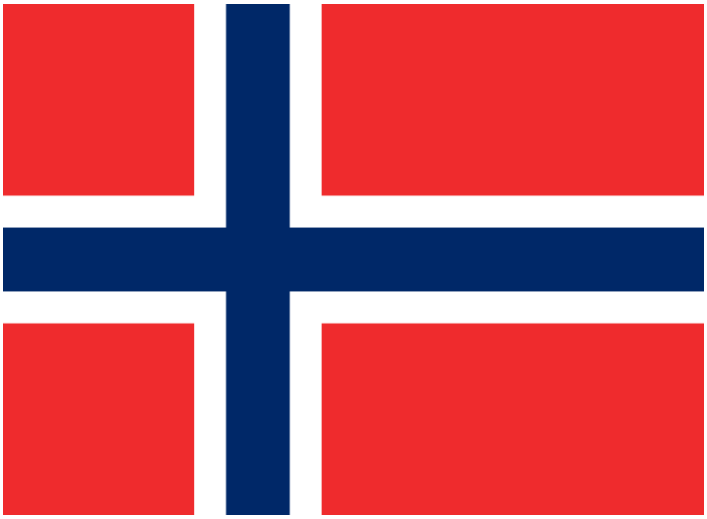
CEWEP

Country report 2018

Norway



"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 WI00343003.

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

A. Amount of Waste

In your country in million tonnes (Reference year: 2016)	
Total amount of Municipal Waste (MW): **MW production / inhabitant / year: 837 kg/inhabitant**	
Total amount of household waste	2,22 link (haz.waste is excluded from 2,27)
Total amount of commercial/industrial/institutional waste similar to household waste	2,15 link (haz.waste excluded from 2,27 - "tjenesteyte

Total amount of industrial/commercial waste	7,02
Total amount of waste	11,39 link

B. Treatment of Waste

In your country (concerning MW) in million tonnes (Reference year: 2016)	
Recycling (including composting)	1,727 (HW:869 + CW: 858) link HW, link CW (calculated 18,87% CW of total)
Incineration	2,043 (HW: 1323 + CW: 720) (calculated 18,87% CW of total)
Landfilling	0,597 (HW: 87 + CW: 510) (calculated 18,87% CW of total)

Total Amount of thermally treated waste in million tonnes (Reference year: 2016)	
In WtE plants/dedicated RDF plants	1,613
In Cement kilns	N.A

Number of plants (Reference year: 2016)	
WtE plants	16
Dedicated RDF plants	1
R1 plants	13

Capacity development in your country (Please include retrofitted/closing facilities)	Years			
	2019 – 2025		After 2025	
	Additional Capacity, ktonnes	Additional number of plants	Additional Capacity, ktonnes	Additional number of plants
Planned additional Waste-to-Energy plants:	53	0	20	0
Planned additional RDF plants:	0	0	0	0
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: 2016

Total Electricity and Heat production in Waste-to-Energy plants and dedicated RDF plants	
Reference amount of thermally treated waste in million tonnes:	1,613
Number of plants:	17
Electricity produced in million MWh/ year	0,425
Electricity exported in million MWh/ year	0,353
Heat* produced in million MWh/ year	3,882
Heat* exported in million MWh/ year	2,973

*** 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): 50% (energy production)

Contribution of WtE to the production of renewable energy in your country (%) N.A_____

D. Residues

Reference year: 2016

Slag/bottom ash	
Annual amount in million tonnes:	0,252
Method of utilisation or disposal (%): (road construction, cement production, construction block fabrication, landfill: considered as recovery (e.g. as layer) or disposal?)	landfill (as disposal)
Recovery of metals	
Annual amount (%):	3,4
Ferrous (F) material extracted (gross weight, %):	n.a

errous (NF) material extracted (gross weight, %):	n.a
Typical composition of the NF fraction (% Al, other NF, inert):	n.a

FGC (Flue Gas Cleaning) residues, (incl. filter dust and boiler ash)	
Annual amount in million tonnes:	0,053
Method of treatment or disposal (e.g. salt mine, hazardous landfill site, stabilisation, immobilization and use as asphalt filler):	haz.landfill site

E. Waste shipments of MUNICIPAL and SIMILAR WASTE

Into/from your <u>country,</u> reference year: 2016____

	<u>MW</u>	**<u>RDF</u>**
Shipments in	n.a	50 kt
Shipments out	710 kt	n.a

(if possible please indicate the countries to/from which the shipments are made)

F. Responsibilities Public - Private

Type of waste:	**Responsibility for <u>treatment</u>: Public/Private**	**Responsibility for <u>collection and transport</u>: Public/Private**	**Municipalities' responsibility for <u>monitoring</u>: Yes/No**
from private households	public	public	yes
commercial waste similar to household waste	private	private	Yes,if applied in local handling/ regulation
industrial/commercial waste	private	private	no
hazardous waste	public/private	public/private	yes/no

G. Refuse Derived Fuels (RDF)

	In million tonnes (Year____)
MW input in Mechanical-Biological Treatment (MBT)	0
Production of RDF	n.a
Planned capacity (of MBT)	n.a

H. Taxes

1. **Waste-to-Energy taxes for Municipal Waste (MW)**

Reference year: 2018_____

	Tax in €/tonne MW	Tax for export in €/tonne MW	Tax for import in €/tonne MW	Other tax (e.g. CO_2, energy)	Rules to avoid double taxation if MS of destination and of dispatch have taxes
Incineration	0	0	0	0	
Co-Incineration	0	0	0	0	

Additional comments:

2. **Landfill taxes and bans**

Reference year: 2018_____

Average Net fee for landfilling in €/tonne	VAT (Value Added Tax) rate %	Landfill tax in €/tonne (If landfill tax is planned please indicate when and the amount planned)	Total price for landfilling €/tonne MW	Landfill ban (If landfill ban is planned please indicate when and for what type of waste)
25-85	25	0	25-85	biodegradeable/ 2009

Additional comments:

I. Employment

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

Number of jobs (full time equivalent) per WtE plant including operation process, administration and outsourced personnel hired on a regular basis, i.e. during maintenance.

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