

## Sustainable Agriculture & Communities Alliance

c/- Gillian Blair, SACA Secretary,

### An Industry Looking For A Home": Submission from the Sustainable Agriculture & Communities Alliance (SACA)

**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.*
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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](https://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/ENVIvsIncineration?fbclid=IwAR3vct7f4X1GBUpwwBQZUKXdY8TS-Ekw5shNFy9u4cInIOe5ZE\\_fKw9nNuA](https://bit.ly/ENVIvsIncineration?fbclid=IwAR3vct7f4X1GBUpwwBQZUKXdY8TS-Ekw5shNFy9u4cInIOe5ZE_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=IwAR12HNQNvfzFBHZzLweF8q-1sT9f3JcSgS1rgsG-UYTL8j6O3bXivLRyXPE>
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](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>

**Maríel 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: <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 Sustainable Agriculture & Communities Alliance. 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.**

#### **Reference/Further Bibliographical Source:**

(1) Hilts, 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.