

Socialist Alliance policy

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Coal and Steel

Scientists are telling us we must phase out coal quickly or risk an uninhabitable planet. Coal burning now accounts for around 36% of Australia's greenhouse gas (GHG) emissions; mining and handling coal adds even more – all subsidies to the coal industry must end.

Phasing out thermal coal – used for power generation – should begin immediately. With direct government investment in a publicly owned renewable energy sector, jobs and retraining on full pay would be guaranteed for coal-mining and power-station communities. But what about coking (or metallurgical) coal – used in the production of steel? Is it part of the problem or part of the solution?

Steel still necessary

The transition to a low-carbon economy will require the use of steel, in the production of train rolling stock or wind turbines for example. Coking coal is used to extract iron from iron ore, in a blast furnace, to make steel and can therefore be socially useful. The process does pollute however. Oxygen from the iron-ore bonds with carbon from the coal to make carbon dioxide. A tremendous amount of energy is required to separate the oxygen from the iron.

Electric Arc furnaces are used to recycle steel from old scrap steel, avoiding the need for coking coal. Recycling steel in an electric arc furnace is much less GHG intensive than manufacturing new steel from iron ore in a blast furnace. Imagine melting down military hardware to manufacture train lines and wind turbines, for example. However, recycled steel alone is not sufficient to meet current demand for steel worldwide. If we plan to continue producing steel at the same rate, we can't simply end the mining of coking coal overnight.

However, the extent of the climate crisis demands we reduce our GHG emissions across the board. This means rapidly decreasing our reliance on polluting industries and materials that are energy intensive to produce, including steel. We need to radically rethink the way we produce and use such materials.

Transparency and democracy

But for starters we need to know exactly what's going on. Our major steelworks are subject to government audits to assess carbon emissions but these are difficult to access. Audits need to involve and be made available to the public and independent environment groups. They need to be transparent and open to scrutiny. If companies refuse to cooperate they should be brought under public ownership and democratic control.

Steelworks are big polluters. For example BlueScope Steel's Port Kembla plant on the NSW south coast emits about 11 million tonnes of GHGs into the atmosphere each year - about 7% of NSW's total greenhouse output. An independent assessment needs to be made of the clean up cost.

We support the 'polluter-pays' principle. If companies cry poor they should have to open their books and let the community decide if they can afford to clean-up. For example, every steelworks should be using co-generation to recycle heat and flare gases for electricity generation. Climate change won't negotiate with the peaks and troughs of the market, such measures should be mandatory.

For the six months to the end of December 2008, BlueScope posted profits of \$406.9 million. Imagine if those millions were going back into the public coffers to clean-up the industry.

Making steel greener

Destructive coal-mining practices should end. Longwall mining for example is used because it massively increases production and profitability but at great cost to the environment. We support the demands of groups such as Rivers SOS who call for a one kilometre buffer zone between coal mines and key water sources such as rivers and reservoirs.

More funding and research is needed into finding a replacement for coal in steel production. The CSIRO is investigating the use of oil mallee trees and other native hardwoods for example. They argue steel production could be a net zero-emissions process as each new generation of trees absorbs the carbon emitted from the production process. This research should be continued but significant questions remain. It may be more useful to turn the wood into biochar or leave the trees as a carbon sink. Researching this though would be much more valuable than continuing research into discredited “clean coal” technologies. Another possible alternative is the use of hydrogen gas as a reductant in the blast furnace instead of coking coal. This technology is still under development but has the potential to result in a significant decrease in emissions.

The steel-making process has the potential to be made more efficient by paying close attention to the manufacturing process. This can involve things such as: implementing more modern technology into an older steelworks or minimising internally generated waste by implementing by-product recycling schemes into the steelworks. Every steelworks in operation should be committed to operating at maximum efficiency and where necessary existing facilities should be modernised to ensure this.

Steel is expensive and energy intensive to transport. We call for massive investment in heavy rail and bulk freight to facilitate a shift “from roads to rail”. Diversifying the production of steel – reversing years of specialisation – should also be encouraged to reduce the need to transport large amounts of finished steel around Australia and the globe.

Planning the big picture

More importantly we need strategic planning to reduce our reliance on steel. Steel producers should be compelled to increase the recycling of steel which is much cleaner than blast-furnace steel (only 65% of available scrap metal is recycled in Australia each year). Steel producers should have to maximise the end of life recyclability of products, and governments should encourage scrap availability programs, especially in the electrical and domestic industries where recycling is minimal.

Steel producers should have to source more of their energy needs from renewables, aiming for 100% by 2020. Mandatory targets must be set in these areas.

Manufactured products should be redesigned to reduce the amount of steel necessary in their production, e.g. light weighting. Furthermore, the products that we design and use should be made to last. The government should outlaw planned obsolescence. This is particularly important in the industries that place the most demand on steel production, like the automotive industry for example.

Manufacturers should be required by law to commit to such plans or else be placed in public hands. We can't allow our planet to be held hostage to the private profits of the big polluters and the industries that demand energy intensive inputs.

The potential of less energy intensive alternatives to steel, such as carbon-fibre composites, need to be explored. Other energy intensive alternatives, such as aluminium, could be utilised if power was sourced from renewable energy.

We need to rethink the things that we are making with steel. Wind turbines, electric trains and solar panels are socially useful, but what about bombs, warships and Joint Strike Fighters?

If society took these approaches to lower the amount of steel we use and increase the quantity of recycled steel used in production, we could significantly reduce the rate of extraction of coal from the earth.

Steel for development

Underdeveloped countries have the right to better living standards and the First World should support and resource their development. At this stage, development necessarily requires the use of steel. While living standards in those countries must be improved, this should not occur at the cost of ruining the environment.

Australia should support and resource Third World development along sustainable lines. Firstly, because of the debt of colonialism and imperialism and the fact that First World industrialisation created the climate crisis. Secondly, because it is both necessary for the survival of the planet and because we are the ones with the resources to do so.

What does this mean for the export of coking coal?

The vast majority of coking coal exported from Australia goes to industrialised countries. For example, 52% of NSW coking coal goes to Japan. Further, it is not all used for steel making, with much used for energy production.

A great deal of this export, and indeed steel production, is also driven by commercial opportunity and marketing from the steel industry, not human need. The “development” currently needing steel may be new coal-fired power stations, mega-dams that cause internal displacement, or cheap export industries that service Western consumers. Thus sourcing steel (or the means to produce it) does not necessarily even mean better living standards.

So the export of coking coal cannot be used to support current modes of unsustainable development, and must be carried out along selective lines.

To facilitate this, the coal export industry must be brought under public control. The revenues should be used to establish sustainable alternative industries in communities currently reliant on the coal industries.

Jobs and a ‘just transition’

The “Greenhouse Mafia”, powerful lobby groups represented in the coal, steel and other industries, will fight moves to put the planet and people before profit. Many workers and their communities are being told that they must choose between a safe climate future and their jobs, their livelihood.

But the transition to a low-carbon economy isn’t the main threat to jobs. The unquenchable thirst for profits is, and it threatens to destroy life on Earth as we know it. The climate movement needs to unite with working people and demand the government assist communities to move away from coal. In fact, it’s likely the scale of changes needed for the transition will require more workers than are currently employed in Australia.

Australia’s response to climate change must include the phasing out of coal, including the planned phase out of coking coal. But the only possible alternative has to include massive job creation in the renewable energy sector and in the manufacturing of sustainable alternatives to energy intensive materials such as steel. Importantly, communities currently relying on coal-mining and steel production need to be prioritised for infrastructure investment and job creation in the new, sustainable sectors.