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PO Box A290  
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**RE: AEBN's SUBMISSION ON THE REGULATORY IMPACT STATEMENT FOR THE  
POEO (GENERAL) REGULATION 2008**

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The Australian Environment Business Network (AEBN) welcomes the opportunity to comment on the *Regulatory Impact Statement Protection of the Environment Operations (General) Regulation 2008*. (RISPGR) While this RIS covers the entire regulation AEBN has identified issues surrounding the changes to the Load Based Licensing (LBL) Scheme which is included in the POEO (Generation) Regulation 2008.

AEBN is an industry and business representative body specialising in environmental issues affecting its members. Collectively, its membership has a turnover in excess of \$50 billion and employs well over 50,000 people. Further information about AEBN can be found on its web site at [www.aebn.com.au](http://www.aebn.com.au).

AEBN has identified a number of issues with the proposed changes to the LBL. Some of these changes are welcome, others will cause considerable hardship to a few members. The removal of a number of industry sectors from the regulation is a welcome outcome.

Additionally, the RIS process also opens up further opportunities for improving the cost of implementation of the regulation on industry, but not impacting on the revenue received by the NSW Government nor on the environment. AEBN has provided comment on the following areas:

- Consultation
- Use of NPI Data in Setting LBL Parameters
- Consideration of other Cost Impacts
- Fee Rate Thresholds

**CONSULTATION**

Industry always welcomes consultation on any regulatory change that affects it. While consultation on the RISPR is welcome, it has been made using the minimum time permitted. Given the complexity of the proposed changes there is little time for industry to prepare a quality response on the complex scientific issues raised in the consultation draft. Without good feedback on the changes AEBN is doubtful that the real impacts of the changes can be assessed and made into regulatory improvement.

AEBN has considerable difficulties with the prior amendments made to the *POEO General Regulation* made last year, which resulted in the inclusion of summer NO<sub>x</sub> VOCs LBL fees. There was no formal public consultation on this change which resulted in an increase in LBL fees of approximately \$8 million. The NSW Government justified this action on the basis of a post election promise.

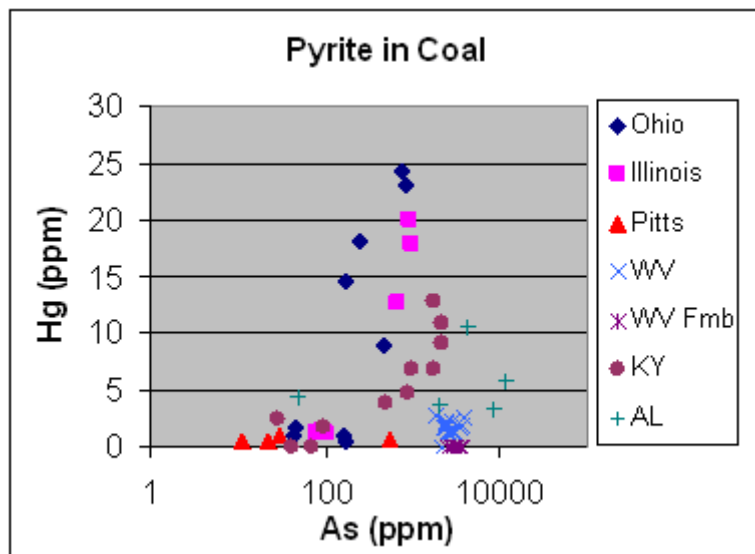
## USE OF NPI DATA IN SETTING LBL PARAMETERS

Proposed changes to introduce new substances and recover new additional fees in the RISPGR are largely based on industry reported quantities under the National Pollution Inventory (NPI). This approach may generate an approximate list of substances that could be considered for future inclusion into the LBL scheme. However, using NPI data to regulate new contaminants and also estimate future government revenue is flawed.

NPI data is notoriously inaccurate and errors of orders of magnitude are not uncommon. Most NPI handbooks are based on the United States Toxic Release Inventory (TRI) estimation techniques which related to north American industrial processes and raw materials.

For example, many NSW companies use the NPI Boiler Handbook to estimate their emissions of arsenic, lead, mercury and Benzo(a)Pyrene (B(a)P). Tables 8 to 15 in the NPI Boiler Handbook use USA data from 1995 and 1998 on a small number of US based coal fired boilers. Considerable differences in trace element occur between Australian and north American coal. In addition the Boiler Handbook is often applied to non-boiler processes, but where coal is burnt resulting further inaccuracies.

### Chart 1 Comparisons of US and Australian and International Coal Mercury Content



Plot of mercury in pyrite plotted versus arsenic content (log scale) based on reconnaissance laser ablation ICP-MS analysis of 6 U.S. eastern bituminous coal samples. [USGC](#)

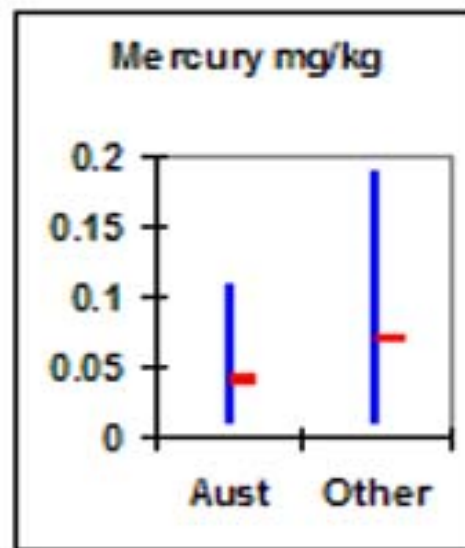


Chart compares level of mercury in Australian coal with other internationally traded coal. [CSIRO](#)

As can be seen in chart 1 the concentration of mercury in US coal is much higher, up to 240 times higher, than Australian coal. It is also common for the US TRI to adopt an environmentally conservative estimation level. As a consequence the NPI handbook data based on TRI estimation techniques can result in errors of over 2 orders of magnitude compared to actual emissions experienced at NSW industrial sites.

Concentration of Lead in:	mg/kg
Australian Export Coals	2 – 14 (3) <sup>#</sup>
Other Internationally Traded Coals	<1 – 22 (6) <sup>#</sup>
Australian Domestic Coals	3 – 18 (10) <sup>#</sup>

This [CSIRO table](#) displays the range of lead concentrations for Australian coals. In comparison north American coals can have 4 to 5 times the concentration of Pb.

For lead (Pb) the difference is narrower between North American and Australian coals. It is worth noting there is are major variations within different Australian coals. Even if the NPI handbook estimation techniques used Australian coal data, which they do not for lead, (it is based on TRI techniques and data) there should be an expectation of variability of at least 3 times.

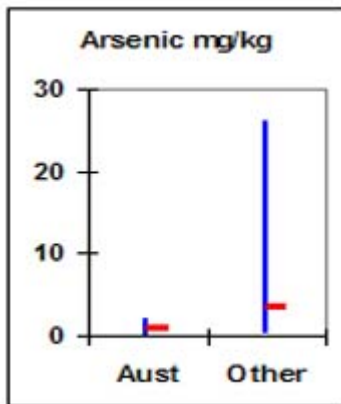


Chart compares level of arsenic in Australian coal with other internationally traded coal. [CSIRO](#)

This is not to say that all NPI data is inaccurate as many companies report far more accurately measured emissions, such as required under LBL, to the NPI annually. Such variations between accurate and NPI handbook emissions estimation techniques gives misleading ranking of sites on the NPI data base. Consequently choosing companies and industry types based on NPI ranking is a poor indicator of actual ranking and actual emissions.

Overall the use of NPI data to make regulatory changes to LBL is a poor choice. Companies targeted under the proposed changes will be required to measure far more accurately their LBL emissions for those substances at a very high cost. AEBN considers such measurement cost are an unnecessary impost on industry. A better approach would be for the DECC to undertake further indicative measurements, not to the standards or costs of LBL requirements, but reasonably priced measurements that are of a higher quality than required under NPI. Only after such indicative measurements are made should the LBL component of the regulation be considered for amendment.

***RI AEBN recommends the DECC use a more accurate scientific approach than NPI data to base its changes to the POEO (General) Regulation.***

AEBN notes that there is lack of time in which to make changes to the regulation where a reassessment of science could occur. While not ideal, AEBN considers that a legal flexibility mechanism should be used.

If the new LBL substances are added to the regulation, based on the NPI's data, then at least DECC should accept that some of their application will be poorly chosen. Consequently, the DECC should be able to permit use of a reasonable low cost measurement estimation technique initially for determining if that substance should be measured as a full LBL reportable substance. AEBN calls this the lower cost

measurement approach where alternative measurements techniques and even site exemption of certain LBL substances can be written into an Environment Protection Licence.

The lower cost measurement approach includes the following options:

- If the estimated LBL fee is less than \$500 the substance should not be included on the licence for LBL — no further measurements are required for LBL. NPI reporting continues.
- Only if the new substance exceeds a LBL fee of say \$5,000 per annum<sup>1</sup> should the full measurement process under the LBL protocol be applied.

Use of the above approach should be extended to all LBL sites. As part of the reporting requirements DECC should also ask for the site's measurement costs associated with obtaining LBL assessable loads. This cost data can then be used to assess on a site-by-site basis if the measurement costs are an unnecessary burden. High monitoring costs on low site LBL fees (eg <\$5,000 pa) should be reconsidered in accordance to the practice mentioned above. An exemption provision is required to remove the contaminant or vary the test method under the licence of that site.

As there is no legal option under the POEO (General) Regulation to vary load based licensing requirements either for the type of contaminant nor for alternative measurement methods this needs to be included. An exemption provision as an option on LBL testing and contaminants used and would permit the DECC to apply increased flexibility on sites subject to high costs associated with LBL, but relate to small levels of emissions.

***R2 AEBN recommends the DECC include an exemption clause in the POEO (General) Regulation to permit the option of not including all the Load Based Licensing contaminants and measurement requirements for individual sites.***

## **CONSIDERATION OF OTHER COST IMPACTS**

Proposed changes to the LBL fee structure for new pollutants, fee rate thresholds and new industry sectors is estimated to be between \$1.25 – \$2.28 million. This is the increased cost range and does not include the savings from the industry sectors which have been discontinued under LBL.

Most heavily hit industry sectors in terms of fee rises include:

- Carbon black production
- Coke production
- Aluminium production
- Iron and steel production
- Electricity generation

### **Small Scale Employers**

AEBN is particularly concerned with the first two Carbon Black and Coke production. Both of these industry sectors differ from the others in orders of magnitude in employment levels. While some coke production is bundled up with iron and steel production other coke manufactures are small employers.

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<sup>1</sup> A \$5000 figure is used which establishes an arbitrary threshold where the environmental and health impacts of the contaminant are considered low enough not to warrant a more accurate and costly test methods. As a rule of thumb it is assumed the lower cost measurement processes will be conservative and provide a generally higher reading than a more accurate technique.

Nevertheless, coke production in NSW (considering the employment with iron and steel for only coke production) employs less than 250. Carbon black production less than 80 employees. Hence the fee increases on these two industries is high on a per employee basis and undermines their financial viability.

### **Impact of the CPRS**

The RISPGR table 18 lists the estimated cost increases on carbon black manufacturing in the Sydney basin area. This is the only carbon black manufacturer in Australia and it employs less than 80. Both carbon black and coke manufacturing are considered carbon constrained processes, which means there is no off the shelf technology to reduce their greenhouse emissions. Carbon capture and storage is one of the few technologies being developed which may address their greenhouse emissions. DECC should recognise that both industries face uncertain futures under the proposed Carbon Pollution Reduction Scheme (CPRS). If they were to close their lost production would be taken up most likely by China which has a much poorer emissions, resulting in the increase in greenhouse emissions- a perverse environmental outcome. This is known as carbon leakage.

CPRS recognises and wishes to minimise carbon leakage by providing assistance to Trade Exposed Emissions Intensive (TEEI) industries. However, the current proposed assistance packages are poor and are undergoing considerable review with the outlook for the carbon black and coke industries, as well as most of the other above listed companies uncertain.

### **Impact of the Current Financial Crisis**

AEBN appreciates that the process of review of the POEO (General) Regulation commenced well before the current financial crisis commenced in earnest. Nevertheless, with an impending economic downturn, perhaps recession occurring especially in Australia's manufacturing industries, now is a poor time to increase taxation revenue.

### **Health Impacts of Unemployment**

The RISPGR contains many correct claims that for example on page 8:

*Any reduction in environment performance may result in higher risk of health effects (mortality and morbidity) and degraded environmental amenities (visibility, crop productivity). That is, a lapse in the Regulation would reduce social welfare.*

DECC's role is to protect the health and environment<sup>2</sup> of NSW. Within these objectives there is an often missed health issue – health impacts of unemployment. There are numerous studies which demonstrate increased health risks in the form of cardiovascular disease and suicide rates affecting the unemployed. Below is an extract of one example from Canada:

*Based on these assumptions [largely from measurements in direct increases in hospital costs], the total excess annual cost of health care in Canada attributable to the unemployment level in 1993 was \$845 million, for 12.3% unemployed or \$1,085 million for 15% unemployed.*

*D. Bellemare and L. Poulin-Simon from the Canadian Centre for Policy Alternatives have done studies to estimate the real cost of unemployment to both the unemployed and society in terms of unused human resources to produce goods and services, loss of salaries to the unemployed, loss of profits to companies, additional work generated through employment and loss of government revenue in tax collection for 1992*

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<sup>2</sup> See s6 Objectives of the Authority, Protection of the Environment Administration Act 1991

and 1993.<sup>63</sup> This cost was \$109 billion in 1993, which amounts to 15.5% of Canada's GDP or \$3,956 per capita.

Another example is from the Australian Medical Journal<sup>3</sup> which states:

*A 1% sample of census records was used to analyse mortality in unemployed men aged 15 to 64 in England and Wales in 1971 and 1981.<sup>1,2</sup> For both samples, employment meant lower mortality rates than the average (the "healthy worker" effect). Those unemployed who had a pre-existing illness or disability had mortality rates over three times higher than the average. Those who were unemployed but not ill at census time showed a 37% excess mortality over the following 10 years (95% confidence interval [CI], 22%-52%)*

*Factory-closure studies, which minimise the effects of health selection, have found increased levels of medically diagnosed health problems, particularly cardiovascular disease and its risk factors, including high serum cholesterol levels and high blood pressure.<sup>28-30</sup>*

*[Conclusion:] Although the relationship between unemployment and health is complex and varies for different population groups, there is consistent evidence from different types of studies that unemployment is associated with adverse health outcomes. Health selection effects do occur, but longitudinal studies provide reasonably convincing evidence that unemployment has a direct effect on health over and above the effects of socioeconomic status, poverty, risk factors, or prior ill-health.*

Overall AEBN concludes that DECC should also consider the wider impact of its environmental regulations and policy on the health impacts of unemployment resulting from its regulations as well as the impacts on the environment and other health issues.

## **FEE RATE THRESHOLDS**

AEBN has considerable issues with the changes to the Fee Rate Thresholds (FRT). LBL's main purpose is to provide an incentive for industry to reduce its emissions. However, most reported or indicated pollution reductions under LBL have come from:

- Closures of industrial sites
- More accurate monitoring of actual emissions

The reason that LBL has not been a successful regulatory mechanism is that:

- It collects large amounts of revenue which are not reinvested back into the LBL sites for reducing emissions – LBL revenue is transferred to internal revenue
- The LBL fees required to drive a real reduction in emissions for most emissions, especially NO<sub>x</sub>, PM<sub>10</sub> and VOCs would need to be orders of magnitude higher. However, the NSW Government recognises that imposing \$10 to \$100 million fees on some of the larger industries would result in their closures. Consequently, LBL becomes a tax to raise revenue for DECC activities rather than achieving token improvement in the emissions it regulates.
- It is a blunt regulatory method which groups industry sectors together rather than considering their site specific issues

There are a number of examples where the fees imposed are of the order of, for example, \$50,000 for NO<sub>x</sub> emissions. However the cost of NO<sub>x</sub> removal equipment is of the order of \$5 million. This

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<sup>3</sup> [Mathers and Schofield](#), The health consequences of unemployment: the evidence AMJ 1998

position is reflected in the RISPGR on increasing the FRT, but also reflect the broader operational issues with LBL – quote page 45 RISPGR:

*The review indicated that in about two-thirds of cases, FRT factors were not providing any added incentive for LBL premises to improve their performance. In many cases, the existing FRT factors were at least an order of magnitude greater than the average emissions per unit production that the industry was currently achieving.*

There is scant information on how the Option 3 process worked to make the decisions upon the FRTs listed. Option 3 appears to use the approach that where an industry sector is largely performing below the FRT then that was justification to raise it. Option 2 appears more scientific, but was abandoned due to a lack of data on Australian best practice studies. To quote the RISPGR (p46) states:

*However, the disadvantages of this option[2] are that comprehensive data to develop such an approach is not readily available, nor is overseas data necessarily applicable to Australian production practices.*

Yet on the same page for Option 3 [new substances] it states:

*In this case DECC has used average emissions per unit production using 2002–2005 NPI data or emissions standards from overseas literature.*

AEBN is confused in that FRT rates based on overseas data is rejected in Option 2, but the overseas data is acceptable for the new FRTs? This suggests that a contradictory approach was used to set various FRTs. AEBN can only conclude the FRT process was not based on science, but on another target possibly revenue.

AEBN has a long history of labelling LBL as DECC's revenue raising tax which achieves little in improving environmental and health outcomes. Comments made in the RISPRG reinforce this view. Overall the arguments to reduce the FRT appear to be means to achieve a revenue target rather than any serious attempt to work with industry to reduce emissions.

***R3 AEBN recommends the process for setting FRTs is flawed and should be reassessed using a scientific rather than a reduce where performance has been good approach.***

## **SUMMARY**

Overall the LBL scheme is a poor mechanism to reduce industrial pollutants, but is effective in raising considerable revenue for the NSW Government. As it is a distinct state based tax on NSW industry it undermines the investment of industry in NSW and promotes existing industries to relocate in other states or overseas. The proposed price increases and capture of new industry sectors will add further to the schemes poor outcomes especially economically for NSW.

Should you require to discuss these issues with AEBN please contact me on the below number or via email.

Yours sincerely

A handwritten signature in black ink, appearing to read "Andrew Doig". The signature is fluid and cursive, with a large, prominent 'D'.

ANDREW DOIG

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