

CEWEP

Country Report

2016

Czech Republic



“Municipal Waste” (MW) means waste from households as well as commercial, industrial and institutional waste, which because of its nature and composition is similar to waste from households (excluding hazardous waste).

“Solid Recovered Fuels” (SRF):- solid fuel prepared from non-hazardous waste to be utilised for energy recovery in incineration or co-incineration plants, and meeting the classification and specification requirements laid down in CEN/TS W100343003.

“Refuse Derived Fuels” (RDF): broader than definition of SRF. In the Country Report only RDF expression is used and it comprises SRF as well,9

A. Amount of Waste

In your <u>country CR</u>	Year _____	In million tonnes
Total amount of Municipal Waste (MW): MW production / inhabitant / year: 506 kg/inhabitant	2014	5,324
Total amount of household waste	2014	3,260
Total amount of commercial/industrial/institutional waste similar to household waste	2014	2,064

Total amount of industrial/commercial waste	2014	28,475/3,553
Total amount of waste	2014	32,028 Ministry of Environment

B. Treatment of Waste

In your <u>country</u> (concerning MW)	%	Year _____	In million tonnes
Recycling (including composting)	39,95	2014	2,13
Incineration	12,07	2014	0,64
Landfilling	47,98	2014	2,55

Total Amount of thermally treated waste in million tonnes	<u>CZ</u>	<u>Organisation/ company</u>
In WtE plants/dedicated RDF plants	0,63	3
In Cement kilns	0,152	4

Number of	<u>Country CZ</u>	<u>Organisation/ company</u>
WtE plants	3	SAKO Brno ZEVO Prague Termizo Liberec
Dedicated RDF plants	-	
R1 plants	3	

Capacity development in your <u>country</u>	Years			
	2017 – 2020		2021 – 2025	
	Additional Capacity, ktonnes	Additional number of plants	Additional Capacity, ktonnes	Additional number of plants
Planned Waste-to-Energy plants:	95	1	500	4
Planned RDF plants:				
All (if it is not possible to specify separately)				

C. Energy production in Waste-to-Energy and dedicated RDF plants

1. Total Electricity and Heat production in Waste-to-Energy and dedicated RDF plants

Reference year: 2014 (if data from 2015 are available, please add them and specify the year)

Total Electricity and Heat production	Waste-to-Energy plants and dedicated RDF plants	
	<u>Country CZ</u>	<u>Organisation/company</u>
Reference amount of thermally treated waste in million tonnes:		0,64 (2014) 0,657 (2015)
Number of plants:		3
Electricity produced in million MWh/ year		0,152 (2014) 0,150 (2015)
Electricity exported in million MWh/ year		0,099 (2014) 0,097 (2015)
Heat* produced in million MWh/ year		1,576 (2014) 1,575 (2015)
Heat* exported in million MWh/ year		0,734 (2014) 0,701 (2015)

* incl. heating, cooling and steam

2. Recognition of energy produced in Waste-to-Energy and RDF plants as renewable

How much %? (Please indicate if it refers to energy production or waste input): Not available

Contribution of WtE to the production of renewable energy in your country (%) _____

In your <u>country</u>	Electricity	Heat
Market price per kWh in € cent/kWh		
Subsidy or market based instruments (Please specify e.g. green certificates, feed in tariffs)		
Price incl. subsidy or market based instruments in € cent/kWh		

D. Residues

Reference year: 2014 (if data from 2015 are available, please add them and specify the year)

Slag/bottom ash	<u>Country</u>	<u>Organisation/company</u>
Annual amount in million tonnes:		0,165 (2014) 0,157 (2015)

Method of utilisation or disposal (%): (road construction, cement production, construction block fabrication, landfill)		100 % landfill
Recovery of metals: • Annual amount (%): • Ferrous (F) material extracted (gross weight, %): • Non Ferrous (NF) material extracted (gross weight, %): • Typical composition of the NF fraction (% Al, other NF, inert):		5,1 % (2014) 5,9 % (2015) F – 8386 t, 100 % (2014) 9272 t, 100 % (2015)

FGC (Flue Gas Cleaning) residues, (incl. filter dust and boiler ash)	Country CZ	Organisation/company
Annual amount in million tonnes:		0,013 (2014) 0,013 (2015)
Method of treatment or disposal (e.g. stabilisation, salt mine, hazardous landfill site):		Stabilisation Hazardous landfill site 0,001 million tonnes

E. Export and Import of MUNICIPAL and SIMILAR WASTE

Into/from your country, reference year: 2014 (if data from 2015 are available, please add them and specify)

	MSW	RDF
Export	0	
Import	0	

F. Responsibilities Public - Private

Type of waste:	Responsibility for treatment: Public/Private	Responsibility for collection and transport: Public/Private	Municipalities' responsibility for monitoring: Yes/No
from private households			
commercial waste similar to household waste			
industrial/commercial waste			
hazardous waste			

G. Refuse Derived Fuels (RDF)

In your country, reference year: _____

1. **Amount of RDF/year**
 - a. **Current Production:** _____
 - b. **Potential:** _____
2. **Experience (market development etc.):** _____

3. Capacity for mechanical-biological treatment/ year

Currently: _____

Planned: _____

H. Prices and taxes

1. Waste-to-Energy prices for Municipal Waste (MW)

Reference year: _____

Average Net fee in €/tonne	VAT (Value Added Tax) rate %

	Tax in €/tonne MW	Tax for export in €/tonne MW	Tax for import in €/tonne MW	Rules to avoid double taxation if MS of destination and of dispatch have taxes	Comments
Incineration					
Co-Incineration					

Waste-to-Energy total price in €/tonne MW _____

2. Landfill taxes and bans

Reference year: _____

Average Net fee for landfilling in €/tonne	VAT (Value Added Tax) rate %	Landfill <u>tax</u> in €/tonne (If landfill tax is planned please indicate when and the amount planned)	Total price for landfilling €/tonne MW	Landfill <u>ban</u> (If landfill ban is planned please indicate when and for what type of waste)
Ca. 40				

I. Investment

1. The average investment cost per tonne of annual capacity (for a new plant, considering 15-20 years operation):
2. Investment cost regarding flue gas cleaning system (% of total investment):
3. The average investment cost per MW heat and electricity installed respectively:

J. Employment

The amount of employment created by the Waste-to-Energy industry

Jobs (full time equivalent) per WtE plant including operation process, administration and outsourced personnel hired on regular basis i.e. during maintenance (reference to total capacity): ZEVO Prague – 105 employees, SAKO Brno - 111 employees Termizo Liberec 42 employees

You can also provide this information in another unit, e.g. jobs per 100,000 t/a capacity