



Covanta's 3/8 inch Aggregate



Asphalt using Covanta Aggregate



Post combustion non-Fe

## Recovery & Use of Aggregate from Waste-to-Energy Ash

Federation of NY: Solid Waste and Recycling Conference  
May 24, 2022

# Covanta: Company Overview



- Operate 40 modern WTE facilities in North America, and Europe.



- Annual capacity to process 21 million tons of waste



- Generate 9 million megawatt hours - enough clean energy to power over 1 million homes.



- Recycle over 600,000 tons of metal/year - the equivalent amount of steel used to build 6 Golden Gate Bridges.



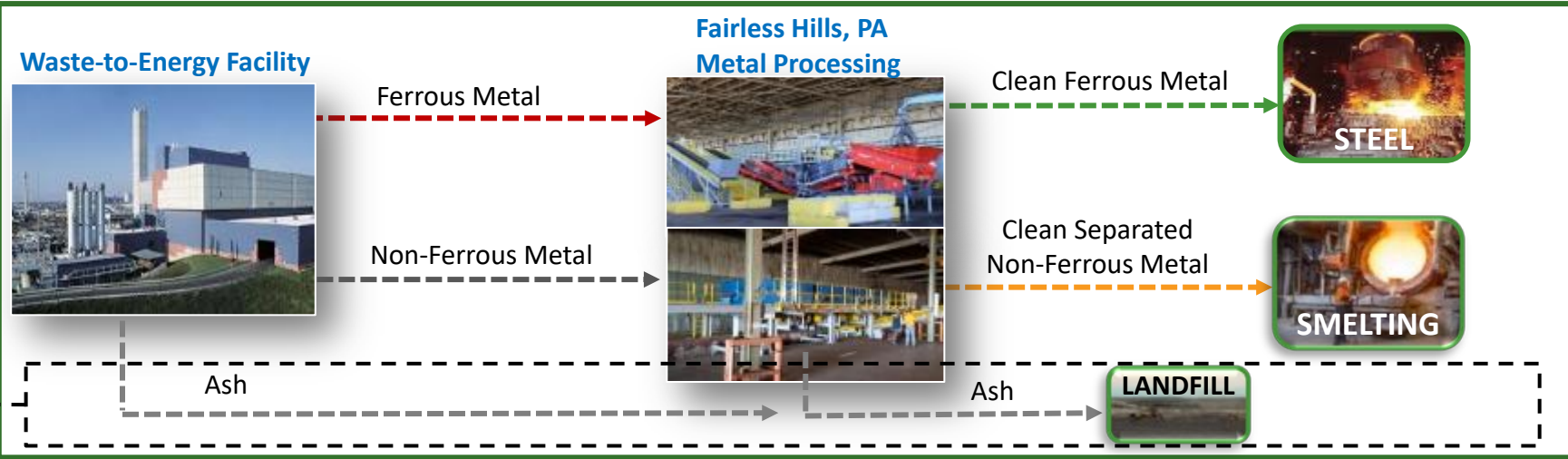
- Reduce greenhouse gas emissions by 18.8 MM metric tons



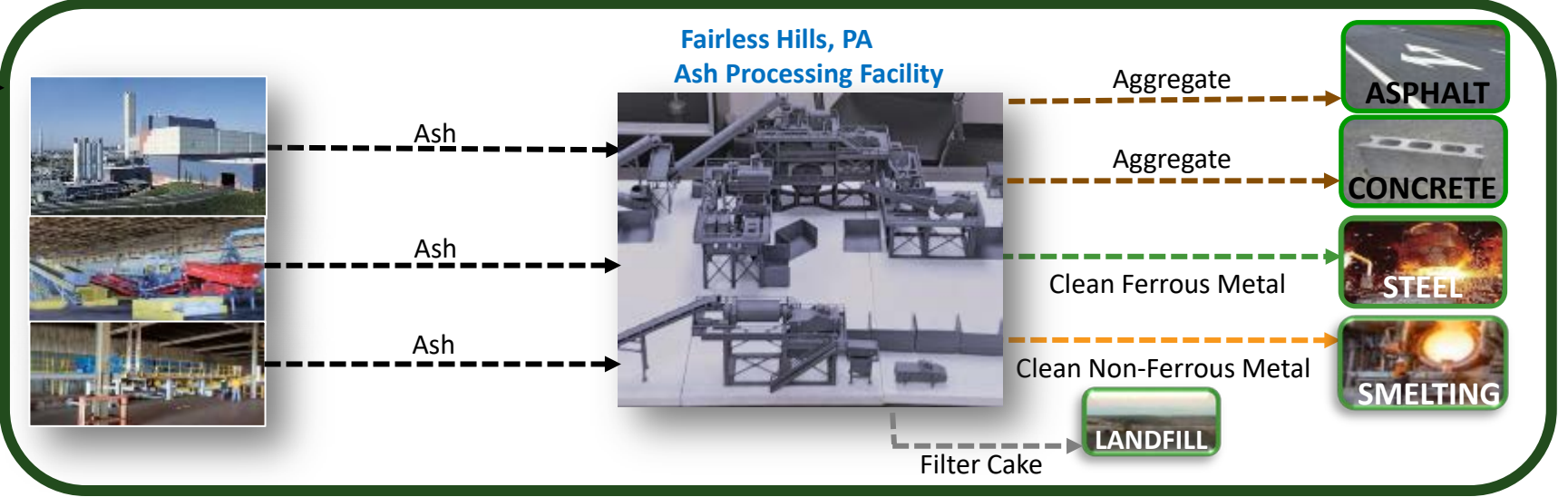
- 3,500 professionals employed in North America.

# Covanta: Recovering Aggregate and Metal from Combustion Ash

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# Covanta's Fairless Hills, PA - Ash Processing Facility

## Ash Processing System

- WTE is extensively processed to extract a usable aggregate plus more recyclable metal
- Processes include washing, crushing & density separation
- Diverts >50% (aggregate & metal) from landfill disposal

## Recovered Aggregate Used on a Regular Basis

- Primarily used in Asphalt Applications
- > 135,000 tons of asphalt made using Covanta's Aggregate
- Asphalt meets geotechnical and environmental requirements



non-Fe Heavies



Covanta's 3/8 inch Aggregate

# Pennsylvania DEP: Regulatory Pathway for Aggregate Recovery & Use

## Covanta Received Permit to Process WTE ash for Recovery & Use of Aggregate

- Fairless Hill, PA facility operating since Feb 2020
- Requires testing of recovered aggregate or final product (asphalt/concrete)
  - Sample every 1000 tons of aggregate for totals & leachable (22 inorganic and 41 organic)

## Encapsulated Aggregate: Not a waste if used in asphalt or concrete when...

- Aggregate alone meets unencapsulated leachable limits, OR
- Asphalt or concrete produced meets specific leachable limits



# Long Island, NY – Waste Management

- 2.8 million people generate millions of tons of MSW every year.
- 1.8 million tons of MSW, is sent to the Island's 4 WTE facilities. Preventing traffic from 160,000 truck trips every year. 📍
- Residual ash, 10 % by volume, is transported to local landfills in Babylon and Brookhaven. ★
- Existing WTE facilities can be expanded – an environmentally sustainable solution while reducing trucks on roadways.

WtE Facility	Tons per year of ash generated
Hempstead	215,000
Babylon	53,000
Huntington	78,000
MacArthur / Islip	54,000
Landfill	Estimated Closure Date
Brookhaven	2024
Babylon	2032



# Upcoming Landfill Closures Is a Looming Problem on Long Island



**EDITORIAL: Long Island, do not waste this crisis**




**Brookhaven landfill is filling up fast!**



**Regional Council, Panel Try to Solve Solid Waste Crisis**

- **Brookhaven Landfill is scheduled to close at the end of 2024**
  - *“It’s not a looming crisis – It’s now. Either we get together as a region to resolve this and have a path forward, or this is going to be yet another thing that makes Long Island less desirable to live and work.”*
    - Ed Romaine, Town of Brookhaven Supervisor, <https://tbrnewsmedia.com/regional-council-panel-try-to-solve-solid-waste-crisis/>
- **Babylon Landfill is scheduled to close in 2032**
  - *“The Town of Babylon, New York, is preparing to close one of its two ash landfills and the second repository will be filled within seven years, leaving the town searching for a new home and uses for its incinerated waste.”*
    - Waste Today, “New York town prepares to close its ash landfill, looks for alternatives” Oct. 2020

# New York: Regulatory Pathway Is Needed – Ash Processing



**Regulatory pathway (similar to PA) would encourage development of ash processing projects**

- Divert over 50% of the ash from landfills
- Double the remaining life of Long Island's ash landfills

**Pathway needs to...**

- Establish limits (aggregate by itself or encapsulated in asphalt or concrete)
- Classify aggregate NOT a waste, but a recycled product for use
- Encourage aggregate to be used



Thank you!

Questions?