

**VICTORIAN CIVIL AND ADMINISTRATIVE TRIBUNAL**

**ADMINISTRATIVE DIVISION**

**PLANNING AND ENVIRONMENT LIST**

VCAT REFERENCE NOS. P1816/2011, P1818/2011  
P1820/2011, P1822/2011, P1829/2011 & P1846/2011

**In P1829/2011 & P1846/2011:**

**APPLICANT** Dual Gas Pty Ltd  
**RESPONDENT / AUTHORITY** Environment Protection Authority

**In P1816/2011, P1818/2011, P1820/2011 & P1822/2011:**

**APPLICANTS** P1816/2011 Martin Shield  
P1818/2011 Doctors for the Environment Australia Inc.  
P1820/2011 Environment Victoria Inc.  
P1822/2011 Locals into Victoria's Environment Inc.  
**RESPONDENT / AUTHORITY** Environment Protection Authority  
**RESPONDENT** Dual Gas Pty Ltd

**OUTLINE OF SUBMISSIONS  
ON BEHALF OF ENVIRONMENT VICTORIA INC.  
AND  
LOCALS INTO VICTORIA'S ENVIRONMENT INC.**

*Introduction*

1. This Outline of Submissions is prepared on behalf of Environment Victoria Inc. (*EV*) and Locals Into Victoria's Environment Inc. (*LIVE*) in accordance with the Orders of the Tribunal made on 18 July 2011.
2. This is an application under s 33B of the *Environment Protection Act 1970* (Vic) (*EP Act*) for review of the decision of the Environment Protection Authority (*EPA*) to grant Works Approval No. WA67043 (*the Works Approval*) in relation to a proposal to construct the Dual Gas Demonstration Plant (*DGDP*) in Morwell, Victoria (*the proposal*).

3. The application is brought on the basis that that the use of the works permitted by the works approval would result in the emission of waste, namely carbon dioxide or carbon dioxide equivalent gases,<sup>1</sup> to the environment in Victoria which will be inconsistent with State Environment Protection Policy (Air Quality Management) (*SEPP (AQM)*)

*The Environmental Context*

4. The principal issue in EV and LIVE's review application is the level of greenhouse gases that will be emitted by the DGDP. Greenhouse gases are a matter of concern because they contribute to anthropogenic climate change.
5. Anthropogenic climate change poses a serious threat to Victoria's environment, its health, its economy, and its way of life. This has been recognised by the both Federal and State governments, as well as innumerable other bodies.
6. Among other things, climate change has led to, and is expected to continue to result in:
  - (a) Increased temperatures;
  - (b) An increased frequency of extreme weather events, including floods and bushfires; and
  - (c) Sea level rise resulting increased erosion and the inundation of coastal environments.
7. These changes have begun to, and are expected continue to:
  - (a) Have direct and indirect health impacts on human health;
  - (b) Damage and destroy infrastructure, including vital infrastructure;
  - (c) Impair productive agriculture;
  - (d) Adversely affect existing ecosystems, including through the destruction or fragmentation of habitat and the exacerbation of existing stressors.

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<sup>1</sup> The definition of 'waste' in s 4 of the *EP Act* includes 'greenhouse gases', such as carbon dioxide, methane, nitrogen dioxide, etc.

8. As it stands, some climate change is inevitable. How much is uncertain. As the Department of Sustainability and Environment has written:

We are already committed to global warming of at least 0.6°C (relative to 1990) by 2030. Thereafter, we have a choice – the extent of climate change we experience will depend on emissions we release over the next couple of decades and beyond.<sup>2</sup>

*The Proposal*

9. Dual Gas Pty Ltd (*Dual Gas*) proposes to construct and operate the DGDP. The plant is fired by a mix of brown coal and natural gas.
10. If constructed at 600MW, the DGDP will add at least 3 - 3.2 million tonnes of CO<sub>2</sub> or CO<sub>2</sub>e gases to the atmosphere every year. This figure is equal to approximately 5% of Victoria's total emissions from electricity production in 2009. The DGDP has a lifespan of at least 30 years and potentially significantly more.<sup>3</sup>
11. Greenhouse emissions intensity (*GEI*) measures the quantity of CO<sub>2</sub>e produced by the combustion of fuel at a power plant against the megawatt-hours of energy produced by the combustion of that fuel. It may be considered a measure of 'carbon efficiency'. GEI may be calculated on an 'as generated' or 'as sent out' basis. The use of the 'as generated' figure understates the quantity of emissions produced per megawatt-hour of energy sent to the electricity grid, however, as it does not take into account the fact that power is consumed by the power plant itself, a factor which varies depending on the technology used.
12. The GEI of this proposal will be at least 0.78 tCO<sub>2</sub>e/MWh on an as generated basis and may be as high as 1.05 tCO<sub>2</sub>e/MWh. For comparison, the GEI of a modern natural gas fired power plant is 0.34 tCO<sub>2</sub>e/MWh as generated – less than half that of the DGDP.

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<sup>2</sup> DSE, 'Climate Change in Victoria: 2008 Summary', <http://www.climatechange.vic.gov.au/publications>

<sup>3</sup> The Hazelwood Power Station is currently in its 50<sup>th</sup> year of operation and has been allocated sufficient coal to permit it to operate until 2031, subject to the operation of the carbon price.

*The Legislative Framework*

13. On an application for review under s 33B, the Tribunal 'stands in the shoes' of the EPA and makes the 'correct or preferable' decision. In doing so, the Tribunal has all the powers, functions and obligations of the EPA.
14. The principal piece of primary legislation relevant to the Tribunal's decision is the EP Act. This is supplemented, in relation to greenhouse gases, by the *Climate Change Act 2010* (Vic).
15. The EP Act also permits the making of subordinate legislation, in the form of State Environment Protection Policies (*SEPP*), and requires that any relevant SEPP be considered in decision-making. The State Environment Protection Policy relevant to greenhouse gas emissions is SEPP (Air Quality Management) (*SEPP (AQM)*).

*The Environment Protection Act 1970*

16. The purpose of the *Environment Protection Act* is to protect the environment. It does so 'having regard to the principles of environment protection' contained in ss 1B - 1L.
17. The principles of environment protection in those sections essentially restate the principles of ecologically sustainable development stated in the *National Strategy for Ecologically Sustainable Development 1992*.
18. In addition to the objects of the legislation, Part III, Division 2 of the EP Act governs works approvals specifically. Relevantly:
  - (a) Section 19B(7) confers a discretion to grant works approvals, but does not specify any relevant considerations;
  - (b) Section 20C(2) requires that the decision-maker have regard to any applicable SEPP and ensure that any approval is consistent with that policy; and
  - (c) Section 20C(3) authorises the decision-maker to refuse an application on the basis that the approval of the application would:

- (i) Be contrary to, or inconsistent with, a SEPP;
- (ii) Be likely to cause, or contribute to, pollution; or
- (iii) Be likely to cause an environmental hazard.

19. The disjunction between 'contrary to' and 'inconsistent with' in s 20C(3)(a) makes clear that a proposal may be refused as inconsistent with a SEPP, even if it is not necessarily contrary to the SEPP.

*The Climate Change Act 2010*

20. The *Climate Change Act 2010* requires consideration of climate change and greenhouse gas emissions in decision-making under the EP Act.

21. Section 14(2) requires the Tribunal, in making decisions under the EP Act, to consider the 'potential impact of climate change' and 'the potential contribution to Victoria's greenhouse gas emissions'.

22. Section 14(3) of the Act defines 'potential impacts of climate change':

In having regard to the potential impacts of climate change, the relevant considerations for a person making a decision or taking an action are potential-

- (a) biophysical impacts;
- (b) long and short term economic, environmental, health and other social impacts;
- (c) beneficial and detrimental impacts;
- (d) direct and indirect impacts;
- (e) cumulative impacts.

23. Section 14(4) defines 'potential contribution to Victoria's greenhouse gas emissions':

In having regard to the potential contribution to Victoria's greenhouse gas emissions, the relevant considerations for a person making a decision or taking an action are potential-

- (a) short and long term greenhouse gas emissions;
- (b) direct and indirect greenhouse gas emissions;
- (c) increases and decreases in greenhouse gas emissions;
- (d) cumulative impacts of greenhouse gas emissions.

24. As such, section 14 of the *Climate Change Act 2010* (Vic) requires a comprehensive consideration of the greenhouse gas and climate change impacts associated with a proposal, including cumulative impacts.
25. The *Climate Change Act* was not in force at the time of the original decision and, as such, it is not clear that the comprehensive assessment required was undertaken. On merits review, however, the Tribunal must consider the law as in force at the time of the review.

SEPP (AQM)

26. SEPP (AQM) 'establishes a framework for managing emissions',<sup>4</sup> including greenhouse gas emissions. As a mandatory consideration under the EP Act, its contents guide the discretion under s 19B(7).
27. Part I of the SEPP sets out the Policy Framework, with sets out the aims, principles and intent of the SEPP. Clause 13 of the SEPP provides that, in making decisions, EPA will apply the principles and pursue the aims and intent of the policy.
28. Clause 33(1) of the SEPP requires generator of greenhouse gases to manage their emissions in accordance with clauses 18 and 19. Relevantly:

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<sup>4</sup> Preamble to the SEPP.

- (a) Clause 18(1)(a) provides that management of emissions means 'avoiding or minimising emissions in accordance with the preference established in the principle of the waste hierarchy';
- (b) Clause 18(3) provides that a generator of emissions must 'manage their activities and emissions in accordance with the aims, principles and intent of the policy'; and
- (c) Clause 19(1) provides that a generator of a new source of emissions must apply best practice to the management of those emissions.

#### The Protocol for Environment Management – Greenhouse Gases

- 29. The EPA has issued a protocol for the management of greenhouse gases under clause 33 of the SEPP.
- 30. The Protocol is of limited relevance to this matter as it is directed principally to energy consumers, rather than energy producers. Moreover, as sub-subordinate legislation, it cannot be used to construe the SEPP itself.

#### *The review*

- 31. As stated above, s 20C(3)(a) permits the Tribunal to refuse an application that is inconsistent with an applicable policy. As also noted above, inconsistency does not require antipathy. It is enough that the proposal is not harmonious with the SEPP, whether its technical requirements or its aims, principles and intent.
- 32. Not every inconsistency with SEPP will necessarily justify refusal of a works approval. In this case, the inconsistency between the SEPP and the proposal is, however, sufficiently pervasive to warrant refusal.
- 33. The proposal is inconsistent with the SEPP for two reasons:
  - (a) The proposal does not apply best practice in the management of emissions, contrary to clauses 18 and 19; and

(b) The proposal produces greater emissions than comparable energy production technologies without producing any additional benefit, contrary to the aims, principles and intent of the SEPP.

34. As the second point suggests, in some circumstances, inconsistency with the SEPP may be justified by some countervailing benefit resulting from the proposal. The material in this case does not provide such a justification. The economic and environmental benefits of the proposal are uncertain, whilst the social benefits are highly confined. By contrast, the level of emissions from the DGDP is certain and significant and will contribute to the environmental, economic and social harms associated with climate change which are wide ranging and massive.
35. Accordingly, the Tribunal should grant the applications for review and refuse the grant of the works approval. It follows that Dual Gas' applications for review must also be dismissed.

Best practice

36. Best practice is defined in Part IV of the SEPP as:

the best combination of eco-efficient techniques, methods, processes or technology used in an industry sector or activity that demonstrably minimises the environmental impact of a generator of emissions in that industry sector or activity

37. The definition of 'best practice' requires identification of the relevant sector or activity for comparison purposes.
38. In this case, the EPA elected to define the relevant sector as electricity generation from brown coal. This narrow conception of the relevant sector is unrealistic and perverse.
39. The decision to treat electricity generation from brown coal as the relevant industry sector is unrealistic in that:

- (a) Electricity generated from brown coal is indistinguishable from electricity generated from other sources, except on the basis of its emissions intensity;
- (b) Electricity generated from brown coal is bought and sold in the same market – the National Electricity Market<sup>5</sup> – as electricity generated from other sources;
- (c) Brown coal power generation has the capacity to displace, and compete for investment with, other power generation technologies in the NEM including cleaner power generation technologies such as natural gas;
- (d) In order to meet its environmental obligations, the DGDP is required to operate using natural gas as a fuel source for a significant proportion of time that the plant is producing electricity. To describe it as a brown coal plant is not an accurate reflection of the actual proposal;
- (e) As such, there is no basis for distinguishing between electricity generation using brown coal and electricity generation using other sources. Rather, the relevant industry sector is electricity generation and the choice of fuels is simply an aspect of best practice within that sector.
- (f) Accordingly, it would have been appropriate to consider brown coal in comparison with other energy sources used for electricity production, both fossil fuels and renewables.

40. The decision to treat electricity generation from brown coal as the relevant industry sector is perverse on a number of levels:

- (a) It is inconsistent with the treatment of other power generation technologies, such as natural gas or wind, in other environmental decision-making contexts:
  - (i) Judges, tribunals and decision-makers in this State and elsewhere have recognised the greenhouse gas advantages of natural gas, wind and other technologies over black and brown coal;

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<sup>5</sup> The National Electricity Market covers all of Australia except Western Australia and the Northern Territory.

- (ii) It is entirely inconsistent with that recognition to ignore the greenhouse gas disadvantages of coal.
  - (b) It is inconsistent with the environmental protection objectives of the legislation:
    - (i) The adverse effects of climate change are well-established;
    - (ii) It is also well-established that the emission of greenhouse gases contributes to climate change;
    - (iii) Using existing and widely available technologies, such as combined-cycle natural gas, it is possible to generate the same amount of power as the DGDP with less than half the emissions;
    - (iv) Accordingly, the additional emissions attributable to the use of brown coal are the product of choice, rather than necessity, and must be seen as entirely elective;
    - (v) It is self-evidently perverse, in a time of dangerous climate change, to let a person emit more pollution than is actually required for the purposes of whatever goal is sought to be achieved.
  - (c) If applied widely, it would permit applicants for works approvals to effectively determine the level of scrutiny to which they wish to be subject. On the approach used by the EPA, a proponent could simply select an old and inefficient process, moderately improve it and then insist on the grant of a works approval on the basis that they had demonstrated best practice in that class, notwithstanding the existence of other, less environmentally degrading ways of achieving the same goal.
41. The decision to treat brown coal power as essentially the only option is also inconsistent with the principles of environmental protection, in particular the precautionary principle and the principle of shared responsibility:
- (a) Section 1C of the EP Act and clause 7(2) of the SEPP contains a formulation of the precautionary principle and requires 'a risk weighted

assessment of the consequences of various options'. Consideration of various options and the risks associated with them would necessarily require consideration of other methods of generating the same amount of power and the consideration of doing nothing.

- (b) Section 1G of the EP Act provides that protection of the environment is a shared responsibility of society, including industry and business. By choosing not to evaluate the works approval application against the best practice existing power generation technology, EPA effectively relieved Dual Gas of that responsibility.

42. It is irrelevant to the question of best practice that Dual Gas wishes to demonstrate its IDGCC technology:

- (a) Dual Gas could have, but chose not to, applied for a research, development and demonstration approval. Such approvals are specifically intended to permit demonstration of new technologies. Instead, it chose to apply for a works approval.
- (b) Nothing in the definition of 'best practice' in Part IV indicates that the intention of the proponent is relevant to what constitutes best practice.
- (c) In deciding whether to grant a works approval, it is appropriate to have regard to the substance, rather than the form of the application. In substance, the works approval is for the operation of a power station, not for the demonstration of the IDGCC technology:
  - (i) The application is for the development and operation of a power plant. The plant is expected to run for at least 30 years. Dual Gas specifically acknowledges that, even if the IDGCC technology is not successful, it will operate the power plant for at least that time. In that event, Victoria will be left with a natural gas power plant that is demonstrably not best practice.
  - (ii) As the expert evidence acknowledges, the IDGCC technology developed by Dual Gas is, by itself, incapable of meeting the 0.8

tCO<sub>2</sub>e/MWh GEI target set by the State government. This target can only be met by running the plant on pure natural gas for a significant percentage of the time. That is to say, the plant can only meet the target if it deliberately does not use the technology it is supposedly demonstrating.

43. Compared to other power generation technologies, IDGCC brown coal is plainly not best practice. It has a higher sent-out GEI than:
- (a) Existing supercritical black coal power plants;
  - (b) IDCC black coal plants;
  - (c) Open-cycle gas power plant;
  - (d) Combined-cycle gas power plants; and
  - (e) Renewables.

*Inconsistency with the SEPP*

44. Assuming the DGDP is found to be best practice, the Tribunal retains a residual discretion under s 20C(3)(a) of the EP Act to refuse the grant of a works approval on the ground that the proposal is 'contrary to, or inconsistent with' the SEPP.
45. The proposed Dual Gas power station will have an emissions intensity of at least 0.78 tCO<sub>2</sub>e/MWh as generated. Modern combined-cycle natural gas plants have a GEI of 0.34 tCO<sub>2</sub>e/MWh. As such, the decision to use gasified brown coal creates more than double the emissions achievable through the use of natural gas with no change in the quantity or quality of the electricity produced. The comparison is even less favourable with renewable energy.
46. These additional emissions – the gap between what is achievable and what Dual Gas has chosen to achieve – are the root of the inconsistency between the SEPP and the proposal. Dual Gas' decision to generate unnecessary emissions is inconsistent with:

- (a) The goal of supporting Victorian measures aimed addressing climate change;
- (b) The precautionary principle;
- (c) Intergenerational equity;
- (d) The hierarchy of wastes;
- (e) The principle of shared responsibility; and
- (f) The conservation of biological diversity.

Inconsistency with the aims of the SEPP

47. Clause 6(3) of the SEPP provides that one of the aims of the SEPP is to support Victorian and national measures aimed at addressing climate change.

48. The primary Victorian measure for addressing climate change is contained in s 5 of the *Climate Change Act 2010* (Vic), which provides:

The Minister must ensure that, by the year 2020, the amount of Victoria's greenhouse gas emissions is 20% below the amount of Victoria's greenhouse gas emissions for the year 2000.

49. It is obvious that adding an additional 5% to Victoria's 2009 emission level will only make it harder to achieve this goal. Dual Gas observes that, if its IDGCC technology replaced other brown coal power plants, Victoria's emissions total would be reduced. Whether IDGCC technology will in fact replace existing brown coal power plants is, at best, a matter for speculation. No credible mechanism is identified by which the replacement would occur.

50. Moreover, for the reasons identified above in relation to best practice, the replacement of existing brown coal by IDGCC would continue to be less than ideal. Natural gas and renewables continues to be lower emission options that will more effectively contribute to achieving the 20% reduction target under s 5 of the *Climate Change Act*.

51. Fundamentally, a decision to emit more emissions than are required for the purpose of producing the same amount of electricity is inconsistent with, and does not support, an emissions reduction target.

*Inconsistency with principles of environment protection*

52. Section 1A of the EP and clause 13 of the SEPP both require application of the principles of environment protection to be applied to decision-making.'

Integration of economic, social and environmental concerns

53. Section 1B of the EP Act and clause 7(1) of the SEPP requires the integration of economic, social and environmental concerns.
54. This principle arose from the historical failure to give equal weight to environmental concerns in decision-making.
55. The Dual Gas proposal is inconsistent with giving equal weight to environmental concerns as its justification focuses principally on short term (and questionable) economic gains such as low electricity prices, whilst failing to address the long term impacts associated with the continued burning of brown coal.

The precautionary principle

56. Section 1C of the EP Act and clause 7(2) of the SEPP require the application of the 'precautionary principle'. As formulated in the Act and the SEPP, the principle requires:

Decision making should be guided by-

- (a) a careful evaluation to avoid serious or irreversible damage to the environment wherever practicable; and
- (b) an assessment of the risk-weighted consequences of various options.

57. The precautionary principle has a dual role. Substantively, the principle requires a particular approach to decision-making including 'an assessment of

the risk-weighted consequence of various options.’ This has been discussed above in the context of best practice.

58. In addition, to its substantive requirements of the precautionary principle, the principle requires, as its name suggest, a cautious approach to decision-making. It requires an assumption that climate change is occurring and that the DGDP will contribute to climate change.
59. It is inconsistent with taking a precautionary attitude to the risk of climate change to discharge unnecessary emissions into the climate system.

#### Intergenerational equity

60. The deliberate use of high emissions intensity fossil fuels, when other lower emission sources of power are currently available, is incompatible with notions of intergenerational equity:
  - (a) The principle of intergenerational equity requires decision-makers to have regard to the interests of succeeding generations and to seek to ensure that they are able to experience a similar standard of living to that of the current generation.
  - (b) Climate change is expected to have severe negative impacts on Victoria’s environment, its economy and its citizens’ health. These are impacts are likely to be worse for succeeding generations, as the climate change is a slow moving problem based on the accumulation of emissions in the atmosphere.
  - (c) The burning of fossil fuels to ensure cheap electricity for the current generation whilst contributing to more severe climate change for succeeding generations is flatly inconsistent with considerations of intergenerational equity.

### The hierarchy of wastes

61. Clause 7(8) of the SEPP sets out the waste hierarchy. It provides that, so far as possible, waste – which is defined in the EP Act as including greenhouse gases – should be avoided.
62. Given that more than half of the emissions in this case are avoidable, the decision to utilise brown coal is clearly inconsistent with the hierarchy of wastes.

### Shared responsibility

63. The election by Dual Gas to deliberately use technology with a higher GEI than other available technologies is not consistent with the notion of shared responsibility. It places the onus on other members of society to reduce their emissions further to make up for the unnecessary emissions produced by Dual Gas' proposal.

### Conservation of biological diversity

64. The SEPP requires that the conservation of biological diversity be a 'fundamental' consideration of decision-making.
65. It is reasonable to infer that the deliberate designation of a particular consideration as 'fundamental' is intended to give it particular force, especially as none of the other matters required to be taken into account are designated as 'fundamental'.
66. Climate change has obvious adverse impacts for various endangered species including, for example, the Mountain Pygmy Possum and Victoria's faunal emblem, Leadbetter's Possum. Any exacerbation of the impact of climate change is likely to further inhibit these species' chances of survival.
67. To permit the emission of unnecessary greenhouse gases is inconsistent with treating the conservation of biological diversity as a fundamental consideration.

*Justification*

68. Section 20C(3)(a) does not require a decision-maker to refuse an application which is inconsistent a SEPP. Instead, the decision-maker retains a degree of discretion. Nonetheless, a decision to approve a works approval that is inconsistent with a SEPP should be justifiable.
69. As explained above, the Dual Gas proposal is *prima facie* inconsistent with the aims and principles of the SEPP (AQM). Nothing in Dual Gas' application justifies or requires approval of an inconsistent application:
- (a) Dual Gas places emphasis on the need for cheap electricity. As the evidence of Dr Washusen demonstrates, however, current electricity prices in Victoria are unsustainably low. Moreover, Victoria's historically low electricity prices are the product of the externalisation of environmental impacts. The carbon price, to be introduced by the Clean Energy Bill 2011, is expressly designed to address this. Properly priced, it is not clear that brown coal will necessarily mean cheaper electricity.
  - (b) The principal justifications for Dual Gas' project turn on its desire to demonstrate its technology. In support of being permitted to demonstrate this technology, Dual Gas make three questionable claims:
    - (i) The first is that the IDGCC technology will be exported to India and China. No evidence has been produced that India or China is interested in deploying this technology. As will be discussed further below, existing black coal power power plants in China are already closely comparable to the maximum reductions achievable using IDGCC technology.
    - (ii) The second is that the IDGCC technology, if widely utilised, will result in lower emissions. No evidence has been provided to show that this utilisation will occur. In addition, the reduction to less than 0.8 tCO<sub>2</sub>e/MWh as generated is a product of Victoria's regulatory environment, rather than the technology itself, as demonstrated by

the need to burn pure natural gas for a significant proportion of the time.

- (iii) The third is that, if carbon capture and sequestration (CCS) becomes commercially viable, the DGDP would be well-placed to install it. It is not clear whether CCS will ever be commercially viable, however, even if it is currently practically possible.
  - (c) These questionable assumptions are not a proper justification for approving a project that will certainly cause the unnecessary emission of greenhouse gases.
  - (d) The Triple Bottom Line Analysis prepared by SKM provides limited, and highly confined, evidence of any social benefits from the DGDP. In particular, it does not provide any evidence of social benefits outside the LaTrobe Valley.
  - (e) In addition, the failure to properly evaluate other options means that it cannot be said that other power generation technologies would not produce the same benefits at a lower environmental cost.
70. For the reasons set out above, Dual Gas' proposal is inconsistent with the SEPP and that inconsistency is unjustified. The proposal relies upon a grab bag of uncertain benefits – a number of which are causally unrelated to the proposal – to justify the inevitable and unnecessary contribution of greenhouse gases. Accordingly, the proposal should be refused.

26 October 2011

**ADRIAN J. FINANZIO**

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