

BATTERY FIRES IN WASTE MANAGEMENT FACILITIES

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Tuesday 18 February 2025

Batteries Roundtable x Grinner

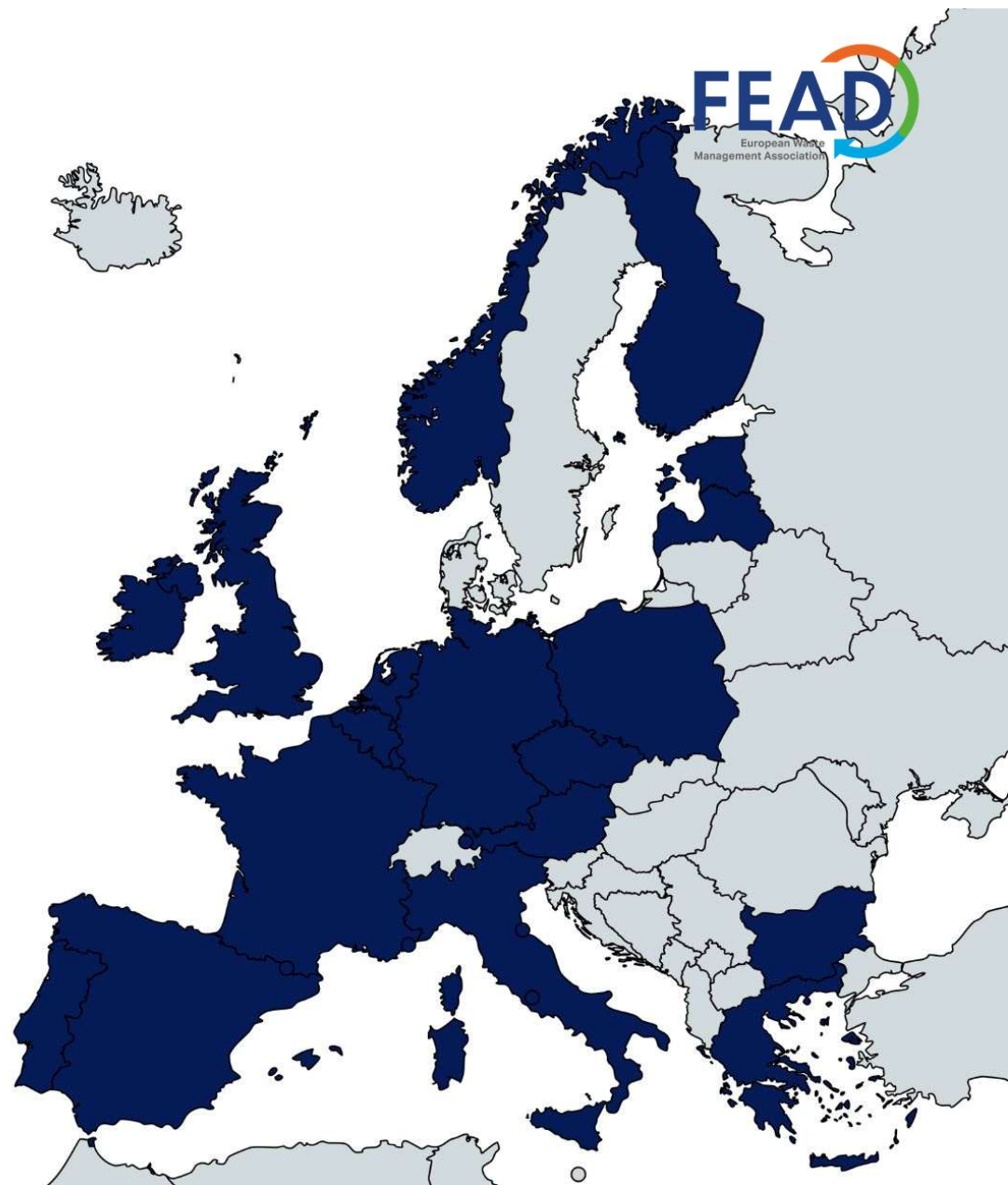
The challenges of Lithium Battery Fires in the Managements of E-Waste

FEAD

The voice of Europe's private resource and waste management industry

We represent **20 national associations** from the EU, EFTA and the UK, steering Europe towards a circular economy for **over 40 years** today

Our members represent the **entire waste management value chain**, which allows us to offer a **holistic overview** on the industry that provides a second life to waste and resource





Our objective is to advocate for a **better regulatory framework** for the waste management sector, to achieve the best economic and environmental outcomes, and to **strengthen the circular economy in Europe.**

Battery fires in waste management systems

Fire at landfill site likely caused by battery

21 August 2024

Alex McIntyre
BBC News, West Midlands



The fire broke out at Walleys Quarry in Staffordshire on 4 August

Recycling lorry dumps waste after battery fire

19 December 2024

Chris McHugh
BBC News

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The recycling vehicle's driver dumped its cargo after noticing smoke coming from the rear

Sklad baterií připravených k recyklaci zničili plameny



...r haty v Tursku.

Discarded battery started recycling yard blaze

12 August 2024

Alice Cunningham
BBC News, Suffolk

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Large-scale operation at fire in recycling company

On Tuesday evening, the fire in a recycling company in the district of Bruck-Mürzzuschlag triggered a large-scale operation. Around 200 firefighters were in action. No one was injured.

Fire extinguished in garbage warehouse in Münster

Status: 10.06.2024, 02:46 p.m.

In Münster, a fire broke out in a hall of the waste management company on Monday morning. The fire brigade was able to extinguish the fire, the roof was badly damaged by the flames.

The fire had broken out in the morning in a reception hall for residual waste in the Coerde district. The Münster fire brigade was on site with 40 firefighters and was able to quickly bring the fire under control. The fire was transported outdoors by means of an excavator and extinguished there. No one was injured during the operation. There is no danger to the population.

The police are now investigating the cause of the fire. The Münster waste management company suspects that a battery caused the fire. At this time, no information could be given on the cause of the damage. The roof of the garbage warehouse

An increasing issue in all waste facilities

Registered fire event involving batteries in waste management facilities in France (ARIA)



‘Every week we have a collection vehicle experiencing a fire’

NVRD, Municipalities & Public Companies in charge of local waste management and collection, Netherlands

‘240 fires are statistically expected to be caused by batteries in Austria every year’

Nigl, T. (2021), Fire-Hazardous Waste Materials: Risk Analysis and Assessment of Portable and Lithium-Ion Batteries in Waste Management Systems.

‘Battery fires in bin lorries and at waste sites in the UK have reached an all time high – over 1,200 in 2023, an increase of 71% from 700 in 2022’

<https://nfcc.org.uk/over-1200-battery-fires-in-bin-lorries-and-waste-sites-across-the-uk-in-last-year/>



‘The number of reported fires connected to lithium batteries or electronic waste doubled between 2019 and 2023 at French waste management facilities’

French environment ministry’s bureau for industrial pollution and risk analysis

Consequences for the waste facilities

Dangers and costs of increased fires in waste facilities



Insurance:

After major damage, insurance denied or with very high premium
→ recycling industry now rated with a damage rate factor x2 compared to other economic sectors



Fire prevention:

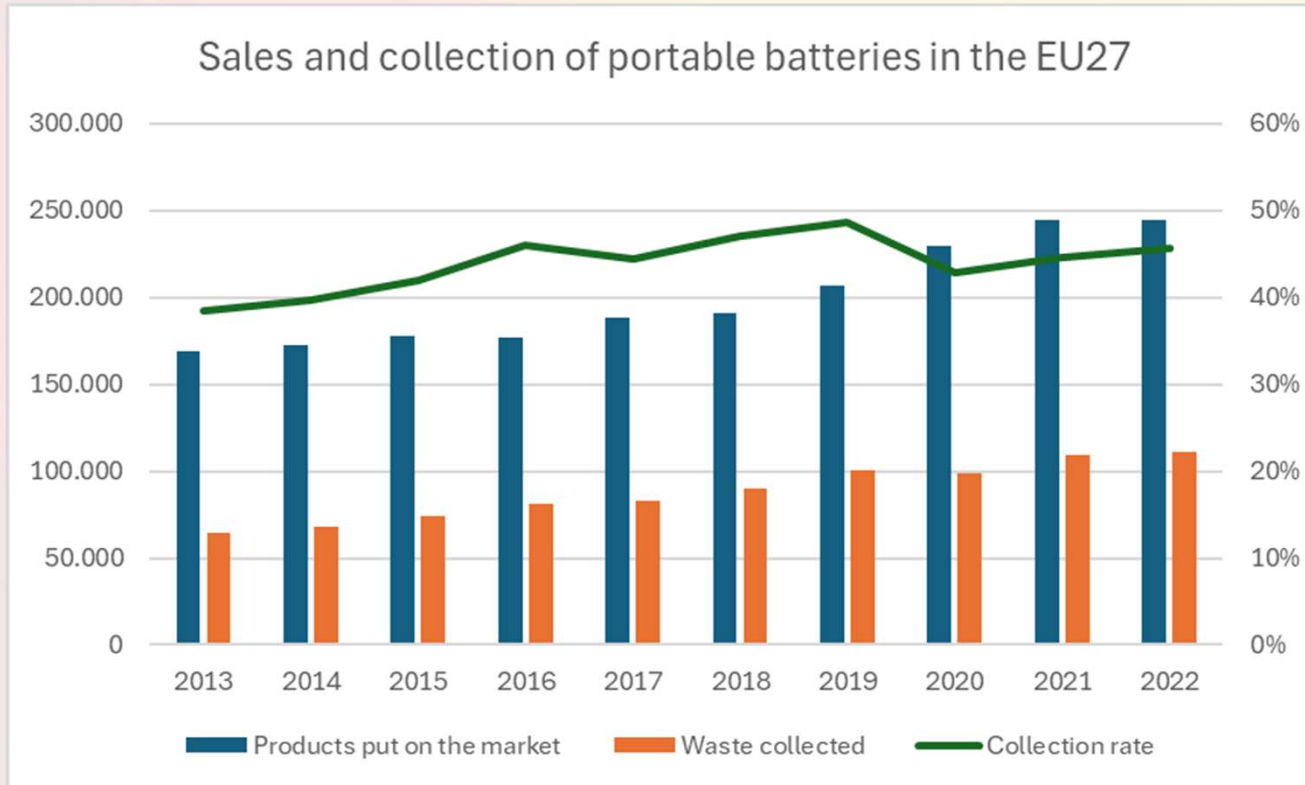
Thermal cameras, smoke detectors, water canons
→ Increased operational improvements (up to 100s k€/year)



Danger:

Life of drivers of the collection vehicles, residents, employees of the affected facilities, fire fighters

Increased sales of portable batteries



2022

- 244kT of portable batteries sold
- 111kT collected for recycling
- 46% collection rate

Collection targets set in the Battery Regulation:

- 45% in 2023
- 63% in 2027
- 73% in 2030

	2019	2020	2021	2022
Products put on the market	206.412	229.321	244.682	244.048
Waste collected	100.290	98.273	109.205	111.212
Collection rate	49%	43%	45%	46%

Problem statement - Battery fires in waste facilities

Increased lithium battery market

Increasing sales of lithium-ion batteries (30% of batteries on market), soon reaching EoL → risk of misplacement and fires

Insufficient targets

Collection rate becoming increasingly difficult to achieve
Amount & piece problem → not a ton volume problem

→ Increasing collection targets

Improper disposal

Consumers often unaware how to discard batteries / if product contains battery
→ end up discarded in residual waste or in separately collected waste streams.

→ Household hazardous waste mandatory separate collection since Jan 2025

Hidden/Not accessible batteries

Batteries are integrated into ever-increasing number of product and are hidden or not always easily accessible

→ Guidance on removability & replaceability of portable batteries

Possible solutions – Better sorting practices

Awareness

Consumers campaign –
Strengthening distribution of
information to private
households



Collection

Increase collection points +
make information accessible



Restriction

Bans of certain disposable
products with batteries, i.e.
disposable vapes (BE, FR)



Possible solutions – Deposit & Return System

Pilot project BATTINCENTIVE

Objective: Increase the collection of used lithium-ion batteries through targeted incentivization

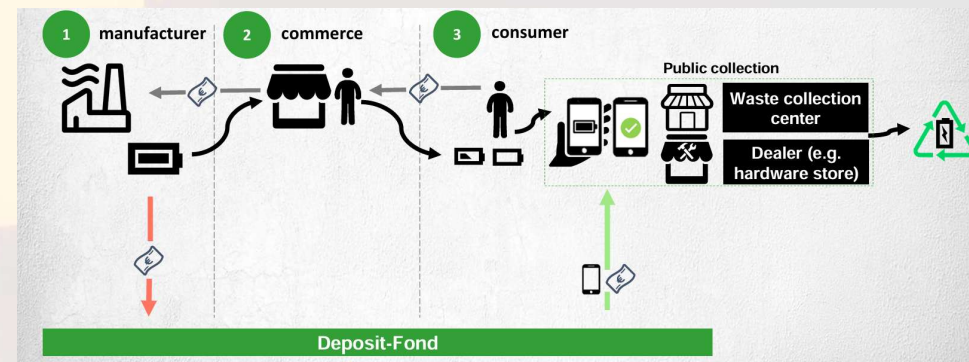
- Use of Digi Cycle App
- Pilot Region Feldbach (Styria, AT)
- Project Duration: April – Nov. 2023
- Generating knowledge and experience
- Documentation and reporting for the industry



8 Business partners
12 retailers
8 Months of duration



- Introduction of a Deposit & Return System
- Portable batteries and small rechargeable electrical & electronic equipment
- Sufficient incentive to encourage the return



Possible solutions – Fire fund

Creation of a fire fund

- EPR system
- EPR fee for batteries and battery-operated electrical appliances producers placed on market
- Fire fund pays waste companies
 - For battery fire prevention
 - Affected by fires caused by improperly collected batteries through no fault of their own



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| <ul style="list-style-type: none"> • <i>Costs in the event of fire (disposal, cleaning, reconstruction costs)</i> • <i>Costs arising from breaches of contract</i> • <i>Administrative costs (logistics, ensuring disposal security)</i> • <i>Information campaigns & collection systems improvement</i> | <ul style="list-style-type: none"> • <i>Investments in fire protection (technology, infrastructure, remodeling, operation, personnel)</i> • <i>Insurance costs due to higher premiums,</i> • <i>Aftercare costs</i> |
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Thank you!

Contact us: info@fead.be