Republic of the Philippines
HOUSE OF REPRESENTATIVES
Quezon City, Metro Manila

Eighteenth Congress
First Regular Session

HOUSE BILL NO. 4419

Introduced by

Honorable DAVID "Jay-Jay" C. SUAREZ and
Honorable ANNA MARIE VILLARAZA-SUAREZ

EXPLANATORY NOTE

This bill seeks to legalize the incineration of waste. Incineration is a method of waste treatment involving the burning of organic materials found in waste. Incineration and other high-temperature waste management processes are called "*thermal treatment*". Particularly, they involve converting waste materials into ash, flue gas, and heat. The ash mostly consists of inorganic components of waste and can be in the shape of solid lumps or particulates carried by the flue gas. The flue gases are supposed to be cleaned of particulate and gaseous contaminants before being released into the air. Sometimes, the heat generated is used in useful ways like in producing electricity.

Waste management has become a serious problem brought about by an increasing population and rapid urbanization in the country, waste generation will also rapidly increase within the next few years. With this scenario, the need for measures to effectively deal with the problem of waste disposal in the country has never been more imperative than now. However, waste management entails equally serious environmental concerns. Hence, this means that waste must not only be properly disposed of, but also requires that the disposal of waste would not become a significant environmental burden.

In response to the looming garbage problem in the country, Republic Act No. 9003 or the 'Ecological Solid Waste Management Act of 2000' was enacted mandating the adoption of a systematic and comprehensive ecological solid waste management program that ensures the protection of public health and the environment through the implementation of best environmental practices. The law specifically promotes the proper segregation, collection, transport, storage, treatment and disposal of solid waste, and the exploration of the potentials and benefits of recycling waste products in addressing waste management problems.

In 1999, Republic Act No. 8749, otherwise known as the "Clean Air Act" was passed which outlines government measures to reduce air pollution and incorporate environmental protection into its development plans. The provisions of this Act extend to the Ozone

Depleting Substances (ODS) that significantly deplete or otherwise modify the ozone layer, and to Persistent Organic Pollutants (POPs) which are organic compounds persisting in the environment, chemical and biological degradation, including but not limited to dioxin, furan, and other toxic substances potentially damaging to human and animal health and the ecosystem. Some of these toxic substances are emitted by a process known as incineration, a method of waste disposal. Hence, the prohibition of the said law on the use of incinerators.

Incineration reduces the volume of waste very effectively and destroys disease-causing bacteria. It is arguably suitable for use in the country in the light of current difficulties in establishing final disposal sites (landfills) due to our limited land space. More importantly, incinerators can be used for generating electricity, known as waste-to-energy (WTE) or energy recovery technologies. Although there are serious environmental concerns about incineration, advances in emission control designs, along with strict standards and monitoring systems have caused large reduction of pollution in the atmosphere. In fact, The Department of Health (DOH) supports waste incineration particularly for medical and hazardous wastes since these types of waste are often too dangerous to compost or cannot be recycled or reused. Moreover, some countries allow the incineration of human anatomical waste, discarded medicines, or solid items contaminated with blood and body fluids.

Incineration plants are able to reduce the mass of waste by 95% to 96%. The decrease in waste is determined by the recovery level and decomposition of substances. Even though incineration does not substitute the need for landfills, it has been able to reduce the quantity of waste in landfills.

Incineration has numerous benefits especially in terms of destroying contaminant medical wastes and other life-risking garbage. Also, incineration largely utilizes waste-to-energy technology. In Japan, for example, thermal treatment is very popular since they have a shortage of land. Moreover, the energy produced by incineration plants is in high demand in nations such as Sweden and Denmark.

The ban on incineration was premised on the need to reduce the release of greenhouse gases like carbon dioxide (CO2), methane, sulfur dioxide (SO2) and nitrous oxide (NO2) which bring about global warming and induce climate change. It was also meant to reduce the release of carcinogenic organic air pollutants, principally the highly toxic dioxins and furans.

Ironically, the ban on incineration achieves the opposite result. After the municipal wastes are sorted and the non-biodegradable wastes like plastics, metals and glass recovered and recycled, the remaining organic biodegradable wastes are finally disposed properly in industrial scale in three ways: 1) sanitary landfills with or without methane gas recovery, 2) incineration for steam and electricity generation, or 3) converted into some form of powdered solid fuel and also into gasoline and fuel-oil like products.

Hence, the realistic choice for now for most countries/cities is between sanitary landfills versus incineration.

However, studies have shown that sanitary landfills with methane recovery systems produce 2–3 times more carbon dioxide equivalent, sulfur dioxide and nitrous oxide than incineration electricity systems per kilowatt hour of power generated.

The less capital-intensive, easier to manage landfills without methane capture are much worse because the escaping methane has 34 times more global warming potential compared with carbon dioxide.

Thus, for the purposes of mitigating global warming and cleaner air, incineration is the far better technological option.

Additionally, both options can generate electricity. Sanitary landfills with methane recovery, generate power in the order of 44–84 kilowatt per hour per ton of waste. Modern incinerators on the other hand generate 450–930 kilowatt per hour per ton of waste, or an efficiency factor of 10, in favor of incineration.

Our Clean Air Act got its priorities mixed up. Incineration, especially with the modern plants, are more benign to people and the environment than sanitary landfills.

Many progressive and environmentally conscious countries have adopted incineration as the preferred waste-to-energy option in handling municipal solid wastes. Denmark, Sweden, Switzerland, The Netherlands, Germany, France and Italy are leading the way in Europe. Sweden even imports 700,000 tons of solid wastes each year to keep its incinerators running efficiently.

Closer to home, the tiny island city state of Singapore which generates close to 9,000 tons of waste per day similar to Metro Manila has five operating incinerators.

Metro Manila is running out of dumpsites for the 9,000 tons of garbage it generates every day. The problem can only get worse. But suitable landfill sites are more and more difficult to find as the surrounding communities rise up in protest to the stench, sanitation and public order problems landfill sites bring with them.

The Clean Air Act (RA 8749) shortsightedly closed the option to safely and neatly dispose municipal solid wastes by incineration which generate much needed electricity without unduly contributing to global warming and spoiling the air.

On the contrary, the residual biodegradable organic wastes burned in incinerators are really carbon-neutral and are treated by some countries as renewable sources, much like bioethanol and biodiesel, meriting tax incentives rather than being banned.

This bill aims to amend Republic Act 8749 and lift the blanket prohibition on the use of incinerators in the disposal of solid wastes in the country. The proposed measure also seeks to take advantage and promote the use of recent advances in waste-to-energy technology. This technology provides for the safe disposal of waste without harmful emissions to the atmosphere. Finally, the bill sustains the primacy of using non-burn technologies in waste disposal such as recycling and waste segregation as mandated by the Ecological Solid Waste Management Act.

For the foregoing reasons, the immediate consideration and approval of this bill is earnestly urged.

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AN ACT
PROMOTING THE USE OF WASTE-TO-ENERGY TECHNOLOGY, AMENDING FOR THE PURPOSE REPUBLIC ACT NO. 8749, OTHERWISE KNOWN AS THE CLEAN AIR ACT OF 1999

Be it enacted by the Senate and House of Representatives in Congress assembled:

Section 1. *Title* – This Act shall be known and referred to as the "Waste-To-Energy Technology Act of 2019";

Sec. 2. Section 5 of Republic Act No. 8749, otherwise known as the "Clean Air Act of 1999" is hereby amended to read as follows:

Section 5. Definitions. – As used in this Act:
a.) xxxx

Y.) Waste-To-Energy Technology – refers to:
a.) Technology that involves the conversion of various elements of solid waste susch as but not limited to paper, plastics, or wood to generate energy by either thermochemical or biochemical processes;
b.) Any waste treatment that is able to produce energy from a waste material;
c.) Technology which reduces or eliminates waste that otherwise would be transformed to a greenhouse gas.

Sec. 3. Section 15 of the same Act is hereby amended to read as follows:

Section 15. Air Pollution Research and Development Program. – The Department, in coordination with the Department of Science and Technology (DOST), other agencies, the private sector, the academe, NGO's and PO's shall establish a National Research and Development Program for the prevention and control of air pollution, **AND FOR THE**

DEVELOPMENT AND UTILIZATION OF WASTE-TO-ENERGY TECHNOLOGIES. The Department shall give special emphasis to research on and the development of improved methods having industry-wide **AND COMMUNITY-WIDE** application for the prevention and control of air pollution **AND THE UTILIZATION OF WASTE-TO-ENERGY TECHNOLOGIES.** Such a research and development program shall develop air quality guideline values and standards in addition to internationally-accepted standards of maintaining environmentally-sound practices in waste treatment. It shall also consider the socio-cultural, political and economic implications of air quality management, pollution control and **WASTE-TO-ENERGY TECHNOLOGY UTILIZATION.**

Sec. 4. Section15 of the Act is hereby further amended by adding a sub-section to read as follows:

Section 15-A. Waste-To-Energy Technology. – Pursuant to Section 15 of this Act, Waste-To-Energy Technology is hereby promoted with the following objectives:

a.) Reduce the volume of original waste and at the same time produce energy from the same;

b.) Conduct waste stream analysis to prevent situations where ash becomes a hazardous waste;

c.) Treatment all types of waste, including hazardous and toxic materials, without leaving behind waste residues and harmful emissions to the atmosphere;

d.) Recover all valuable contents of wastes at highly economic conditions;

e.) Recycle valuable materials and recover more energy;

f.) Continuously promote developed technology that produces no harmful emissions or residues, complying with the standards and regulations which protect the environment.

Sec. 5. *Compliance*. - Incinerators which are compliant with the emission standards set by Section 19 of Republic Act 8749 shall be allowed as waste-to-energy facilities in municipalities and cities;

Sec. 6. The same Act is hereby further amended by repealing the original Section 20 of the said Act and amending the same to read as follows:

> ***Sec. 20. [~~Ban on Incineration~~] Allowing Incineration.* – Incineration shall be allowed for the treatment of waste, and in effect, the conversion of such waste into energy. To control air pollution, the incinerator shall be designed in such a way that product combustion gases shall be properly treated and harmful emissions shall be removed before gases are released into the atmosphere. Advanced emission control designs and stringent regulations shall ensure that wastes are disposed of without detrimental impact to the improvement.**
>
> **Traditional and/or small-scale methods of community/neighborhood incineration for sanitation purposes or "siga", agricultural, cultural, health and food preparation and crematoria incineration shall continue to be allowed subject to existing rules and regulations.**
>
> Local government units **[~~are hereby mandated~~] shall continue** to promote, encourage and implement in their respective jurisdiction a comprehensive ecological waste management that includes waste segregation, recycling and composting **and the use of waste-to-energy technologies.**

~~[Incineration, hereby defined as the burning of municipal, biomedical and hazardous waste, which process emits poisonous and toxic fumes is hereby prohibited; *Provided, however*, That the prohibition shall not apply to traditional small-scale method of community/neighborhood sanitation "siga", traditional, agricultural, cultural, health, and food preparation and crematoria; *Provided, Further*, That existing incinerators dealing with a biomedical wastes shall be out within three (3) years after the effectivity of this Act; *Provided, Finally*, that in the interim, such units shall be limited to the burning of pathological and infectious wastes, and subject to close monitoring by the Department.]~~

With due concern on the effects of climate change, the Department shall promote the use of the state-of-the-art, environmentally-sound and safe non-burn technologies for the handling, treatment, thermal destruction, utilization, and disposal of sorted, unrecycled, uncomposted, biomedical and hazardous wastes.

Sec. 7. *Local Government Solid Waste Management Plans subject for approval*. Proposals and plans to establish incinerator facilities must originate from the local solid waste management boards of the LGUs and effected through an ordinance in consonance with their respective 10-year solid waste management plans consistent with the national solid waste management framework.

All local government solid waste management plans shall be subject to the approval of the National Solid Waste Management Commission;

Sec. 8. *Environmental Compliance Certificate*. – The establishment of incinerators shall be subject to an environmental impact assessment as required by law prior to implementation.

No actual implementation of such activities shall be allowed without the required Environmental Compliance Certificate.

Sec. 9. *Regulation of Waste-To-Energy Technology*. – Thermal and other treatment technologies for the disposal of municipal and hazardous wastes, or for the processing of any material for fuel, whether for commercial use or not, shall be designed and operated to meet the standards established by this Act and its implementing rules and regulations: Provided, That these technologies shall be fitted with equipment that will continuously monitor, record and make publicly available the reported data on their emissions or air pollutant concentrations: Provided, however, That units that recover energy shall be prioritized: Provided further, That thermal treatment units shall treat wastes at a temperature of not less than eight hundred fifty degrees centigrade (850℃).

Sec. 10. *Role of the Department of Environment and Natural Resources (DENR)*. - The DENR shall be primarily responsible for the implementation and enforcement of this Act. It shall likewise promote the use of the state-of-the-art, environmentally sound and safe technologies for the handling, treatment, thermal or non-thermal destruction, utilization, and disposal of residual wastes.

Sec. 11. *Role of Local Government Units (LGUs) in Setting Up Treatment Facilities*. – The LGUs are hereby mandated to promote, encourage and implement in their respective jurisdiction a comprehensive solid waste management plan that includes the use of waste-to-energy technologies.

Sec. 12. *Role of the National Solid Waste Management Commission.* – The NSWMC shall approve or deny the plan, or supplemental disposal plan of all LGUs, which may carry out treatment projects, within ten (10) working days from its submission. The Department of Science and Technology (DOST) shall likewise process the application of said projects for the necessary technology verification within the same period. However, for new technology, the DOST shall have twenty (20) working days from the receipt of the application of said projects to process the verification. In all cases, the approving body shall put in writing the reasons for either approving or denying the plan.

Sec. 13. *Incentives.* – (a) Fiscal Incentives. – The following tax incentives shall be granted to registered enterprises which shall invest in waste to energy technology:

1. Income Tax Holiday. – Within the first seven (7) years of its operations, the treatment facility shall be exempt from income tax levied by the national government.

2. Tax and Duty Exemption on Imported Capital Equipment and Vehicles. – Within the first ten (10) years of operations registered enterprises which invested in the treatment facility utilizing WTEs shall enjoy tax and duty free importation of machinery, equipment, vehicles and spare parts used for setting up the treatment facility: Provided, That the importation of such machineries, equipment, garbage collection vehicles, and spare parts shall comply with the following conditions:

i. They are not manufactured domestically in sufficient quantity, of comparable quality and competitive prices; and

ii. They are reasonably needed and will be used exclusively by the registered enterprise in the operation of the facility; The importation of such machinery, equipment, vehicle and spare parts has been approved by the Board of Investment (BOI) of the Department of Trade and Industry (DTI).

Provided, further, That the sale, transfer or disposition of such machinery, equipment, vehicle and spare parts within five (5) years from the date of acquisition shall be prohibited, without prior approval of the BOI, otherwise the registered enterprise and the vendee, transferee, or assignee shall be solitarily liable to pay twice the amount of tax and duty exemption given it.

3. Tax and Duty Exemption of Donations, Legacies and Gifts. – All legacies, gifts and donations to LGUs, enterprises or private entities, including nongovernment organizations (NGOs) for the support and maintenance of the program for setting up of treatment technologies shall be exempt form all internal revenue taxes and customs duties, and shall be deductible in full from the gross income of the donor for income tax purposes.

b. Non-Fiscal Incentives. – LGUs, enterprises or private entities availing of tax incentives under this Act shall be entitled to applicable non-fiscal incentives provided for under the Omnibus Investment Code.

c. Financial Assistance Program. – Government financial institutions such as the Landbank of the Philippines (LBP), Development Bank of the Philippines (DBP), Government Service Insurance System (GSIS), and such other government institutions

providing financial services shall, in accordance with and to the extent allowed by the enabling provisions of their respective charters or applicable laws, accord high priority the extension of financial services to individuals, enterprises, or private entities engaged in putting up treatment facilities using WTE's: Provided, That these institutions shall allocate five percent (5%) of their loan portfolio to waste treatment projects.

Sec. 14. *Fines and Penalties.* – Violations of the provisions of this Act or its IRR, or the standards or rules and regulations promulgated for treatment facilities shall be fined or penalized under the provisions of P.D. 1586, R.A. 6969, otherwise known as the Toxic Substances and Hazardous and Nuclear Waste Control Act of 1990, R.A. No. 8749, otherwise known as the Philippine Clean Air Act of 1999, R.A. No. 9003, and R.A. 9275, otherwise known as the Philippine Clean Water Act of 2004. For waste-to-energy facilities, the penal schemes established under the Philippine Grid Code and Philippine Distribution Code pursuant to R.A. No. 9136, also known as the Electric Power Industry Reform Act of 2001 shall likewise apply for this purpose.

Sec. 15. *Implementing Rules and Regulations* – The DENR, in coordination with the NSWMC, Department of Energy, BOI, Bureau of Internal Revenue, the Bureau of Customs, academe or research institutions, and other concerned agencies, shall promulgate the implementing rules and regulations for this Act, within three (3) months after its enactment.

Sec. 16. *Report to Congress* – The NSWMC shall submit an annual report to the President of the Philippines and to Congress on the status of the disposal management and the use of treatment facilities in the country not later than March 30 of every year following the approval of this Act.

Sec. 17. *Separability Clause.* – If any part or section of this Act is declared unconstitutional, such declaration shall not affect the other parts or sections of this Act.

Sec. 18. *Repealing Clause.* – All laws, orders, decrees, rules and regulations and issuances or parts thereof inconsistent with the provisions of this Act are hereby repealed or amended, accordingly.

Sec. 19. *Effectivity.* - This Act shall take effect fifteen (15) days after publication in the Official Gazette o in a newspaper of general circulation.

Approved.