

Submission 373342 and 373334 (duplicate)

SUBMISSION FROM [Redacted]

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Introduction:

The members of the [Redacted] thank Engage Victoria for the opportunity to have input into the government investigation into the regulations regarding gas and oil production.

The following suggestions were made by members of [Redacted] as we are all concerned about the need to reduce emissions from many sources because of the effects of climate change.

As farmers and members of farming communities we are aware that unless action is taken on climate in this decade, the production of food and provision of sustainable water supplies will be severely compromised.

It is now public knowledge that Australia and other countries cannot wait for years to change our energy sources and reduce emissions. The world's biosphere is now at a critical point.

We have at the very most only ten years to cut our emissions and change to a green economy. The upside of this is that such a green economy will provide many new jobs in cleaner industries, without the lung and heart diseases and the cancers caused by fossil fuel pollution.

COMMENTS ON REGULATIONS RE GAS AND OIL INDUSTRIES:

Health and Environmental Problems with Gas Extraction That Were Not Included In The Victorian Government Earth Resources Report:

It is now an established fact that regulations on gas and petroleum extraction cannot prevent certain toxic emissions from the extraction of these fossil fuels. Until recently the use and emissions of the indestructible chemicals known as PFAS AND PFOS by and from the fossil fuel industry were not public knowledge.

In July this year (2021) Physicians for Social Responsibility reported that the extremely toxic and indestructible per and polyfluoroalkyl substances known as PFAS and PFOS are used in drilling and other operations by the gas and oil companies. Gas and oil companies have been very secretive about what they use in their industries. Now governments around the world are starting to ban the use of PFAS and PFOS.

The film entitled "Unearthed" contained a video of fossil fuel executives speaking about how they had got around legislation for reduced emissions and climate action as well as legislation enacted to prevent toxic petrochemical pollution from the gas and oil industries. One of those executives who spoke about this had no qualms about admitting that PFAS and PFOS are called "forever chemicals" because they literally last forever. Even gas flaring just releases these toxins into the atmosphere, as fire cannot destroy these chemicals.

Barbara Gottlieb of Physicians for Social Responsibility said that the use of these chemicals by the gas and oil industries "brings together two planetary emergencies, climate and contamination".

Water Contamination: The Hidden Health Issues Are Surfacing:

According to Phil Brown who directs a research centre on PFAS contamination, "We already know that over 200 million people have PFAS (from the gas industry) in their drinking water."

According to the Southwest Pennsylvania Environmental Health Project (<https://www.environmentalhealthproject.org/sites/default/files/assets/resources/health-outcomes-associated-with-exposure-to-shale-gas-development.pdf>) and thousands of other medical reports, the chemicals released from gas and oil production are responsible for cancers, heart disease, lung problems, birth deformities, and many other serious health problems.

See article: Australia must kick the gas habit, because it is bad for our health, [David Shearman](https://reneweconomy.com.au/australia-must-kick-the-gas-habit-because-it-is-bad-for-our-health/) 6 May 2021, <https://reneweconomy.com.au/australia-must-kick-the-gas-habit-because-it-is-bad-for-our-health/>

It is the opinion of [Redacted] members that the report and economical assessments of the Victorian Gas Program and the proposed Regulations cannot possibly prevent or compensate for the health and environmental damage caused by the methane gas extraction industry.

Whether gas is extracted via directional drilling to sites under the ocean or under the land, PFAS and other toxic drilling and industrial chemicals have been shown to escape into the water, air and soils. Contamination of the oceans will come back in fish that we eat and in other products we take from the sea. It is already having an effect on wildlife. On 14th May, 2021, it was reported on ABC Gippsland, that University of Sydney researchers have found PFAS in Australia's largest fur seal colony on Victoria's Phillip Island. The number of seals has dropped, and the scientists put that down to the effects of PFAS chemicals in the mother seals' bodies and in their milk.

What affects seals that live on fish could also affect human beings and their babies. There is mounting evidence of harm from PFAS, as mentioned elsewhere in this submission. For example: *the European Environment Agency, stated there is "high certainty" of links to liver damage, kidney and testicular cancer.* Countries such as New Zealand have banned PFAS because of health concerns.

Jonathon Kendall, <https://www.abc.net.au/news/2021-05-14/pfas-found-in-phillip-island-seals/100136436> For further information about the effects of PFAS chemicals, see also: [Fair, P.A. and Houde, M., 2018. Chapter 5 – Poly- and Perfluoroalkyl Substances in Marine Mammals. Marine Mammals Ecotoxicology. Impacts of Multiple Stressors on Population Health. pp. 117-145. https://doi.org/10.1016/B978-0-12-812144-3.00005-X](#)

[Pedersen, K.E., Basu, N., Letcher, R., Greaves, A.K., Sonne, C., Dietz, R. and Styrishave, B., 2015. Brain region-specific perfluoroalkylated sulfonate \(PFSA\) and carboxylic acid \(PFCA\) accumulation and neurochemical biomarker responses in east Greenland polar bears \(Ursus maritimus\). Environmental research, 138, pp.22-31](#)

[Butt, C.M., Berger, U., Bossi, R. and Tomy, G.T., 2010. Levels and trends of poly-and perfluorinated compounds in the arctic environment. Science of the total environment, 408 \(15\), pp.2936-2965](#)

THE LEGAL IMPLICATIONS AND THREAT TO FARMERS FROM GAS EXTRACTION:

In Australia farmers must sign an annual statement known as the National Vendor Declaration, which guarantees the safety of the food or livestock produced on-farm. The farmers in our organisation have stated that gas extraction and its known pollution of soil, underground aquifers and the food chain with PFAS and other chemicals will leave them liable for being sued for the

production of unsafe food if or when PFAS and other contamination is found in the food the farmers produce.

See below a summary of concerns from farmer members:

“The NVD is a legal document that ensures the food safety and traceability in Australia’s red meat/livestock industry and access to international markets. Every individual animal movement or transaction in the value chain is recorded, along with its animal health treatment status and pasture/feed chemical exposure. All information entered on the NVD must be backed up with accurate records. The penalties to individuals, companies and the national export trade for misinformation are severe. [In many agricultural industries, including livestock production, biological guarantees are also legally required.]

To assure quality of product and truth in declaration beef and dairy producers are required to obtain: a soils test for potentially chemically contaminated areas on farm [eg animal dipping sites], written evidence from authorities [eg electricity suppliers] as to the chemical hazards associated with their infrastructure, and chemical content/exposure declarations from commercial feed suppliers.

If an onshore gas industry is to proceed in Victoria [and it should not!], the regulations around their exploration and extraction activities:

- must include a requirement to provide landholders and the State with a never-to-expire liability guarantee of no-change, on-farm chemical and biological/disease status that ensures NVDs can be accurately completed. (That is, farmers should NOT be liable for any changes induced by fossil fuel extraction processes);
- must stipulate the gas industry has to conduct pre-impact, baseline analyses of underground aquifer and surface water used for stock watering, and topsoil in the vicinity of their above ground operations extending to the limit of their subsurface horizontal drilling.

It should also be necessary for the gas industry to provide carbon-status information to the State, and for that status not to be linked to the producer landholding, as it is likely that in the near-future, marketing of livestock will involve, or be enhanced by, on-farm carbon-status declarations made in the ‘Additional Notes’ section of the NVD.

It is not good enough for the gas industry to say “Don’t panic, she’ll be right!” The consequences to agriculture and the environment of biosecurity threats and chemical contamination by products like arsenic, DDT, PFAS, and asbestos are disastrous. We can ill-afford another environmental catastrophe, carry-the-can for profiteers, lose agricultural land, and jeopardise industry credibility with consumers and nations.”

METHANE GAS PRODUCTION AND USE: AN INDUSTRY ON ITS WAY OUT:

The continued extraction and use of methane gas will tip us over the edge into Climate Change. This scientific fact has been recognised by authorities around the world and they have been making changes:

Note: The Coalition is wedded to the concept of a “gas-led economic recovery”, despite the fact that gas costs are high and will remain so. Reductions in domestic gas use around the world indicate that gas will be a “stranded asset” in about ten to fifteen years due to its high running costs compared with electric energy. The Australian Energy Market Operator (AEMO) has said that gas use in grid may all but disappear in 20 years: [Giles Parkinson](#) 29 March 2021,

<https://reneweconomy.com.au/gas-led-recovery-aemo-says-gas-use-in-grid-may-all-but-disappear-in-20-years/>

THE ALTERNATIVES TO GAS:

A logical and defensible action to save on household expenses and greenhouse gas emissions, and generate thousands of jobs in a green economy are as follows:

No New Gas for New Homes:

It is urgent in this time of Climate Change, that we follow the example of other municipalities around the world and ban the installation of gas appliances in new houses. Those presently working in the gas industry can transfer their industrial skills to employment in the many aspects of renewable energy economy. An example of this sort of employment transferability is what has been happening in Germany over at least a decade with the Energiewende policies. Despite some teething problems initially, the process of transferring to renewable clean energy and away from gas, coal and oil is now more and more viewed as successful both socially and economically.

<https://www.cleanenergywire.org/dossiers/energy-transitions-effect-jobs-and-business>

Gas is much more expensive to use than is electricity, and its use is falling around Australia and around the world. To lumber new homeowners with expensive gas appliances whose use contributes to Global Warming will be seen as a mistake within the decade. (See *Attached Appendix with article about this issue.*)

There is another way that the Labour State Government could help to eliminate the use of expensive and harmful gas, and that is to mandate that when gas heaters for homes, or gas water heaters or gas stoves reach the end of their lives, they should be replaced with the many electric options. Whilst gas is bad for our health and the environment, electric conduction stove tops, electric water heaters, and electric space heaters have no harmful emissions and are cheaper to run. In 2014 the Australian Bureau of Statistics (ABS) found that around 3.4 million hot water systems run on mains gas and another 387,900 run on bottled gas, with 75% of Melbourne households relying on gas for hot water. As the life of water heaters is around 15 years, if these gas water heaters are replaced with solar-electric water heaters instead of with more gas appliances, the savings in household bills and in greenhouse gas emissions would be huge. Plumbers, appliance retailers, builders and architects will need to be guided and helped to move to sustainable forms of electric heating. Builders of new houses presently install about 25% of new hot water systems. They are motivated by capital costs, without taking into account the running costs that are borne by home-owners. Running costs of electric hot water systems are cheaper than for gas. Recent increases in the cost of gas make the additional capital cost of an electric hot water system with a high efficiency heat pump a much more attractive proposition in both the short and long term. *Ref: Lombard & Price, 2018. Also see article "Fossil Gas – households in hot water", Jim Crosthwaite and Amaryll Perlesz, Friends of the Earth magazine, May 2021.*

Legislation on both ergonomic design and prohibitions against new gas appliances for new homes would help those wishing to purchase energy saving homes. Some young people in Warrnambool have met with refusal from builders who wish to continue to build houses that are *energy guzzlers*. The problem to overcome here is that builders need to be educated on the advantages of electric over gas for both health and the environment, as well as the hip pocket.

Legislation on ergonomic design and banning uneconomic and unhealthy installation of gas in new homes would work well with the policies of CASBE that are currently being worked out.

Incidentally, the new AEMO CEO wants Australian grids ready to handle 100% renewable energy by 2025. <https://reneweconomy.com.au/new-aemo-boss-wants-australias-grid-to-handle-100-pct-renewables-by-2025/>

The Best Way Forward – We Will Need Leaders With Wisdom and Courage:

Contrary to the myths promulgated by the Coalition Federal Government, methane gas cannot be an “intermediary fuel”. It is as harmful to the atmosphere as coal, oil, and diesel. As described above, gas is also bad for human health. The gas industry is using the promise of hydrogen technology in years to come as an excuse to keep using the gas pipelines and keep gas in use. However, like heroine addicts, modern society needs to go “cold turkey” on fossil fuels before they kill us all. The methane gas industry is going to be short-term and is rapidly being overtaken by renewable energy, which is cheaper and cleaner.

As we are in a *Global Climate Crisis*, we should be following the advice of the scientists who advise that no more new fossil fuel extraction sites should be developed. The advice from the scientific experts is that we must over the next ten years make the transition to cleaner sources of energy and electric vehicles, homes and buildings run on renewable electricity, and investment in energy-saving house design. As in Germany and other countries, this will mean investing in public education and realigning industries to run on renewable energy. It will also drive a new industry in retrofitting old homes to be more energy-efficient. It will also mean promoting the electric vehicle industry.

Note: Britain aims to have all its vehicles running on renewable energy within the next ten years. We can blame P.M. Tony Abbott for the fact that the car factories in Geelong were not converted to making electric vehicles – he preferred to let the car manufacturing industry die, rather than having the vision to support Australia to be a leader in electric vehicles. This is just one example of how engineering skills can be transferred to a better modern industry.

To summarise on the topic of alternatives to gas, government can make as many regulations as it likes, but there is no contravening the fact that a gas-led economy will lead to a gas-led extinction. More investment and development of the methane gas industry for export has to date mainly benefited the gas corporations and the “Coal-Alition” government which gives massive amounts of money to the fossil fuel industries and in return receives money back again as donations for use in elections. We are at a crossroads for survival of the planet. Fossil fuels can have no part to play in our survival. To illustrate: if your house were on fire and your family were trapped inside, would you phone for the fire brigade to put out the fire and save your family, or would you call the neighbourhood pyromaniac to come and pour petrol around the place to build up the fire to higher proportions? In this instance the pyromaniacs are the fossil fuel advocates who are doing everything in their power to hold off the day when they must change to renewable energy instead of polluting coal, oil and gas. As one retired petrol company executive once said to me, “We don’t abide by the rules, we make the rules”.

Included with this submission is a submission on the incineration of waste, which is not a benign source of energy. Incineration is a harmful industry looking for a home in Australia, as it has been banned or is being phased out in Europe and the USA because of its high costs, the very harmful nanoparticles emitted to the atmosphere which become part of the food chain, and the huge

amounts of highly toxic wastes that are generated by burning the waste. It is time to reassess and rescind any further approvals of high temperature incinerators that are so hungry for materials to burn that they prevent the recycling of resources and furthermore require forests to burn as part of their feedstock. The world has lost most of its forests which are an essential part of the atmospheric weather cycles. We should be doing all in our power to prevent further felling of our Australian native forests, especially in the light of the disastrous forest fires of 2019-2020. Certainly the incinerator approved to be built in the Latrobe Valley has no scientific validity for long term sustainability or even for good economics or best standards of energy production. The Europeans call incineration “waste of energy” as the amount of energy produced by burning is less than would be saved or generated if dealt with by other means such as recycling and composting. The end result is polluted air and health problems from toxic dioxins and furans, and enormous amounts of toxic ash that are impossible to dispose of safely.

RECYCLING: FOLLOWING EUROPE’S EXAMPLE TO A CIRCULAR ECONOMY:

As a footnote to the above, it should be borne in mind that many new industries and thousands of jobs will rapidly develop over the next ten years in recycling and retrofitting old buildings and devices, if the Victorian State Government leads the way. *NOTE: Government should be promoting the recycling of batteries and solar panels and working with expert scientists such as Professor Veena Sahajwalla. Professor Sahajwalla is FAA FTSE is an inventor and Professor of Materials Science in the Faculty of Science at UNSW Australia. She is the Director of the UNSW SM@RT Centre for Sustainable Materials Research and Technology and an Australian Research Council Laureate Fellow. Source: [Wikipedia](#)*

Please see appendices and additions with this submission.

Yours truly

[Redacted]

APPENDIX I

San Francisco just banned gas in all new buildings. Could it ever happen in Australia?

Madeline Taylor, University of Sydney; Susan M Park, University of Sydney

https://theconversation.com/san-francisco-just-banned-gas-in-all-new-buildings-could-it-ever-happen-in-australia-150171?utm_medium=email&utm_campaign=Latest%20from%20The%20Conversation%20for%20November%2018%202020%20-%201787917351&utm_content=Latest%20from%20The%20Conversation%20for%20November%2018%202020%20-%201787917351+CID_d3b72708121306b234f73aae6e9c27d8&utm_source=campaign_monitor&utm_term=San%20Francisco%20just%20banned%20gas%20in%20all%20new%20buildings%20Could%20it%20ever%20happen%20in%20Australia

In 2020 San Francisco became the latest city to ban natural gas in new buildings. The legislation will see all new construction, other than restaurants, use electric power only from June 2021, to cut greenhouse gas emissions.

San Francisco has now joined other US cities in banning natural gas in new homes. The move is in stark contrast to the direction of energy policy in Australia, where the Morrison government seems stuck in reverse: spruiking a gas-led economic recovery from the COVID-19 pandemic.

Natural gas provides about 26% of energy consumed in Australia — but it’s clearly on the way out. It’s time for a serious rethink on the way many of us cook and heat our homes.

While San Francisco bans gas, the Morrison government turns to gas to recover the economy from the pandemic.

Cutting out gas

San Francisco is rapidly increasing renewable-powered electricity to meet its target of 100% clean energy by 2030. Currently, renewables power 70% of the city's electricity.

Our mission is to share knowledge and inform decisions.

The ban on gas came shortly after San Francisco's mayor London Breed announced all commercial buildings over 50,000 square feet must run on 100% renewable electricity by 2022.

Buildings are particularly in focus because 44% of San Francisco's citywide emissions come from the building sector alone.

Read more: 4 reasons why a gas-led economic recovery is a terrible, naïve idea

Following this, the San Francisco Board of Supervisors unanimously passed the ban on gas in buildings. They cited the potency of methane as a greenhouse gas, and recognised that natural gas is a major source of indoor air pollution, with a ban leading to improved public health outcomes. From January 1, 2021, no new building permits will be issued unless constructing an "All-Electric Building". This means installation of natural gas piping systems, fixtures and/or infrastructure will be banned, unless it is a commercial food service establishment.

Switching to all-electric homes

In the shift to zero-emissions economies, transitioning our power grids to renewable energy has been the subject of much focus. But buildings produce 25% of Australia's emissions, and the sector must also do some heavy lifting.

A report by the Grattan Institute this week recommended a moratorium on new household gas connections, similar to what's been imposed in San Francisco.

The report said natural gas will inevitably decline as an energy source for industry and homes in Australia. This is partly due to economics — as most low-cost gas on Australia's east coast has been burnt.

Read more: A third of our waste comes from buildings. This one's designed for reuse and cuts emissions by 88%

There's also an environmental imperative, because Australia must slash its fossil fuel emissions to address climate change.

While acknowledging natural gas is widely used in Australian homes, the report said "this must change in coming years". It went on:

This will be confronting for many people, because changing the cook-tops on which many of us make dinner is more personal than switching from fossil fuel to renewable electricity.

The report said space heating is by far the largest use of gas by Australian households, at about 60%. In the cold climates of Victoria and the ACT, many homes have central gas heaters. Homes in these jurisdictions use much more gas than other states.

By contrast, all-electric homes with efficient appliances produce fewer emissions than homes with gas, the report said.

Natural gas produces methane, a greenhouse gas that's far more potent than carbon dioxide.

Zero-carbon buildings

Australia's states and territories have much work to do if they hope to decarbonise our building sector, including reducing the use of gas in homes.

In 2019, Australia's federal and state energy ministers committed to a national plan towards zero-carbon buildings for Australia. The measures included "energy smart" buildings with on-site renewable energy generation and storage and, eventually, green hydrogen to replace gas. The plan also involved better disclosure of a building's energy performance. To date, Australia's states and territories have largely focused on voluntary green energy rating tools, such as the National Australian Built Environment Rating System. This measures factors such as energy efficiency, water usage and waste management in existing buildings. But in 2020, just 2% of buildings in Australia achieved the highest six-star rating. Clearly, the voluntary system has done little to encourage the switch to clean energy.

An estimated 200,000 new houses are built in Australia every year.

The National Construction Code requires mandatory compliance with energy efficiency standards for new buildings. However, the code takes a technology neutral approach and does not require buildings to install zero-carbon energy "in the absence of an explicit energy policy commitment by governments regarding the future use of gas".

An economically sensible move

An estimated 200,000 new homes are built in Australia each year. This represents an opportunity for states and territories to create mandatory clean energy requirements while reaching their respective net-zero emissions climate targets.

Under a gas ban, the use of zero-carbon energy sources in buildings would increase, similar to San Francisco. This has been recognised by Environment Victoria, which notes

A simple first step [...] to start reducing Victoria's dependence on gas is banning gas connections for new homes.

Creating incentives for alternatives to gas may be another approach, such as offering rebates for homes that switch to electrical appliances. The ACT is actively encouraging consumers to transition from gas.

Read more: Australia has plenty of gas, but our bills are ridiculous. The market is broken

Banning gas in buildings could be an economically sensible move. As the Grattan Report found, "households that move into a new all-electric house with efficient appliances will save money compared to an equivalent dual-fuel house".

Meanwhile, ARENA confirmed electricity from solar and wind provide the lowest levelised cost of electricity, due to the increasing cost of east coast gas in Australia.

Future-proofing new buildings will require extensive work, let alone replacing exiting gas inputs and fixtures in existing buildings. Yet efficient electric appliances can save the average NSW homeowner around A\$400 a year.

Learning to live sustainably, and becoming resilient in the face of climate change, is well worth the cost and effort.

Should we be cooking with gas?

Recently, a suite of our major gas importers — China, South Korea and Japan — all pledged to reach net-zero emissions by either 2050 or 2060. This will leave our export-focused gas industry possibly turning to the domestic market for new gas hookups.

But continuing Australia's gas production will increase greenhouse gas emissions, and few Australians support an economic recovery pinned on gas.

The window to address dangerous climate change is fast closing. We must urgently seek alternatives to burning fossil fuels, and there's no better place to start that change than in our own homes.

APPENDIX II

[Redacted]
[Redacted]

“An Industry Looking For A Home”:
Submission To the Victorian Parliamentary Inquiry On Waste
From [Redacted]

Waste Incinerators including gasification and pyrolysis plants are now rejected in the USA and Europe because they cause air, soil and food chain pollution, and are horrendously expensive. The large amounts of highly concentrated toxic ash from incineration create a massive disposal problem.

Poor Economics of Incineration: The need for resources is matched by the need for *capital subsidies*. Harrisburg in the USA recently filed for bankruptcy because of ongoing costs over three decades and the cost of keeping the incinerator going (\$400 million).

Poor Energy Returns Compared To Other Methods of Dealing With Resources: The amount of energy generated by incineration is small compared with the energy that is saved by recycling and composting.

Europe is now setting itself up for a *Circular Economy*, with cradle to grave to rebirth, many jobs generated, and reduction of waste going to landfill.

Once installed incinerators require so much waste to burn in order to keep functioning that recycling is stopped in order to feed the insatiable need for resources.

Air, Soil and Food Chain Pollution: Dioxins, furans, heavy metals and other toxins are the products of incineration. These pollutants have an impact on people locally and much further away. In 2000, a study by the North American Commission on Environmental Cooperation found that Inuit women in Nanavut, Canada, had high levels of dioxin in their breast milk. The major source of the dioxin pollution was the Harrisburg incinerator. Note: global wind systems take pollutants long distances and these winds circulate around the world in a matter of days. This is why not only those in the immediate vicinity of sources of industrial pollution are at risk. (1), (2), (3)

According to recent World Health Organization reports, 1 in 12 human deaths are linked to exposure to unsafe environments globally, with air pollution linked to 7 million deaths.

As part of his opening keynote address on *Clean soils: humanity's next great challenge* at World Soil Day 2018 celebrations at the Korea Environment Industry & Technology Institute event in Seoul, Professor Ravi Naidu, Chief Executive Officer of Australian Contamination Research Agency (CRC CARE) said:

“Soil pollution is particularly insidious. It harms us when we eat food grown in contaminated soil, it poisons water that flows into dams and catchments, and people working with soil – or children playing in it – can be exposed directly... *The United Nations 2030 Agenda for Sustainable Development recognises soil's vital role in our wellbeing, with four of the seventeen Sustainable Development Goals*

containing targets that directly consider soil resources, especially soil pollution

and degradation in relation to food security.... I estimate that the impact of chemical contamination upon Earth is five times as large as that of climate change. Humans are the cause of this problem, and humanity must

work together to solve it before it is too late.”

Why have incinerators in Australia? A NSW Parliamentary Inquiry recently recommended against a proposal for a waste incinerator in greater Sydney due to overwhelming concerns of putting an incinerator in a populated area. The ACT has also rejected incineration as a method of dealing with waste, questioning claims made by the proponent, and recently halted the plan. It is now looking at safer methods of waste disposal.

Our atmosphere is NOT a new convenient “landfill”. It is claimed that 20 to 30% remains as concentrated highly toxic ashes after incineration and creates a disposal problem. The rest goes into our air, our lungs and into the food chain. Due to the large amount of dioxins, furans and other toxins produced and the problems of ash disposal, there is no such thing as ‘clean energy incinerators’.

Disposal Problems: In Holland a mountain of toxic ash has had to be covered with plastic. Ash fallout from incinerators has caused problems in the UK and other areas.

The **National Toxics Network’s report** on waste incinerators exposes the myths around claims made by industry. It cites many credible references; too many to include here. Incineration is not a genuinely clean and economically sustainable solution to discarded resources in the so-called waste-stream:

The facts and references below should warn decision makers in state and local government that there are many economic, health and environmental reasons why they should re-examine the facts and reject incineration.

- **Over the last 22 years, since 1996, there has been only one new garbage incinerator built in the USA.**
- **An estimated 300 proposed incinerators were defeated by citizen and small business coalitions in the USA from the 1970s-1996.**
- **Since 1996 an estimated additional 150 proposed facilities have been rejected at the local level.**
- **Citizens in Saugus, Mass. are fighting to shut down a garbage incinerator ash dump that was supposed to be closed in 1996.**

The pattern is the same throughout the world: People do not want garbage incinerators, which pollute, need enormous amounts of capital, and block comprehensive job-intensive recycling, reuse and composting efforts.

Institute for Local Self-Reliance: <https://ilsr.org/global-anti-incineration-2018>

1. The **European Commission Communication on Waste to Energy from 26 Jan 2017**, basically says there is a problematic role for incineration in Circular Economy. The EU therefore defines what we call a "decommissioning strategy" for countries with “excess capacity” (meaning that that such countries need extra materials to burn in order to keep the incinerator going) such as Sweden, Denmark, the Netherlands, etc.), which includes:
 - *stopping subsidies*
 - *taxing incineration*
 - *a moratorium on new ones*
 - *start shutting the existing ones down.*
 -

For countries without incinerators, it says "*before building one, consider what your*

waste will be not tomorrow, but in 20-30 years". This statement, coupled with the ongoing directions defined in the Circular Economy Package, jeopardises bankability of investments on incineration.

ec.europa.eu/environment/circular-economy/implementation_report.pdf

2. There's also a mandate on European Investment Bank to de-fund incineration and align its funding policies with the reuse centres, separate collection, recycling and composting sites)
3. The European Union environment committee just voted to end all funding to incinerators - https://bit.ly/ENVlvslncineration?fbclid=IwAR3vct7f4X1GBUpwwBQZUKXdy8TS-Ekw5shNFy9u4cInlOe5ZE_fKw9nNuA
4. The UK has proposed an incinerator tax - <https://www.dailymail.co.uk/news/article-5964725/Councils-told-stop-burning-waste-MPs-want-introduce-incineration-tax.html>, <http://ukwin.org.uk/2018/08/25/government-shortlists-incineration-tax-for-november-budget/>, <http://ukwin.org.uk/2018/09/28/are-we-only-a-month-away-from-an-incineration-tax/>
5. There's also a mandate on European Investment Bank to de-fund incineration and align its funding policies with the higher levels in the hierarchy (reuse centres, separate collection, recycling and composting sites)
6. The UK the "Without Incineration Network" has recently released a new report on incineration and climate impacts - <http://ukwin.org.uk/climate/?fbclid=IwAR12HNQNvfzFBHZzLweF8g-1sT9f3JcSgS1rgsG-UYTL8i6O3bXivLRyXPE>
7. The EU Plastic Strategy (a document that frames strategies to tackle the "plastic plague") only mentions incineration in order to highlight the (negative harmful) role of incinerating plastics as one of largest emitters of greenhouse gases. http://ec.europa.eu/environment/waste/plastic_waste.htm
8. Connected to this, the **Zero Waste Energy Report on Contribution of Waste Management to tackle decarbonisation of economy was published around the time of COP 21.** The **REPORT** (which summarises hundreds pages of science-based assessments and calculations) preferability of reduction and recycling (reduction of Greenhouse gases) instead of incineration and land-filling (increase of Green house gases). ***This is basically related to the so-called "embedded energy" you lose once you destroy resources, since you'll have to extract, transport, and transform new primary raw materials, with a total energetic input which is far larger than the energy you get through incineration.***

Two relevant quotations from the Zero Waste Energy Report mentioned above are:

Recommendation 4: Member states should immediately discontinue support for all forms of energy from residual waste, including implicit subsidies. Given that part of the rationale for developing renewable sources of energy is to address climate change, it seems counterproductive to maintain support for those that contribute to climate change. **The case for supporting measures for the generation of energy from waste on the basis that waste is 'a renewable resource' makes no sense when set against the waste hierarchy.**

As countries improve in their prevention, reuse, and recycling, so less and less residual waste will be available. It is stretching the definition of 'renewable'

beyond what is credible to argue that residual waste could be a source of 'renewable' energy.

Recommendation 5: Every subsidy for the utilisation, directly, of harvested biomass for renewable energy generation/renewable fuels should be withdrawn.

In a world where there will be increasing pressure on land, it must surely be questionable to use biomass directly for energy when the land used to grow it could be used for food, or for manufacturing prior to the resulting waste materials being recycled. Only when waste materials are 'leaking' from the system, or when food waste is being digested, should they be used for energy generation, and no subsidies should be attributed to use of primary biomass for energy purposes.

<http://www.zerowasteurope.eu/wp-content/uploads/2015/10/Press-Kit-en.pdf>

Mariel Vilella, Zero Waste Europe's Associate Director and Head of the Climate Policy Programme said: "For far too long the climate impact of waste management has been overlooked. Now it's clear that waste prevention, reuse and recycling are climate change solutions that need to be fully integrated into a low carbon economy. Both at the EU and international level, it is time to shift climate finance support to these climate-friendly options *instead of waste incineration, which in fact contributes to climate change and displaces livelihoods of recyclers worldwide.*"

<http://www.zerowasteurope.eu/wp-content/uploads/2015/10/Press-Kit-en.pdf>

Pioneering Italian Town Leads Europe in Waste Recycling:

Six years ago, Capannori, a rural town in the Italian province of Lucca, in Tuscany became a trendsetter and leader, not just in Italy but throughout all of Europe, as the continent's first Zero Waste town. Today, about 3.5 million Italian citizens carefully separate their waste into coloured bags before leaving them on their doorsteps for collection.

The movement has spread further, too, to other European countries. "Zero waste by 2020 is no utopia," Georgio Del Ghingaro, the Mayor of Capannori said: "It is a concrete goal that we intend to achieve".

Capannori's midterm goal of recycling 75 percent of waste by 2015 was met long in advance; (by 2013) the town recycled 82 percent. Capannori's waste management has become a model for all of Europe. Joan Marc Simon, executive director of [Zero Waste Europe](#) and European coordinator of the [Global Alliance for Incinerator Alternatives](#), confirms that the Zero Waste strategy came to Spain through the Italian experience.

Since 2008, one hundred cities in Spain, all concentrated in Catalonia and the Basque Country, have adopted the strategy. "Southern Europe is giving a lesson on how things can and should be done in a more sustainable way," Simon stressed.

Note: The article above by Silvia Gianelli can be accessed in full, with details of the planning and management that made the Zero Waste program so successful, from:

<http://www.ipsnews.net/2013/05/pioneering-italian-town-leads-europe-in-waste-recycling/>

Why Communities Across America Are Pushing to Close Waste Incinerators, [Rebecca Stoner](#), Dec 10, 2018:

They can be a threat to public health, and a poor solution to larger environmental problems.

Organizers from Baltimore to Detroit to Los Angeles are working for a future without them.

<https://psmag.com/environment/why-communities-across-america-are-pushing-to-close-waste-incinerators>

To summarise why the incineration, pyrolysis or gasification of waste is a bad idea economically and also for human health, the [National Toxics Network](#) has many references on its website including the following:

Submission 373342 and 373334 (duplicate)

<https://ntn.org.au/wp-content/uploads/2014/10/10-reasons-why-burning-waste-to-make-energy-is-a-bad-idea-1.pdf>

See also the list of references attached to the submission made by the [Redacted]. These are listed below:

Incinerator economics

- [Harmful subsidies to waste-to-energy](#) (Zerowaste Europe 2016)
- [Burning public money – for dirty energy](#) (GAIA 2011)
- [Why incineration incentives need to change](#) (Resource Recycling 2013)

Incineration Health Impact

- [Air Pollution from Incinerators and Reproductive Outcomes](#) (link to Epidemiology article 2013)
- [Health effects of waste incinerators](#) (British Society of Ecological Medicine 2008)
- [Toxic ash poisons our food chain](#) (IPEN 2017)
- [Public health impacts associated with incinerators – a compilation](#) (Alliance for a Clean Environment 2013)
- [Cancer and incineration](#) (Prevent Cancer Now Canada 2008)
- [Sarcoma risk from incinerator pollution](#) (Italian study – Open Access Environmental Health 2007 6:19)
- [Incinerator and health issue briefing](#) (Friends of the Earth UK 2001)
- [Incineration Human Health](#) (Greepeace UK 2001)
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<https://zerowasteoz.org.au/publications/>

- [10 reasons why burning waste to make energy is a bad idea](#) (National Toxics Network, Australia)
- [Energy Justice Network Incinerator fact sheet](#)
- [Incinerator Myths vs Facts](#) (GAIA 2010)
- [Landfill gas fact sheet](#) (Energy Justice Network 2008)
- [Incineration of Municipal Solid Waste Pollution Update](#) (Pembina Institute Canada 2007)
- [Questions to ask when faced with a Waste to Energy proposal](#) (GAIA 2016)
- [Gasification pyrolysis and plasma incineration summary](#) (GAIA)
- [Gasification fact sheet](#) (Clean Water Action 2013)
- [Blowing Smoke : 10 reasons why incineration is not “green”](#) (GAIA 2010)
- [Biomass fact sheet](#) (Energy Justice Network 2009))

Incineration Technical

- [Gasification, pyrolysis and plasma briefing](#) (Friends of the Earth 2006)
- [Incineration overcapacity and waste shipping in Europe](#) (GAIA Europe 2013) (Incinerators and waste shipping in Europe 2013)
- [Nanomaterials in the Waste stream](#) (OECD Publishing 2016)
- [Waste to Energy in Australia does not stack up](#) (National Toxics Network Australia 2013)

Incineration Climate Impact

- [Not Renewable, Barely Energy](#) (GAIA 2011)
- [Burning Biomass Report](#) (National Toxic Network Australia 2016)
- [Incinerator subsidies in the EU hurt the climate](#) (GAIA 2017)

Case Studies

- [Air pollution from incinerators: EU case studies](#) (Zero Waste Europe 2015).
- [Incinerator in disguise: case studies worldwide](#) (GreenAction & GAIA 2006)

- [China incinerator case study](#) (EU, IPEN, Green Beagle 2015)
- [Changing the rules for dirty energy in Western Australia](#) (Alliance for a Clean Environment WA 2016)
- [China toxic eggs case study](#) (IPEN 2016)
- [Maryland, USA case study waste to energy](#) (EIP 2011)
- Denmark case study: why recycling makes more sense (

Zero Waste and Recycling

- [A zero waste strategy for Western Australia](#) (National Toxics Network Australia 2017)
- [A sustainable zero waste future](#) (ACT greens 2017)
- [On the Road to Zero Waste](#) (GAIA 2012)
- [Best disposal option for leftovers on the way to Zero Waste](#) (Ecocycle 2014)
- [The benefits of using compost to mitigate climate change](#) (Organic Force and NSW Government 2011)
- [A guide to zero waste: a practical guide](#) (Gaia 2015)
- [GAIA 10 years of community action for zero waste](#) (GAIA 2015)
- [It's smarter to separate](#) (Houston Zero Waste Campaign 2014)
- [Analysis of national landfill survey data](#) (Blue Environment 2013)
- [Organic recycling in Australia](#) (Recycling Organics 2013)
- [Waste generation and resource recovery in Australia](#) (Blue Environment 2013)
- [Citizens guide to zero waste](#) (Connett and Sheehan 2002)
- [Recycling versus landfill versus incineration comparison](#) (Morris 2004)
- [San Francisco zero waste program](#) (Macy)
- Recycling
- [Bad News for recycling and waste reduction](#) (GAIA 2013)
- [Lifecycle analysis comparing waste reduction technologies](#) (Morris LCA 2004)
- [Job creation through recycling](#) (Friends of the Earth UK 2010)
- Waste data
- [National waste report 2016](#) (Dep. of Energy & Environment, Australia)
- [National waste report 2010](#) (Australian Government 2010)
- [National waste regeneration & recovery 2010/11](#) ((Australian Government 2014)
- [Analysis of landfill data](#) (Waste Management Association of Australia 2013)
- [Organic recycling in Australia 2012: industry statistics](#) (Recycled Organics Unit 2012)

The [National Toxics Network's report](#) on waste incinerators exposes the myths around claims made by industry. It cites many credible references; too many to include here. Incineration is not a genuinely clean and economically sustainable solution to discarded resources in the so-called waste-stream:

"The incinerator industry is now compelled to make claims that the electricity it produces is renewable and green in order to attract subsidies and credits for 'green' energy. It is unlikely that the industry would be able to remain financially viable in any sense unless they can access these funds. However, regulators and legislators are taking a closer look at these claims in some countries and exposing the false nature of these arguments". "Renewable energy" subsidies for waste incinerators should be reviewed and revoked. Waste incineration should be discouraged at all levels of governance as a poor solution to waste in the 21st Century. The priority should not be approving 'end of pipe' solutions, but rather focusing on waste avoidance, reuse and recycling which will provide more jobs and the energy they save would dwarf any energy from incineration.



The incinerator will be owned by an overseas company, which has shown few scruples or concern

for community or environment.

While Australian Paper investigates renewable energy options, the government should be considering other opportunities to reduce waste, including mandatory extended producer responsibility and product stewardship programs. Some alternatives listed below would be a better economic proposition for government and tax-payer, and would not disadvantage any large organization looking for cheaper energy sources.

Alternatives: The estimated \$600M cost of the incinerator could instead be invested in a massive solar plant. Nippon has not properly investigated renewable energy and storage options but has superficially dismissed them as an option.

The [Port Augusta Renewable Energy Park](#) – providing 375MW is to be built at a cost of \$600M. 'Once the energy park is completed, it is expected to generate up to 1,000GWh of electricity annually – enough to power approximately 200,000 South Australian homes each year.'

The recently approved [Maffra solar farm](#) is estimated to cost \$40M.

Environment Victoria recently stated that Victoria currently has 1585 MW of operating large-scale wind and solar energy projects, with another 2518 MW under construction or financed. With the average Victorian household estimated to consume 3865 kWh of electricity annually, calculations show these projects will generate more than enough electricity to power the equivalent of all 2.5 million homes in Victoria.

[Redacted]

Reference/Further Bibliographical Source:

(1) Hiltz, Philip (October 17, 2000). "[Dioxin in Arctic Circle Is Traced to Sources Far to the South](#)". *The New York Times*. Retrieved March 10, 2018.

(2) Commoner, Barry; et al. "[Long-range Air Transport of Dioxin from North American Sources to Ecologically Vulnerable Receptors in Nunavut, Arctic Canada](#)" (PDF). *Commission for Environmental Cooperation*. p. 83. Retrieved March 11, 2018.

(3) Capozza, Korey (June 6, 2009). "[U.S. Hazardous to Health?](#)". *International Reporting Project*. Retrieved March 10, 2018.

(4) "The Zero Waste Solution: Un-trashing the Planet, One Community at a Time: How Cities and Towns around the world are saying no to incinerators and wasteful product design and yes to radical recycling, reuse entrepreneurs, and the jobs they create".

The book is published by Chelsea Green, ISBN 978-1-60358-489-0 (paperback) or as an e-book the ISBN is 978-1-60358-490-6.