

WTE DEVELOPMENT IN CZECH REPUBLIC

CEWEP European session, 14th May, 2024



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About EVECO

Since **1996**...

..we propose **new, efficient** and **environmentally friendly solutions** for **technological processes** using proven methods.

Field of **thermal processes, energy use** of solid, liquid and gaseous fuels, **use of heat**, flue gas **cleaning** and **supply** of related technologies.

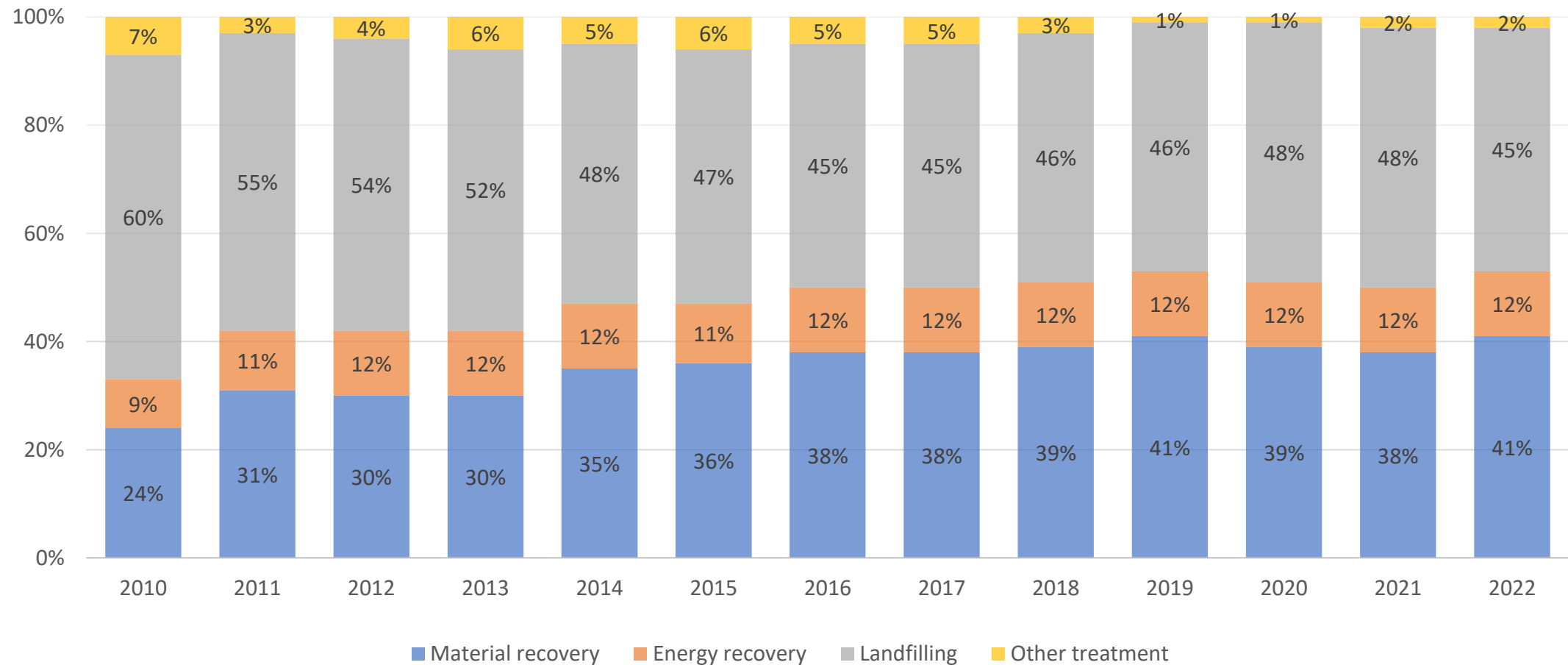




WASTE MANAGEMENT IN CZ

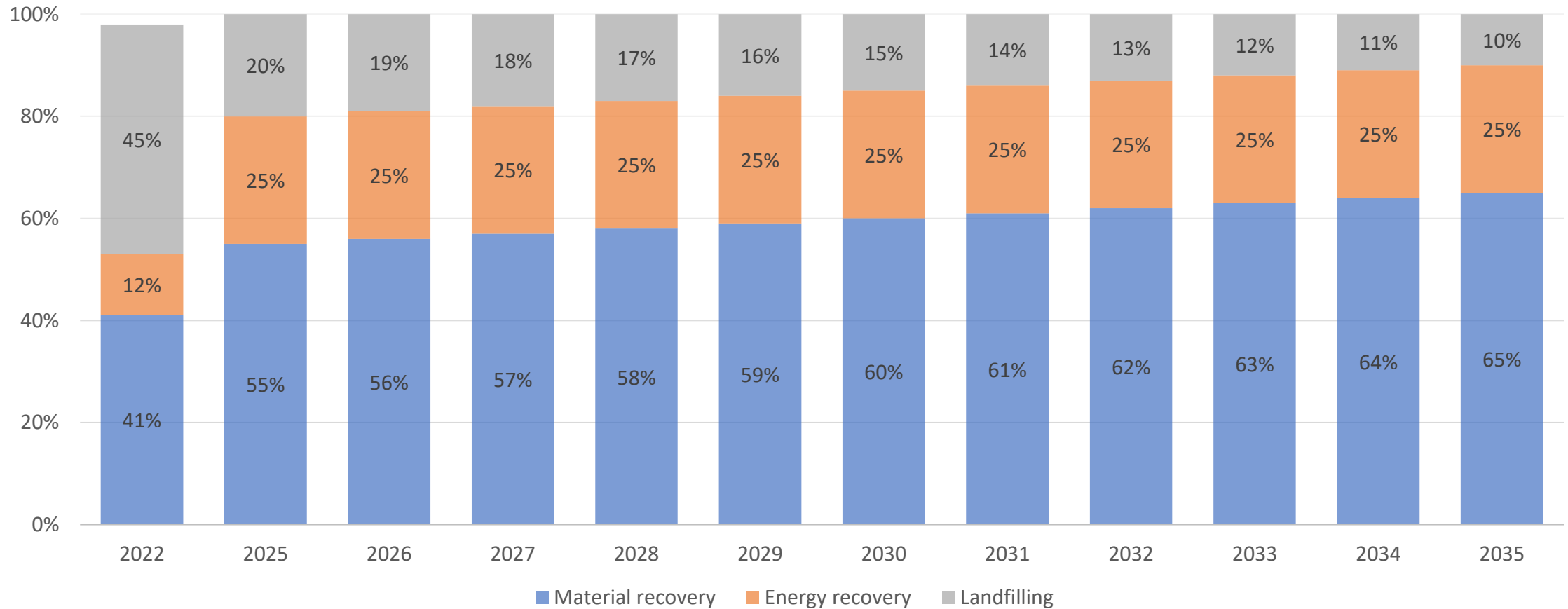
Waste management in CZ

MUNICIPAL WASTE TREATMENT IN CZ



Waste management in CZ

PROGNOSE OF CZECH MINISTRY OF ENVIRONMENT 2021



Waste management in CZ - tools

New waste law from 2021

In 2030 landfilling **ban for waste**, which can be used for material or energy recovery – set by **LHV 6,5 MJ/kg** in dry content.

Fee increase for waste landfilling

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030+
MSW usable [€/t]	32	36	40	50	60	64	68	72	74	74
MSW residual [€/t]	20	20	20	20	20	24	24	28	28	28

Waste separation discount

	2019	2020	2021	2022	2023	2024	2025	2026	2027
Minimum separation	35%	45%	55%	60%	65%	70%	70%	70%	75%



WTE PLANTS PIPELINE



WtE plants pipeline



Locality	Capacity [kt/y]	Permission	Building	Estimated startup
Liberec	96	-	-	Running
Prague	394	-	-	Running
Chotíkov (Pilsen)	120	-	-	Running
Brno	248	Accepted revamp, stopped		Running
Mělník	320	Approved, funds granted	Signed contract	2028
Neratovice	160	Approved EIA	-	?
Příbram	34	-	-	?
Komořany	150	Approved, funds granted	Signed contract	2027
Chomutov	60	Approved EIA	-	?
České Budějovice	160	Approved EIA, stopped funds	-	2028
Písek	50	Funds granted	-	2028
Planá nad Lužnicí	80	Approved EIA	-	2027
Opatovice	150	Approved EIA	-	2030
Uherské Hradiště	15	Approved EIA	-	?
Čeb	20	-	-	Stopped by local auth.
Český Krumlov	80	-	-	?

Coincineration RDF pipeline

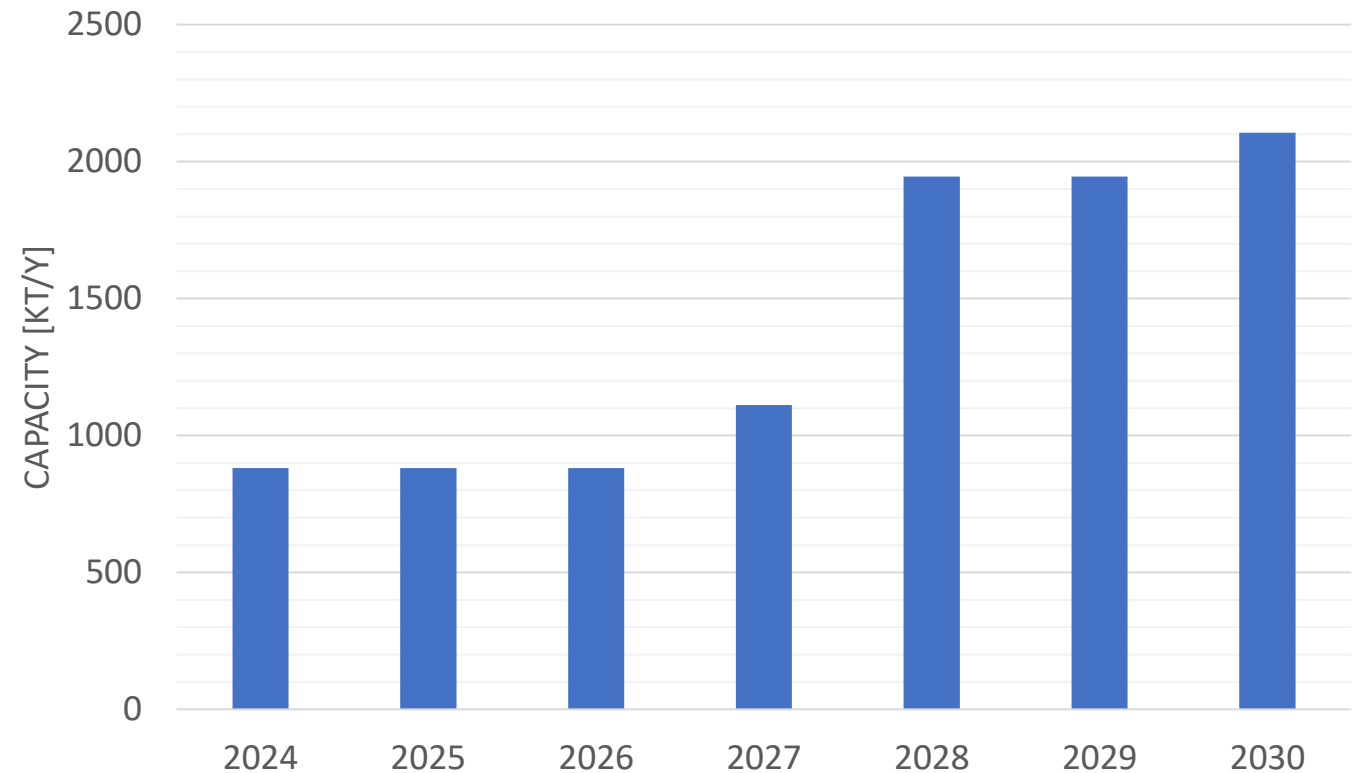


Locality	Capacity [kt/y]	Permission	Building	Estimated startup
Kolín	43	-	-	?
Domoradice	80	-	-	?
Přerov	134	-	-	Running
Karviná	154	Approved EIA, funds granted		2028
Ostrava	59	-	-	?

WtE plants pipeline

Current WtE capacity	881 kt/year
WtE in pipeline (optimistic)	1.714 kt/year
WtE in pipeline (realistic)	1.224 kt/year
Total municipal waste average	5.749 kt/year
Total WtE future capacity	2.105 kt/year

WtE capacity forecast



A photograph of a large industrial building, likely a waste-to-energy plant. The building has a complex, multi-level structure with a prominent cylindrical section covered in a grid of solar panels. A tall, red and white striped chimney is visible on the left, and another chimney is on the right. The sky is blue with some clouds. In the foreground, there are concrete walkways and some greenery.

ENERGY PERFORMANCE OF WTE

Energy performance of WtE

Basic law **requirement** is **fulfilling R1 efficiency**.

All projects in CZ:

- are connected to **central heating system**
 - generates **electricity**
 - heat and electricity **is counted** as renewable for biogenic part of waste
- by measuring
- **60 % biogenic** if not measured



*However the subsidy for green energy sources **was not** notified **in EU** for few years.*

Current **trend** is to **utilize the residual flue gas potential** → residual flue gas heat exchanger or any other low potential heat.

Energy performance of WtE

SAKO Brno - Heat pump

- **Waste heat** from generator cooling system and turbine bearings
- Heat generated **29.000 GJ/year**
- Heat substitute from pump increases



Energy performance of WtE

ZEVO Plzeň (Pilsen) – Flue gas cooling exchanger

→ **Residual waste heat** is utilised through bypass of flue gas to further reduce the flue gas temperature above dew point (not condensing).

→ Heat power to hot water **3 MWt**

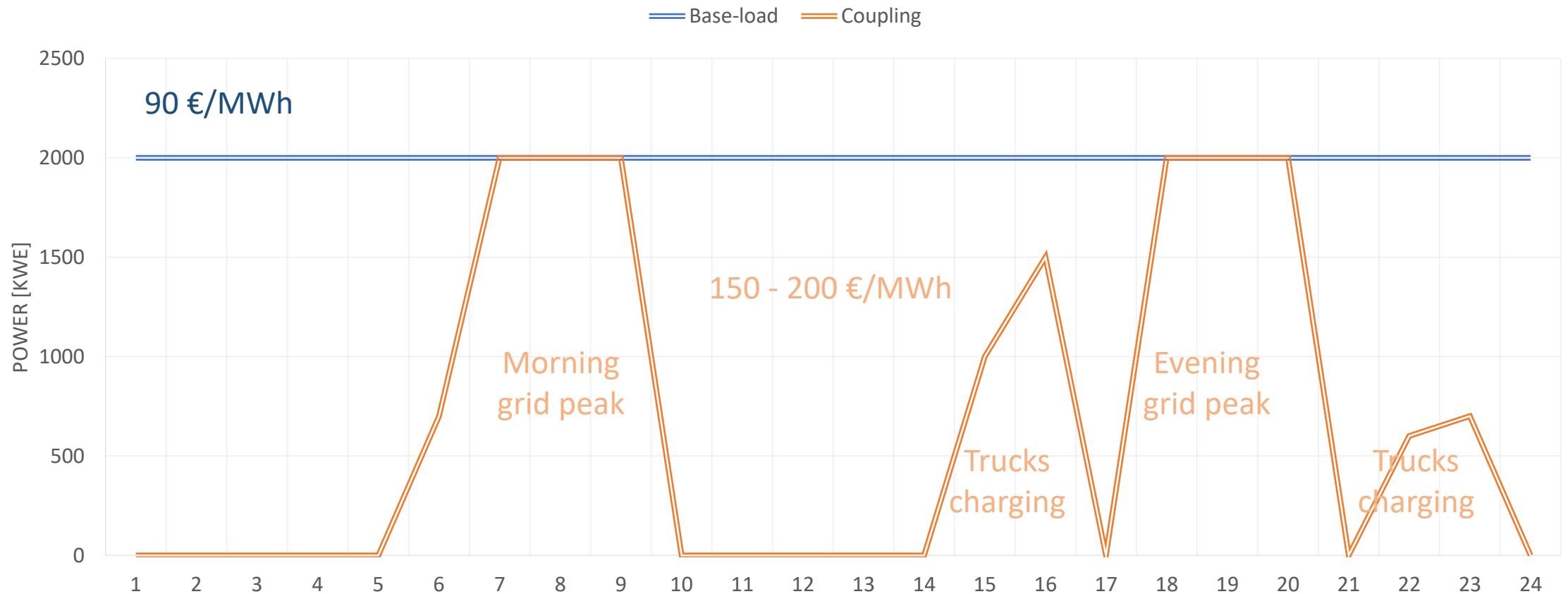




SECTOR COUPLING WITH E-MOBILITY

Sector coupling with e-mobility

E-MOBILITY COUPLING



A close-up photograph of a pile of brown, granular soil. Scattered throughout the soil are numerous small, dark blue or black, angular particles, likely waste residues. The background is a blurred, light-colored surface.

WASTE MANAGEMENT OF RESIDUES

Waste management of residues

Current state of **all WtE plants**:

- Scrap iron **sorted** on magnetic separator from slag
- Slag **is landfilled**
- Fly ash **is stabilised** with cement and landfilled
- New law **from 2021 allows** direct usage of treated slag from waste incineration if it complies with **required criteria**.
- **First tests** of treated slag in **ZEVO Malešice (Prague)** → using the treated slag **for building** the parking space



Thank you for attention!

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