

30th march 2010

This response to an article in the Latrobe Valley Express was prepared for the Latrobe Valley Sustainability Group by Dan Caffrey and sent to all the Latrobe City councillors.

Cr Sharon Gibson replied via a lengthy phone call and said that she was very interested to learn many of the facts about climate change and the history of the study of climate change. She also expressed interest in some of the future directions that were possibilities for the economic advancement of Latrobe City.

Cr Lisa Price also responded favourably via email.

RESPONSE TO THE RED-FACED CLIMATE STANCE

Dear Councillor.

Hearing of Council's decision to hold an investigation into what position Latrobe City should adopt in regards to whether climate change was human-induced or not, puzzled me to say the least. It amazes me that there would be some Councillors that seriously question the scientific truths that underpin the conclusions of such bodies as the IPCC.

Given that our municipality is responsible for well over 50 % of the greenhouse gases emitted to the atmosphere from all sources in Victoria, one can understand the sensitivity of our community leaders in regards to decisions about the use of coal in the Valley. However, to deny or seriously question the overwhelming body of scientific evidence for greenhouse gases, especially carbon dioxide causing a rise in global temperatures with its consequent knock-on effects is just short-sighted and ignorant.

In 1983, I saw retreating glaciers in Iceland. In the intervening time it has been observed that almost all glaciers around the world were undergoing the same process. As far back as the 1950's scientists have been aware of the potential for extra heat to be held in the atmosphere due to the release of CO₂ from the burning of fossil fuels. Today we have 40% more CO₂ in the atmosphere because of the industrial revolution – from about 275 parts per million to around 390 ppm today. This is 40 % above the level of CO₂ that had allowed life forms, including humans to evolve the way they did. Our Earth has always had fluctuations in CO₂ levels but nothing like what we have now for at least 800,000 years and they have been gradual shifts of no more than 35% change over tens of thousands of years, not 200 years.

Bear in mind the first humans did not walk on the planet till only 160,000 years ago. No human has seen the atmosphere change so much as our own generation has.

In the late 1980's and early 1990's, the CSIRO started to actively investigate the implications of the increased level of Greenhouse gases in the atmosphere and what it would mean for Australia. In a report to the Federal Government in 1995, the CSIRO, who by that time had made some computer models of climatic changes associated with the projected levels of increasing CO₂ in the atmosphere, made a number of predictions about the climate in the next 10 to 15 years.

Amongst other things, they predicted that

- Rainfall would decrease by between 20 and 35% in southern Australia.
- Rainfall would increase in the tropics and in northern Australia as a whole.
- The Darling River could stop flowing along large stretches of its length.
- The Murray Darling Basin would dry out and agriculture would be increasingly difficult there.
- Average daily temperatures would rise.
- Rainfall patterns would alter so that rain would fall on fewer occasions but would fall in much more concentrated bursts and would be less uniform.
- More violent weather events
- There would also be an increased risk of mega-bushfires and an increasing number of days of extreme heat.

Isn't this pretty much what has happened in the last 15 years. In Science, when a link is made between cause and effect and the effects have been predicted, then this is proof of the hypothesis.

If you, the councillors are serious about adopting a scientific position on climate change, then you must consult the best authorities. Dr Graeme Pearman was head of the Climate Studies Division of the CSIRO at the time and is now associated with Monash University, Clayton Campus. I am sure that he would be happy to assist the Council in any way he could.

Undoubtedly, the implications for this municipality of accepting the science are immense and present a political problem, which will take maturity and engagement with the community at large, which in itself will see challenges in the educating and presenting of options to the residents. Please do not be daunted by this challenge but instead see yourselves as being the initiators of change that will ensure the survival and sustainability of people in this area for generations to come.

Councillors will also be put under pressure from those spruiking developments for coal – either for export or new power stations. There will be much politicking about loss of jobs or job creation with big projects. In the face of what we, and the rest of the world need to do, there is no option but to realise that coal cannot continue to be burnt. Other uses, such as for fertiliser or urea production are possible, but the truth is that the world needs to transition to renewable energies such as wind, solar – especially thermal solar, hydro, ocean wave, tidal, biomass and geothermal to produce our electricity.

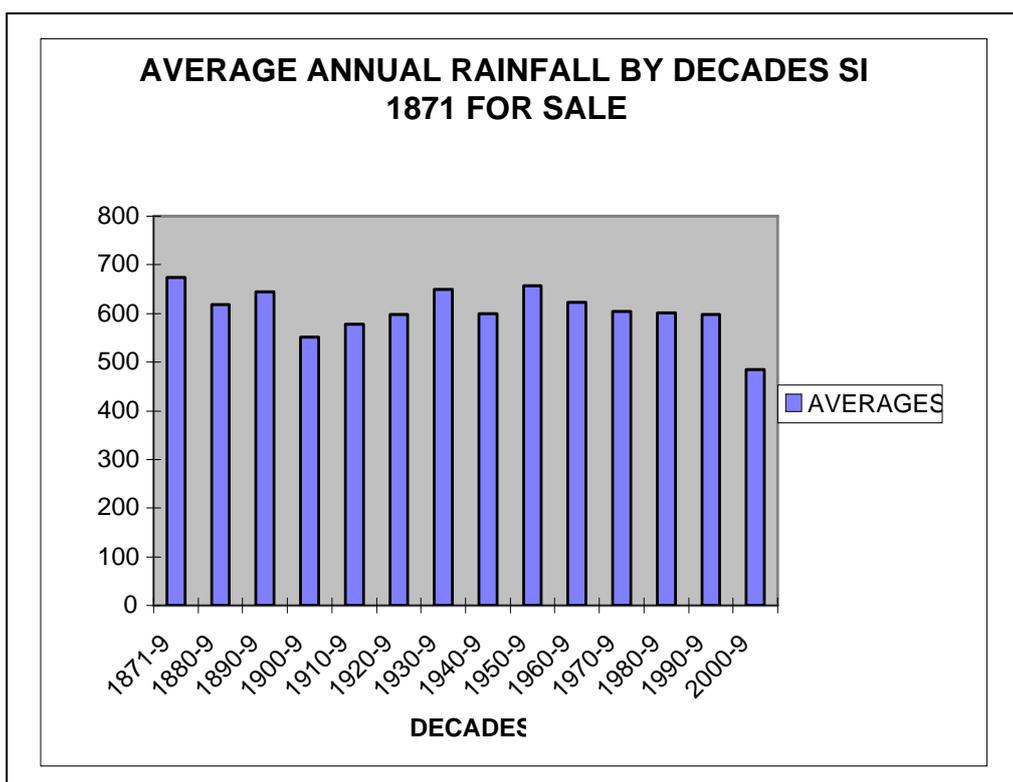
The temptation might be to think that geo-sequestration is the answer. But even allowing that a \$2 billion dollar outlay will only provide the basic infrastructure, that there might only be enough storage for 50 years. Also at least 30 % of the electricity produced from a power station would be needed to operate the process each and every day of its operation. This does not seem like a good sustainable investment, apart from the fact that there isn't a light globe in the world at present that is powered from electricity from a coal-fired power plant that uses geo-sequestration.

We in the Latrobe Valley need to focus on developing secondary industry here to replace coal industry jobs and keep the work place skills in the Valley. Any future power station won't be a big employer anyway because of technology.

Below is attached a graph that helps bear out the accuracy of the CSIRO predictions referred to above. It shows the reduction in rainfall over the last decade compared to the last 140 years. It is for the Sale area and the monthly rainfall data comes originally from the Gippsland Times newspaper and the Bureau of Meteorology from 1944 onwards. The decade from 2000 to 2009 saw a 21 % reduction of rainfall from the long-term average prior to 2000.

**10 YEARLY AVERAGES
SINCE 1871**

YEARS	AVERAGES
1871-9	674
1880-9	618
1890-9	645
1900-9	552
1910-9	577
1920-9	598
1930-9	649
1940-9	600
1950-9	658
1960-9	622
1970-9	604
1980-9	601
1990-9	598
2000-9	484



At the moment Melbourne is experiencing the warmest unbroken spell of daily maximum temperatures above 20° C – well over 100 days and still going. The previous record was 78 days –from memory in 2003. We can think of many other examples of climate records bearing out the CSIRO predictions.

Another emerging issue that all levels of government should be cognisant of is that people increasingly object to living next to mines. This municipality has some of the best farming land and picturesque landscapes in Australia and to see them devoured by a coal mine is an increasingly obnoxious idea. The idea that Traralgon and Morwell cannot expand the town boundaries because of mining easements is a worrying portent to the future quality of life in this area.

I hope that you will honestly consider what I have presented here and that the Latrobe City Council can come to a sound position on what climate change is caused by and what the implications are for not only this municipality, but for the world at large.

Yours Truly
Dan Caffrey