

MAKING WASTE WORK

Aligning Legal, Market, and Local Systems for Waste-to-Energy in the Philippines

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KEY MESSAGES

- **Interest is mounting for WtE as a solution to waste problems.** With landfills at capacity, urban waste rising, and coal still dominant in the energy mix, Waste-to-Energy (WtE) has re-emerged as a serious policy option. The DOE's plan to include WtE in Green Energy Auction 6 and President Marcos Jr.'s legislative push highlight the window for action.
- **No new law is needed.** The legal foundations for WtE already exist through RA 9003, the Clean Air Act, the Renewable Energy Act, and DENR/DOE issuances. The problem is not absence of policy, but lack of alignment across DOE, DENR, DILG, DOF, and NEDA.
- **Three barriers block progress.** Fragmented feedstock across thousands of LGUs, misaligned and inconsistent agency mandates, and fragile project economics have left WtE stuck in concept stage rather than the market.
- **WtE must fit within the waste system.** It cannot compete with recycling but must complement Extended Producer Responsibility and broader circular economy goals. Residual waste will remain even with stronger recovery, and how it is managed has direct implications for public health, resilience, and urban well-being.
- **Pathways forward are clear.** Government and business can unlock progress through a Joint Memorandum Circular harmonizing rules, a dedicated WtE stream under GEAG6 to signal market confidence, LGU clustering to stabilize feedstock and contracts, and scaling bridge options like cement co-processing.

Executive Summary

Waste-to-Energy (WtE) is re-emerging as a serious policy option for the Philippines. With landfills nearing capacity, urban waste climbing, and coal still dominating the energy mix, the urgency is clear. The Department of Energy has announced plans to include WtE in its sixth Green Energy Auction by 2025, while President Marcos Jr. has named a WtE bill among his legislative priorities. These signals place WtE squarely back on the policy agenda, but the consensus from recent multi-sector roundtables convened by Makati Business Club and the Embassy of the Netherlands is clear: what the country needs is not a new law, but better alignment across the ones it already has.

Three barriers stand in the way. First, fragmented feedstock across thousands of barangays erodes investor confidence and makes long-term contracts difficult. Second, system misalignment, DOE, DENR, DILG, DOF, and NEDA applying overlapping but inconsistent mandates, creates uncertainty and sustains the misperception of a legal ban on incineration. Third, economic fragility, with high capital costs, unclear tipping fee structures, and unsettled power sales rules, means that projects that may look viable on paper often collapse in practice. These challenges leave both local governments and private investors hesitant to move forward.

The path ahead lies in harmonizing mandates across agencies, strengthening local solutions such as LGU clustering to stabilize feedstock and contracts, a dedicated WtE stream under Green Energy Auction 6, and scaling bridge options like cement co-processing. Equally important is placing WtE within the broader waste system: it cannot compete with recycling but must complement implementation on Extended Producer Responsibility law and other circular economy efforts. Residual waste will remain even under stronger recovery, and how it is managed has direct implications for public health, resilience, and urban well-being. With alignment, clarity, and sustained public-private collaboration, WtE can move from concept to investable reality, strengthening both waste management and energy security.

Waste-to-Energy in the Philippine Context

WtE is quickly returning to the policy agenda in the Philippines. Landfills across the country are nearing capacity¹, and urban waste generation continues to climb². At the same time, the Philippines remains heavily reliant on coal, making diversification of the energy mix more urgent than ever. In response, the government has begun to act: the Department of Energy has announced plans to include WtE in its next Green Energy Auction Program by the end of 2025, creating a potential pathway for long-term power contracts, while President Marcos Jr. has listed the WtE Bill among his legislative priorities in the 20th Congress³. These developments have put WtE squarely back into national discussions, and with them, a renewed need to carefully weigh environmental, economic, and governance considerations.

Few issues in waste management spark as much debate as WtE. Supporters see it as a way to tackle two challenges at once: relieving the pressure on landfills while producing electricity. Critics worry that it could discourage recycling, lock in incineration, and carry environmental risks if not tightly regulated. At its simplest, WtE means using non-recyclable waste to generate power or heat, often through controlled burning (incineration), gasification, or other treatment methods. Yet the term itself has no single definition – government agencies, businesses, and community groups interpret it in different ways. This lack of common ground has fueled disagreement as much as the technology itself.

The divide is further complicated by persistent misinterpretations of the Clean Air Act. While many assume it imposes a blanket ban on incineration, Supreme Court rulings have clarified that compliant WtE technologies are legally permissible. Still, the perception of prohibition continues to shape public and investor sentiment.

Makati Business Club, in partnership with the Embassy of the Kingdom of the Netherlands in the Philippines, convened two multi-sector roundtables on Waste-to-Energy (WtE). The first, in May 2025, gathered private sector leaders; the second, in June, expanded to include both public and private actors. Across both sessions, one point was clear: the Philippines does not need a new WtE law. What it needs is to make existing laws work better. The building blocks are already in place; what's missing is cohesion, political will, and implementation that connects the dots.

¹ Several of the country's largest landfills in Davao, Bacolod, General Santos, and Calamba have already reached full capacity.

² As of March 2023, there were 279 operational landfills with space for around 66 million cubic meters of waste. Yet the Philippines produces over 20 million cubic meters annually, meaning current capacity could be exhausted in as little as three years.

³ President's Report 2025

Feedstock as anchor

In WtE, the conversation starts with two questions: where will the waste come from and can the supply be guaranteed? A facility only works if there is enough, steady waste to power it. Without that foundation, no amount of advanced technology, financing, or government approvals will make a project move forward. In the Philippines, this challenge is sharper. Waste collection is spread across thousands of barangays, each under a local government whose leadership changes every three years. For private investors, this makes long-term contracts risky. One industry executive put it plainly:



“We spent seven years developing a project with one city administration, only for the next to cancel it. How can we ask our board to approve a 25-year investment on a 3-year political cycle?”

Feedstock, then, is not just a technical input. It is the entry point to the entire WtE conversation, the factor that determines whether discussions remain exploratory or mature into investable projects. Until confidence is built around long-term supply and continuity, WtE will remain more of a concept than a market.

Economics as driver

Even with sound governance, WtE projects only succeed if the numbers work — and right now, they rarely do. During the first WTE RTD, an industry representative mentioned that building a plant can cost upwards of \$10 million per megawatt, and the economics are delicate: tipping fees⁴ that LGUs can realistically afford must balance against electricity prices that stay competitive with the grid. Push too hard on one side, and the other quickly becomes unsustainable. This is why many LGUs continue to rely on landfills, which look cheaper in the short term.

But the challenge goes beyond cost. Investors, local governments, and communities alike lack reliable information on the long-term economics of WtE. Waste supply projections are difficult to accurately capture, tipping fees vary widely, and power sales rules remain unsettled. A project that seems viable on paper can collapse when contracts and actual waste streams are tested. Investors

⁴ Tipping fees refer to the charges paid by waste haulers or local governments to disposal or treatment facilities for each ton of waste delivered, serving as a primary revenue source for waste management and Waste-to-Energy operations.

need confidence in enforceable agreements and predictable revenues; LGUs need certainty about what they are committing to and the trade-offs involved. Today, neither side has that assurance.

The comparison with other renewables also requires nuance. WtE's value is not just in power generation, but in reducing landfill use, cutting public health risks, and contributing to climate goals. Yet without clear policy signals and predictable rules, private capital will stay cautious, leaving LGUs with few alternatives.

Crucially, WtE must be seen within the wider waste system. The Extended Producer Responsibility law is pushing companies to recycle more, and LGUs are under pressure to cut landfill use. WtE cannot compete with recycling; it must complement it. Even under stronger EPR, residual waste will remain. How that balance is managed has direct implications for resilience and urban well-being. When waste systems falter, cities face higher flood risks, clogged waterways, and rising public health costs.

Recognizing WtE as one part of an overstrained waste system, not a standalone solution, is what keeps the focus on building approaches that are both environmentally and economically sustainable.

A system in need of alignment

Waste does not move on its own; it flows through systems that link collection, contracts, and compliance over time. Whether recycling, composting, or WtE, every stage has to connect seamlessly, or the whole effort falters. This requires coordination both across agencies and between national and local levels. DENR, DOE, DILG, DOF, and NEDA must align on standards, while LGUs adapt them to the realities of their waste streams. National leadership can set direction, but facilities only succeed when local implementation delivers.

Yet the system remains weakened by ambiguity at the top. The clearest example is the persistent, but legally incorrect, belief that incineration is banned, which continues to chill investor confidence. This stems from DOE, DENR, and DILG interpreting WtE through separate mandates, rather than building one shared framework. As one private sector participant put it:

“We don’t need a new law, we have enough laws. What we need is for the agencies to agree on what the existing laws mean and create one clear, harmonized path forward.”

From a business perspective, the issue is not the absence of laws but the lack of coherence. Rules overlap, agencies interpret them differently, and implementation is uneven, leaving both investors and LGUs hesitant.

The legal foundation is already in place:

- **RA 9003 (Ecological Solid Waste Management Act, 2000)** – assigns LGUs the lead role; Section 20 is often misread as a total ban on incineration, when it must be read with the Clean Air Act.
- **RA 8749 (Clean Air Act, 1999)** – prohibits burning that produces toxic emissions, setting performance standards rather than a blanket ban.
- **MMDA vs. Jancom (2002)** – Supreme Court ruling affirming incineration is legal if Clean Air Act standards are met.
- **RA 9513 (Renewable Energy Act, 2008)** – recognizes WtE as renewable energy, with incentives like tax holidays and VAT zero-rating.
- **DENR and DOE issuances⁵** – DAO 2019-21 and DOE’s WtE operating rules, which already outline permitting and regulatory steps

Taken together, these laws provide a workable framework.

What is missing is alignment: DOE, DENR, and DILG continue to act in silos, leaving LGUs without consistent guidance. The result is investor hesitation, slower project timelines, and lost opportunities to scale solutions that could strengthen both waste systems and energy supply.

⁵ DENR Administrative Order 2019-21 specifically covers Waste-to-Energy (WtE) facilities that utilize municipal solid waste (MSW) as feedstock, whereas DOE and renewable energy policies classify WtE more broadly to include biomass and other organic waste sources.

Pathways forward

Drawing from both global models and local opportunities, there are clear levers that government and business can pull together to move WtE forward in the Philippines. These are not exhaustive solutions, but they represent actionable starting points where alignment and collaboration can unlock progress.

- 1. Policy alignment.** A joint circular between DOE, DENR, and DILG can immediately harmonize rules under existing laws, rather than waiting for new ones. Pairing this with a National WtE Development Framework and forthcoming legislation on mandating LGUs to cluster waste supply could further complement implementation. This creates economies of scale and reduces political risk, giving investors a stable counterparty for long-term projects.
- 2. Market confidence.** The upcoming Green Energy Auction 6 is a timely venue to design a bespoke WtE stream with a viable tariff. Models worth considering include a feedstock cost pass-through or indexing tariffs to a benchmark like coal. Both provide predictable revenue streams that reflect the unique costs of WtE, making projects more bankable.
- 3. Local solutions.** Waste is collected locally, so the system must work at that level. Enforcing the closure of illegal dumpsites, implementing a graduated landfill tax, and applying consistent tipping fee rules can remove artificially cheap, non-compliant options. At the same time, clustering LGUs to pool waste stabilizes supply and creates a more reliable basis for long-term contracts.
- 4. Bridge options.** Large-scale WtE plants take years to develop, but the cement industry already has capacity for co-processing. Incentivizing Refuse Derived Fuel (RDF) production and strengthening its supply chain provides an immediate way to divert waste while building infrastructure that will benefit the wider WtE ecosystem in the long run.

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