6 May 2016

Emissions Reduction Fund submissions
Policy Framework Branch
Department of the Environment
GPO Box 787
CANBERRA ACT 2601

Via email: emissions-reduction-submissions@environment.gov.au

Australia's Gas Networks
Emissions Intensity Benchmark Considerations

To whom it may concern.

The Energy Networks Association (ENA) welcomes the opportunity to make a submission to the Department of the Environment in response to its *DRAFT Emissions Reduction Fund: Safeguard Mechanism – Emissions Intensity Benchmark Guidelines* published in April 2016.

The ENA is the national industry association representing the businesses operating Australia's electricity transmission and distribution and gas distribution networks. Member businesses provide energy to almost every household and business in Australia.

ENA supports the development of effective climate change and carbon abatement policy initiatives, which promote efficient outcomes and investor certainty. Australia requires an enduring framework for the monitoring and abatement of its greenhouse gas emissions in line with international obligations.

The ENA supports greenhouse gas abatement reduction programs that provide a least cost, technology neutral solution to emissions reduction. The ENA does not support abatement programs that are not fuel neutral, that distort markets by supporting specific technologies over others or create uncertainties for business.

A number of ENA gas and electricity members have historically reported "Scope 1" emissions over 100,000 tonnes of CO_2-e under the *National Greenhouse and Energy Reporting Act 2007*. Under the ERF, it is understood that the relevant networks would be subject to measures proposed under the Safeguard Mechanism and Emissions Intensity Benchmarks for expansions.

Emissions Intensity Benchmark Guidelines

The ENA understands that Benchmarks will only be applied in circumstances of new facilities or a significant expansion in capacity of an existing capacity. The Guidelines indicated that a significant expansion is 20% or more.

It is also understood that the Benchmark will reflect the emissions intensity of the best performing 10% of facilities in that sector, and that this Benchmark will then be multiplied by the production capacity of that new facility, or expansion, to calculate the Baseline for that new facility, or expansion.

The draft guidelines appear focused on large capital investments of new technologies and in such cases a benchmark approach to setting the baseline would encourage investment in technologies which lower greenhouse gas emissions. However, such a mechanism would not consider facilities that experience organic growth such as gas networks.

Issues for Gas Networks

The Safeguards regime threshold is likely to capture a number of gas distribution networks. Gas distribution network service providers continually seek to minimise fugitive emissions as they are already subject to direct financial penalties in the form of having to 'make good' losses in the form of 'unaccounted for gas' in the distribution system.

Gas distribution networks are subject to economic regulation of operating and capital efficiency, and are incentivised to undertake efficient network investments, which include consideration of losses.

The efficient operation and extension of a gas distribution network may result in an increase in the quantum of greenhouse gas emissions through network losses, for instance due to:

- extensions to the geographical extent of the gas network, which may be ***beyond the control of the distribution business*** (which has a regulatory obligation to connect new residential and commercial customers upon request); a commercial initiative or in response to government initiatives such as the Victorian Government's Energy for the Regions program.

- promotional activity ***by a third party*** (such as a retailer) that results in the addition of new connections on an existing network.

Gas networks large enough to produce over 100,000 tonnes of CO_2-e generally have around 500,000 to 700,000 customer connections. For these networks, it is not feasible to expand the network by at least 20%, or add the equivalent of over 100,000 connections, within a single year due to logistical effort and investment required to extend the network to this extent. Organic growth rates are in the order of 2% per annum so it could take over a decade for networks to reach this 20% expansion criteria.

The emission intensity of gas distribution networks vary significantly to reflect the different characteristics of the network. This is a function of the number of connections per km of network, the type of connections (e.g. residential or commercial) and the amount of gas being used within the network, which is largely a reflection of temperature variation across Australia. For example, in Victoria, where the gas penetration is approximately 90%, the average residential customer consumes about five to six times more gas compared to those in Queensland. Applying the top performing 10% of network businesses as the benchmark may not reflect these other characteristics that are outside of the control of networks.

Regulatory obligations make it likely that organic growth will occur within gas distribution networks. However, the proposed guidelines will not allow gas distribution network baselines to be adjusted, resulting in increases to the cost of providing gas services to customers and the distortion of technology competition within energy markets, without a demonstrable environmental benefit.

Application of intensity benchmarks to gas networks.

Calculating the emissions for networks requires consideration of the network characteristics, for example, the physical size of the network, the number of connections, and the gas consumption through that network. The Emissions Intensity Benchmark Guidelines refer to production variables of "widget material extraction" or "widget processing". The benchmarks are expressed in terms of mass of CO_2-e per unit volume or mass of material or number of units. It further proposes to adopt the best

performing 10% of the sector as the level for setting the benchmark for a new or significantly expanded facility. This approach cannot be easily applied across network businesses as the proposed method does not account for different characters of network. For example, the top 10% of the sector may represent an inner metropolitan network that has a large number of connections per km of network and has high gas consumption rates. It would be inappropriate to apply this emission intensity to networks expansions in regional Australia which may have a low level of connections per km of network and low gas consumption rates.

Supporting the ERF intention

The intention of the Emissions Reduction Fund is to provide incentives for emissions reduction activities across the Australian economy[1]. The safeguard mechanism will protect taxpayers' funds by ensuring that emissions reductions paid for through the crediting and purchasing elements of the Emissions Reduction Fund are not displaced by significant increases in emissions above business-as-usual levels elsewhere in the economy[2].

Baselines are set for facilities based on historic emissions to ensure that those facilities do not increase their emissions above their baseline. This baseline can be adjusted to account for economic growth using benchmarks. These benchmarks will be based upon emissions intensity of production, and will use the best practice for that industry as the guide However, the current requirements in the guidelines (that facilities must expand by more than 20% and that a benchmark will be set using the best performing 10% of the sector) may result in gas network businesses not being able to adopt a benchmark – reflective of that network characteristics - to increase their baselines due to organic growth. Hence, networks may be excluded from adjusting their baselines as a reflection of economic growth.

This may create a poor outcome for overall emission reductions. Direct use of energy in the home has a lower emission intensity compared to using electricity from the grid. For example, while the electricity generation technology mix is changing, the average emission intensity of the Australian electricity is 0.79 t CO_2-e per MWh. However, the emission intensity for direct use of gas at the premises is 0.2 tCO_2-e / MWh. An increased penetration of gas connections and gas appliance usage is therefore likely to promote greenhouse gas emission reductions, with improvements of approximately 75%. The Safeguard mechanism and benchmark guidelines should therefore ensure that the increased emissions from this organic growth can be considered in revising the baselines for gas networks, effectively ensuring a fuel neutral approach by removing a potential disincentive and additional cost from gas network businesses. From a holistic policy perspective, the reductions in emissions from enabling the direct use of gas are likely to be substantial. By contrast, there is unlikely to be a material environmental benefit in a Safeguard mechanism that increases the cost of gas services to customers so as to discourage organic growth in gas distribution network demand.

Working Group

The Department proposes that technical working groups be established for each relevant sector. The ENA recommends that a working group be established for the gas network sector. This working group will be familiar with the issues highlighted above and could assist in developing the methodology based on best practice to account for the organic growth required of networks and the differing emission intensities of networks to reflect the types of future connections and the type of customers.

[1] http://www.environment.gov.au/climate-change/emissions-reduction-fund
[2] https://www.environment.gov.au/climate-change/emissions-reduction-fund/publications/factsheet-erf-safeguard-mechanism

Developing the methodology for gas networks benchmarks will support all the benchmark principles outlined in the draft guidelines.

If you have any queries, please contact Dr Dennis Van Puyvelde at:

- email: dvanpuyvelde@ena.asn.au
- Phone: 02 6272 1548

Yours sincerely,

John Bradley
Chief Executive Officer