

Changing our Behaviour

A Municipal Solid Waste Strategy for Ukraine

Kharkiv - 2017

RAMBOLL



ACKNOWLEDGEMENT OF DONORS

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TIMELINE FOR MSW STRATEGY DEVELOPMENT



A PARTICIPATORY APPROACH

KEY STEPS

1. Identification of key partners and stakeholders
2. Launch event – September, 2017
3. Ongoing dialogue with key institutional partners
4. Presentation of strategy scope – October, 2017
5. Public dissemination of first draft via MENR website – December, 2017
6. Invitation for comments
7. Discussions with relevant business forums
8. Presentation of final draft – 26 April, 2017



**KICK OFF EVENT
7 SEPTEMBER,
2016**

KICK OFF EVENT (7TH SEPTEMBER)

KEY ISSUES RAISED

- Lack of an integrated approach to MSW management
- Lack of cooperation between municipalities
- Low level of separate collection and sorting of household waste
- Poor standard of landfills
- Low level Of tariffs and landfill tax
- Lack of monitoring and enforcement of legislation
- Lack of economic incentives
- Poor overall understanding of the negative impacts that current practices have upon human health and the environment



KICK OFF EVENT (7TH SEPTEMBER) ADVANTAGES OF MSW STRATEGIC APPROACH

- Provides a clear strategic direction for all stakeholders in relation to municipal solid waste (MSW) management in Ukraine
- Provides a clear long-term and coherent vision within which the necessary infrastructure can be planned
- Sets out investment priorities – allowing for proper allocation of resources
- Gives confidence to private sector in relation to investment projects
- Sets the agenda for the various players



THE VISION

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The Vision

- Envisages a move away from sole reliance on landfill disposal for municipal waste management
- To a situation where such waste is sorted and separated into streams for reuse, recycling or recovery with disposal of residual waste in EU-compliant 'regional' disposal facilities.

Goals and objectives

Sees the establishment of an integrated municipal solid waste management system where the private sector is encouraged to participate, both as operators and as investors

- Aims to establish a system that is comparable to best practice standards in place in EU member states
- Affords an appropriate protection of human health and the environment.



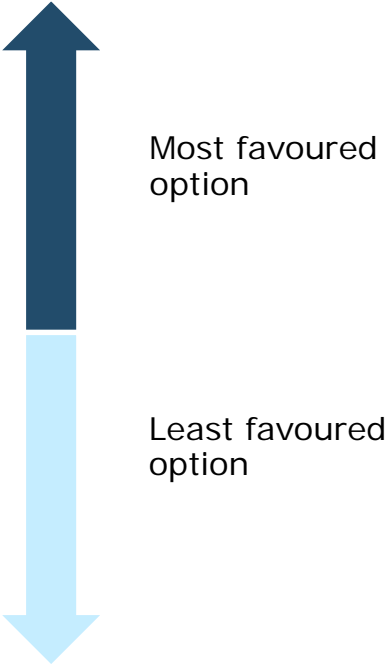
KEY PILLARS

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1. Respecting the EU waste 'hierarchy'
2. Full cost-recovery of MSW management operations
3. Implementation of Extended Producer Responsibility (EPR) for certain waste streams - Packaging waste, Waste electrical and electronic equipment (WEEE)
4. Inter-municipal cooperation (IMC) arrangements - Landfill sites, waste sorting lines, transfer stations, etc.
5. Extension of MSW separate collection of dry recyclable - Two-container/bin system
6. Closure of poor standard landfills and dumpsites and rationalisation of disposal within a small number (i.e. 100 to 150) of regional landfills which need to be appropriately licensed.

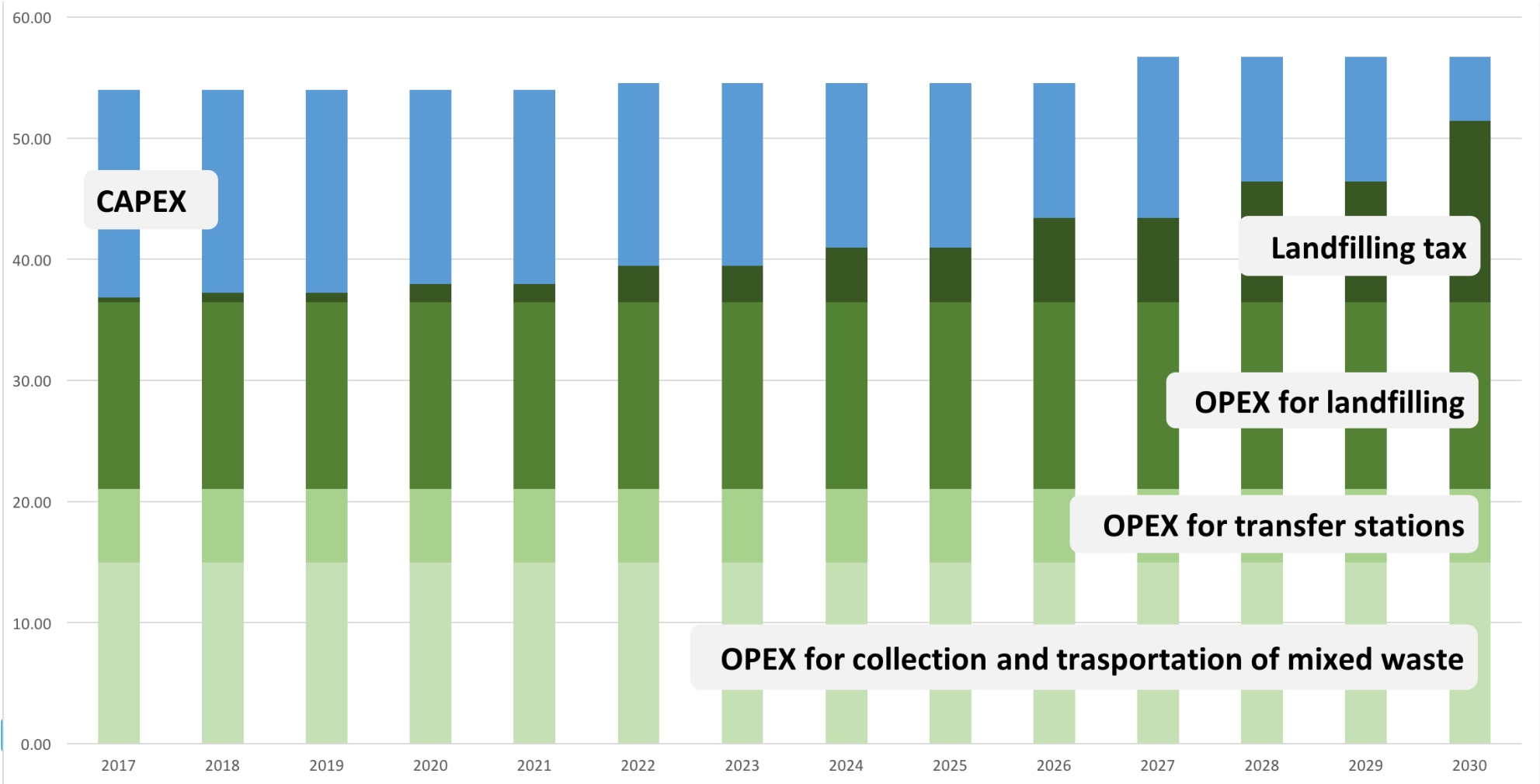


1. RESPECTING THE EU WASTE 'HIERARCHY'



2. FULL COST-RECOVERY OF MSW MANAGEMENT OPERATIONS

CAPEX and OPEX for the period 2017 – 2030



3. IMPLEMENTATION OF EXTENDED PRODUCER RESPONSIBILITY FOR CERTAIN WASTE STREAMS

Full implementation of EPR by 2022 for a the following waste streams in particular:

- Packaging waste
- Waste electric and electronic equipment (WEEE)



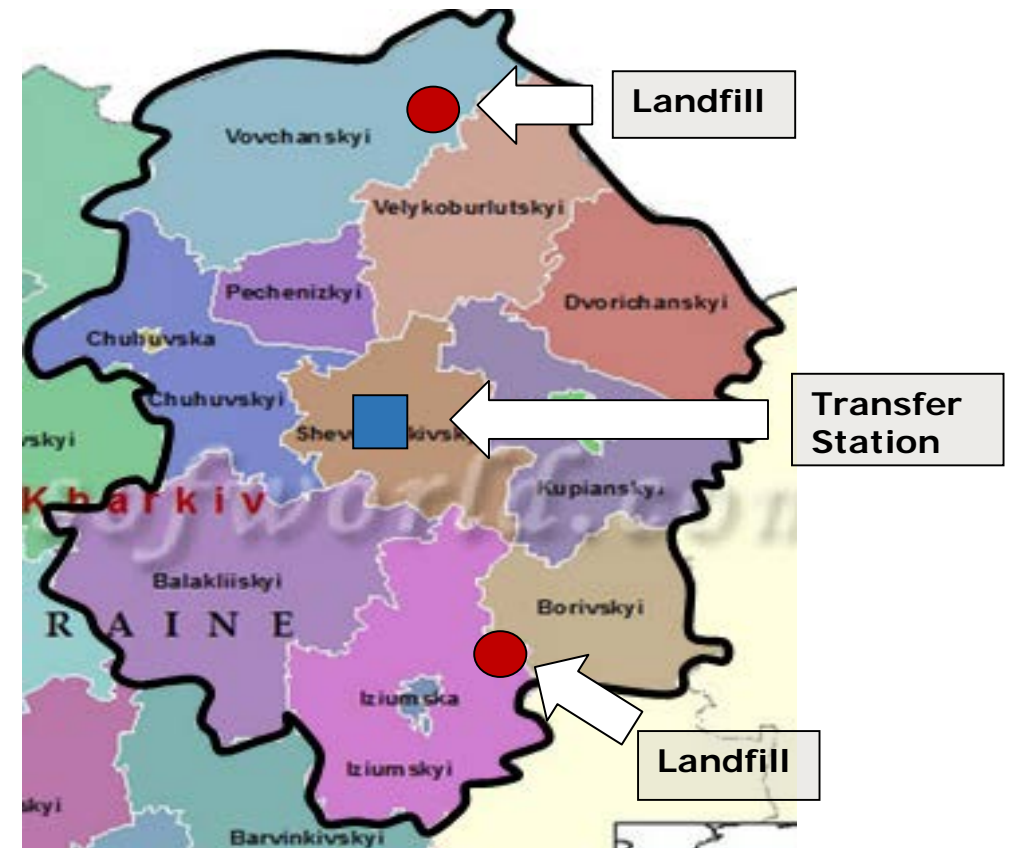
4. INTER-MUNICIPAL COOPERATION (IMC) ARRANGEMENTS

What:

Local self-government units coming together and entering into agreements to carry out works or activities for which they are otherwise individually responsible.

Why:

To achieve the necessary economies of scale and to improve the efficiency and overall effectiveness of the activity or operation in question.



5. EXTENSION OF MSW SEPARATE COLLECTION OF DRY RECYCLABLES

Container/bin for 'dry' recyclables

- Paper & Cardboard;
- Plastic;
- Metal;
- Glass



Waste Sorting Line (WSL)

Container/bin for 'residual' waste



EU-Compliant Landfill

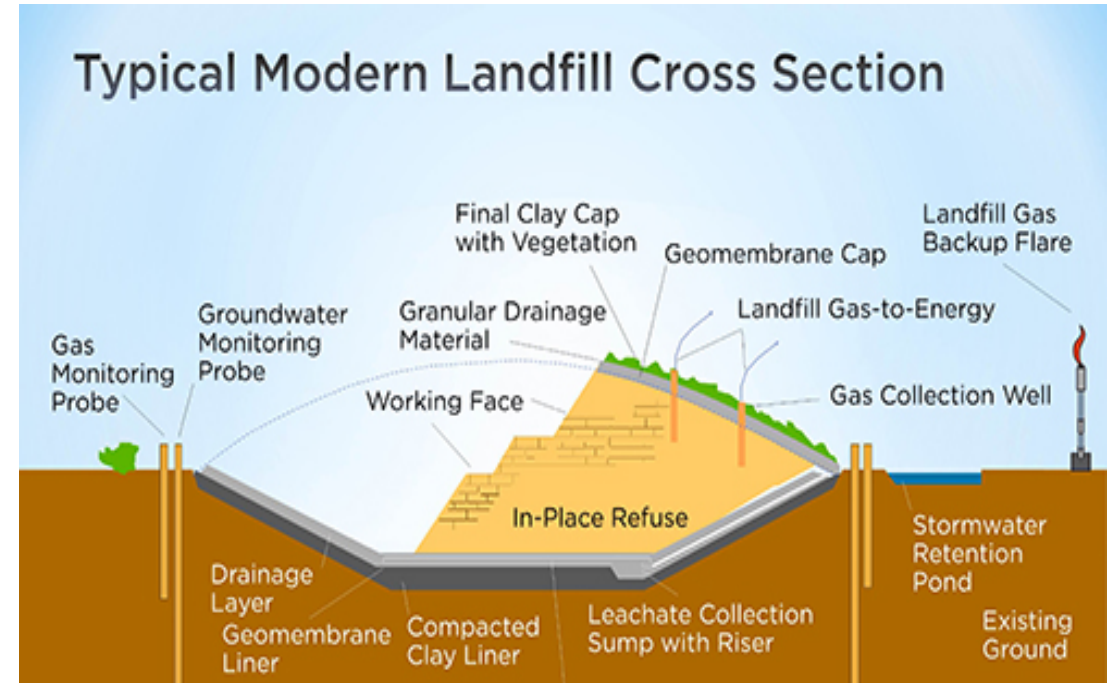
6. DUMPSITE CLOSURE AND LANDFILL DEVELOPMENT

CAPEX approximately €1.4 billion



Over 6000

CAPEX approximately €0.7 billion



100 - 150

SUMMARY OF KEY MEASURES

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- Increase in organised MSW **collection service** coverage of the population to 90% by 2030;
- Construction of **landfills - approximately 100-150** 'state-of-the art', EU-compliant landfills based on the waste catchment areas organised through inter-municipal co-operation (IMC)
- Closure of the existing **6,000 plus landfills** and dumpsites in Ukraine;
- Construction of a network **of transfer stations** based on the defined waste catchment areas;



SUMMARY OF KEY MEASURES (2)

- MSW separate collection and sorting:
 - Progressive extension of MSW **separate collection of recyclables**, within a two-container system, for 'dry' recyclables, to cover approximately **53%** of the total population by 2030
 - Construction of about **91 additional waste sorting lines (WSLs)**
- Development of **Waste Reception/Collection Centres** in the largest settlements in Ukraine (between 250 and 300)
- **Home composting** to cover **2.5 million households** - 30% of the rural population and 10% of the urban population of Ukraine, by 2030.
- **Other technologies** are not specifically proposed at this stage but can be considered on a case-by-case basis
 - Pre-feasibility studies
 - Pilot projects



MSW SEPARATE COLLECTION & SORTING

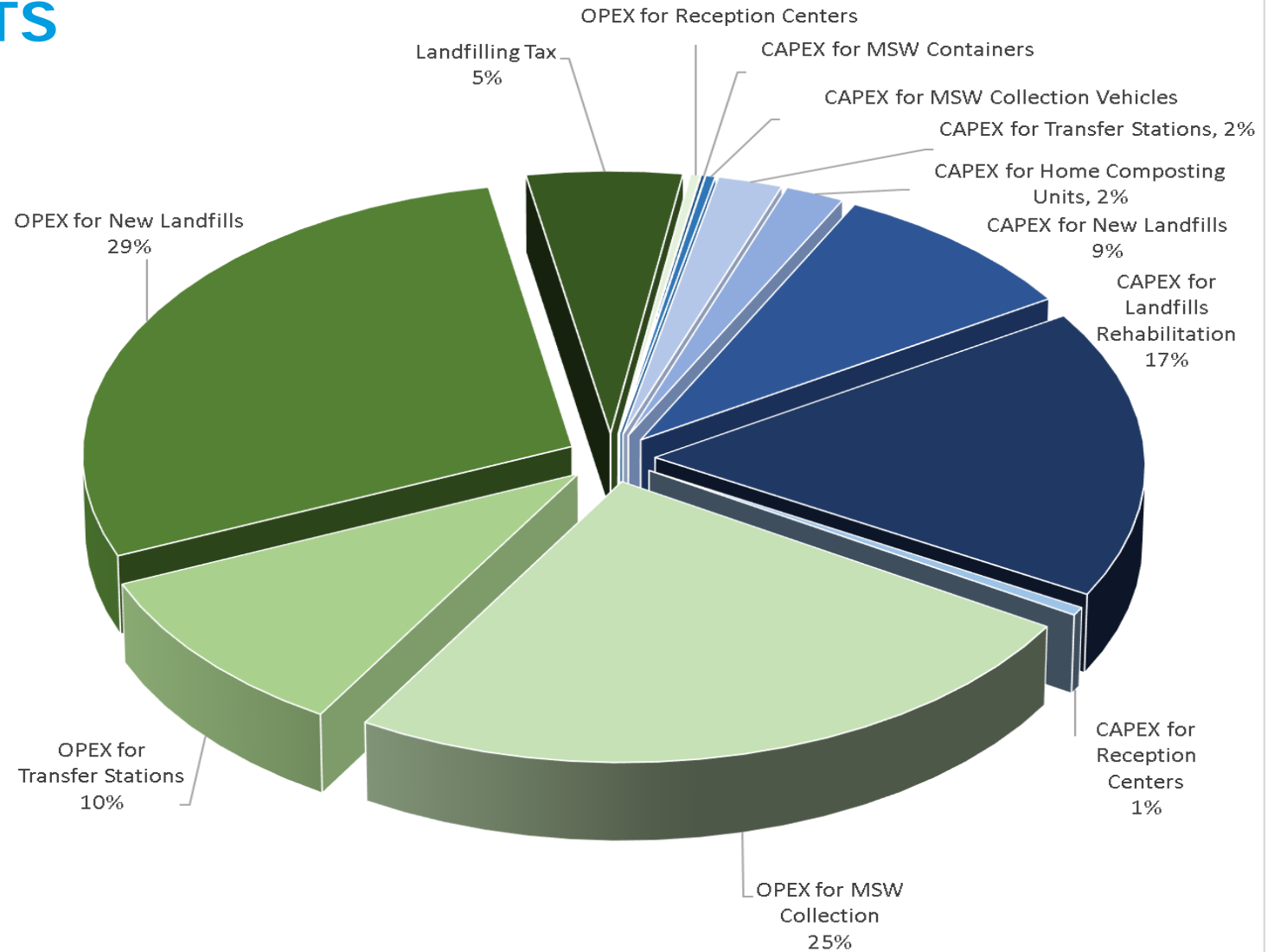
- Preliminary financial assessment indicates that revenues from captured secondary raw materials can potentially secure **full cost-recovery** for MSW separate collection and sorting
- Part of the net costs of MSW separate collection and sorting, if any, can potentially be covered by an **EPR scheme** for packaging waste
- Existing MSW separate collection schemes have been shown to operate profitably in Ukraine but such schemes need the following:
 - A comprehensive programme to increase awareness;
 - Cooperation between municipalities and operators;
 - Stable market for secondary raw materials, etc.



COST RECOVERY ASPECTS

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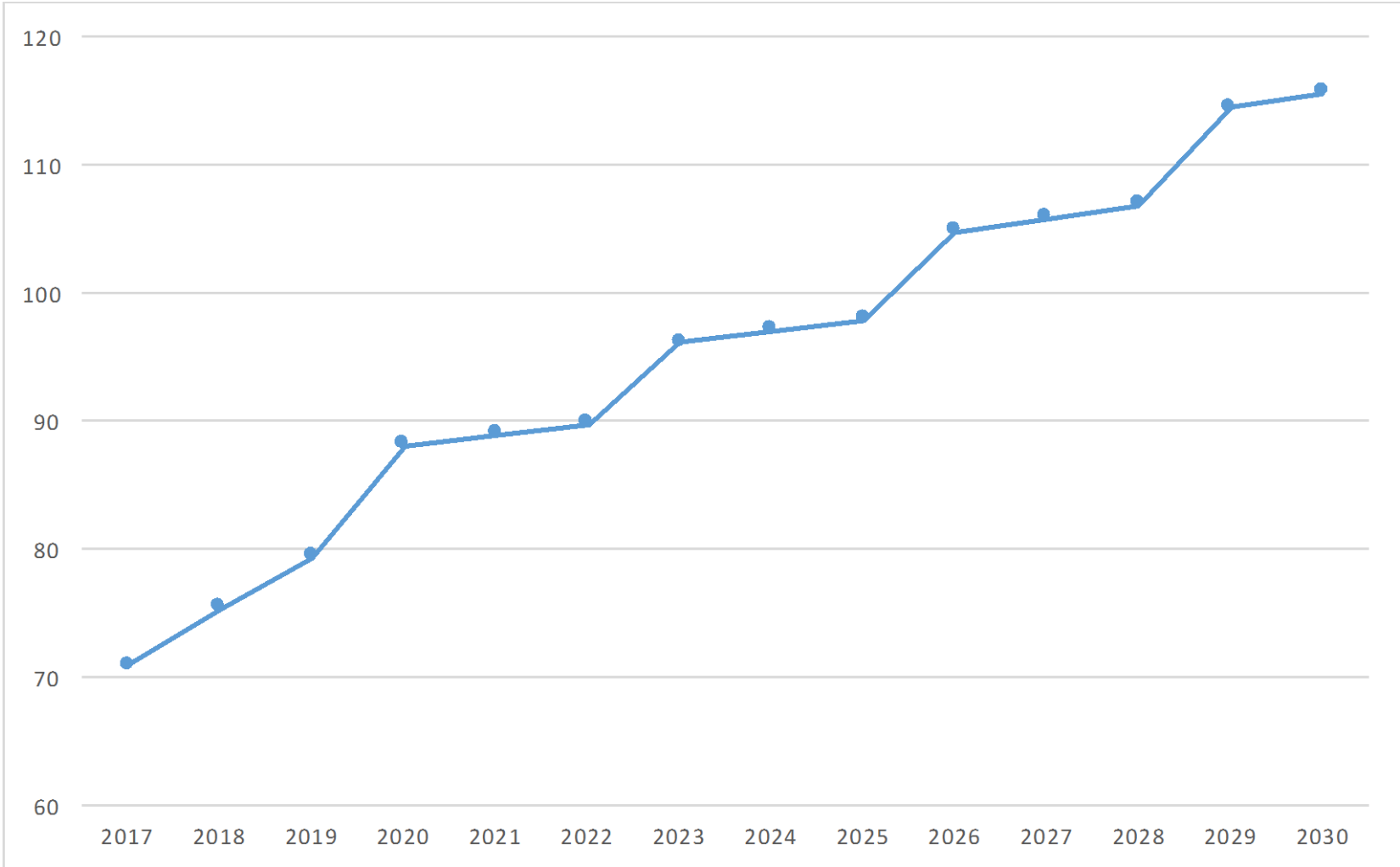
- CAPEX and OPEX for the measures set out in the MSW strategy ultimately need to be addressed by the tariffs for MSW management services
- CAPEX and OPEX for 2017-3020
 - CAPEX \approx €2,5 млрд
 - OPEX \approx € 5,4 млрд.



COST RECOVERY ASPECTS (2)

One household expenses on MSW management, UAH/month

- Indicative estimates show that the tariff required for the proposed system will need to be increased from the current average level of **0.37%** of average household income to an average level of **1.68%** over the 13-year period 2017 - 2030
 - Based on 1% year-on-year increase in household income over the period



MAIN BENEFITS

MAIN BENEFITS OF THE STRATEGY

- Provide a clear indication of **Government policy** which will shape the actions of local self-government units and give confidence to the private sector in relation to investment
- Relieving the pressure on the extraction of **raw materials** through the reuse of products and the recycling of paper, glass, plastic, etc.
- A reduction of **greenhouse gas emissions** (e.g. through increasing diversion of biodegradable waste to landfill and managing LFG by flaring or utilization);
- An increase in **job opportunities** in the waste sector and recycling sector;
- An enhanced environment and a **cleaner and safer place to live**, through the prevention of pollution to ground, water and air, and reduced litter by the provision of safe landfills operated to best international practice.



THANK YOU!

ADDITIONAL SLIDES

EXTENDED PRODUCER RESPONSIBILITY FOR PACKAGING WASTE

- A policy approach under which producers are given a significant responsibility – financial and/or physical – for the treatment or disposal of post-consumer packaging waste
- EPR schemes should ideally be producer-managed systems, with minimum government involvement, but with government oversight
- Producers given the choice to meet their EPR obligations individually or collectively with other producers, by establishing or joining a producer responsibility organisation (PRO),
- Two broad models:
 - A Single Producer Responsibility Organisation (PRO), owned by the obligated companies, that is responsible for arranging collection, transport, sorting and sales of the recycled materials; and
 - Several competing PROs



FURTHER EXPLANATION OF IMS ARRANGEMENTS AND ,SW CATCHMENTS AREAS – EXAMPLE: KHARKIV OBLAST

- Kharkiv Oblast
 - Population: 2,755,177
 - 27 Raions
 - 7 cities of regional significance
- Catchment Area No. 3 (of 4) – Eastern Area
 - Raions: Balakliia; Borova; Valky; Velvki Burlok; Vovchansk; Dvorichna; Iziium; Kupiansk; Pechenihy; Chuhuiv; and Chevchenkove
 - Population approximately 400,000
- Different possible configurations of landfills and transfer stations within



WASTE COLLECTION/RECEPTION CENTERS



WASTE COLLECTION/ RECEPTION CENTERS

