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Mr Keir Delaney
Secretary
Environment & Planning Committee
Parliament House
Spring Street
Melbourne VIC 3002
Email: epc@parliament.vic.gov.au

Submission to the Inquiry into Unconventional Gas in Victoria

Dear Mr Delaney,

Thank you for the opportunity to provide a submission regarding this important issue. Unconventional gas is a fossil fuel that is extracted through fracking (a layperson's term for hydraulic fracturing), a process of fracturing rocks to allow collection of oil and gas. Fluid is pumped under great pressure - enough pressure to cause rock to crack, or fracture along lines of weakness. This widens or forces open gaps and fissures that enable natural gas to escape to the surface.

These extraction methods are crude, and carry risks. Enormous amounts of fresh water are wasted in the process. The landscape is scarred and degraded. Groundwater and soils are contaminated by the fluids used in pumping - these fluids can range from water to gels and foams containing benzene, toluene, ethyl benzene and xylene.¹ Further to this, **gas rigs leak methane (aka 'fugitive emissions'), which is odourless, colourless and highly flammable.**² Methane is around 85 times more potent than CO₂ in the atmosphere, when viewed over a 20-year time span.³

Some or all of these factors combined explain why France, Germany, Northern Ireland and Bulgaria, as well as many counties across a number of US states, have already outright banned fracking. Like Victoria, many communities around the world have imposed moratoriums pending scientific investigations.

All fossil fuels fuel climate change

The key findings of the Fifth Synthesis Report of the Intergovernmental Panel on Climate Change (aka the IPCC's Fifth Assessment Report) are that:

Human influence on the climate system is clear, and recent anthropogenic emissions of greenhouse gases are the highest in history. Recent climate changes have had widespread impacts on human and natural systems. {1}

Warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, and sea level has risen. {1.1} ⁴

In fact, emerging evidence is showing that we are losing much more polar ice much faster than previously suspected. For example, according to researchers, the Totten Glacier in the Antarctic is losing an amount of ice “equivalent to 100 times the volume of Sydney Harbour every year.”⁵

Some years ago now one of the world’s most respected climate scientists, NASA Goddard Institute for Space Studies’ Director, Dr James Hansen warned that continued coal use will result in “catastrophic climate change and a ‘transformed planet’”.⁶ Yet, old and inefficient coal-fired electricity plants still largely generate Australia’s electricity needs and the Abbott Federal government has been dismantling all environment protection laws we now have to phase them out.⁷ With its so-called ‘developed nation’ status and **enviable renewable energy resources (aka solar radiation and strong ‘Roaring Forties’ winds)**, Victoria has no excuse for remaining one of the world’s largest per capita polluters. By legislating for a determined energy transition plan for the La Trobe Valley, our State now has an opportunity to lead the nation in developing the alternative renewable energy and efficient storage and distribution solutions that will reduce pollution levels and generate new investments and jobs in our economy.

The Green Economy is the Future Economy

By reducing emissions since 1990 while expanding its economy, the EU has successfully shown that economic growth and emission cuts are compatible. With only a fraction of our renewable energy resources, countries such as Denmark, Germany, Spain, USA, Austria and Sweden, to name a few, are enjoying the **social and economic benefits** of a burgeoning, multi-billion dollar renewable energy industry, largely driven by determined climate protection policies including strong emissions reduction targets. In many places around the world strong emission reduction targets combined with ambitious renewable energy targets are already generating new investment and new jobs in rural and regional areas while stabilising local pollution levels and increasing **energy security**.

In terms of wind energy, according to Bloomberg New Energy Finance, after adding 20.7GW of capacity during 2014, China now has more wind power than the entire UK energy system. Meanwhile, the US added 4.7GW of new onshore wind capacity last year, a sixfold increase on the 764MW installed the previous year.⁸ As for solar energy — including household solar photovoltaic (PV) as well as utility-scale PV power plants — with costs falling and efficiencies soaring, the global industry continues its meteoric rise, creating millions of jobs in local economies.

It's ridiculous. Australia's the Saudi Arabia of renewable energy. There's so much sun, there's so much wind off the coast, and so it makes absolutely no sense when you have an abundance of renewable energy, [to] rely on a depleting supply of fossil fuels with all of the attendant consequences to society and the planet.

Jeremy Rifkin, *The Third Industrial Revolution*

In places with climate friendly policies, renewable energy industries are exceeding people’s expectations. Germany has more than 380 000 people employed in its clean-energy industry, and this figure could rise above 500 000 by 2020.⁹ Meanwhile, more than 50 per cent of Germany’s renewable energy is community-owned, which makes the business of generating and distributing

the energy and the profits far more transparent and democratic.¹⁰ Globally, there are now more than 6.5 million people employed in renewable energy.¹¹

Why would any government anywhere support a highly destructive newly emerging unconventional gas industry when renewable energy alternatives and the storage and distribution technologies that support them, are proving highly effective at:

- 1) Creating tens of thousands of new jobs in local economies
- 2) Generating tens of billions of dollars of investment in local economies
- 3) Effectively reducing pollution levels.

To help secure Victoria's precious natural assets (including major tourist attractions such as the Great Otway and Wilsons Promontory National Parks), and prepare us for the future zero carbon global economy, the Victorian government should now 1) starting with an energy transition plan for the La Trobe Valley, redirect all state subsidies that currently support fossil fuels to renewable energy and the storage and distribution technologies that support it, with the aim of transitioning the State's electricity grid to deliver only zero pollution energy as fast as humanly possible, 2) approve NO new coal or gas projects, 3) legislate a State based price on pollution (aka carbon tax) and ensure it's high enough to reflect its true long term damage, 4) commit to major mandatory improvements in energy efficiency across the State's economy, 5) halt land clearing and undertake major re-forestation projects, and 6) direct a rapid transition to a transport system that can run on electricity sourced from renewable energy.

As the host of some of the most polluting coal fired power stations in the world, where will Victoria be? Unless we move quickly to radically reduce our greenhouse gas emissions by transitioning to zero pollution energy resources, our reliance on fossil fuels will not only continue to force dangerous climate change but will also ensure that our economy falls behind because everything coming out of Victoria will carry an enormous carbon footprint at a time when **world economies are transitioning** away from dirty technologies and practices. This is an opportunity to turn the La Trobe Valley into an R&D hub for sustainable technologies.

An independent 'Inquiry' vs a Vested Interest Inquisition

Like the Abbott Federal government, on ideological grounds, the former Napthine government systematically dismantled Victoria's emerging Green economy, including introducing extreme legislation to curtail wind farms, abolishing the 20 per cent emissions reduction target from the Climate Change Act, slashing and limiting the solar feed-in tariff, withdrawing a commitment to replace inefficient street lights with energy efficient alternatives, scrapping the solar hot water rebate and campaigning against the fixed price on pollution (aka carbon tax).¹²

Meanwhile, as a direct result of a spirited community campaign demanding a moratorium on all new coal and gas projects. the Napthine Liberal government was forced to declare a ban on the use of dangerous chemicals in gas drilling and to declare a moratorium on the process of fracking. Seeking an escape from a policy forced on them by the community, the Napthine Liberal State government commissioned Peter Reith, the former Deputy Leader of the Liberal Party and Australia's former Minister for Defence under the Howard Liberal government, to chair a task force into Victoria's gas industry. However, it was discovered that Mr Reith was on the payroll of a major CSG company, working as a lobbyist for the gas industry. Further to this, all eight members chosen to sit on the CSG task force were representatives of fossil fuel energy and polluting industry groups. So, it was reasonable for the community to conclude that the Government's so-

called 'Inquiry' was a sham from the start. At least nobody was surprised that Reith's report recommended that the State government lift its moratorium on coal seam gas, and offer incentives to businesses to develop a gas industry in Victoria.¹³ Given this history, it will be interesting to see how the current Inquiry differs or not.

Vested Interest Driven Myths & Old-Era Scare Campaigns vs Scientific Evidence and Building a Sustainable Economy

In addition to assessing the global warming and other highly destructive affects of the gas industry, the Inquiry must consider the serious health impacts associated with it. In areas where unconventional gas is being extracted appalling cases have emerged, including of young children with rashes from bathing in contaminated water, nose and ear bleeds, vomiting, dizziness, lethargy and severe headaches, all of which are known symptoms of gas exposure. In many cases where serious gas leaks have been reported to companies, years have gone by before anything has been done. According to chemical expert, Dr Mariann Lloyd-Smith, of the 23 major chemicals currently used in Australia by CSG companies, the national regulator has independently assessed only two but not for use as a fracking agent.¹⁴

In contrast, and despite the best efforts of anti-wind campaigners with investments in fossil fuel companies, no research from anywhere in the world has emerged to directly link adverse health effects to wind farms. However, findings conclusively show that 'wind turbine syndrome' is far more prevalent in communities where anti-wind energy lobbyists have been active, and appears to be a psychological phenomenon caused by the suggestion that turbines make people sick¹⁵. According to the findings of leading Professor of Public Health, Simon Champam, 'wind turbine syndrome' is a 'communicated disease' — that is a sickness spread by the claim that something is likely to make a person sick. So, in fact the symptoms are caused by the 'nocebo effect' — that is the opposite of the placebo effect. In Professor Chapman's words, 'anxiety and fear about wind turbines being spread about by anti-wind farm groups will cause some people hearing this scary stuff to feel that they are suffering symptoms'.¹⁶ In other words it's the anti-wind energy campaigners who are making people sick.

Meeting 21st Century Challenges

If Victoria is to maintain living standards and quality of life for current and future generations, we must drastically reduce our emissions by immediately commencing a rapid transition away from 'old' centralised and highly polluting fossil fuel based infrastructure and energy sources towards 'new' decentralised and more sustainable alternatives, such as **wind and solar power**. In addition to drastically reducing pollution levels, the adoption of renewable energy sources located close to end power users will ensure a more **robust and secure power supply** than the current one. This is because centralised power supplies are more vulnerable to major disruptions caused by accidents, fires and storms (which are predicted by scientists to become even more frequent and ferocious), accidents and/or deliberate attacks.

Dangerous climate change is already here and our environment is already showing the predicted signs due to excessive greenhouse gas emissions in our atmosphere, as evidenced by the ongoing reports of extreme weather presenting all around the world. Further, the era of cheap crude oil for transportation is gone. Given the tyranny of distance and our increased vulnerability to draught and flooding, it is even more critical for Victoria (and Australia) to prepare itself for the changed economic and ecological circumstances that will be part of life in the 21st Century.

According to Beyond Zero Emissions widely endorsed report, *Zero Carbon Australia 2020 (ZCA2020)*—which demonstrates precisely how Australia could transition its stationary electricity system from polluting energy to **zero emission energy** using off the shelf renewable energy and energy efficiency technologies that are readily available now—**wind power could be providing 40 per cent of our stationary electricity needs within a decade**. Further to this, the report shows that such a transition would be feasible, affordable (3 to 3.5 per cent of GDP or \$8 per household per week for ten years), create an estimated **140,000 new jobs** in regional economies where they are needed most and ensure energy security for at least the next 70 years. Given the billions Australians are now spending to mop up after successive climate related natural disasters, alternative technologies such as wind power are looking cheaper and more attractive by the minute. There could be no better place to start the powerful energy transition than Victoria's La Trobe Valley.

A safe climate and healthy environment are the **foundations** on which all else we know and value depends. The most cited argument for slow and inadequate responses to climate change and peak oil, are driven by a combination of ignorance of the current science, greed by those with vested economic interests, fear of change and the failure to recognise the bountiful economic opportunities that are ready to be taken up. Climate deniers (including anti-wind campaigners) typically fall into one or more of the categories above. Yet, as previously stated, with the adoption of renewable energy as a much greater proportion of our energy mix—in addition to mitigating catastrophic global warming—there will be the added benefit of a boost to our local economies and **new, more secure and sustainable 'green collar' jobs**.

In concluding we wish to emphasize that this submission has been prepared to voice the deep climate concerns of private citizens associated with ClimActs (an independent, non profit climate change action group). In other words, we have no vested interests, nobody is paying or compensating us in any way and there is nothing covert about ClimAct's access to our democratically elected representatives.

Thank you for your attention to this submission. We would welcome the opportunity to discuss any part of this submission with you.

Yours faithfully

Deborah Hart
Co-convenor
ClimActs



Dr Liz Conor
Co-convenor
ClimActs



Website: <http://climacts.org.au>

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- ⁹ <http://www.unendlich-viel-energie.de/en/economy/current-facts-and-figures.html> German Renewable Energies Agency Information Platform, Current facts and figures webpage
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