



#Beyond Recovery

**The Executive Directors
Asian Development Bank**

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CC:

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We are writing this letter as the Global Alliance for Incinerator Alternatives (GAIA)¹ along with various global civil and social movements and stakeholders to put forth our collective request for the Board of the Asian Development Bank (ADB) to exclude waste-to-energy (WtE) incinerators and other thermal-based technologies, including co-firing of waste in cement kilns/industrial boilers (Refuse Derived Fuel production), plastic-to-fuel, and other burning technologies from the list of renewable energy sources and climate mitigation activities in its Energy Policy and other climate-related investment policies and financial instruments in response to the recent commitments for enhanced climate action during the Climate Ambition Summit 2020 where 75 leaders increased plans to reduce CO₂ emissions and around 38 countries declaring a state of climate emergency.

We support the Independent Evaluation Department (IED) recommendation for a phase out on coal-based energy.² However, we express deep concerns on its recommendation to invest in WtE systems in urban and rural areas particularly in developing member countries (DMCs), a proposal consistent with ADB's current green and climate investment policy and guidelines yet in contradiction to various international and national environmental laws and regulations on CO₂ and GHG emissions, pollution, toxic and hazardous waste management including its own safeguards for the environment and small island developing states and particularly incompatible as a waste management solution in the region.

First, WtE incineration is not an efficient source of energy. Waste composition of developing countries in the region is dominated by biodegradable 'wet' waste³, followed by plastic, paper and metals. Considering the high moisture content, this reduces Lower Calorific Value (LCV) and lower

¹ GAIA is a global network of over 800 grassroots organizations, non-profits and individuals established to phase-out incinerations and grow zero waste systems in over 90 countries.

² ADB Independent Evaluation of ADB Energy Policy and Program 2009–2019.

³ World Bank. <https://openknowledge.worldbank.org/handle/10986/30317>

energy recovery efficiency of waste incineration - making WtE incineration neither practical nor economical.

The Ministry of Sustainability and the Environment Singapore stated that waste incineration is not a sustainable solution and has opted to stop building more incineration plants indefinitely citing high costs to build and operate and land area requirements.⁴ In Singapore, there are four WtE incineration plants which burn 37% of Singapore's total waste generation - mostly plastic waste. Yet, it only meets up to 2% of Singapore's total electricity demand.⁵ Also, Singapore incineration plants' net electricity efficiency is only 25%.⁶ Similar to Japan's latest WtE incineration plants which can only typically convert 20% to 25% of energy into electricity.⁷

The economic implication is severe because revenue from selling electricity and recyclables does not sufficiently cover the operating costs of WtE incinerators.⁸ This fact is well reflected in the U.S. where waste incineration is considered as one of the most expensive ways to generate energy. WtE incineration also reflects the weak financing model for an industry that has become increasingly dependent on renewable energy subsidies to stay afloat.⁹

Second, WtE is not a climate mitigation activity and remains to be a hindrance toward decarbonization. Plastic waste and other non-organic waste are the preferred inputs for WtE facilities. Plastics however, is 99% made from chemicals sourced from fossil fuels¹⁰ hence the operational efficiency of WtEs highly depends on the volume of fossil fuel burnt. According to UNEP, depending on the waste composition, waste incineration emits between 250-600 kg fossil-CO₂ per tonne of incinerated waste, which is comparable to the carbon intensity of emissions from coal combustion-making it a significant source of GHG emissions.¹¹

The EU's experience shows that high levels of carbon intensity produced in their WtE incineration is already about two-times greater than the current EU average electricity grid carbon intensity¹². Further, the US Environmental Protection Agency also states that incinerators emit more carbon

⁴ Ministry of Sustainability and the Environment Singapore. <https://www.mse.gov.sg/policies/clean-land>

⁵ Ministry of Sustainability and the Environment Singapore. <https://www.mse.gov.sg/policies/clean-land>

⁶ National Environment Agency of Singapore.

<https://www.uncrd.or.jp/content/documents/6597Country-G-4-Singapore.pdf>

⁷ IGES Centre Collaborating with UNEP on Environmental Technologies (CCET).

https://www.iges.or.jp/en/publication_documents/pub/policysubmission/en/10877/WtEI_guideline_web_200615.pdf

⁸ idem

⁹ Tishman Environment and Design Center.

https://static1.squarespace.com/static/5d14dab43967cc000179f3d2/t/5d5c4bea0d59ad00012d220e/1566329840732/CR_GaiaReportFinal_05.21.pdf

¹⁰ Center for International Environmental Law. <https://www.ciel.org/issue/fossil-fuels-plastic/>

¹¹ United Nations Environment Programme.

<https://www.unep.org/ietc/resources/publication/waste-energy-considerations-informed-decision-making>

¹² Zero Waste Europe.

<https://zerowasteurope.eu/library/the-impact-of-waste-to-energy-incineration-on-climate/>

dioxide per megawatt-hour than coal-fired, natural-gas-fired or oil-fired power plants.¹³ A recent scientific paper further proves that incinerators emit more greenhouse gas emissions per unit of electricity produced than any other power source.¹⁴

The Board can also find wisdom from the path of the European Union (EU) in its exclusion of WtE incineration in their list of activities worthy of sustainable financing, despite having better environmental regulations than Asian DMCs, as it harms efforts toward achieving a circular economy.¹⁵ WtE is also excluded from other EU funds such as the Regional Development and Cohesion Fund and the Just Transition Fund.¹⁶

Third, WtE projects pose irreversible and long-term fiscal, environmental and social risks for ADB and its borrowing DMCs because of operational incompatibilities with the region's waste composition and existing regulations, job losses from recycling, and high investment requirements that profits alone cannot recover.¹⁷ Moreover, WtE incineration facilities create the least jobs compared to composting, recycling, remanufacture and repair.¹⁸

Asia's waste generation has a significant potential to reduce wastes, reuse and recycle to realize economic gains, achieve higher productivity and resource security, generate employment and reduce risks to humans and ecosystems.¹⁹ WtE incineration, however, undermines these potentials by removing incentives to resort to other waste management options with higher circular economy potential through waste prevention, reuse and recycling that local governments, civil society and communities have invested in for many years. EU's policy to delist WtE incineration in its sustainable finance was also based on this practical economic logic and which is also the basis of existing laws on ecological solid waste management in DMCs.

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https://www.colorado.edu/ecenter/sites/default/files/attached-files/stop_trashing_the_climate_-_fullreport_1.pdf

¹⁴ <https://eartharxiv.org/repository/view/2050/>

¹⁵ The EU Taxonomy Regulation defines activities leading to increase in waste incineration as harmful to the circular economy. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32020R0852> On this basis the Climate Change Mitigation Taxonomy proposal excludes waste to energy incineration from the list of activities considered as sustainable.

https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12302-Climate-change-mitigation-and-adaptation-taxonomy#ISC_WORKFLOW

¹⁶ <https://data.consilium.europa.eu/doc/document/ST-13719-2020-INIT/en/pdf>

¹⁷ A WtE guidelines published by the Institute for Global Environmental Studies mentions that in Japan, China and Thailand, subsidy systems were introduced such as FIT schemes by which energy generated from the WtE incineration process because, in general, profits alone cannot adequately cover the operating costs of incinerators.

¹⁸ Despite the geographic range captured in the literature, the job creation potential of waste incineration is consistently low, supporting an average of 1.7 jobs/10,000 TPY. One proposed incinerator in South Africa would have reportedly created as few as 0.7 jobs/10,000 TPY.

<https://zerowasteworld.org/wp-content/uploads/Jobs-Report-ENGLISH-2.pdf>

¹⁹ [Asia Waste Outlook](#) published by International Solid Waste Management, UN Environment and the Asia Technology Institute

More importantly, the harder and long-term consequences are externalized by communities and the environment for generations long after the project life. WtE incineration burn various material which contain hazardous and toxic content such as heavy metals, polychlorinated biphenyls (PCBs), and brominated polyaromatic hydrocarbons (PAHS) which are proven to cause neoplasia, congenital anomalies, infant deaths and miscarriage, cancer, and other life-threatening illnesses.²⁰ Placed nearby communities and agricultural areas, WtE incineration contaminates air, land, water and food systems.²¹ A report by IPEN shows that toxic ash and other residues from waste incineration around the globe contain dioxins, furans (PCDD/Fs), and a range of other highly toxic POPs, which occur at levels threatening to human health and the environment.²² Also, WtE incineration emits fine and ultra fine particles which contain high amounts of toxic compounds and pose a serious threat to environment and human health.²³

For these reasons, we put forward these urgent requests to the Board:

- 1) Explicitly exclude WtE incineration and other thermal-based technology from ADB Energy Policy and all its climate and green investment policies and financing instruments. Thenceforth, WtE incineration be included in ADB's prohibited investment activities list.²⁴ And further, stop all WtE incineration projects and investments in the preparatory and implementation phase funded by ADB.
- 2) Meet the principles outlined in ADB's own social and environmental safeguard standards and policy for small island developing states such as Maldives which citizens are protesting due to the WtE incineration's climate risks, and countries facing severe climate risks.
- 3) Order for a review of the environmental and social safeguards implementation in all WtE incineration projects including technical assistance projects in the Philippines that are currently paving the way for establishing incineration projects with the private sector despite existing national safeguards banning all forms of incinerations.

WtE is not an energy, climate, waste or green jobs solution. It counters the enhanced commitments toward reducing GHG emissions set forth in the Climate Action Summit 2020. Investing in WtE contradicts ADB's long term strategy priorities on climate change, build climate and disaster resilience, and enhance environmental sustainability. WtE ADB-projects, by their very nature, violate the Bank's own environmental safeguards on pollution abatement, toxic and hazardous manufacturing and trade. It also deviates from other international environmental laws and guidelines that ADB, as a multilateral development bank, has a legal and ethical obligation to follow.

²⁰ https://www.no-burn.org/wp-content/uploads/Pollution-Health_final-Nov-14-2019.pdf

²¹ <https://www.sciencedirect.com/science/article/abs/pii/S0269749116320838?via%3Dihub#undfig1>

²² International Pollutants Elimination Network.

<https://ipen.org/documents/toxic-ash-poisons-our-food-chain>

²³ The Particulate Research Group.

<https://ukwin.org.uk/files/particulates/PRG-Particulates-Matter-December-2019.pdf>

²⁴ ADB Safeguards Policy Statement 2009. Appendix 5.

The costs of continued investments in WtE compared to immediate divestment is high and even higher if we bring this technology as part of our post-COVID19 plans.

We request that the Board heed policy models, demands of communities, and expert views of environmentalists, health professionals, and scientists from different regions. It is in this period that we need to ensure that the recovery of DMCs are free from dirty debts brought by WtE projects and that much-needed development finance becomes an instrument in achieving a low-carbon, resilient, and viable post-COVID19 future immediately.

Yours sincerely,

INTERNATIONAL ORGANIZATIONS

1. Center for International Environmental Law
2. Changing Markets Foundation
3. Gallifrey Foundation
4. Global Alliance for Incinerator Alternatives
5. Green Army International
6. Greenpeace International
7. Health and Environment Justice Support
8. International Accountability Project
9. Let's Do It World
10. Oceana
11. The Last Beach Cleanup
12. Trash Hero World

REGIONAL ORGANIZATIONS

13. 350.org - Asia
14. Building and Wood Workers International - Asia Pacific Region
15. Health Care Without Harm - South East Asia
16. NGO Forum on ADB
17. Zero Waste Association of South Africa
18. Zero Waste Europe

NATIONAL ORGANIZATIONS

Canada

19. Zero Waste Canada, Canada
20. Zero Waste British Columbia, Canada

United States

21. Algalita Marine Research and Education, United States
22. California Safe Schools, United States
23. Citizens' Environmental Coalition, United States

24. Clean Air Action Network of Glens Falls, United States
25. CT Coalition for Environmental Justice, United States
26. Earth Action, Inc., United States
27. East Yard Communities for Environmental Justice, United States
28. FracTracker Alliance, United States
29. FreshWater Accountability Project, United States
30. Go Green OC, United States
31. Green Delaware, United States
32. Inland Ocean Coalition, United States
33. Institute for Local Self-Reliance, United States
34. Ironbound Community Corporation (organizing wing), United States
35. NC Climate Justice Collective, United States
36. Society of Native Nations, United States
37. Sound Resource Management Group, Inc., United States
38. Texas Campaign for the Environment, United States
39. The Center for Environmental Transformation, United States
40. Urban Ore, Inc., a Material Recovery Enterprise, United States
41. Working on Waste, United States
42. Zero Waste Washington, United States

South America

43. Red de Acción por los Derechos Ambientales (RADA), Chile
44. Fronteras Comunes, Mexico

Europe

45. Plastic Change, Denmark
46. Nature And Biodiversity Conservation Union (NABU), Germany
47. Humusz Szövetség, Hungary
48. Green Liberty, Latvia
49. Plastic Soup Surfer, Netherlands
50. Society for Earth (TNZ), Poland
51. Sciaena, Portugal
52. Društvo Ekologi brez meja, Slovenia
53. United Kingdom Without Incineration Network (UKWIN), United Kingdom

References:

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