

June 4, 2025

#EU  
GREEN  
WEEK

# THE WATER-ENERGY-FOOD NEXUS: BUILDING RESILIENCE TO GLOBAL CHALLENGES

Partner Event

## Energetic recovery of waste in Czechia: current trends and challenges Dr. Barbora Duží, Dr. Petr Dvořák

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### INTRODUCTION, BACKGROUND:

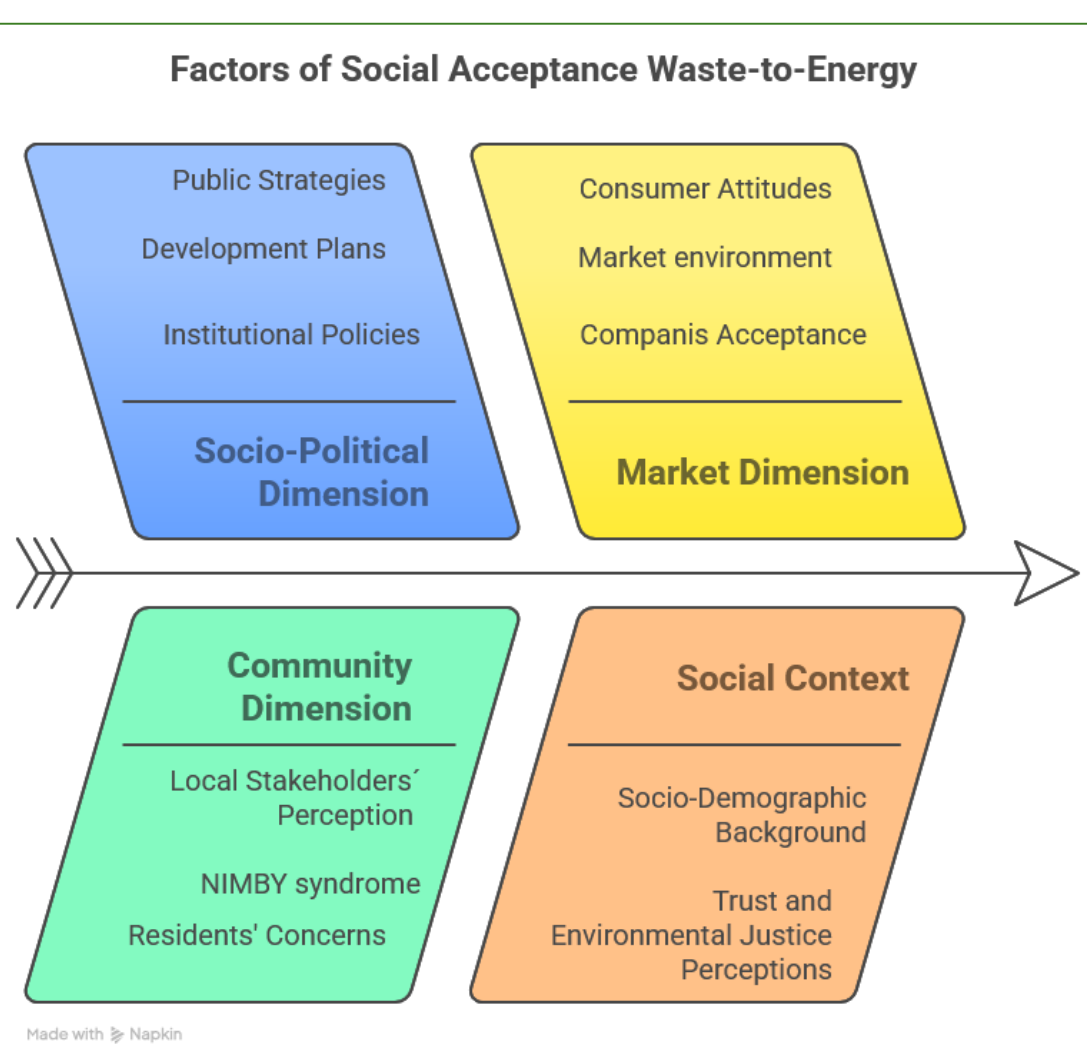
EU's ambitious aims for sustainable waste management are in line with the principles of the circular economy: minimising waste production and landfilling, maximising reuse, material recycling and composting, and finally incineration (with a focus on energy recovery) for non-recyclable waste. According to Eurostat, 511 kg of municipal waste per capita was generated in average in EU, of which 48% was recycled (through material recycling and composting), 22% was landfilled, 25% was incinerated, and 5% was disposed of in other ways in 2023. The energetic recovery of waste incineration (waste-to-energy, WtE) seems to be a progressive method of waste treatment and has become part of a strategic approach to integrated waste and energy management.

However, in countries in Central and Eastern Europe, including the Czechia, high proportion of waste is still being landfilled. The generation of communal waste in Czechia shows an increasing material demand. While it was 302 kg per capita in 1995, it increased by nearly 80% to 537 kg per capita in 2023, slightly exceeding the European average. In light of the EU's climate and waste obligations, Czechia strives to support various infrastructure projects of incineration. Current data shows that 42% of communal waste is landfilled, 43% recycled and 14% incinerated.

This contribution aims to analyse the current situation and trends of waste management based on available statistical and spatial data in Czechia, focusing on WtE. The second aim is to discuss social acceptance, and prevailing discourses to planned new waste-to-energy facilities from various stakeholders, NGOs, local governance and bussiness actors.

### METODOLOGY, CONCEPTUAL FRAMEWORK:

- Statistical Analysis of Recent Waste Management Trends
- Spatial Analysis of Waste-to-Energy Infrastructure Distribution
- Social Acceptance and Discourse Analysis of Waste-to-Energy Facilities



What are the dominant public attitudes, concerns, and acceptance levels toward planned waste-to-energy facilities as reflected in media discourse, and how do these perceptions vary across different stakeholder groups and geographic contexts?

What factors influence social acceptance of WtE facilities?

### PRELIMINARY FINDINGS:

In Czechia, recent trends in waste disposal demonstrate a gradual shift toward more sustainable practices, with landfilling proportions declining modestly while incineration rates experience corresponding increases. Comparing to EU, Czechia still put vast proportion of waste to land without any further re-use.

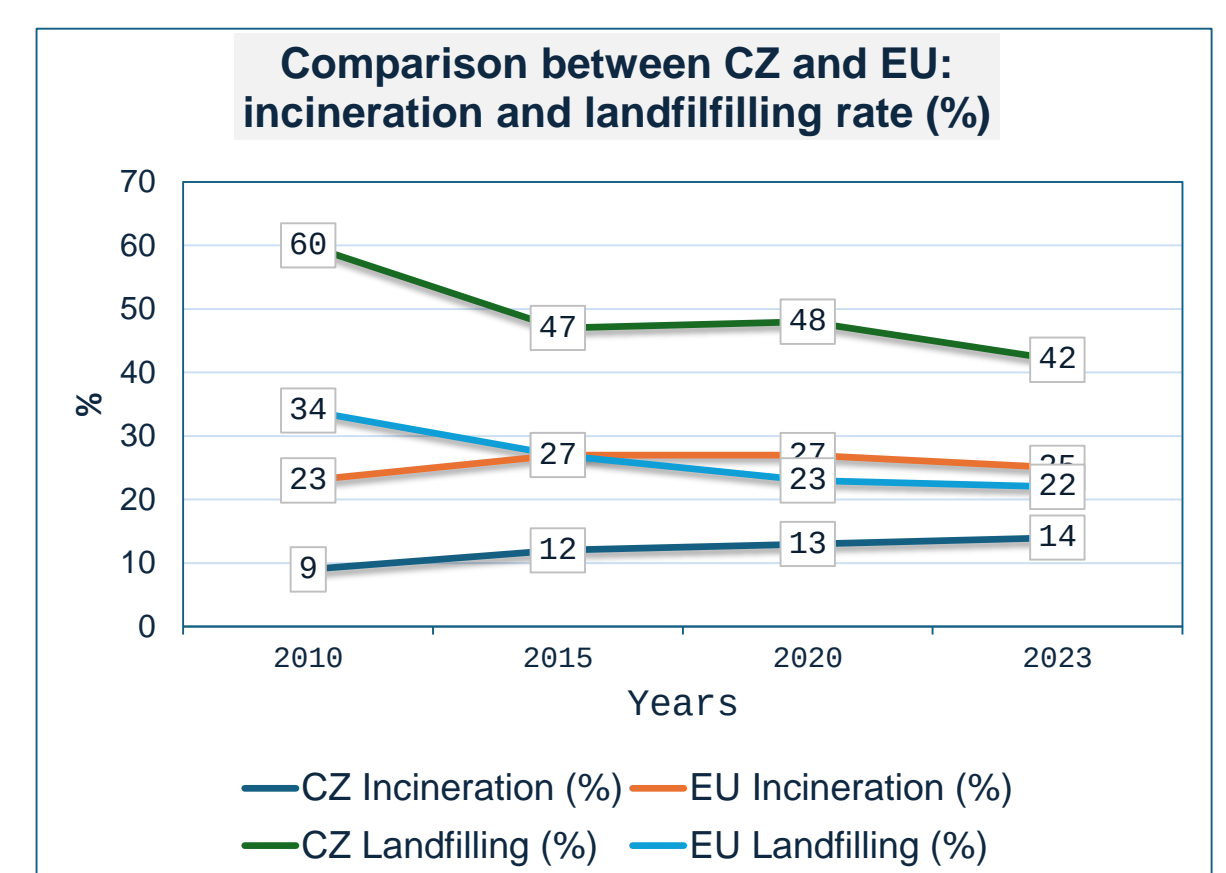


Fig.1: Selected comparison between Czechia and EU



Fig. 2: WtE Plant SAKO, Brno



Fig. 3: Solid recovered fuels production OZO, Ostrava

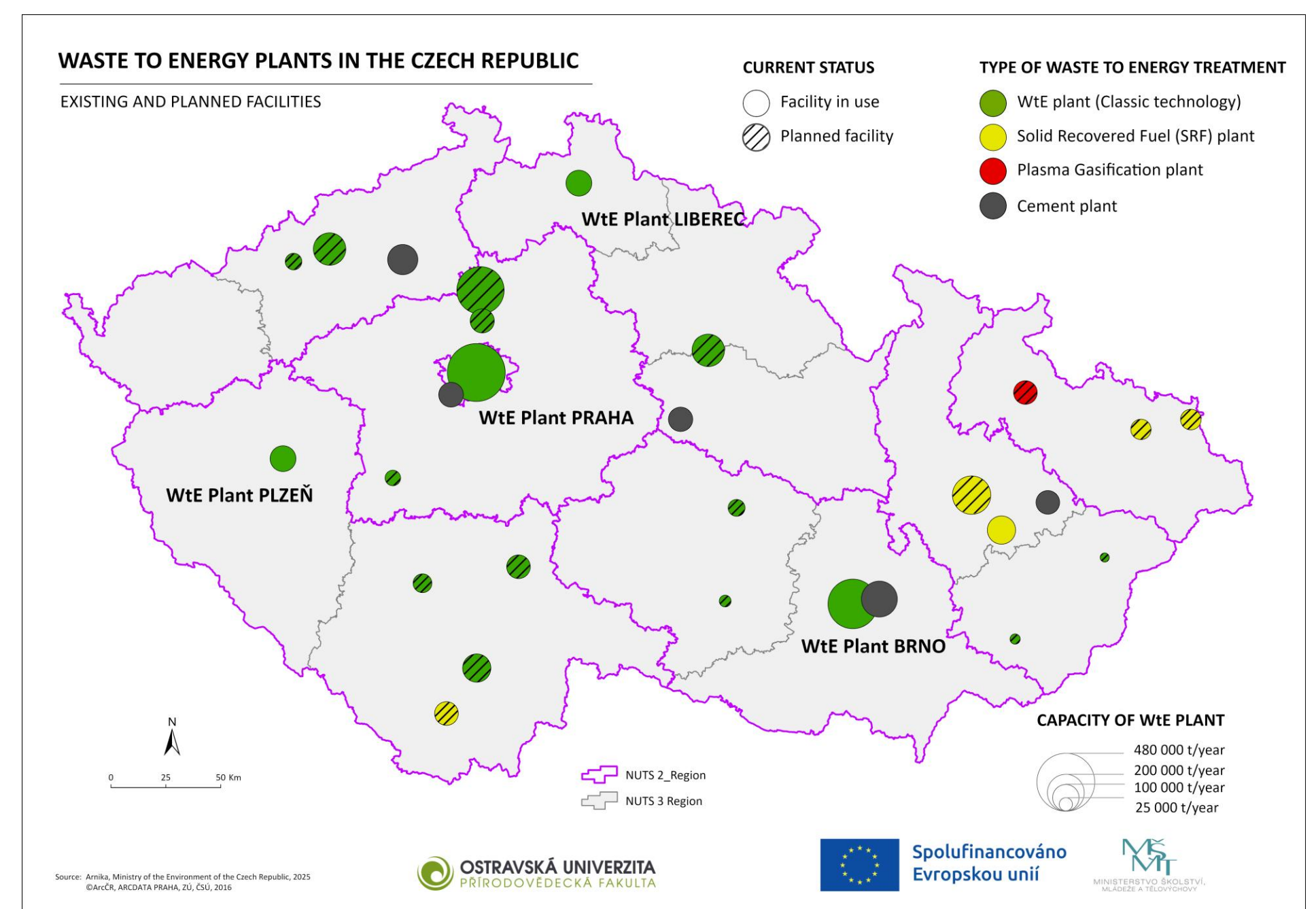


Fig.4: Existing and planned WtE facilities in Czechia

### DISCUSSION AND CONCLUSION:

- Czechia's waste strategy targets at least 25% rate of waste-to-energy utilization, yet faces substantial social resistance due to inadequate public consultation during facility siting. NGOs and affected municipalities express concerns about environmental and health impacts, while waste industry representatives warn that planned capacity may exceed domestic waste availability, potentially undermining recycling incentives.
- A promising alternative involves producing solid recovered fuels from non-recyclable waste for use in multifunctional facilities. Strategic dialogue remains essential for future waste management approaches.

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