



Analysis of the NSW Greenhouse Gas Abatement Scheme

Sources of registered NGACs, market concentration, reporting transparency, additionality, economic efficiency, scenarios out to 2012, and policy implications.

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The NSW Greenhouse Gas Abatement Scheme (NGAS) has been underway for over two years. It aims to reduce the per-capita greenhouse gas emissions associated with electricity consumption in the State. NSW Greenhouse Gas Abatement Certificates (NGACs) are used to ensure compliance.

A detailed analysis of the NGACs created for the 2003 compliance period, and scenario analysis exploring its possible future performance demonstrate that:

Most 2003 NGACs come from just a few types of projects: Waste coal mine gas and landfill gas projects were the main sources of NGACs for 2003, registering just over two thirds of the total between them. Together with natural gas-fired and coal-fired plant they made up just under 92% of the total. Just over 40% of the 2003 NGACs were awarded to projects outside NSW.

There is evidence of market concentration in the supply of, and demand for NGACs: There is a high level of market concentration. A single participant, Integral Energy, created almost half (46%) the 2003 NGACs, and together with EDL (17%) and AGL (8.5%), created over 70%. Furthermore, the three NSW government owned electricity retailers represent the majority of the NGAC liability. Markets with this level of concentration are at risk of manipulation by participants with market power.

Reporting transparency is lacking: The lack of publicly available data often makes it difficult to assess both how a particular project created NGACs and the likelihood that the underlying emission reduction activity was additional. The main problems relate to which method or equation was used, how baselines were calculated, and how compliance was achieved.

Complex rules allow NSW electricity related emissions to increase even while retailers meet a declining state target: The complex 'imputed' linkages between the scheme's stated policy intent and the 'baseline and credit' rules mean that physical emissions can continue to increase even while the scheme's declining State per-capita target is met and large numbers of NGACs are created.

Emissions are greater than implied by the scheme: A significant proportion of low emission plant does not have to increase generation compared to their level of output before the scheme in order to create NGACs. Thus their activities that created NGACs won't necessarily change the emissions intensity of electricity sold in NSW.

Additionality is not clear: The level of additionality (emission reduction activities that occurred only because of the scheme) is likely to be low. This particularly applies to Category A fossil fuel plant, and to biogas plant which together account for over 75% of the NGACs created for 2003. NGACs created directly from mandated retailer RECs obligations made up 28.5% of total NGACs surrendered in 2003 and reduce additionality further.

Economic efficiency may be low: The cost of creating NGACs includes numerous transaction costs in accreditation, NGAC creation, auditing, registry fees and trading. These may be quite significant as IPART has rigorous auditing requirements, albeit requirements that don't necessarily test additionality. Relatively high transaction costs and low additionality suggest low economic efficiency for NGAS. There is also considerable potential for windfall profits for NGAC providers and/or retailers at the expense of NSW electricity customers.

Additionality through to 2012 may be low: Through to 2012 additionality will be reduced by (i) non-additional NGACs from existing projects that continue over the life of the scheme, (ii) policy overlap between NGAS and other greenhouse related policy measures, and (iii) new generation in the NEM driven by BAU growth in electricity demand. Scenario analysis using conservative assumptions suggest that 70% or more of all NGACs created over the scheme's life may not represent additional abatement. The implications of this in terms of the scheme's effectiveness, efficiency and price impacts would be significant. Proposals to extend the life of NGAS to 2020 don't seem likely to resolve some of these underlying additionality questions.