GE
Kirby Anderson
Government Affairs, Finance & Policy Director
(Australia & New Zealand)

General Electric
Level 18
127 Creek Street
Brisbane QLD 4000

March 8, 2013

Committee Secretary
Senate Standing Committees on Community Affairs
PO Box 6100
Parliament House
Canberra ACT 2600

Email: community.affairs.sen@aph.gov.au

RE: The impacts on health of air quality in Australia

General Electric (GE) notes the Senate Standing Committees on Community Affairs is inquiring into the impacts on health of air quality in Australia.

The Inquiry's terms of reference are broad –

> *"The impacts on health of air quality in Australia, including:*
> *(a) particulate matter, its sources and effects;*
> *(b) those populations most at risk and the causes that put those populations at risk;*
> *(c) the standards, monitoring and regulation of air quality at all levels of government; and*
> *(d) any other related matters."*

The Inquiry was initiated through a motion in the Senate by Senator for Victoria Dr Richard Di Natale, who has stated -

> *"There is strong evidence that poor air quality contributes to the ill health of many Australians. Particulates and compounds from sources such as vehicle emissions, smog and coal dust are affecting many communities across the country."*

With reference to the latter source - coal dust - GE is working with industry in Australia and overseas to examine and implement solutions to suppress dusting at various stages in the mining, handling, transport and consumption chain, as well as power plants and terminals.

GE notes coal dust is an issue Australian regulators have recognised in terms of workplace health and safety, environmental impact for new project assessment and proponents, and in response to community concerns.

For instance, in Queensland:

- the *Coal Mining Safety and Health Regulation 2001* (Queensland) requires a coal mine's safety and health management system to limit each coal mine worker's exposure to respirable dust;
- new coal mine projects must address in the Terms of Reference for an Environmental Impact Statement impacts, such as dust, and mitigation measures against these impacts on existing air quality; and
- in 2012, the Queensland Department of Science, Information Technology, Innovation and the Arts undertook a month-long coal dust monitoring program on the rail corridor at Tennyson, Brisbane.

On the latter, an on-line petition currently before the Queensland Parliament seeks –

> *"the House to require all coal trains operating on the West Moreton Coal System to be 'veneered' as a minimum standard and for this to be made enforceable by way of legislation with a sufficient deterrent penalty for any non-compliance as from June 30, 2013"*.

For the information of the Committee, GE can advise of its range of chemical dust suppression programs are offered for the mining, minerals and power industries, treating ore, concentrate, spoils and tailings dust at surface and underground mines, concentrators, storage and transshipment locations.

GE's experience indicates that programs such as wetting agents, binders, crusting agents, foaming agents and foam binders have demonstrated:

- reduced dusting at generating stations and coal terminals with up to 90% less dust during unloading, stack-out and reclamation;
- significant reduction of oxidation;
- significant reduction of BTU losses due to oxidation and weathering; and
- reduced in-transit coal losses from rail cars.

From GE's experience and work with customers, dust suppression solutions are prioritized for workplace health and safety, environment (minimising contamination and pollution), reduced inventory losses, reduced water and energy usages for dust control.

Last month, GE released the results of extensive research and testing to quantify the effectiveness of applying anti-oxidations through GE's CoalPlus™ technology. The accompanying report for this work, *"Delaying Spontaneous Combustion of Reactive Coals through Inhibition"*[i], was presented to Australian Coal Operators' Conference held at the

University of Wollongong. While this work focused on applying the anti-oxidant product to control spontaneous combustion management control, the report acknowledged that *"the chemical agent has an added benefit as it also acts as a dust suppressant"*.

In summary, GE would draw the Committee's attention to the commercial availability of solutions, and the capability of these solutions, to manage coal dust emissions throughout the chain of mining, handling, transportation and consumption chain.

GE believes it is appropriate for project proponents, through the EIS process as aforementioned, to detail coal dust impacts along, with other air quality impacts, and the mitigation measures and monitoring programs it proposes to implement. In addition, initiatives along the supply chain to manage and monitor coal dust emissions warrant ongoing support.

Kirby Anderson
Government Affairs, Finance and Policy Director
General Electric Australia & New Zealand

[i] B. Beamish, P. McLellan, H. Endara, U. Turunc, M. Raab and R. Beamish, *"Delaying spontaneous combustion of reactive coals through inhibition"*, 13th Coal Operators' Conference, University of Wollongong, The Australasian Institute of Mining and Metallurgy & Mine Managers Association of Australia, 2013, 221-226.