

LVSG FUTURE DIRECTIONS STATEMENT 2009

- Our ultimate aim is to stop putting CO₂ and other greenhouse gases into the atmosphere.
- Carbon dioxide is the biggest single factor in climate change and is leading to knock-on effects that accelerate global warming, such as acidification of the oceans, methane released from Tundra regions, loss of ice at the poles and thereby reducing the albedo effect.
- We recognise that telling the message that we must stop burning fossil fuels will be a difficult message to sell in the Latrobe Valley, because of the economic dependence on brown coal fired-electricity generation for about 3000 direct jobs and many more that for jobs indirectly related to the power industry.
- However, we must argue that to maintain our dependence on coal into the future is extremely short-sighted, for the following reasons.
 - World conventions on GHG emissions such as the Kyoto protocol will demand increasingly bigger reductions in emissions over time, because the case for human induced climate change is absolutely compelling. Prior to the industrial revolution the maximum CO₂ content in the atmosphere never exceeded 280 ppm for the last 1 million years. It is presently 387 ppm.
 - Because the speed of climate change tipping points such as the Arctic Ocean being ice-free over summers from possibly as early as 2013 and the increasing prevalence of catastrophic bushfires all over the world, the drying out of continents such as we are witnessing in the southern half of Australia and the increasing number of deluges in tropical areas of the world as well as the increased frequency of more destructive hurricanes, the need for concerted world action to fight climate change will become more evident. A world wide carbon trading scheme is inevitable.
 - When a world wide carbon trading scheme comes into being, large power hungry industries such as aluminium smelting, will be looking to get out of Australia, because the imposts of the carbon taxes will make their operations less profitable. They will be looking to invest in countries, which produce most of their energy from renewable energy technologies. All of our goods and services would become less competitive on the world stage in this scenario. This could be the case by 2020.
 - Countries, which have made the switch to renewable energy technologies, may choose to boycott our goods and services for political reasons like the world did with South Africa in the Apartheid years. The French have already raised the idea of putting an excise duty on our goods three years ago when the Howard Government was denying climate change.
 - In the Latrobe Valley, we are very vulnerable to a shift in government policy. While the coal industry argues that it needs to be protected, if the government was forced by a combination of deteriorating climate situation and pressure from the rest of the world to reign in emissions, then brown coal would be the first to go. The power companies – most of which are foreign owned are private companies with a responsibility primarily to their shareholders and faced with a tightening situation will pull out of the area. This will leave the Latrobe Valley destitute.

What the LVSG would like to see is:

- The coal-fired power generators move to renewable energy options in the Valley and elsewhere.
- In the interim, they could consider co-generation, using hot-rock aquifer geothermal steam, solar thermal and wind to reduce the amount of brown coal burnt.
- In the longer term, we would like to see an orderly transition from a coal economy in the Valley to one based on manufacturing and engineering, preferably of high tech energy efficient white goods e.g. refrigerators, wind turbine towers and nacelles, solar panels and so on.

- Consideration given to building and operating or modifying an existing power station to use geothermal hot rock aquifer steam to produce electricity in the coal-free Valley of the future.
- No new coal developments such as power stations, coal to oil or coal to gas or the exporting of coal out of the Valley.
- We consider the idea of “clean coal” technology to be non-viable. As coal is almost pure carbon and 12 kg of carbon when burnt in air will produce 44 kg of CO₂, then there is no way in which the end product is not carbon dioxide. Carbon dioxide cannot easily be changed to anything else, because it is one of the most stable chemicals on Earth. Photosynthesis is the only chemical reaction, which can effectively change it to other chemicals – i.e. plant matter.
 - Industrially, the only way CO₂ can be effectively dealt with requires billions of dollars of investment and would use much of the energy that the power plant generated in order to handle the quantities produced, thus reducing the overall efficiency and productivity of coal-fired power plants to such an extent, that the electricity produced this way would be more costly than renewable electricity such as wind, solar, geothermal or ocean wave.
 - In order to make carbon capture and geo-sequestration work, you would firstly have to burn the coal in pure oxygen, because 70 % of the atmosphere is nitrogen and this exits the furnace as well. You only want to capture carbon dioxide, nothing else. The flue gases are now pure CO₂ and these have to be collected and compressed. They will then be pumped out into a disused gas well in Bass Strait.
 - Deep in the ground, the CO₂ is supposed to react to make limestone, but the mechanism for this has never been demonstrated. The reality is that the CO₂ will probably sit there for many centuries under high pressure. The danger being, that Seismic activity such as an earthquake or even a valve failure, may release vast amounts of it in a very short space of time and cause almost immediate catastrophic global warming.
 - The power companies have already said they are not willing to bear the cost of building the infrastructure needed for such an undertaking and want the government to do this. By now it should be clear that the cheaper option is to use renewable energy technologies to provide the nations power needs. We cannot foresee taxpayers being willing to pay for these changes, when more cost effective, clean technologies are available.
- We want to see the immediate investment in all types of renewable technologies, especially hot rock aquifer geothermal in Victoria.