Municipal Waste Regulators' Contribution to the CEA Consultation

The independent National Regulatory Authorities (NRAs) of EU Member States, tasked with the economic regulation of waste management, would like to take the opportunity to contribute to the consultation launched by the European Commission in view of the adoption of the Circular Economy Act.

The NRAs exchange ideas and information, encourage the dissemination of good practices, and promote the role of economic regulation in the construction of the circular economy. The NRAs are convinced that the common principles of regulation can provide valuable help to the process of establishing the circular economy in conditions of efficiency and effectiveness.

In their respective national contexts, the NRAs have diversified tasks, but generally aimed at ensuring fair tariffs for citizens, transparency of economic conditions, quality of services. At the same time, the NRAs are called upon to ensure that tariffs cover the efficient costs of services and that operators recover capital costs, as an incentive to make the necessary investments in a sector that is expected to be increasingly capital-intensive. Fairness, transparency and efficiency aim to build a circular economy at the lowest possible cost to citizens, and to ensure the widest possible participation of all stakeholders.

In relation to the issues mentioned above and their competences, the NRAs are therefore pleased and honoured to participate in the very welcome consultation on the circular economy.

The following Position Paper must be considered the result of the collective contribution of the NRAs of **Hungary, Italy, Latvia, Lithuania, Portugal, and Romania**. Each NRA reserves the right to send individual contributions to the Commission.

We thank the Commission for the opportunity to participate in this important decision-making process and are available for any clarification and further information.

MEKH, Hungarian Energy and Public Utility Regulatory Authority - **Hungary**

ARERA, Regulatory Authority for Energy, networks, and the Environment - **Italy**

SPRK/PUC, Public Utility Commission - **Latvia**

VERT, National Energy Regulatory Authority - **Lithuania**

ERSAR, Regulatory Authority for Water and Waste Services - **Portugal**

ANRSC, National Regulatory Authorities for Public Services - **Romania**

Contribution of the Municipal Waste Regulators to the Consultation on the Circular Economy Act

The authors and objective of this paper

This contribution to the public consultation on the forthcoming Circular Economy Act is proposed by the national independent authorities, responsible for the economic regulation of municipal waste, established in Hungary (MEKH), Italy (ARERA), Latvia (PUC), Lithuania (VERT), Portugal (ERSAR), and Romania (ANRSC). Municipal waste regulators are grateful to the European Commission for the opportunity to express their views on how to support the development of Circular Economy.

This document aims to identify and develop the possible contributions/proposals the regulators wish to put forward consistently with their mission, which is to pursue the Circular Economy objectives by enhancing the municipal waste system integration, efficiency, and transparency.

Contents Outline

This contribution contains:

- a general introduction on potential role and contribution of independent regulatory authorities.
- A specific examination for each of major points that emerged as relevant to the decision-making process expected to bring to the adoption of the CEA.

Accordingly, the contribution is divided into two chapters:

1. Introduction: Regulators' support to an efficient and effective circular economy.
2. Discussion of relevant points for the contribution, as emerged from the public consultation launched by the Commission on 1st August 2025.

Introduction: the contribution of independent regulatory authorities to the Circular Economy

The independent national regulatory model is relatively recent in the European Union's (henceforth – EU) waste industry: to date, 7 Member States have established independent authorities (henceforth – regulatory authorities or regulators) responsible for the economic regulation of municipal waste (henceforth - MW). In all cases, these independent entities are multi-sectoral regulators. The reasons behind the choice of establishing a national authority for waste are different and range from the recovery of situations of technical insufficiency and economic crisis in the sector, to the need to bring the environmental performance of low-performing regions closer to the national average.

As a result, the endowment of powers and responsibilities is differentiated by national regulatory authorities. However, it is important to underline the common characteristics: everywhere, the regulatory authorities are required to increase the efficiency, transparency and functionality of the municipal waste collection and treatment system.

In addition, the choice to establish national authorities in the waste sector reflects the need to respond more effectively to the challenges of the circular economy in terms of better governance. It is well known that industrial waste management throughout Europe is highly fragmented: planning responsibilities are typically attributed to municipalities, even if there is a process of concentration of competences in favour of regional entities and aggregations of municipalities. Waste management is also fragmented on the industry side: the presence of a few, large, national and transnational players does not compensate for an industry structure based on small entities.

However, it is the Member States, not the lower levels of government, that must guarantee the achievement of the circular economy objectives stemming out from the EU legislation; In a context of fragmented governance, it seems sensible to set up central entities whose task, among others, is to try to ensure consistency in the action of decentralised entities with respect to the pursuit of national objectives.

Independent regulatory authorities are, therefore, "neutral" entities, which balance the interests and objectives of the many different actors involved in the provision of municipal waste management services. This means that they promote efficiency in the industry, at the same time ensuring cost-recovery, which in turn supports the investments needed to provide for circular economy infrastructures. As well, regulators deal with services quality, consumer protection and transparency. Regulators not only demand and impose transparency but promote and disseminate it. Sharing decisions, consulting stakeholders, publishing analyses, developing regulatory criteria (in terms of tariffs, quality and public service obligations) valid for everyone and everywhere are activities in which regulatory authorities are engaged daily, and which are an essential part of the know-how of independent regulation.

A new impetus for the circular economy

The Circular Economy Act (CEA) is one of the main objectives of the new Commissioner for the Environment; the Commission's commitment is to start work on the CEA in 2025, so to present a legislative proposal by 2026. The Commission aims to reinforce the single market for waste and secondary raw materials, increasing the supply and demand of quality secondary raw materials at competitive prices, and 'getting the economics right' for these markets.

The need for organic action and strong change arises from the awareness of the slowness of the process of pushing the economy towards circularity driven by several regulatory and market failures as:

- heterogeneous interpretations and implementation of EU rules by Member States that create a fragmentation of the single market, making it costly for businesses to convert waste into valuable secondary raw materials and preventing economies of scale.
- higher prices of secondary raw materials due to fact that they do not reflect their lower environmental impacts;
- risks of information constraints and asymmetries, behavioral biases, transitional costs and risks of fraud for consumers and sellers of secondary raw materials;
- unaccounted waste streams and 'leakages' of secondary raw materials, including critical raw materials, lead to mixed or 'incorrect' waste streams being incinerated, landfilled and (illegally) exported.

Based on the context outlined above, the Commission intends to structure CEA's interventions based on two major main pillars:

- ensure effective collection and recycling of e-waste (that are the fastest growing waste stream of which less than 40% is recycled) and to generate market demand for the secondary critical raw materials;
- mix of interventions to foster the single market for waste, secondary raw materials and their use in products (as reform of end of waste criteria; simplification, digitalisation and extension of extended producer responsibility schemes; setting mandatory, targeted, impactful, and implementable criteria for public procurement of circular goods, services and works to stimulate EU demand).

How can regulators contribute?

With regard to CEA goals, the regulatory principles can support the path towards the circular economy paradigm, in particular setting: tariff rules, service quality levels and citizens' engagement and protection mechanisms.

An important feature of national regulatory frameworks is the focus on cost efficiency, where **tariff** rules aim to:

- promote the achievement of environmental objectives in line with the EU and national frameworks, such as, for example, increasing levels of re-use and recycling;
- ensure the cost accountability and transparency of an efficient service provision, guaranteeing affordability and sustainability of service provision in the long term, capping the possible overall growth in tariff revenues, for example through a limit to the annual increase of the tariff;
- improve the overall efficiency of operations promoting technological and process innovations in the context of a multi-year financial planning;
- maximize the revenues from the economic potential of the circularity, also using revenue sharing mechanisms between the industrial operators and the citizens;
- increase the focus on the infrastructural profile of the sector, starting from an exhaustive representation of the gap for waste treatment services to promote a more balanced configuration in terms of possible environmental and economic benefits of energy and material recovery, also incentivizing technological innovation and operational efficiency within the integrated waste cycle.

Regarding **quality**, regulators are committed to increase levels of quality of services, as well as the right of citizens to have homogeneous minimum levels of quality regardless of income and social background. The regulatory framework could include key indicators concerning technical, environmental and/or contractual performances in order to promote the achievement of targets in line with the EU and national frameworks, and to measure the different situations within the Member States and make them comparable, thus promoting the improvement of the outputs related to a single operator during a selected period.

In a holistic approach to waste management, it could also enable a joint evaluation of the contributions of each phase of the supply chain to the environmental performance, through the adoption of appropriate indicators. As an example, the Italian Regulation Authority (ARERA) has introduced a specific indicator (called "R3") aimed to evaluate the environmental impact of the entire MW management in terms of CO2 emissions equivalent - with reference to the impact of separate waste collection, transport and treatment, the latter both in terms of the adopted treatment option (i.e. landfill, waste-to-energy plant) and of the technical efficiency and technological innovation of the plant park used.

Last but not least, in the MWS regulatory mechanisms consider citizens' double role of **initial producers of the waste and individuals entitled to pay** for its management. On one hand, citizens need to be properly informed and engaged, since their choices and behaviours contribute to an efficient waste management, and on the other they should be protected through affordable tariffs and adequate service quality levels. The disclosure of cost articulation and services' performances could enable the citizens' awareness and proactivity.

As regards the **construction of an efficient internal market**, it should be emphasised that some regulatory authorities have powers in the area of quality of services, which may include monitoring the quality of waste sent for recycling. The quality of separate waste collection is, by unanimous recognition, a key feature of the strategy to increase circularity: correctly selected materials and a consistent management of the waste chain contribute

to making the work of the recycling industry more effective, whose costs increase as waste increases and the quality of recyclable waste decreases.

Regulators can also play a role in helping build market infrastructure, i.e. cooperating with industry and other stakeholders to establish common rules for trade, as well as to oversee organised markets.

Regulators also play a very important role in collecting information from markets and in making it available, fostering transparency for interested stakeholders, such as consumers, for operators in the market and other potential competitors.

Through **tariff regulation**, regulators not only ensure the continuity of public services provision; they also incentivise, "protect" (through cost-recovery criteria) and make possible precisely the necessary investments, also through the differentiated application of the rate of return on investments according to the degree of environmental sustainability of the plants. In addition, most regulators have specific expertise on the quality and value of separate collection. Increasing the quality of selection activities can be achieved through virtuous behaviour, which regulators can incentivise through tariff policy, and technological progress, which regulators can incentivise through tariffs for the use of plants with innovative technologies.

If, through appropriate incentives (price cap, profit sharing, competition yardstick, etc.), tariff regulation brings a more efficient cost of waste management services more over time, this could contribute to reduce the difference between the cost of virgin materials and the one of secondary raw materials.

As far as the availability of SRM, the push to investments that can derive from a correct pricing policy in favour of stability, transparency and cost coverage, can be a strong indirect aid to the pursuit of economies of scale in the recycling industry. In this sense, regulation can be a key to increasing the overall efficiency of the municipal waste system though setting rules to improve the quality of waste destined to recycling, reducing losses and inefficiencies, and encouraging the choice of the best treatment option, according to the waste hierarchy principle and following innovation.

Finally, it is worth emphasizing that the achievement of these goals needs an adequate planning capability at institutional level, which requires the improvement of the accountability of the local level of governance. The heterogeneity of the governance in some national context with a great fragmentation of functions at local regulatory level, could represent an obstacle to the efficient implementation of the regulation and a limit for the deployment of its benefits for the citizens.

The pillars of regulatory action

Ideas and proposals presented in this document are inspired by the principles of regulatory action, which are common to all national regulatory authorities, regardless of the institutional framework and the specific attribution of powers and competencies. The contribution of regulators to the building of the circular economy is, therefore, based on the concrete experience and vision gained by regulators in their daily work. Furthermore,

framing the proposals on the circular economy in the general principles of economic regulation underlines the propensity of these principles to be used in every national context, without necessarily establishing specific agencies.

It must also be recognised that most of the issues arising from Circular Economy are related to different institutions' tasks and responsibilities. Regulators' activities are expected to be carried out in collaboration, sometimes in partnership, with governmental offices. Close collaboration between governments and regulators is provided for by law, and it happens in practice. Discussing the potential role of regulation does not imply asking for more authorities to be established: the aim of the dialogue between regulators and the Commission, as well as with all stakeholders, is to introduce and promote, throughout the European Union, consistent principles of regulation and loyal collaboration between institutions to achieve environmental objectives.

The reflections, ideas and proposals contained in this document are therefore formulated considering the shared principles of regulation, implemented through **economic rationality, transparency, integration, and governance**.

Ideas and proposals to deliver circular economy objectives at minimum cost

1. A market-driven circular economy

The need to strengthen market mechanisms stems from the observation that cross-border trade in secondary raw materials (SRMs) is not satisfactory.

Regulators firmly believe that a larger and more efficient market can push the development of the circular economy. Moreover, the core activities of regulators themselves can benefit from a more functioning market: fair and stable prices of SRMs are reflected in a more robust tariff regulation of the "upstream" phases of the recycling chain (collection and treatment of waste destined for recycling). For these reasons, regulators propose the following actions.

- Promoting a better governance and address the issue of a certain weakness in standardisation, which hampers trade growth. The lack of standardization does not only concern the nature and quality of materials but extends to economic support schemes: the production of SRM can be subsidized differently in different Member States, which leads to distortions in trade and inefficiency of price signals. To highlight the importance of harmonization of practices and requirements between MS, having different minimum technical specifications for waste to be considered recyclable may pose impacts on the overall waste management value chain. According to current specifications of, for instance, mixed plastics, the purity demands of a mixed plastics bale for recycling vary significantly among Member States. Although the goal is to improve the quality of recovered materials, these differences have relevant implications on
    - the cost of collecting and sorting (stricter demands, better separation from communities and much more equipment needed for accurate sorting)
    - the accounting of landfilling (higher levels of contaminants accepted at the recycler's gate may underestimate landfilling rates generated by municipal waste collection, while the recycler may need to landfill higher percentage of refuse)
    - competitive advantages of recyclers operating in MS which have higher quality demands (SRM production entails less cost, hence allowing for lower price at expense of consumers in the MS of origin of the recyclables).
- Promoting **economic rationality**: to make price signals effective, to enable as many stakeholders as possible to access national markets and the common market through the creation of a standardised European SRM trading platform. Regional trading hubs could be the first step towards the progressive establishment of a European market platform.
- Promoting **transparency**: quantities and prices of SRM traded, both in regional hubs and in the future integrated European market, should be recorded and regularly published, also to feed into Eurostat's surveys.
- Promoting **integration**: economic incentives in the European market should be sought to **promote the use of recycled materials in products**. For example:

- the natural resource tax for products containing recycled materials could be lower than for products made from virgin raw materials.
- green public procurement in national and municipal tenders by including requirements for products that contain recycled materials — while recognizing in advance that such products may be more expensive than similar ones made from virgin materials.

Action is also required to counterbalance/hamper the influence of cheap and low-quality imported products in the European market. These products are often cheaper than those produced in Europe, but they frequently lack quality assurance and transparency regarding their origin. In some cases, the material type may be incorrectly labelled, and the manufacturer or distributor does not participate in local extended producer responsibility (henceforth - EPR) systems. Such practices undermine market credibility and create unfair competition for EU producers.

In summary, it is proposed that the CEA Regulation:

1. Promote cooperation among the Commission and national Authorities, aimed at carrying out appropriate analysis of the geographic scope, material dealt with (e.g. plastics, WEEE, …), and features of potential market platforms
2. Promote proper investigation of synergies and potential integration between digital infrastructure initiatives to ensure transparency[1].
3. Provide for minimum transparency criteria (publication of prices and quantities) and establish a consistent monitoring and verification system, including verification of SRM quantities and quality, data audit.
4. Establish SRM standardisation, so to facilitate the setting up of a truly functioning internal market.

2. Extended Producer Responsibility Schemes - EPR

EPR schemes are generally not regulated by national regulatory authorities: they are considered market players, are usually organised as private companies and are called upon to balance the interests of the consortia's participants by autonomously setting environmental fees (For example: the cost packaging producers and importers are called to cover aimed to ensure the end-of-cycle treatment of packaging products). In addition to the EPR products defined by the EU, each country may designate its own products under its EPR system.

However, EPR schemes respond to public policy objectives. As well, as far as the independent regulation's scope is concerned, the way they work deeply affects the cost structure of "upstream activities" (collection, sorting, transport, pre-treatment) need to recycle, with an impact on the tariffs paid by citizens. This is why regulatory agencies are to some extent involved in monitoring the EPR schemes' effects in their regulated perimeter of waste chain. Moreover, regulators have sometimes a say when it comes to establishing the efficient costs to be covered by schemes (Italy, Portugal).

In this field, as an example the Italian regulator ARERA takes part to a national task force chaired by Minister of Environment for the supervision and control of the proper functioning of EPR schemes in Italy.

It is worth noting that one of the few "economic rationale" provisions in the waste legislation is contained in Article 8 of the Framework Directive, regarding the need to cover a certain share of the packaging treatment chain's costs and the requirement to cover "necessary costs". This provision, particularly appreciated by those involved in the economic regulation of waste, paves the way for necessary reforms in the direction of greater efficiency of the EPR scheme system. As concern for example the Italian context, ARERA has been entitled by the national law to set the efficient costs to be covered by EPR packaging schemes, and consequently, since 2024, has implemented a system to monitor and foster the gradual improvement of coverage degree of efficient costs of sorted waste collection, related to annual objectives and penalties (index H), with purpose to promote a gradual improvement of the fees received by producers' organizations (i.e. *Consortia*) for collective compliance with EPR obligations and the reduction of sorted waste collection and transport costs, which include indivisible operating costs and capital costs.

A relevant experience has been done in Portugal, where in 2024 the Government acknowledged that the financial deficits[1] displayed by the EPR system were not sustainable. The costs of running the packaging EPR scheme in Portugal have increased

[1] These deficits were putting ever increasing pressure on tariffs, leading operators to minimise and/or postpone investment, with direct impact on the environmental targets of the country:
2016: 15 Million euros deficit (55% cost coverage)
2017: 21 Million euros deficit (51% cost coverage)
2018: 22 Million euros deficit (50% cost coverage)
2019: 38 Million euros deficit (43% cost coverage)
2020: 39 Million euros deficit (44% cost coverage)
2021: 34 Million euros deficit (49% cost coverage)
2022: 45 Million euros deficit (46% cost coverage)
2023: 62 Million euros deficit (41% cost coverage)

substantially. From approximately 80 million euros in 2016 to an expected 240 million euros in 2025. Alongside the pressure on consumer tariffs, the poor economic performance also was an important factor in the non-compliance with environmental targets. This has led to a change in the national law to entrust the Regulator with the competence to set the costs to be recovered through the EPR scheme.

Based on the available experience, the following actions are envisaged:

- Economic rationality: standardizing criteria to include the different environmental impact, as well as the "recyclability" of materials, in the fee calculation is an opportunity to extend the modulation of tariffs to a measure of efficiency[2]
- Economic rationality: there is room for new specific flows (integrated batteries ...), so to enhance recycling capacity, provided that sound cost/benefits analysis is carried out.
- Transparency: Introduce harmonised minimum standards for accounting, so that the technical and economic results of EPR schemes are published, standardised and comparable. In addition, provision should be made for Member States that have independent regulatory agencies to allow such agencies to assess the efficient costs that EPRs are called upon to cover. The principle contained in Article 8, in fact, requires implementing criteria and institutions.
- It is essential to ensure that EPRs operate effectively, particularly in countries where they are integrated into MW management systems. So that end-users do not pay twice for products subject to EPRs: first when purchase the product, and a second - through MW management fees.

In summary, we propose that:

5. the CEA Regulation provide for the introduction of adequate systems to provide for a "one-stop-shop" to operators wishing to qualify as counterparties to national EPR schemes, and to set up the conditions for the establishment of a genuine and functioning market platform.
6. The Regulation should include obligations to publish technical and economic results on a standardised basis

[2] The Portuguese Regulator currently has underway a project to review its tariff Regulation with such considerations (price for given output and quality standards), the fundamental goal being to have real comparison and benchmark possible. However, given that, in particular in what concerns EPR schemes, all operators are working toward the same goals (SRMs and less landfilling), EU wide reporting harmonization would be a great contributor to:

- Transparency
- Efficiency
- Effectiveness
- Competition

An example of harmonization would be the percentage of costs to be covered by EPR schemes. EU legislation currently stipulates 80% or more. At present there does not seem to exist rationale to support a benefit coming from this number not being 100%. It is a relevant hindrance to cost benchmark and comparison.

7. The Regulation should also provide for the option for Member States to entrust Regulatory Authorities with the task of defining the efficient costs covered by EPR schemes, as well as to monitor the cost coverage rate[3].

3. End of Waste

The harmonization of the criteria for the definition of the EOW is certainly a strategic point in the path towards the circular economy. Despite efforts, the process that would lead to the mutual recognition of the EOW criteria appears slow and difficult. This is an issue that typically falls under the responsibility of governments. Regulators, however, are closely following the EOW developments: in fact, the "regulated part" of the waste chain can face significant consequence from EOW criteria change. When a waste product/stream ceases to be considered as such, the organisation of waste services, the waste quantities dealt with by local operators, as well as the tariffs/fees paid by citizens, can vary significantly.

This is why regulators would be in favour of an enlarged dialogue on EOW, for instance through the establishment of a Discussion Forum led by the Commission and composed by Member States, national agencies and regulators, the Commission's Joint Research Centre (JRC), representatives of industry and technical standardization entities. Moreover, with the aim to reduce legal fragmentation and ensure legal certainty, the upcoming CEA Regulation should task the Commission with ensuring that national authorities with competences in this field are endowed with **proper resources**, including training activities.

4. Reduction in waste landfilling

Despite the ongoing reshaping of the mix of waste treatment technologies in favour of recycling, the percentage of municipal waste still destined for landfill remains high and far from the circular economy objectives.

Regulators are generally in favour of economic instruments to address issues arising from the lack of recycling capacity. An additional tool to the usual landfill taxation strategies, the objective of which is to rebalance the use of landfills between regions and operators, is the "cap and trade" system: once the maximum permitted levels of use of landfills have been established, local operators and administrative districts can cover the negative difference with respect to the objectives with the surplus obtained by other operators and administrative regions.

[3] This competence works both in the direction of efficient costs as well as overall sector and environmental target growth. For instance, in Portugal, the Regulator's monitoring efforts evidenced that the costs of running the EPR scheme for packaging were not being supported by consumers (through producers), but instead by waste management operators (mainly municipalities).

Regulators favour and support regulatory instruments designed to influence the behaviour of consumers, producers and regulated operators, encouraging recycling and reducing waste sent to landfill. Well-designed economic mechanisms are essential tools to align operator incentives with waste management objectives.

However, the status of each country regarding the results in achieving EU waste management targets is quite different. This results not only from different starting points, but also to different policies and economic instruments. In fact, for instance, landfill taxes are significantly different throughout Europe, and this is cannot be overlooked as one of the main reasons of imbalance of results between countries.

Solving the underlying issues is key to ensure harmonisation of economic instruments and achieve balanced results within an EU single market.

Such mechanisms can drive the transition towards a more ambitious and balanced circular economy across Member States, provided they are well-structured, with clear monitoring, verification, and reporting rules, and properly aligned with regulatory instruments. Regulators may have a relevant role in the harmonisation of monitoring and reporting rules.

However, regulators would favourably see the adoption of methods to encourage the minimization of landfill disposal, namely the one relating to the tariffs/fees for the use of treatment/disposal facilities.

The following actions are suggested.

- Governance: We propose that regulators provide incentives to reduce landfilling through tariffs, quality and other instruments. The treatment tariffs, part of the integrated tariff for the management of municipal waste, can be modulated to encourage recycling and discourage disposal. Additional components of treatment tariffs may be retained by regulatory authorities or regional and national planning authorities, for example to finance recycling infrastructure in deficit regions.

In summary, it is proposed that:

8. The regulation introduce the possibility for Member States to provide for a modulation of municipal waste tariffs that reflects the environmental cost of treatment, with "rewards and punishments" as an incentive to increase recycling and reduce disposal. This modulation is carried out by the Regulatory Authorities in the Member States that have established them.
9. Provisions for landfilling tax harmonisation should also be envisaged.

5. Overall efficiency of the waste management system

At the beginning of this document, it was stated that the search for efficiency is one of the fundamental objectives of independent regulation: identifying the efficient cost for any given level of service quality is transformed into the possibility of making the process of developing the circular economy more effective and efficient.

By avoiding unnecessary costs, regulators are "freeing up" resources for investment, which are increasingly required by the transformation of the municipal waste industry towards a higher capital intensity. Here it is interesting to underline that, even if economic regulation is often limited to specific parts of the supply chain, the efficiency incentives that regulators introduce in these parts benefit the whole system.

To use the beneficial potential of economic regulation in the development of the circular economy, it is proposed to consider the following actions.

- Economic rationality: promoting efficiency in those parts of the supply chain that are governed by public service principles, through the introduction of tariff policies that include methodology progressive reduction of the costs eligible for tariff coverage, benchmarking, efficiency incentives such as profit sharing mechanisms, also referring to the quality of separate waste collection (e.g., allowing operators to retain a share of the largest profits obtained from the sale of high-quality recyclable waste).
- Transparency: introduce minimum criteria for the publication and comparability of tariffs, at least to operators that exceed certain sizes. Introduce an obligation to adopt clear, verifiable and comparable service costs. Facilitate citizens' ability to understand the different cost components and the evolution of tariffs.
- Governance: to promote the principles of regulation, requiring Member States and operators to adopt clear, fair, technology-neutral, and efficiency-driven tariff policies, minimum levels of quality of services, economic transparency tools such as separate accounts.
- Governance: establishing mechanisms to monitor citizens' ability to pay (affordability).
- Integration, economic rationality: when planning local, regional and national treatment and disposal capacity, consider the efficient use of existing capacity, to avoid duplication and overinvestment. When planning public investments in the waste management sector — or any other sector — it is crucial to first make effective use of existing treatment capacity, as each new unit of infrastructure increases the overall cost and complexity of the system.
- Economic rationality: Efficient use of existing assets supports both economic and environmental sustainability, ensuring that resources are used wisely and public services remain affordable.
- Governance: improving the accountability of the entities involved in the planning, regulation and control of the municipal waste industry, establishing the principle that tasks must be clearly distributed and providing for substitute powers where decentralised authorities do not comply with objectives, deadlines and obligations.

In summary, it is proposed that the Regulation should take into account the principles of efficiency, transparency and cost-reflectiveness, introducing:

10. Transparency obligations (published, comparable and possibly separate accounts at least for larger operators; obligation to indicate tariff criteria and essential cost components in invoices)[4]
11. Provisions to adopt clear, consistent, technology-neutral, efficient, and transparent methodology for calculating fees and tariffs, to be supported by an increasingly coordinated approach across regions and systems, so to ensure fairness, improve cost recovery, as well as benchmarking and policy evaluation
12. Efficiency incentives, including profit sharing mechanisms.
13. The establishment of affordability criteria, and/or the development of sustainability indicators measuring end-users' ability to pay for public services, based on household income adjusted for the households' size;
14. Criteria of rationality and accountability in the distribution of institutional roles within the Member States with the possibility for the European Commission to assess situations of conflict and overlap, and to formulate recommendations to the Member States.
15. Sustainability metrics in cost/tariff/investment regulation, so to ensure resource conservation, reduce externalities and enhance social benefits of the Circular Economy.

6. Circular procurement, more recycled and bio-based materials in the economy

An important part of the reform of the Circular Economy will be predictably and understandably dedicated to supporting the greater diffusion of recycled materials in the European economy. This entails setting minimum obligations to include SRM in the production of certain manufacturing sectors and in purchases by public administrations (so-called "circular procurement" or "green procurement").

Minimum contents requirements and public sector's purchasing obligations clearly are typical policy issues, in which regulators are only marginally involved. However, regulators would like to remark that the demand-side approach (supporting demand for recycled goods by imposing minimum content requirements and requiring greater efforts from the public sector) should be accompanied by actions, programmes and reform "on the supply-side". There is some concerns that increasing obligations to buy/use recycled materials may rather bring to increasing prices and costs if suppliers are not able to meet the

[4] A good example of the effectiveness of transparency is the sequence of events until the delegation on the Portuguese Regulator of the competence to set tariffs for the packaging EPR scheme. Up until 2016, no waste management operator was required to provide detailed information on their costs. Following the privatisation of a large group of municipal waste management operators, the Portuguese Regulator started to collect information per activity, which lead to the identification of significant deficits in the packaging EPR scheme.

additional demand. This is why regulators call for a sound analysis of how to balance over time demand and supply, so to avoid shortcomings and inflationary effects.

Moreover, regulators' view is that an integrated approach is needed to avoid shifting problems among different regulated sectors. Solving issues in the waste management sector should not come at the cost of creating new problems in other sectors — such as increased inefficiency energy production or inefficiency technological use. Innovating circular economy legislation offers the opportunity to consider cross-sectoral consistencies. Circular thinking indeed requires a holistic, systems-based approach that considers environmental, economic, and social impacts across all sectors. To this end, environmental footprint and social benefits should be included in impact assessment related to Circularity provisions.

We consider necessary impact assessment activities. This in turn requires enlarging the discussion and pointing out that we require policy makers to ensure, as far as possible, consistency of the increasing set of measures and legislation due to pursue environmental objectives.

Let's start from the example of the promotion of the use of bio-based materials to submit the EU Institutions a broader reflection on the integration of regulatory policies, proposing the following actions.

- Economic rationality: bio-based content targets must be carefully evaluated in terms of the availability of alternative choices, for example between energy production or secondary raw material from organic waste
- Integration: The collection and management of organic waste should be seen as part of a rational choice model. Incentives for the collection and use of bio-waste must be consistent with overall environmental and energy policies
- Governance: promoting integrated solutions that determine overall benefits (Win-Win Sectoral Approach), facilitating the production of recyclable products and packaging, encouraging the use of recycled materials,
- Integration and governance: Regulated public services are different, but there are many interesting similarities. Regulators have learned to apply common criteria to different industries. This experience is useful for the Community institutions to introduce regulatory principles in the municipal waste sector deriving from other sectors supervised by independent authorities (water, energy).

In summary, it is proposed that:

16. the regulation promotes an impact assessment analysis of both the economic consequences of minimum content requirements and of the cross-sectoral impact of waste-related provisions. Moreover, the impact assessment should include environmental footprint and social benefits in the evaluation. One or more working groups could be established, so to consider technical/economic expertise of independent agencies.

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