

Progress on Implementing an Advanced Waste Management System in the Czech Republic

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1. Planned major legal waste changes totally failed in January 2017

Why? Because of the Czech landfilling lobby pushed back and no waste changes happened as mentioned in my article *Measures to implement an advanced waste management system in the Czech Republic* in the IRRC Waste-to-Energy 2016, Volume 6 book.

If you did not read what was the issue, there is the general summary originally planned *waste revolution* in the country in Table 1. The Czech Republic wanted to support the start of the circular economy and through the economic instruments such as landfilling tax motivate waste producers to divert waste from landfills in the recycling process and its recovery. The proposed increase of the fee should positively stimulate generators of waste to think about higher levels of the waste hierarchy.

Table 1: Disrupted proposal of the new landfilling fee in the Czech Republic 2018 to 2030

Waste category	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	> 2030
	EUR/landfilled tonnes												
Recoverable and recyclable waste	33	43	50	57	63	69	74	74	74	74	74	74	74
Residual waste	19	19	19	19	19	19	19	19	22	22	26	26	30
Hazardous waste	74	74	74	74	74	74	74	74	74	74	74	74	74
Technological waste	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7

Draft of the proposal was ready for submission to the Government Legislative Council after the inter-ministerial and stakeholders discussion in July 2016. It passed through of five working sub-committees of the Council during summer 2016 quite easily.

But the obstacles started in September 2016. The Czech strong landfilling lobby together with the environmental NGO started media negative campaigns which lead to the disruption of the draft in January 2017. Among others that the higher landfilling fee means the extremely high financial burden for citizens or waste diverted from landfills to only waste-to-energy (WtE) plants (by the way there is no free available capacity in the Czech Republic) and thus steps which are against the waste hierarchy. Of course these are wrong statements and nonsense. Not only the pressure from landfilling stakeholders but also lack of time before the parliamentary election in October 2017 meant that the draft of the new waste legislation in the Czech Republic is frozen and have to probably wait for the upcoming adoption of the Circular Economy package discussed in the European Union by the end of the year, hopefully.

2. The light of better waste management at the end of the dark *landfill* tunnel

Despite the fact of the failure of the new waste future in the Czech Republic which was prepared for almost three years there are few milestones currently valid in the Czech waste legislation leading to smarter waste management than just dull landfilling. Act on Waste No. 185/2001 Coll. quick revision 2014 resulted especially in:

- since 2024, the ban on landfilling of recoverable waste, recyclable waste and mixed municipal waste,
- since 2015, obligatory separate collection of biowaste in every municipality and town provided for citizens (based on the Landfilling Directive obligation, Figure 1).

Both new targets became in 2014 also the part of the Czech Waste Management Plan 2015 to 2024 and together with the following targets form the solid background of planned reduction of waste landfilling:

- 50 % of recycled municipal waste in 2020,
- 70 % of recycled construction and demolition waste in 2020,
- forecast to reach 60 % of recycled municipal waste in 2024.

Obligatory aim of the European Community waste law to increase at least 50 % by weight, preparing for re-use and recycling at least for such waste consisting of materials such as paper, plastic, metal, and glass originating from households, and possibly waste of other origin, if such waste streams are similar to waste from households by the year 2020 seems to be fulfilled before 2020 as shown in the Figure 2.

The combination of the forecast in the Czech Waste Management Plan 2015 to 2024 to reach 60 % of recycled municipal waste in 2024 (Figure 3) and proposed Circular Economy Waste Package targets of 60 % and 65 % recycling of municipal waste in 2025 and 2030 respectively (Figure 4) and only 5 to 10 % landfilling of municipal waste in 2030 (Figure 5) show that the Czech Republic needs to increase landfilling fee to promote cleverer waste management.

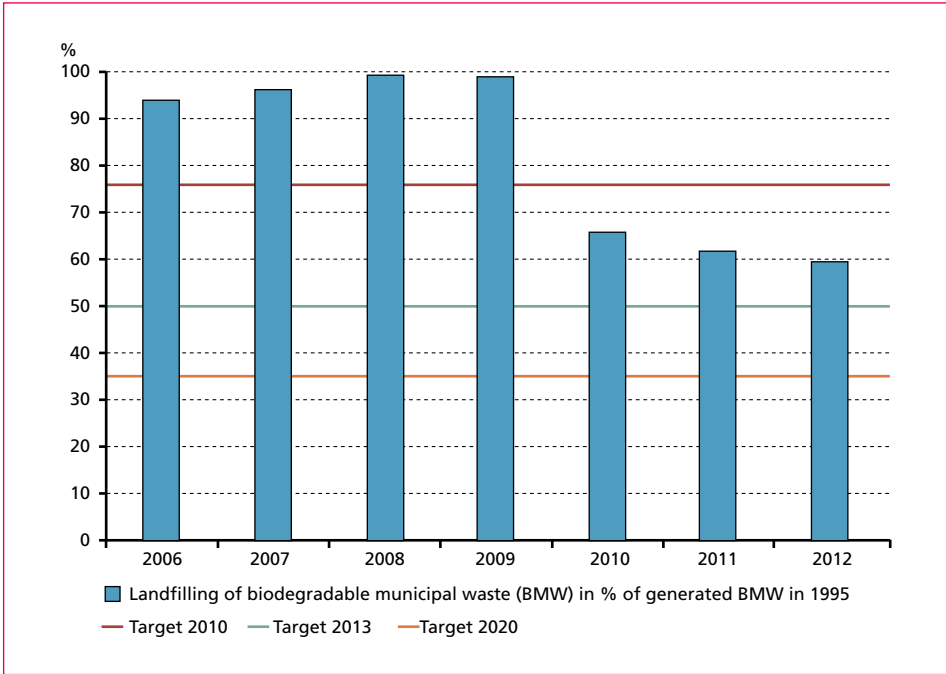


Figure 1: Czech Republic landfilling of biodegradable municipal waste 2006 to 2012 percent of biodegradable municipal waste generated in 1995

Source: EC, 2014 (data for 2006-2008) and EC, forthcoming (data 2009-2012)

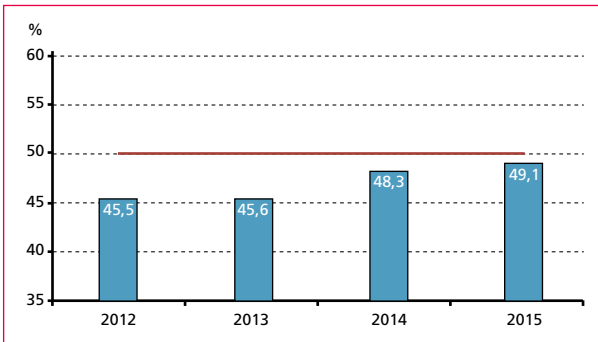


Figure 2:

Municipal waste management, recycling targets in the Czech Republic 2015, calculation method Nr. 2 of Council Decision 2011/753/EU

data source: MoE CZ

However, during the preparation of the Circular Economy Waste Package the European Commission communicated interest and strong position to unify the calculation methods for recycling targets of municipal waste. Instead of having four methods there should be the only one similar to the method Nr. 4 of Council Decision 2011/753/EU. Method No. 4 is based on the calculation of recycling from the total production of municipal waste and waste similar to municipal waste (chapter 20 of the European List of Waste). Figure 4 shows the position of the Czech Republic with regard to municipal waste recycling in Europe and proposed Circular Economy Waste Package targets.

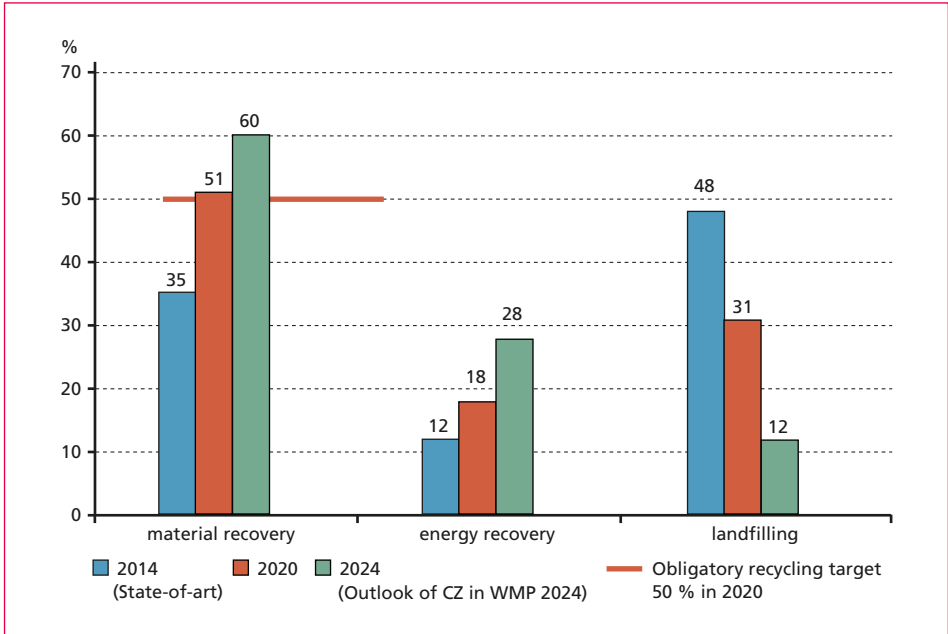


Figure 3: Forecast of the municipal and waste similar to municipal waste management 2020 to 2024 in the Czech Republic according to Czech Waste Management Plan

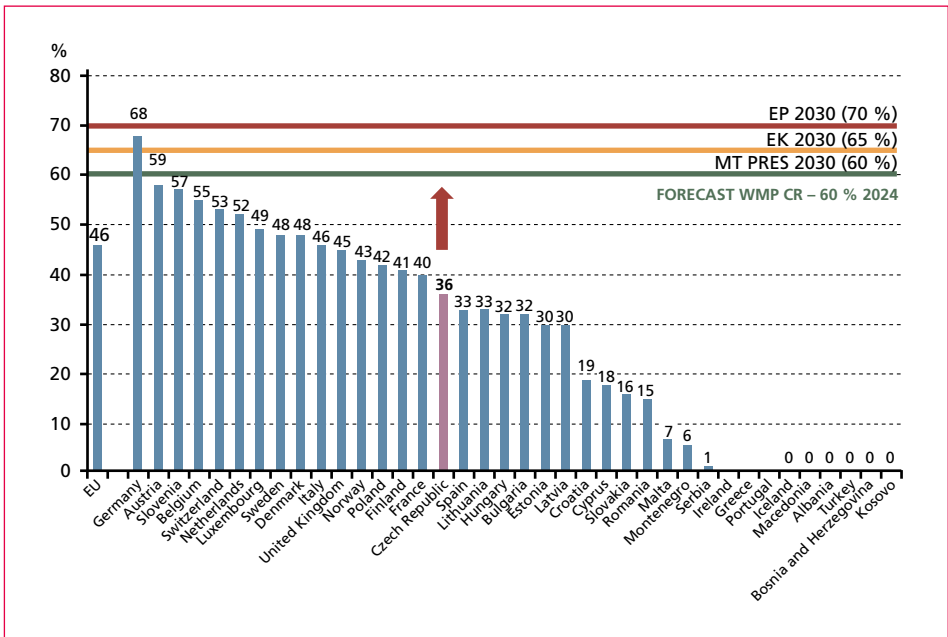


Figure 4: Municipal waste recycling in Europe in 2015 and proposed Circular Economy Waste Package targets

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As the increase of the recycling usually means the decrease of landfilling Figure 5 shows landfilling of municipal waste in 2015 in the Czech Republic in comparison with other European countries.

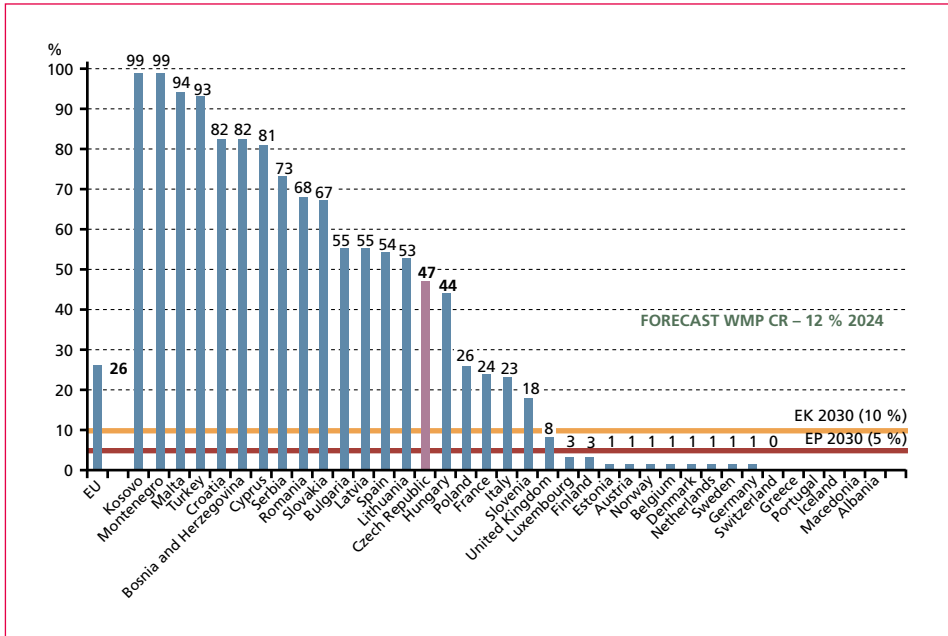


Figure 5: Municipal waste landfilling in Europe in 2015 and proposed Circular Economy Waste Package targets

3. Strong position of the European Commission against the construction of waste-to-energy plants in the Czech Republic

Operational Programme Environment 2014 to 2020, Priority Axis 3 *Waste management and material flows, environmental burden and risks* in the Czech Republic includes specific objective dealing with the financial support to WtE plants. Originally EUR 52,684,241 was allocated for the construction or reconstruction of energy recovery facilities including relevant infrastructure. The condition set by the European Commission was to have Czech Waste Management Plan and 14 Regional Waste Management Plan adopted and to comply with the Waste Framework Directive. The Commission found Czech Waste Management Plan adequate. However, due to inconsistency and differences of Czech waste administrative and statistical data between the Ministry of the Environment and Czech Statistical Office the European Commission after one year discussion both in Prague and Brussels stopped financial support for WtE plants in the Czech Republic.

In the so called comfort letter of December 19, 2016 after the mid-term evaluation of the OP Environment 2014+ based on the recommendation of the Commission which was afraid of the over capacities to be built in the country the Czech Republic declared that EU funding will not be used to extend the incineration capacity of WtE facilities for municipal and mixed municipal waste. However, the threat of jeopardizing recycling by WtE is the false due to the fact that the current capacities of municipal WtE installations are 769,000 tonnes/year available for energy recovery. Prognosis of the Czech Waste Management Plan forecasts to double capacities into about 1,400,000 tonnes/year in 2024 (see: http://www.mzp.cz/cz/plan_odpadoveho_hospodarstvi_cr).

The only positive approach of the European Commission towards WtE in the country was that the Commission agreed with support to:

- biogas stations for processing biodegradable waste and food service waste,
- construction or modernisation of thermal waste treatment facilities (e.g. pyrolysis or gasification of waste),
- reconstruction of waste co-incineration facilities (improving their energy efficiency) for the purpose of energy recovery,
- installation of boilers for waste energy recovery in heating plants or power plants (the facility must be connected to a central heat supply and meet the condition of energy efficiency ≥ 0.65 for an energy recovery facility according to Directive 2008/98/EC),
- construction or modernisation of thermal treatment facilities processing sewage sludge from wastewater treatment plants (incl. phosphorus recovery),
- construction or, if appropriate, modernisation of logistics centres for collection, storage, and sorting of waste for the purpose of its further material and energy recovery.

Whether the private investors or municipalities will be interested in these kinds of permitted technologies without possibility to plan WtE conventional plants is just a question of short time.

4. Even small legal changes can make landfillers unhappy

During the preparation of the new waste legislation in the Czech Republic the Ministry of the Environment prepared the revision of the Decree No. 294/2005 Coll. on the conditions of landfilling and its use on the surface of the ground.

The main purpose of the revision was not to allow the operators of facilities for mechanical-biological treatment (MBT) to circumvent the ban on landfilling as planned by some waste companies and landfill operators. So the Ministry of the Environment set the conditions for landfilling of bottom fraction (underscreen) from MBT plants:

- calorific parameter of 6.5 MJ/kg in dry mass,
- biodegradability in organic solid wastes, respiration activity after four days AT4 of 10 mg O₂/g in dry mass.

These parameters finally meant that more than ten facilities which were not intended to operate as not landfill but *recycle* the waste drew their projects back even after almost passing through EIA process.

5. Wish to have ban on landfilling in 2030 set by the Circular Economy Waste Package

The Czech Republic is among few member states who is strongly supporting the draft of the European Commission in the proposal of Waste Package to set the limit for landfilling of municipal waste by 2030 in maximum of 10 %.

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