



**State Agency on Energy Efficiency
and Energy Saving of Ukraine**

CREATING CONDITIONS FOR DEVELOPMENT OF WASTE -TO- ENERGY PROJECTS IN UKRAINE

Amendments to Legislation-
concept



DISPOSAL OF MUNICIPAL SOLID WASTE - ACTUAL STATUS

Disposal of municipal solid waste - actual status



Ukraine  generates annually:



300-350 kilos of municipal waste (MW) per 1 person is generated in Ukraine



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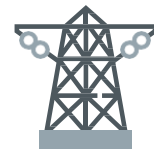
million tons

of municipal waste is being collected and transported to the landfills in Ukraine



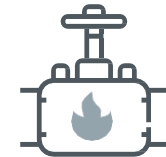
3,5 million GCal of heating energy

=



1,2 billion kWt*hour of electric energy

equivalent



1

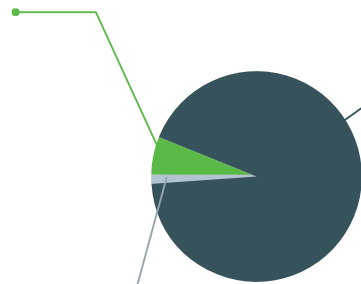
billion m³ OF NATURAL GAS

Disposal of municipal solid waste — actual status



Ukraine*

4,2%
of MSW is being sorted



2,5%
used to generate heat

93,3%

MSW is taken to the landfills



5 434
landfills



30 184
unauthorised
landfills



12 000
hectares
of landfills



Territory exceeding that of the city of Vinnitsa**

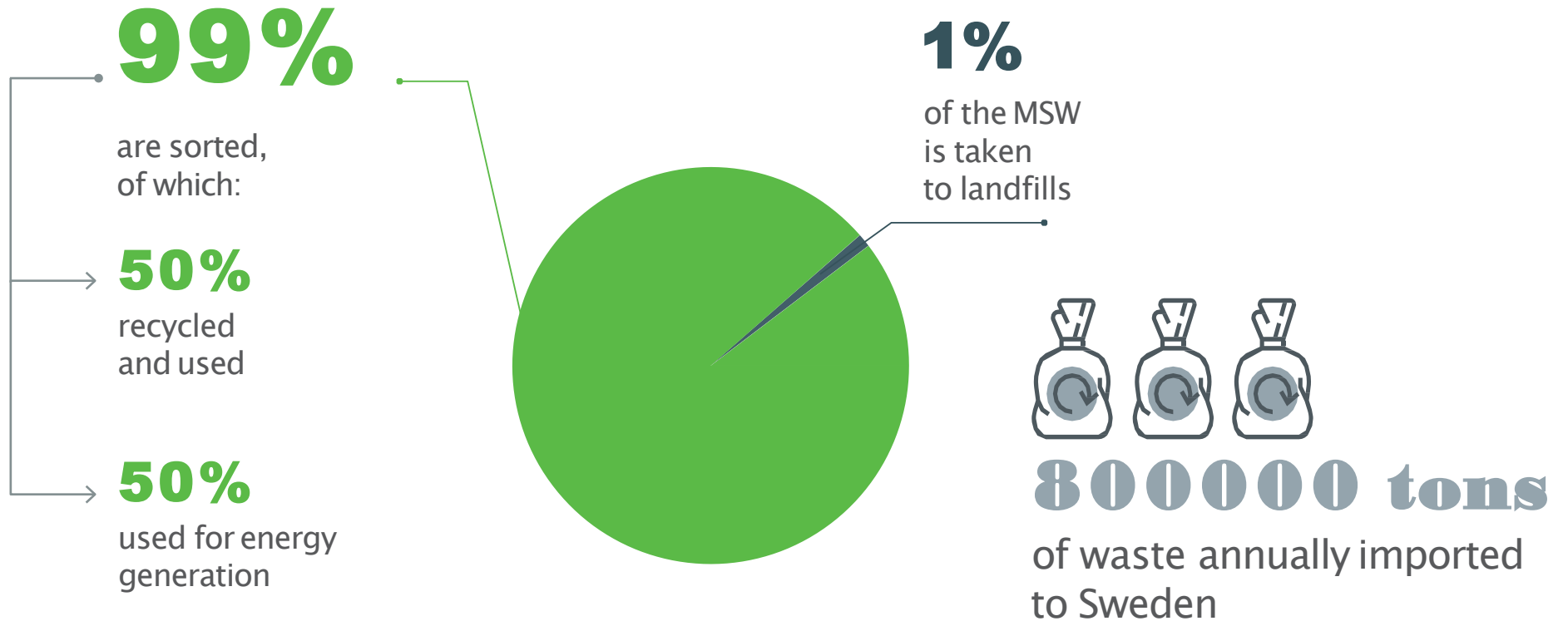
* As per the 2017 annual report by the Ministry of Regional Development

** Vinnitsa city area makes 11,3 thousand hectares

Disposal of municipal solid waste — actual status



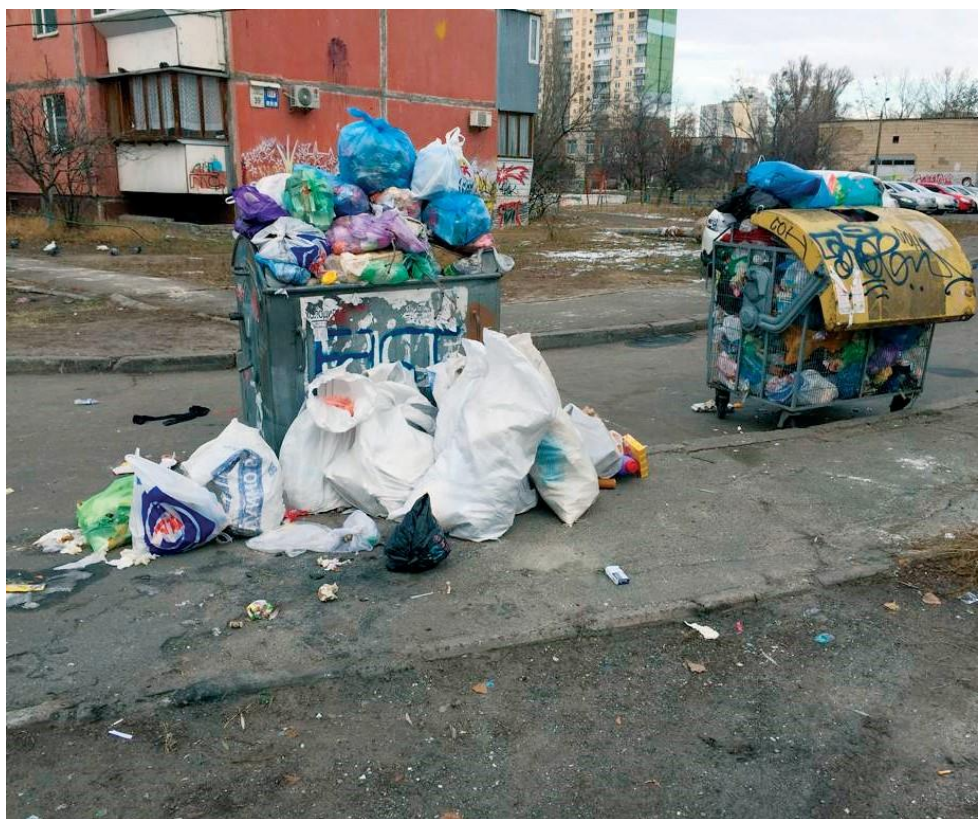
As compares against **Sweden** 





REASONS FOR ABSENCE OF WASTE-TO-ENERGY FACILITIES IN UKRAINE

Waste collection – actual status



Why so?



Cheap landfilling

Waste disposal is still the **cheapest** way of MSW treatment.



No efficient control

Supervisory and law enforcement bodies **are not able** to hold the persons/entities creating unauthorized landfills duly liable.



Liability — minimal to absent

Regulations establish **minimal liability** for waste disposal at unauthorized landfills.



Investors are not interested

No incentives and/or sufficient guarantees available to potential investors to be ready to invest into waste-to-energy (WTE) facilities.



Recently adopted National housing and Municipal Services Law does not provide for:

1

No fixed amount of waste supply guarantee by the local authorities. Waste treatment deals are made between the waste collection/ transportation company and the waste treatment facility and qualify as private business dealing.

2

No means to ensure concluding **long-term contracts** that could guarantee investment return. Private collection/ transportation company may go bankrupt and/or stop providing its services, hence the order for treatment services may be cancelled at any time.

3

No **currency rate risk** decrease mechanism available to investors — in spite of the fact that the investments into waste treatment facilities are mainly made in foreign currencies (relevant equipment, technology and software are unavailable in Ukraine, hence need to be procured abroad), the regulations do not provide for any measures ensuring the investor's foreign currency risks decrease.



Tariffs

NO transparent mechanism to establish the waste treatment tariffs:



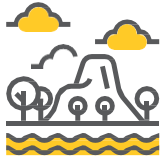
- New national Housing and Municipal Services Law provides for only general waste disposal tariff. Unclear how the treatment fee (gate fee) will be calculated as a part of the disposal tariff.
- The actual tariff formation method (cost plus fixed profit rate calculation) does not qualify as stable source of income since the components thereof (price of energy carriers, fuel and labor) are increasing permanently while the automatic tariff revaluation is unavailable. Hence, projects aimed at the construction of waste treatment facilities get less attractive in terms of investment.



Use of fuel

No laws/regulations to deal with the use of fuel produced from municipal solid waste (SRF/RDF) as one of the potential energy sources (laws/regulations only deal with the use of energy generation from biomass).

Why so?



Ecological safety

Serious resistance by ecology-related NGO and local communities to the construction of the waste treatment facilities due to absence of regulations ensuring the due environmental safety of the WTE facilities.



Sorting

Waste sorting culture and tools to ensure proper waste sorting are absent. Recyclable waste typically going to landfills instead of recycling facilities. Meanwhile Ukraine imports the recyclables from other countries.



Local authorities

Local authorities have no legal power to manage the waste treatment. They are limited to determining the collection/transportation company and establishing the relevant service fee rates. Waste sorting, treatment and disposal fall beyond their competence.



OUR GOAL

Creating preconditions for the waste to be used/disposed of with maximum energy and economic efficiency and environmental safety.

Each type of municipal solid waste should be treated using the most environmentally safe technology that ensures the waste's most efficient use.



WHAT NEEDS TO BE CHANGED?

What needs to be changed?



Turn waste disposal into least cost-efficient type of waste management



Implement the set of guarantees and incentives necessary to involve private investment into the WTE sector



Pass the law to establish the clear set of ecological requirements applicable to the waste treatment facilities



Establish clear rules to form the WTE service tariff (gate fee)



Implement the adequate waste management system at the municipalities' level, increase the relevant powers of local authorities

What needs to be changed?



15

1 task



Turning waste disposal into least cost-efficient type of waste disposal.



Responsibility/liability

Increasing the responsibility/liability for waste disposal at unauthorized locations.



Control

Increasing the relevant powers of the local supervisory and law enforcement authorities.



Tax

Progressive increase of waste disposal tax rates.

Tax rate due and payable for MSW disposal in EU countries and in Ukraine



What needs to be changed?



2 task



Implementing the set of guarantees and incentives necessary to involve private investment into the WTE sector.



Contracts

Delegating to local authorities the power to conclude long-term (up to 49 years) contracts with the winners of the tender for waste treatment services provision.



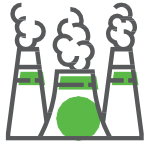
Guarantees

Within the effective contractual term local authorities shall guarantee to the waste treatment company (i) supply of fixed MSW amount and (ii) payment of the fixed waste treatment tariff.

What needs to be changed?



3 task



Passing the bill to establish the clear set of ecological requirements applicable to the waste treatment facilities.



Sorting

Mandatory prior waste sorting with maximum collection of recyclables as a part of biomechanical treatment or before the thermal treatment.



European requirements to emissions

Full implementation of the EU Directive on industrial emissions' into national legislation.



European technological requirements to WTE

In case the thermal treatment technology is used to treat the waste the mandatory requirement for the burnout temperature shall be not less than 850°C to last within not less than 2 seconds to ensure the furanes and the dioxines have disintegrated (most cancer-dangerous substances). The requirements are a part of the EU legislation.



Gas cleaning

Providing for the mandatory 3-level gas cleaning system.

What needs to be changed?



4 task



Establishing clear rules to form the waste treatment service tariff (gate fee).



Cost

MSW treatment cost established by National Commission Regulating Energy Use and Municipal Services for a long-term period using the incentive-based rate formation model.



Price revaluation

Introducing the transparent mechanism for price revaluation (link to consumer price index, currency exchange rate etc.).

What needs to be changed?



5 task



Implementing the adequate waste treatment management system at the municipalities' level, increasing the relevant powers of local authorities.



Property title

Introducing regulations to transfer to local authorities the property title to MSW.



Integrated operator (IO)

Delegating to local authorities the power to either appoint the integrated MSW management operator (hereinafter the IO) from among the municipal companies or to hold a contest/ tender to otherwise determine such IO

The IO shall ensure the coordination of all the waste management processes/operations within the relevant administrative/territorial unit and shall further control the quality of service rendered to customers (population) by the companies involved.



SO rights

Vesting into the IO the right to contract:

- with relevant business entities — for waste collection/ transportation, waste cleaning, waste treatment, waste disposal and/or other waste management services;
- with citizens — for waste management services (via the adherence contracts).

What needs to be changed?



5 task

Implementing the adequate waste treatment management system at the municipalities' level, increasing the relevant powers of local authorities.



Fixed tariff

Establishing officially that the waste treatment services are provided to the customer under the fixed tariff, the latter to include waste collection/ transportation fee + treatment fee + disposal fee + integrated operator costs.



Contest/Tender

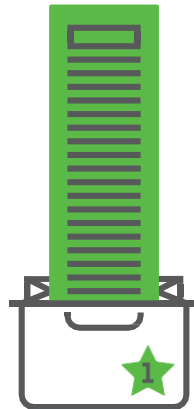
Delegating to local authorities the power to hold the contest/tender to determine the legal entity to provide municipal waste treatment services.

What needs to be changed?



5 task

Implementing the adequate waste treatment management system at the municipalities' level, increasing the relevant powers of local authorities.



- The Cabinet of Ministers (through the Ministry of Regional Development and/or the State Agency on Energy Efficiency and Energy Saving of Ukraine) has to establish the rules for holding the contest/tender for municipal solid waste treatment service providers.
- The winning company must contract with the integrated operator. The contract must be a long-term one and must guarantee the delivery of a fixed amount of waste within the specific time period. Otherwise the local authorities should be penalized [for failing to comply with fixed amount delivery obligation].
- The contest/tender can be held and the contract can be executed with the contest/tender winner, in respect of either simple service rendering to the existing waste treatment facility, or in cases where the winner will design, build and/or further operate the newly constructed waste treatment facility and render relevant waste treatment services (DBO contract). The contract may further provide for the facility buyout by the local community within 25–49 years upon the start of the facility operation (BOT/DBOT).

What needs to be changed?



5 tasks

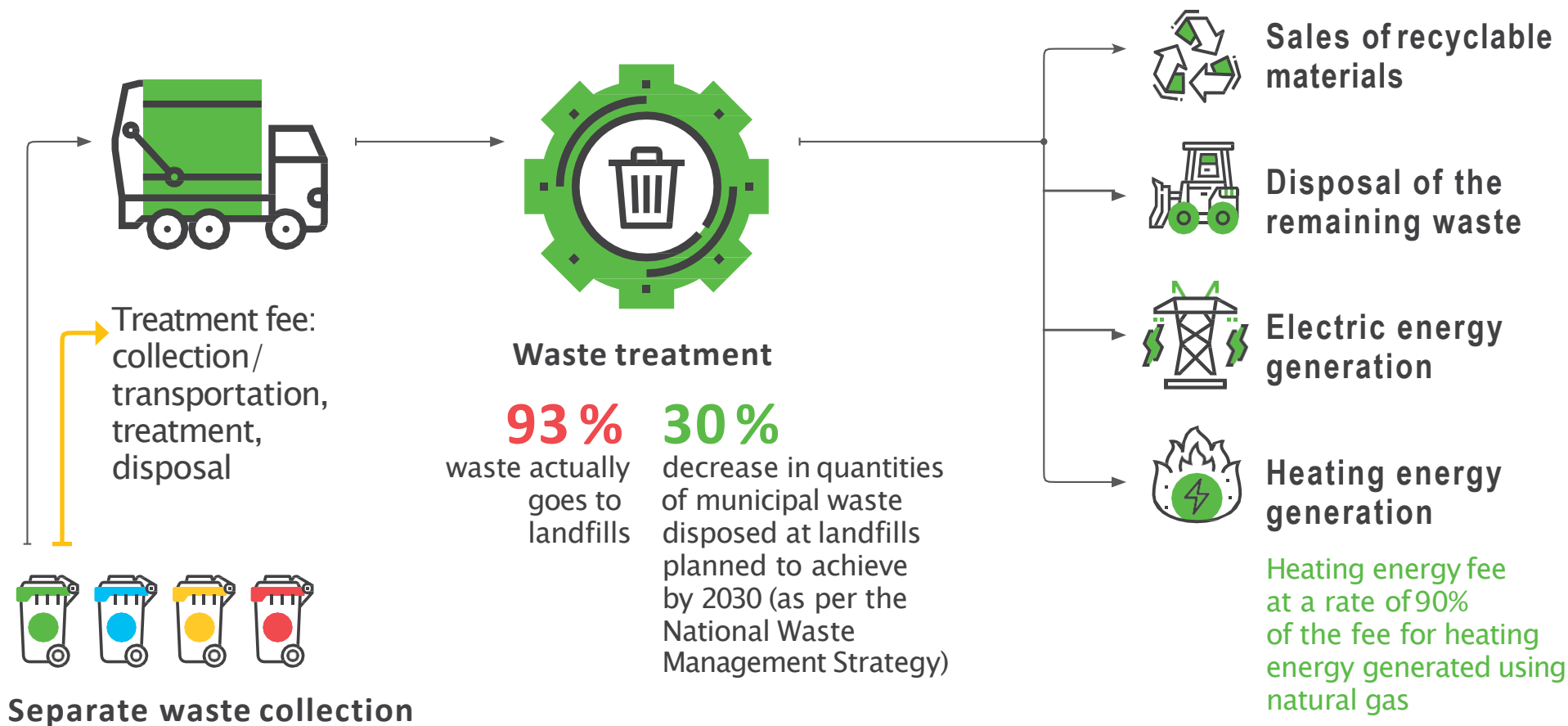
Implementing the adequate waste treatment management system at the municipalities' level, increasing the relevant powers of local authorities.

- Local authorities to be legally empowered to hold a contest/tender to determine the waste collection/ transportation company. The contest/tender winning company shall contract accordingly with the integrated operator.
- Waste collection/transportation companies to be obliged to transport the municipal waste solely only to the pre-determined waste treatment facilities and final municipal waste disposal facilities, such facilities to be listed in the attachment to the contract and included into the sanitary clearance scheme approved for any specific locality.
- Relevant services to be due and payable solely based on the document (certificate) confirming the waste delivery to the relevant waste management facility.





Concept for the efficient waste treatment involving further energy generation



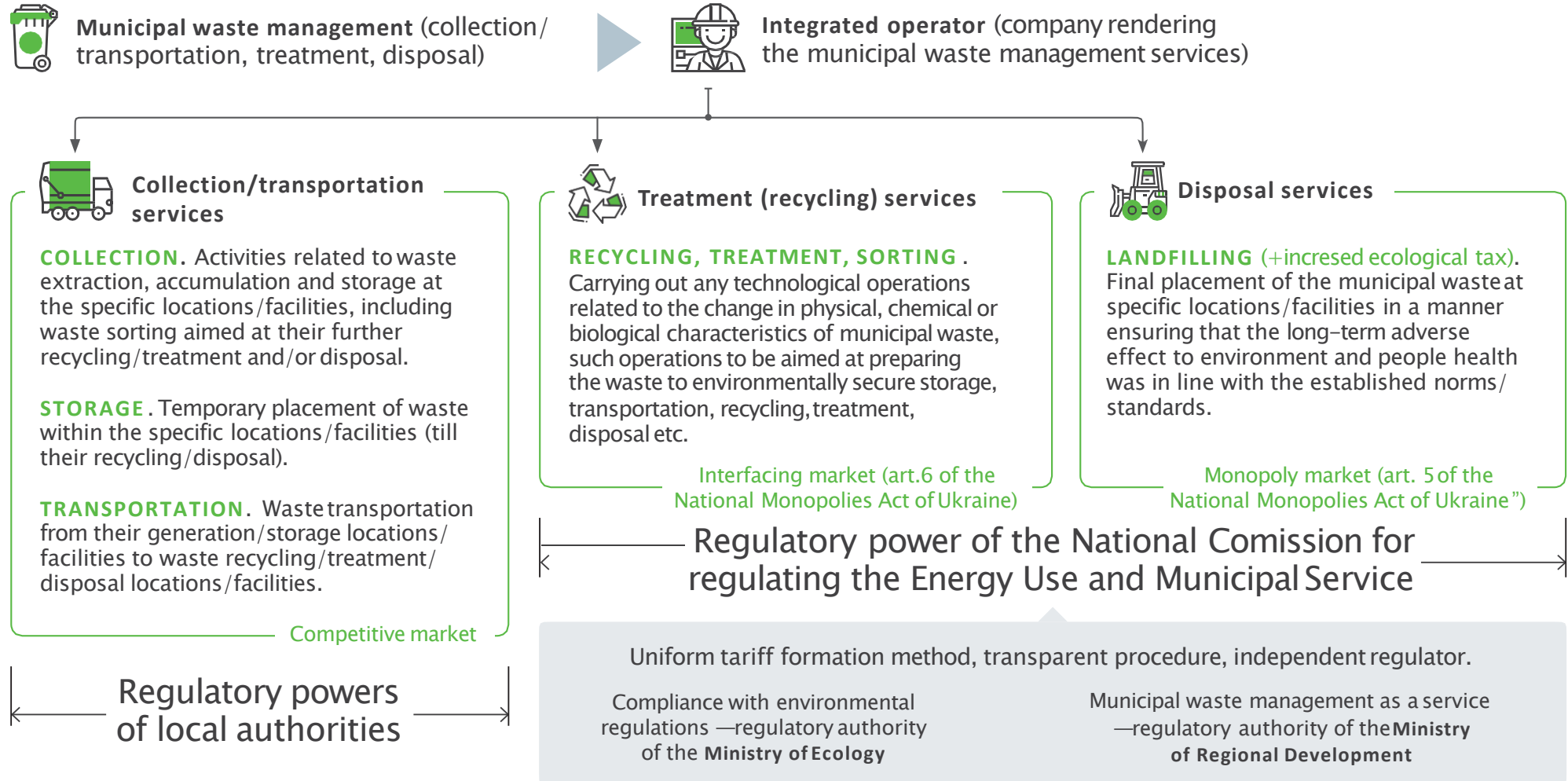
Separate waste collection

93 % waste actually goes to landfills

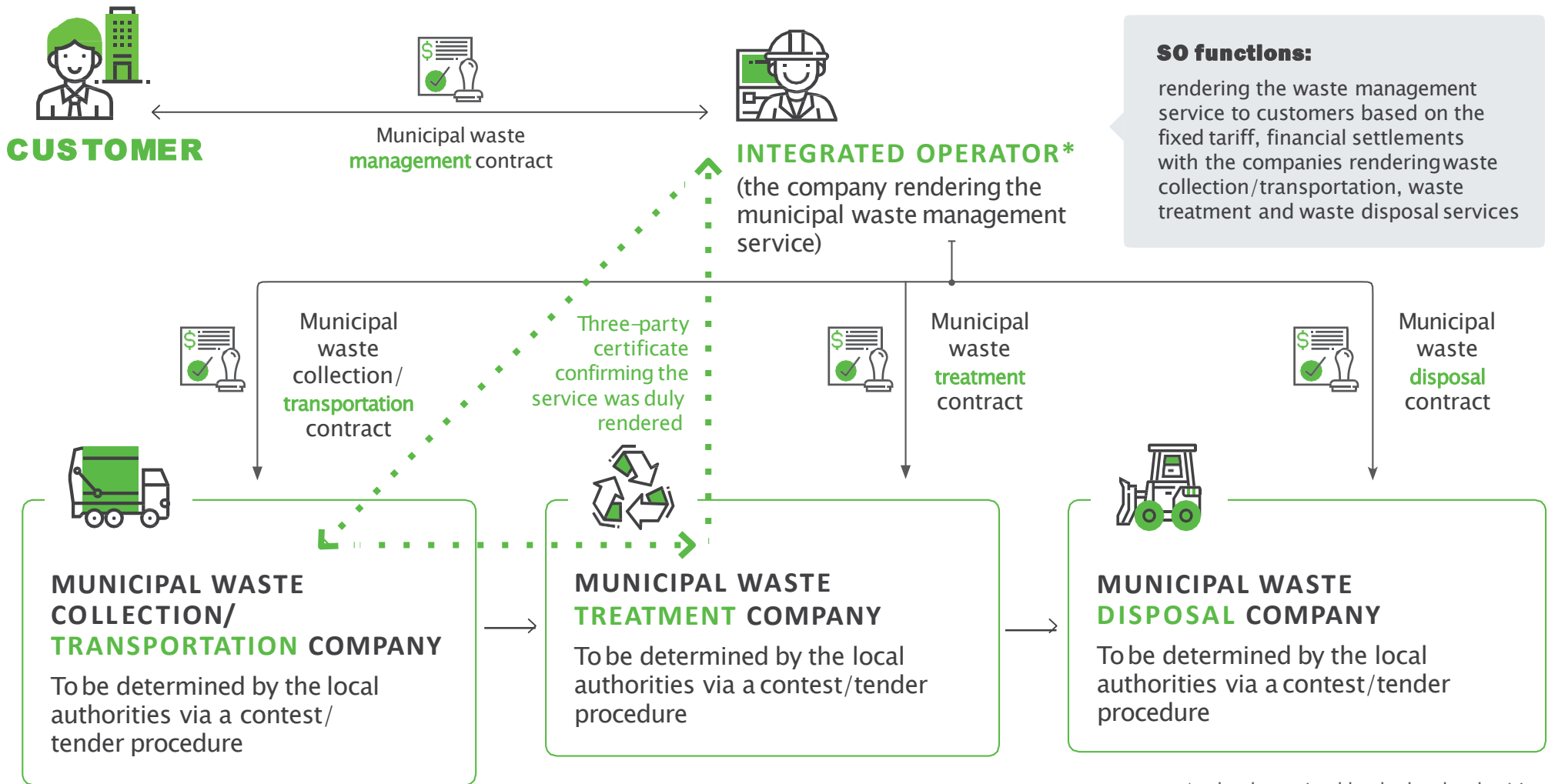
30 % decrease in quantities of municipal waste disposed at landfills planned to achieve by 2030 (as per the National Waste Management Strategy)

Heating energy fee at a rate of 90% of the fee for heating energy generated using natural gas

Draft concept of powers' split with respect to MSW



Interaction in waste management sector



*to be determined by the local authorities



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**THANK YOU
FOR YOUR ATTENTION!**