

LATROBE VALLEY SUSTAINABILITY GROUP SUBMISSION ON AIR QUALITY

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To Whom it may Concern.

The Latrobe Valley Sustainability Group is a grass roots community organization that has over 100 members and is committed to the long-term sustainability of life systems in the local area and the world as a whole. We recognise that global considerations affect the local environment as well and take a holistic view of sustainability. For this reason, we campaign strongly for measures that will reduce the impacts of human induced climate change including the elimination at source of industrial carbon dioxide and methane emissions.

History

Victorian governments have had a long commitment to development of brown coal, commencing in 1920's. Whilst this has been beneficial for Victoria's economic development, the long term implications of brown coal use probably were not recognised in the way they are today. The burning of lignite (brown coal) is one of the major contributors to greenhouse gases. Carbon dioxide emission is a global problem Millions of tonnes are burnt here each year.

The Director of Australian National University's Climate Change Commission, Professor Will Steffen, author of the recent report, *The Angry Summer*, links this summer's record-breaking weather extremes to increasing greenhouse gases and climate change. President Obama has acknowledged climate change and plans to take action, whilst China has announced in early March that greater need must be paid to pollution. If we are to reduce our contribution to global warming, our government needs to act immediately.

Monitoring and reporting: I am aware of these studies

1. In 1977 **The LV Airshed Study** was established by SEC, EPA, LVWSB, CSIRO, but was discontinued in 1990's during the breakup of SEC. This study established that power stations produced the majority of CO₂, other minor contributors being Aust Paper at Maryvale and the brown coal char plant in Morwell. This function was taken over by EPA at several monitoring sites. There is now only 1 permanent site at eastern end of Latrobe Valley, in Traralgon.

In May 2005, Charles Berger (Australian Conservation Foundation) and Tricia Phelan (Environment Victoria) reported on the effectiveness of control measures installed by power generators, to improve efficiency and reduce pollution. They reported on emission intensity 1996-2004. They found that Hazelwood's emissions had increased 2.7% despite \$500 million being spent on improvements since 1996. Loy Yang B had increased emission intensity of 1.5%, Yallourn had reduced 3.0%, Loy Yang B reduced by 5.5% and Anglesea had reduced emission intensity of 7.7%.

2. **Air pollution in the Latrobe Valley and its impact upon respiratory morbidity** by T. Voigt, M. Bailey, M. Abramsom
Article first published online: 13 MAY 2008 DOI: 10.1111/j.1467-842X.1998.tb01438.x

Abstract

Objective: To assess the relationship between air pollution and respiratory morbidity in Latrobe Valley.

Design: An ecological study of the daily hospital admissions abstracted for the 1988 calendar year. Air quality data, including nitrogen dioxide (NO₂), sulphur dioxide (SO₂), ozone (O₃) and particulates, were obtained from the relevant authorities.

Subjects: Hospital admissions for asthma and Chronic Obstructive Airways Disease. (COAD).

Results: There were significant associations ($r=0.11$ to 0.17) between airborne particles, nitrogen dioxide and respiratory morbidity. There was no significant relationship between any of the pollutants and asthma admissions. However, multi-variate analysis confirmed that nitrogen dioxide and particulates were associated with admissions for COAD.

Conclusion: Respiratory morbidity appears to be affected even by the low air pollution levels in the Latrobe Valley.

3. EPA. A study was conducted by EPA from February 2007 to January 2008, at Kay St Traralgon air monitoring station. The primary focus of this study was to monitor air toxics levels in a large regional centre, located near the major power generators. Benzene, benzo(a)pyrene, formaldehyde, toluene and xylene were monitored, taking 24 hour samples every 6 days.

The average concentration of benzo(a)pyrene remained below the health-based monitoring investigation level, with most samples recording levels below the chemical analysis detection limit. Note that Kay St is a major thoroughfare, and power stations are some kilometres away (approx 6km to Loy Yang, 20km Hazelwood, 15km Morwell, 25+km to Yallourn). Was this the best location to conduct such a study?

Yallourn W power station produces about 22% of Victoria's electricity, with a capacity of 1,480MW. The Yallourn North Primary School is approximately 2km from the station, yet there do not appear to be any pollution monitors at the school, or on the health of the children. Within a 5-6km radius of Yallourn W, there are 3 primary schools, 2 secondary schools and a TAFE college. By comparison, the new Anglesea Primary School is within 1km of the 150MW Anglesea power station. Parents there are quite concerned about adverse health effects

In the Latrobe Valley we see the localised effect of coal burning most days. There is a persistent brownish haze which hangs over the valley, visually fuelled by the constant smoke from Hazelwood, Yallourn, Loy Yang and Morwell power stations and the EnergyBrix briquette works.

Daily I note the unrelenting emission of pollutants. Smoke from power stations is known to contain lead, mercury and cadmium as well as uranium, all of which have cumulative effects. Uranium is of course radioactive. Doctors for the Environment have stated that small particles of 2.5 micrometer or less (PM <2.5) have been implicated in cancers of the respiratory tract. As far as I know, these small particles are not even EPA monitored. These tiny particles are more injurious to human health than the 10 micrometer.

The EPA Latrobe Valley monitoring station at Traralgon appears to only collect data on particles as PM10, ozone, nitrogen dioxide and sulfur dioxide. EPA publishes the monitoring data (including visibility reduction and air quality index) on its website, whilst CO2-e does not appear to be published locally at all. In Melbourne, air quality data is published in daily newspapers.

4. Curtin study WA

Poor (or nonexistent) monitoring, (particularly particles of 2.5 micrometer or less) and inadequate public reporting has prompted Curtin University (WA) to look into the matter. I quote Associate Professor Linda Selvey, School of Public Health, Curtin University:

'We felt it was necessary to conduct our study because there is very little information available about air quality in the La Trobe valley. The only air quality monitor data available is in Traralgon, and they only measure PM10 particles. They don't provide any information about the composition of the particles, which is a more involved exercise than just measuring particles. Given the high concentration of coal fired power stations in the La Trobe Valley, it would warrant more air quality monitors being put in place.'

Curtin University WA is currently conducting an air pollution monitoring program. As a Victorian, I ask is it necessary for a Western Australian body to take the trouble to monitor our Victorian air? Perhaps the fact that the Baillieu govt dropped the emission reduction target in 2012 provides the answer; an indication that brown coal will continue to be mined and possibly exported, in spite of increasing CO2 emissions, and despite evidence that climate change is already impacting via extreme weather events.

Further Concerns

In the past decade the government has invested over \$20 million in research to limit emissions from brown coal use. Although carbon capture and storage is often touted as the solution, the technology is experimental, expensive and is risky in the long term due to the earthquakes of the area. This money would be better spent on developing production of electricity from renewables which do not pollute the atmosphere or add to greenhouse gases, and are inexhaustible.

I live on the western edge of Morwell. There is constant fallout of coal dust, particularly during windy conditions when thick clouds of black dust can be seen emanating from the mines. I like fresh air and tend to have windows open very often. Every

horizontal surface in the house collects a blackish film – picture rails, skirting boards, mantle piece, benches, window sills, blinds, curtains and of course floors and verandahs.

The LV covers a geographical area of approx 80km from Warragul to Rosedale, with pop of 160,500 (73,500 in LCC, 43,000 in Baw Baw, 44,000 in Wellington). Wind direction is predominantly westerly, and Rosedale is sometimes nicknamed 'the dropout zone'. Apart from coal mining and some manufacturing, the Latrobe Valley has a large agricultural sector, producing dairy, beef, sheep and crops such as potatoes, wine, blueberries and fodder. Gippsland produces about 23% of Aust dairy products and fresh milk. Does the power station pollution, especially heavy metals, build up in the vegetation and affect produce, or in the soil and run off into rivers and lakes used for irrigation and fishing?

Stricter standards and improved monitoring of air quality will provide a healthier environment for all Gippsland residents,

I hope that this inquiry will provide answers to questions of an unsafe environment in the Latrobe Valley and wider Gippsland area. For the sake of ourselves and our children we must be protective of our health and the health of the whole atmosphere of the planet.