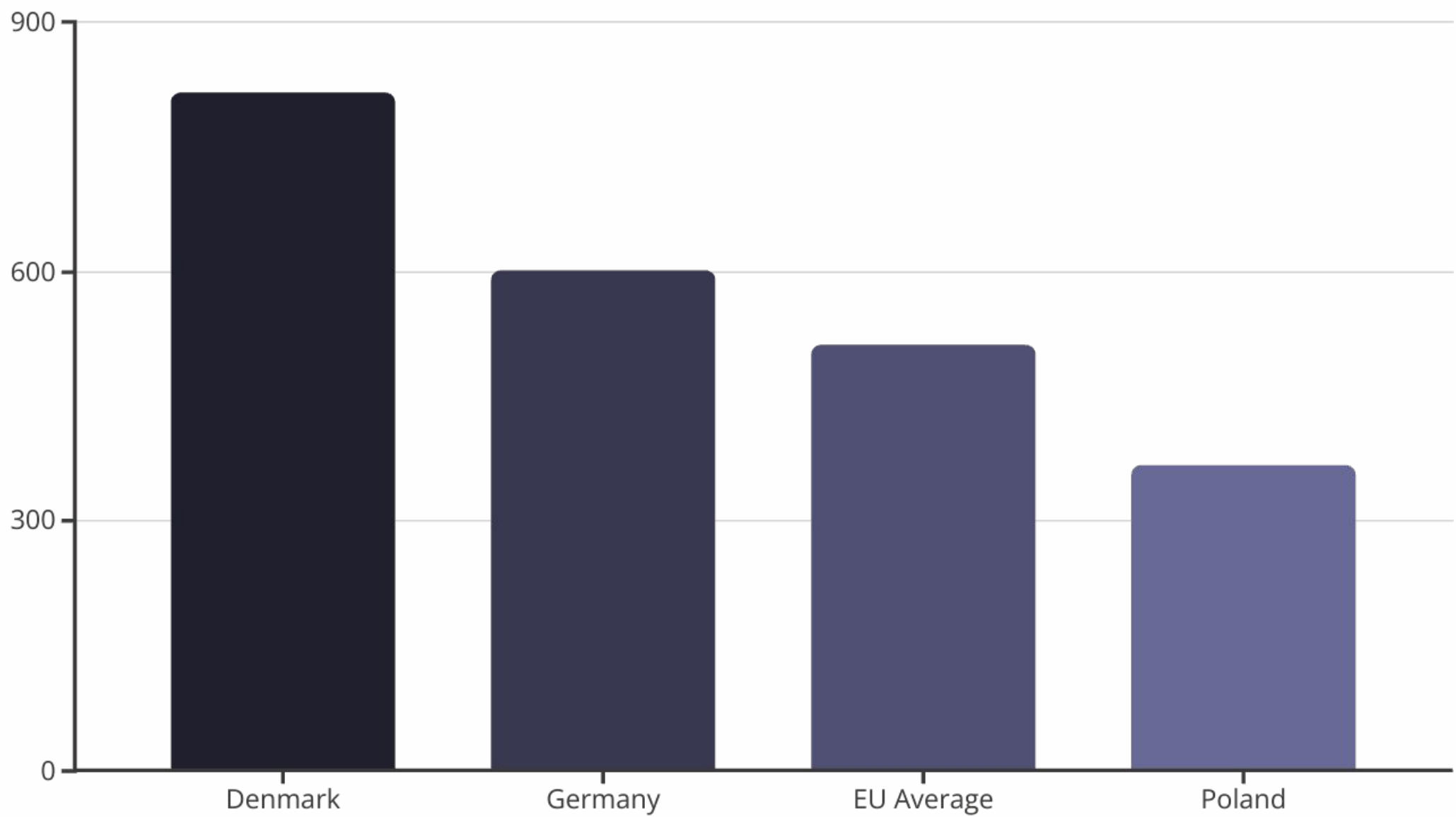




Waste to Energy Market in Poland

A comprehensive overview of Poland's emerging waste management infrastructure and energy production solutions presented by Jakub Bator, Member of the Management Board, Polish Waste to Energy Association.

Municipal Waste Generation Comparisons



Poland generates significantly less municipal waste per capita than other European nations. Citizens produce just 367 kg annually, well below the EU average of 511 kg.

Landfilling Reduction

Trends
30%

Current Rate

Portion of municipal waste sent to
landfills in 2023

19%

Decline

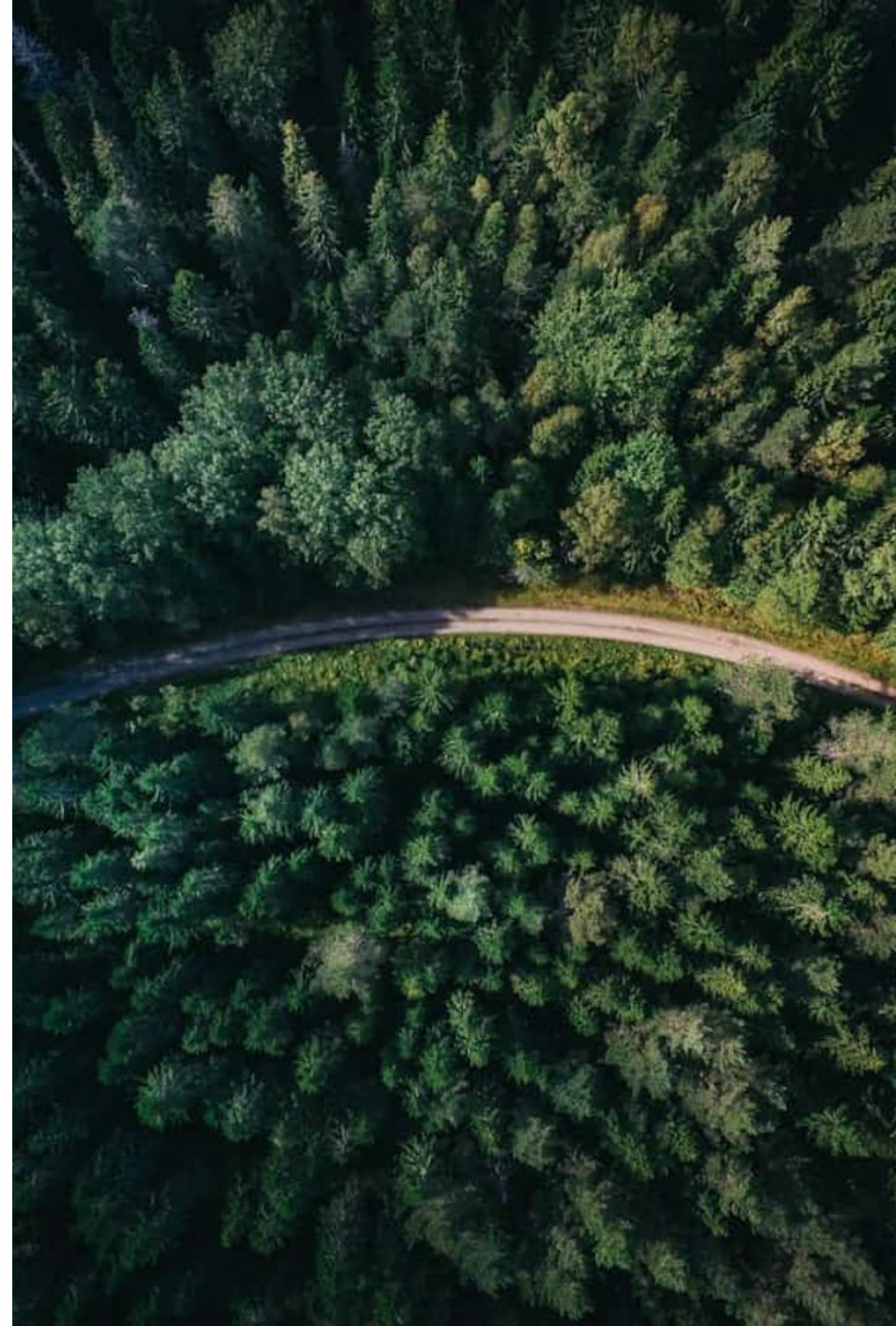
Reduction in number of landfills from
2013 to 2023

91€

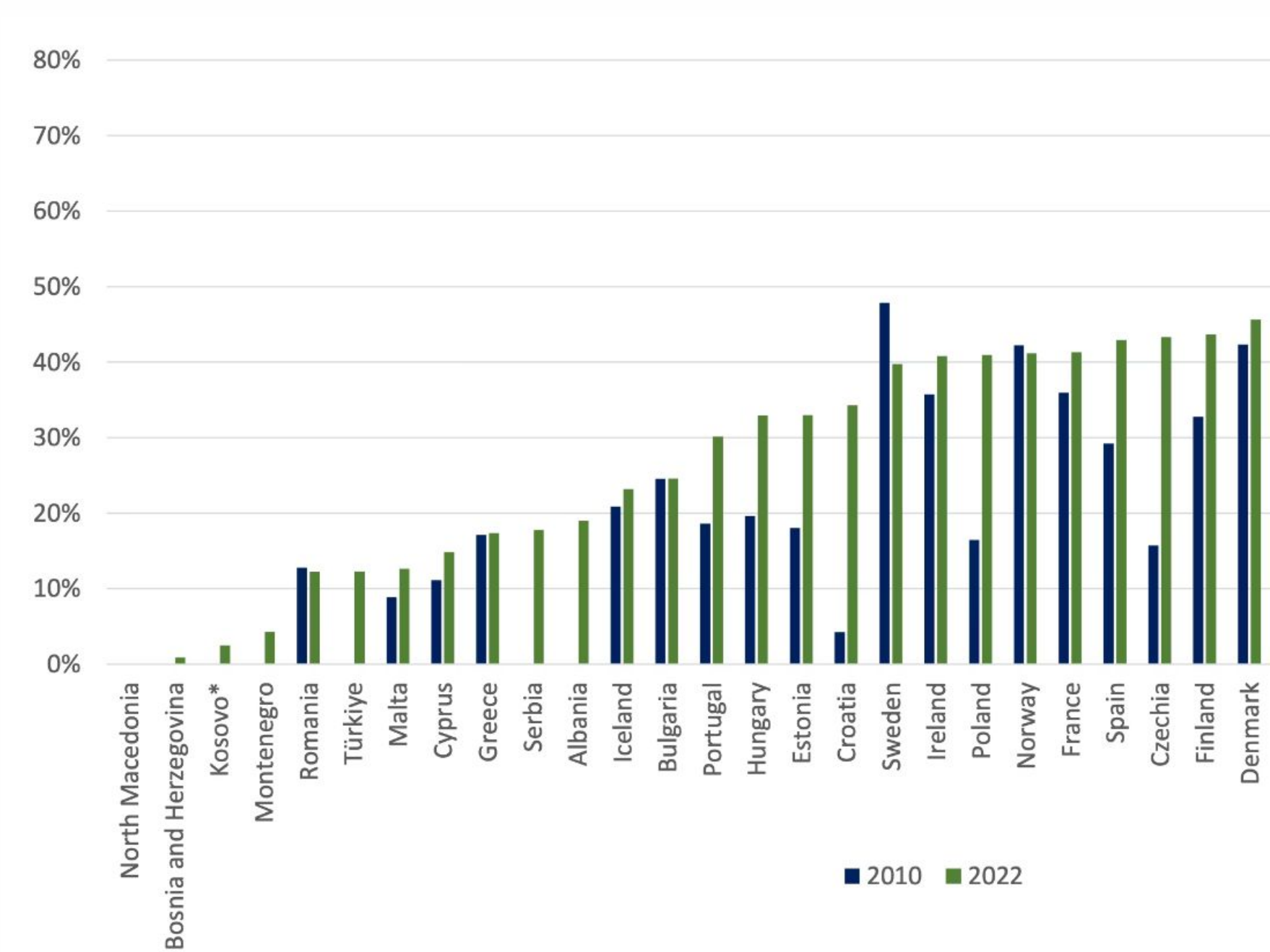
Landfill Tax

Financial disincentive per ton of waste

Poland has made substantial progress in reducing landfill dependency. The country has closed nearly one-fifth of its landfills in the past decade.

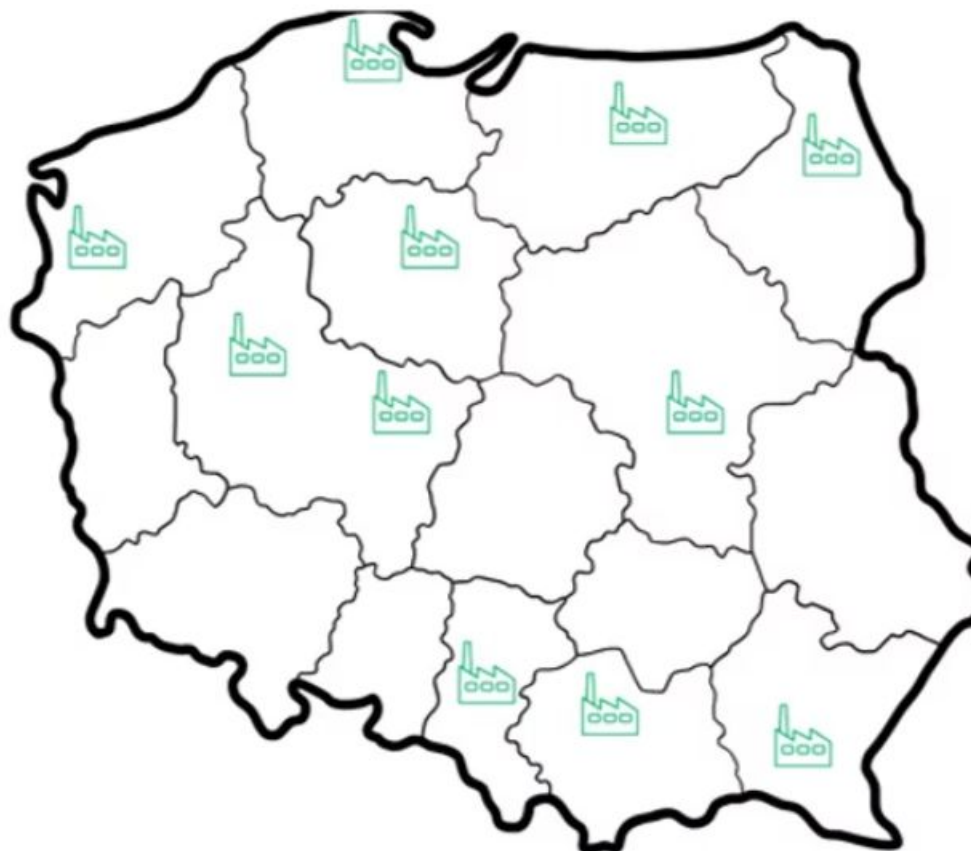


Recycling rates



Waste to Energy in Poland

-  We have:
- **1,735 Mt**
 - **11 MVA**
-  That is **12%** of all municipal waste
-  We need: **4.2 million**




L.p.	City	Capacity (Mg/year)
1	Krakow	245 000
2	Poznan	250 000
3	Bydgoszcz	180 000
4	Szczecin	176 000
5	Bialystok	120 000
6	Rzeszów	100 000
7	Conin	94 000
8	Warsaw	50 000*/265 000
9	Gdansk	160 000**
10	Olsztyn	110 000**
11	Zabrze	250 000***
In total		1 735 000


* MVA under construction with a capacity of 265 200 Mg/year

** Planned start 2025.

*** Co-incineration plant for municipal waste

Stage I: First Polish WtE Plants (2007–2013)

 6 installations under Operational Programme Infrastructure and Environment 2007–2013

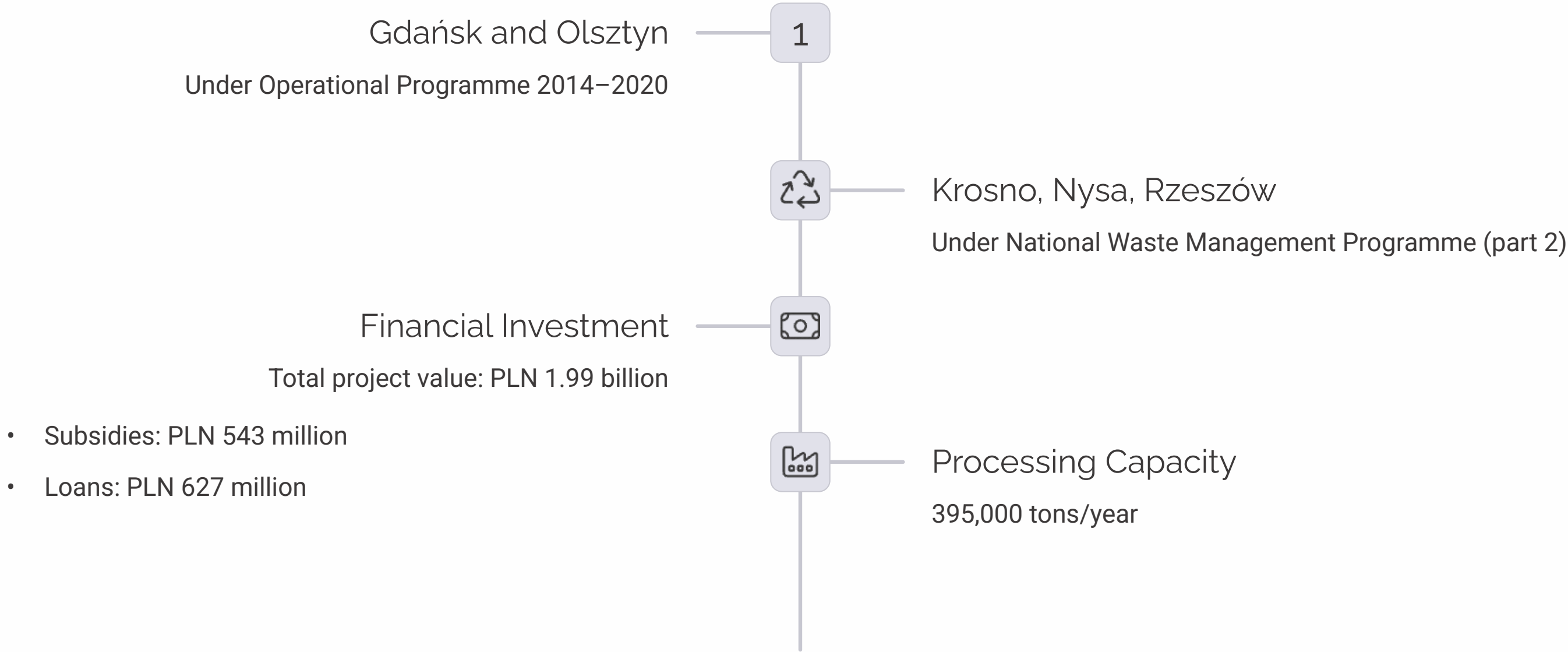
 Co-financing
Subsidies: PLN 1.61 billion
Loans: PLN 1.05 billion

 Total project value: PLN 3.99 billion

 Processing capacity: 974

Stage II: Continued Development (2014–2023)

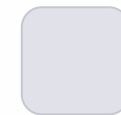
Poland continued expanding waste-to-energy infrastructure with five key projects during this phase.



Stage III: Regional Expansion (2023+)



18 projects under National Waste
Management Programme
Part 3 – alternative fuels



Total project value: PLN 5.22 billion







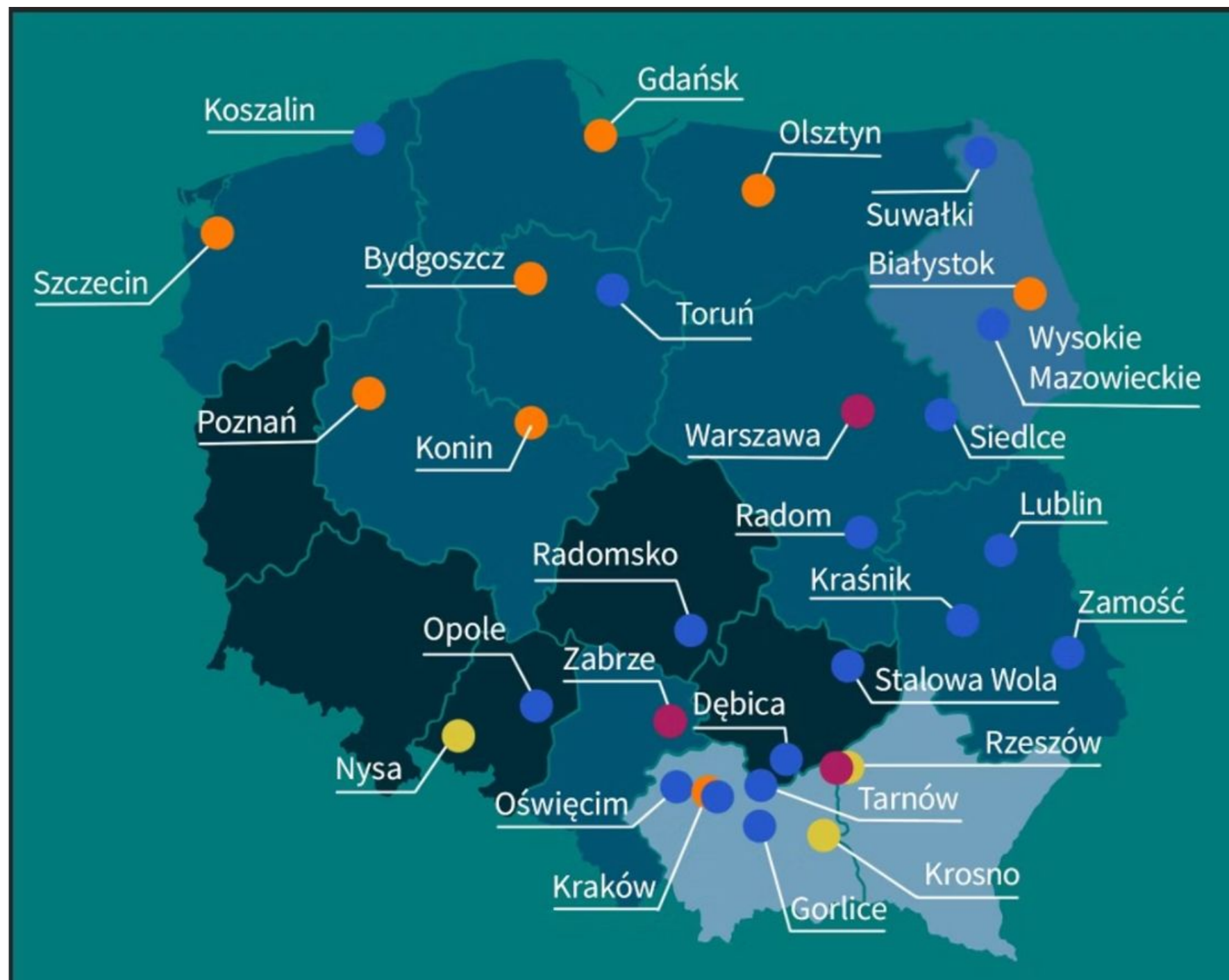
Co-financing

- Subsidies: PLN 1.12 billion
- Loans: PLN 2.22 billion



Processing capacity: 806,630 tons

-  in progres
-  completed
-  from the financial resources of the National Fund for Environmental Protection and Water Management
-  from other resources



Polish Government WTE Capacity Goals

30%

WTE Target

Portion of municipal waste designated for thermal treatment

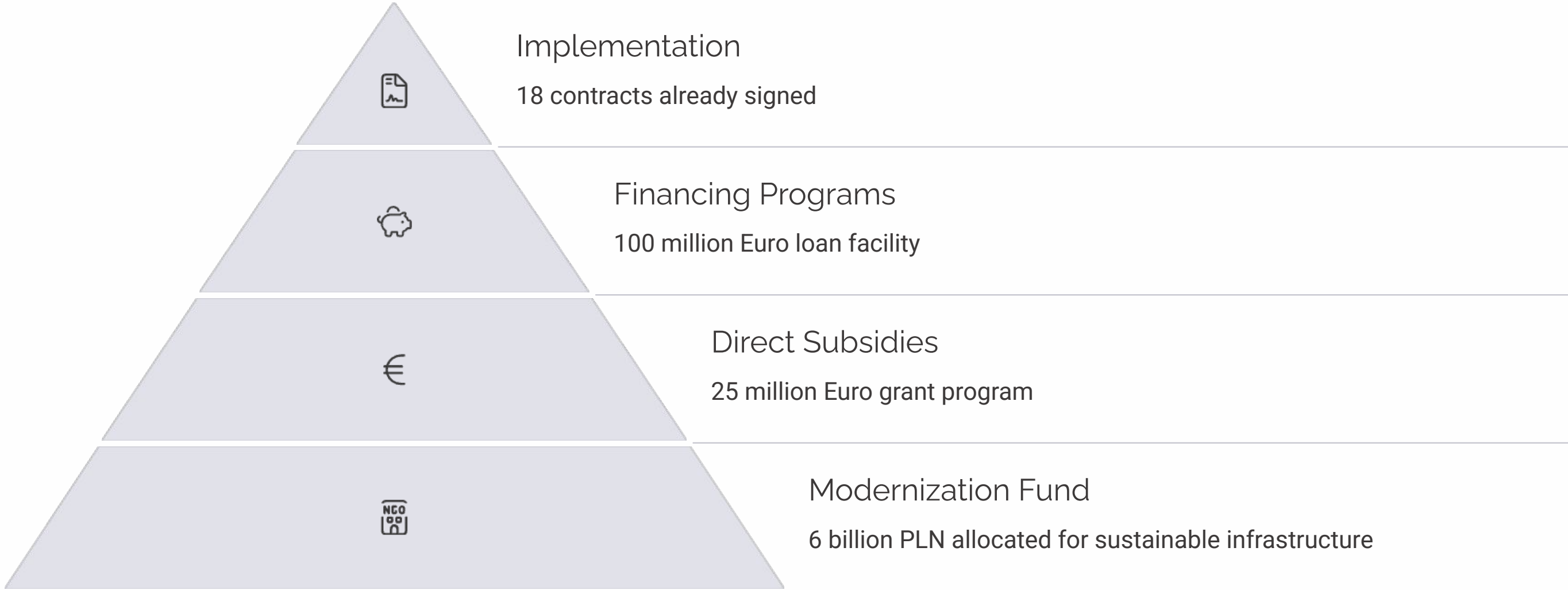
4M

Total Capacity

Tons of waste processing capacity needed annually

This strategic goal represents a significant scaling up of Poland's waste-to-energy infrastructure to address growing waste management challenges while reducing landfill dependency.

Financial Support for New WTE Facilities



Poland has established comprehensive funding mechanisms to accelerate WTE development. Financial support addresses the high capital costs of facility construction.

Regulatory Framework Supporting WTE

Landfill Tax

91 euros per ton creates strong financial incentive to find alternative waste management solutions.

Landfill Ban

Prohibition on landfilling waste with calorific value higher than 6 MJ/kg diverts combustible materials.

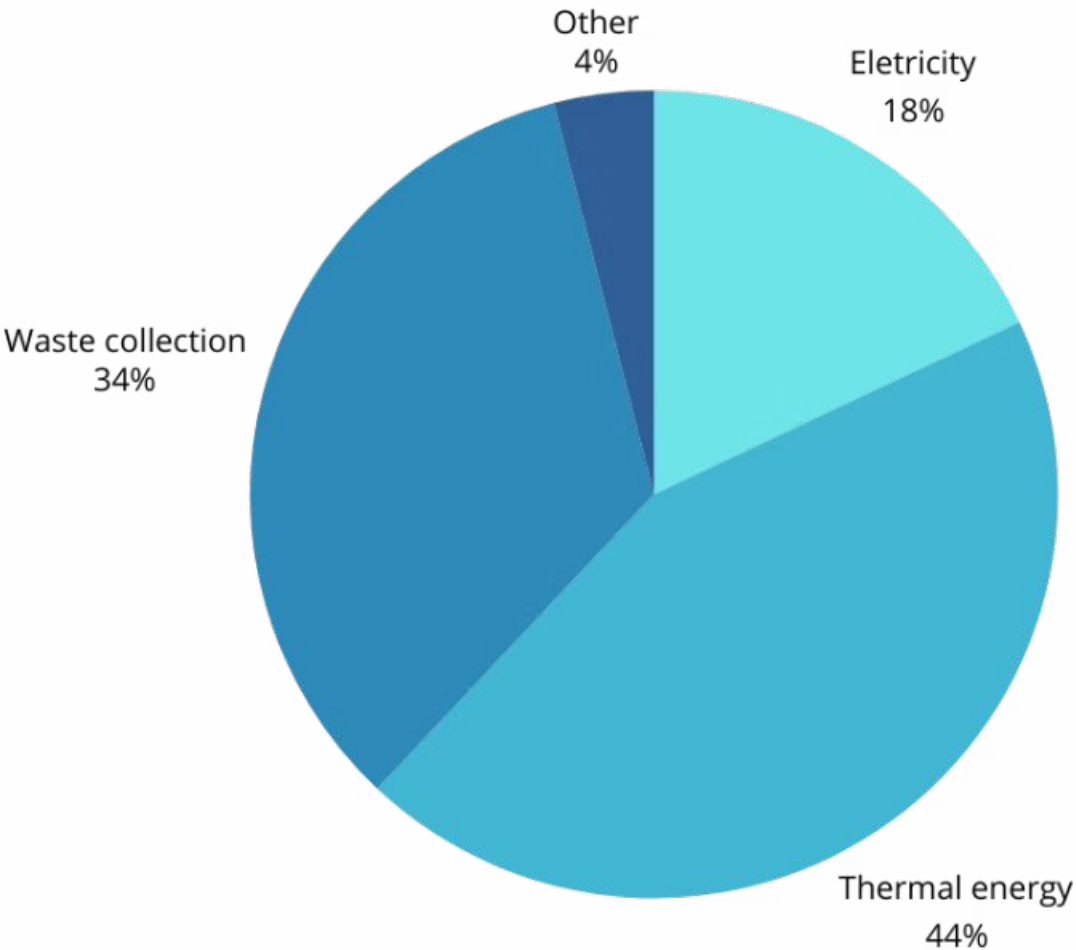
District Heating Priority

Heat generated from WTE plants receives priority access to district heating networks.


Poland's legal framework creates a favorable environment for waste-to-energy development through both restrictions and incentives.



Heat Production as Revenue Generator



The Krakow WTE facility demonstrates the economic importance of heat production. Revenue from heat sales significantly improves financial viability of plants.

A photograph of two wind turbines in a green field under a clear blue sky. The turbines are positioned on the left and right sides of the lower half of the image, with a small body of water or marshy area in the foreground.

Evolving Approach: Small-Scale and Private

Scaling Down Facilities

New focus on smaller facilities with average 30,000 ton annual capacity.

These plants require less capital investment and face fewer permitting challenges.

Private Investment

Shifting from public to private sector leadership. Commercial entities now driving development with specialized expertise and access to capital.

Public-Private Partnerships

PPP arrangements accelerating development timeline. Combined resources and expertise speed up project implementation.



Public opposition remains a significant challenge

Emerging Risks for WtE Development

Energy Efficiency Directive

ETS

Taxonomy

Illegal landfill



Key Drivers of Waste-to-Energy Development in Poland

- 1 Landfill ban
- 2 High landfill tax
- 3 Heat offtake opportunities (district heating integration)
- 4 Strong involvement of local municipalities
- 5 High municipal waste collection fees
- 6 High energy prices

