment of Muja power station which will have an emissions profile of 1.3 tCO_2e/MWh, clearly far higher than current best practice for electricity generation.

Therefore we recommend that all expansions or refurbishments of power stations be subject to the policy emission standards.