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Fortum calls for actions to ensure that clean high-quality recycled materials will be the future's raw material supply in European industry

Fortum welcomes the Commission's new circular economy action plan[1] and supports, in particular, the initiatives on ensuring a clean circular economy and a stronger market for high-quality recycled raw materials.

Fortum is active in the circular economy and has special interest in several initiatives listed in the EU's new circular economy action plan: we treat waste, decontaminate recycling streams, we recycle and produce recycled raw materials, we remediate contaminated land and we supply cities with recovered energy. We save natural resources when we recover the valuables, and we prevent waste that can harm the environment and human health. This position paper highlights the conditions that we consider as prerequisites for a sustainable clean circular economy.

Key messages

- **Decontamination is key to a clean circular economy and to the development of well-functioning markets for high-quality recycled materials. The decontamination principle should be recognised also in the EU waste hierarchy.**
- **The EU needs to move forward to improve the circularity of plastics and avoid plastics that have detrimental impact on the environment through improved design for recycling, separate collection systems, increased capacity for high-quality recycling and the use of high-quality recycled plastics.**
- **A strong battery value chain is of strategic value for the EU. Sustainability requirements along the value chain from cradle to cradle, including safe recycling measures, will facilitate the ability to recycle valuable materials many times over.**
- **Waste leaking from the EU is one of the root causes of the lack of investments in recycling capacity in the EU. Addressing this concern and making "recycled in the EU" a benchmark for high-quality secondary materials will significantly promote investments in recycling and will help the transition to the EU's circular economy.**
- **Recovering excess heat from waste treatment activities for use in urban DH systems must be further encouraged. The responsibility for the emissions from treating waste should be allocated to the manufacturers and consumers of the products themselves.**

Europe needs to develop well-functioning markets for recycled materials so that the recycled material can compete with virgin alternatives over time. Consumers as well as manufacturers play important roles in increasing the demand for recycled materials and will be strong drivers in the transition to a circular

[1] https://ec.europa.eu/environment/circular-economy/pdf/new_circular_economy_action_plan.pdf

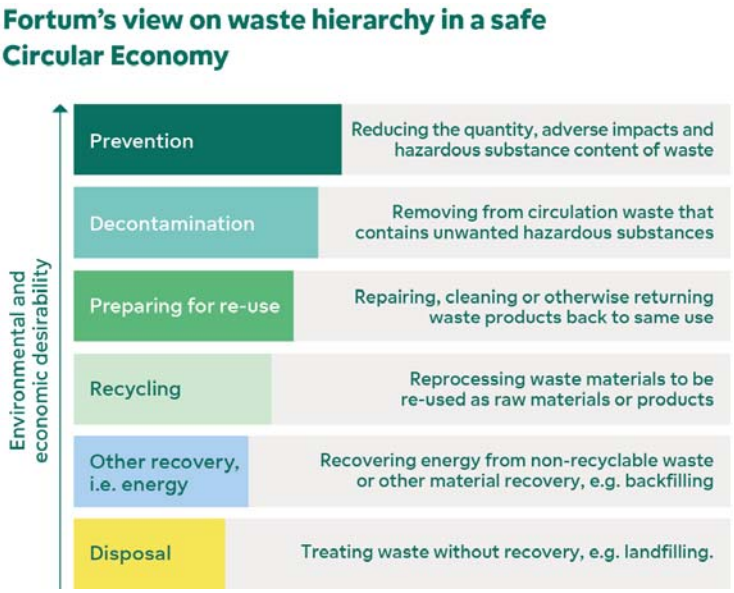
economy. Manufacturers are dependent on a stable supply of raw materials. For manufacturers and consumers alike, confidence in the quality and assurance of the non-toxic material cycles is of high importance.

Decontamination is key to a clean circular economy

Whether a product will be recyclable when it inevitably becomes waste is very much determined already during the product design phase. The possibility to disassemble and separate the different types of materials is an important prerequisite for the subsequent high-quality recycling. Together with design for recycling, efficient systems for source separation, separate collection and capacity in high-quality recycling will be fundamental for the circular economy. A toxic-free environment requires actions to prevent pollution already in the design of products as well as measures to clean and remedy cycles when products inevitably become waste.

Decontamination will be even more urgent when more recycled materials are used in new products. Enhancing circularity and preventing the persistence of banned substances in recycled feedstock requires sorting and decontamination solutions. Therefore Fortum underscores the importance of including decontamination as a key to a sustainable circular economy and a solution for achieving non-toxic material cycles.

Fortum proposes that the EU consider adding a decontamination step in the EU's waste hierarchy priority order in order to recognise and highlight its importance as part of sustainable waste management.



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Further alignment of hazardous waste classification rules with chemicals legislation supports clean material cycles

The action plan recognises the importance to improve the classification and management of hazardous waste and the alignment with the classification of chemicals as important for ensuring clean material cycles. The knowledge about the composition and the proper classification of the waste are key prerequisites for directing waste to the most appropriate treatment options. Fortum supports the initiative improving the interface between waste and chemicals legislation.

Recycled raw materials must be distinguished from virgin raw materials

Recycled materials may remain under waste legislation even if the materials are destined for a useful purpose. However, when recycled materials cease to be waste and are sold as a secondary raw material, there may be challenges to distinguish the secondary raw materials from the virgin raw materials when declaring the recycled content in final products. To ease the declaration procedures, Fortum believes it could be useful to define recycled raw materials that have ceased to be waste in order to distinguish recycled raw materials from virgin raw materials. This will also be a prerequisite for monitoring the uptake of recycled materials and monitoring the achievement of set targets.

Case-by-case end-of-waste [2] decisions should be included in the EC assessment for EU-wide criteria

When the EU Commission goes forward with the assessment of the scope to develop further EU-wide end-of-waste criteria for certain waste streams, Fortum proposes that the EU Commission also include case-by-case decisions for those waste streams. Since the major end-of-waste criteria are based on case-by-case decisions, the member states' reported nationally adopted criteria will reflect only a minor part of the applied end-of waste criteria in the EU. There is currently uncertainty in the status of end-of-waste materials approved in one country when introduced in the EU internal market, since the end-of-waste materials may be considered as waste in the receiving country. EU-wide end-of-waste criteria could help or standardise harmonised approval in member states.

Important action in the EU to address concern regarding shipments of waste outside the EU and to facilitate it within the EU

The Commission's actions aiming to ensure that the EU does not export its waste challenges to third countries and actions supporting the "recycled in the EU" as a benchmark for high-quality secondary materials will significantly promote investments in recycling installations. Currently, the leakage of certain

[2] EU waste directive Article 6

waste materials outside the EU is one of the root causes of the lack of investments in recycling capacity. The shipments of waste materials for recycling between member states may be hampered by the current Waste Shipment Regulation (WSR). The upcoming revision of the WSR is an opportunity to improve the rules so that the regulation better facilitates movements of waste materials for recycling within the EU and restricts shipments of waste that cause adverse environmental and health impacts in importing countries.

The improvement of the regulation to better facilitate shipments of waste destined for recycling should be extended to also facilitate shipments of waste for decontamination operations, since decontamination of cycles is key to safe and clean materials cycles in a circular economy. Free trade on the internal market supporting circular economy activities, including shipments of waste between member states, is a significant opportunity for the EU, but requires member state responsibility for ensuring that EU legislation is being adequately and equally enforced in the member states.

Product design and separate collection are keys to fostering quality recycling of plastics

In order to achieve EU targets for plastics, measures are needed to improve the design of products that facilitate repairability, recycling, and a small environmental and carbon footprint. Restrictions on using plastics in certain applications should be considered after thorough assessments, such as life cycle analysis and carbon and environmental footprint assessments.

Biodegradable plastics are often a challenge for the mechanical recycling operators, since the materials may have detrimental impacts and can ruin the quality of the recycled plastics. Biodegradable plastics may also create challenges for bio-waste treatment plants (composting and digestion). Fortum therefore urges the EU Commission to consider, from a circular economy perspective, the applications in which it is safe to use biodegradable plastics and the applications in which should they not be used because of the risk of getting mixed with recyclable plastics or biowaste.

Consumers need to be empowered to make informed choices through, e.g., better harmonised labelling, and be encouraged to sort and source-separate recyclable plastics. Non-recyclable plastic products should not be produced and put on market in the first place as a general rule, but since there are applications that are necessary and are difficult to replace with other materials, or products that after use are no longer suitable for mechanical recycling because of contamination, those discarded products, too, must be safely managed in order to prevent plastics from being diverted into the environment.

Incineration with energy recovery is currently well-regulated by Best Available Technique Conclusions (BATCs) and the EU Industrial Emissions Directive. Incineration with energy recovery serves as a sound treatment option for plastic waste not suitable for mechanical recycling. The emerging techniques on the development of high-quality chemical recycling may serve as a sound treatment option for plastics not suitable for mechanical recycling and may supply Europe with high-grade raw materials in the future and replace virgin raw materials. Sourcing raw materials from virgin sources, including bio-based, should always be assessed and considered relative to the access to recycled materials. Developing tools and rules for

declaring the recycled content in products and harmonised labelling would help visualise the circulation of materials and support consumers' informed choices.

Well-designed economic instruments require ex-ante impact assessments

Fortum supports the application of well-designed national economic instruments that support a circular economy. Prior to implementation, the expected impacts of those economic instruments must be thoroughly assessed in order to avoid undesirable and counterproductive impacts and market distortions. Comprehensive impact assessments should be statutory before the implementation of new economic instruments (taxes, levies, etc). All affected stakeholders should be included in the assessments.

Economic instruments that affect one sector should not cause increasing environmental footprints in other sectors. Additionally, those instruments should not bring any subsequent economically detrimental effects on stranded long-term investments that have been made to promote the circular economy. It is therefore important to have a systemic approach on the circular economy, and only well-designed economic instruments must be encouraged.

Excess heat from waste treatment activities should facilitate sustainable cities

Sustainable cities are setting ambitious climate targets for themselves and striving towards becoming climate neutral. The necessary consumption and use of products inevitably generates waste that in developed countries will be destined for a circular economy service. The climate impact from the consumption of products includes the manufacturing phase, the user phase as well as the recycling and disposal phase; hence, the carbon footprint should be allocated to the manufacturing and consumption of the products themselves.

Fortum believes that cities using the recovered excess heat from waste treatment services should not be burdened with emissions. In the light of the EU Green deal, excess heat from waste treatment should be considered as replacing other fuels for energy supply and calculated in the renewable target as waste heat. That could be heat recovered from treating sewage water, from the treatment of sludge, from the treatment of residues from recycling activities, and from decontamination activities etc.

Cities providing these services and recovering the excess heat must not be penalised with emissions that hamper their work towards achieving climate targets. Penalising efficient use of excess heat will jeopardise investments and developments in activities fundamental for a well-functioning circular economy.

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The use of recovered soil from remediation should be advantageous compared to competing virgin resources

Fortum supports promoting initiatives to reduce soil sealing, rehabilitate abandoned or contaminated industrial areas, and increase the safe, sustainable and circular use of excavated soils. Fortum supports the revision of material recovery targets for the construction sector. Fortum urges the EU Commission to take into account the hazardous substances in demolition waste and incorporate the importance of decontamination principles when revising the targets. Remediation of contaminated lands and the use of recovered soil requires more attention when the recovered soil competes with virgin materials at low cost. Supporting the demand for decontaminated recovered soil as a replacement for virgin materials would foster the remediation of land and soil treatment and save natural resources. The current remediation of contaminated lands is usually driven by the need to exploit land for other purposes, e.g. buildings.

Excavated contaminated soil usually needs immediate disposal options, and this usually does not lead to circular use. The contaminated soil should be decontaminated and the remediated soil should be utilised for filling and landscaping. Green public procurement could be developed in order to foster the sustainable and environmentally sound use of recovered soil. Financial instruments supporting circular use of recovered soil could also be explored.

Electronics need to be traceable in the whole value chain from cradle to cradle

Fortum supports the elaboration on developing tools for tracing electronics along the value chain from cradle to cradle. We emphasise the importance of transparency of the value chain for electronics, waste electronics (WEEE) and subsequent recycled materials as prerequisite for sustainable recycling and resource management. Pushing stricter requirements for verified tracing and transparency would help to reduce sham recycling and illegal activities and would build confidence in new products made from recycled materials. Minimum requirements for the treatment of WEEE and the standardised testing of recycled materials would improve the confidence in and the competitiveness of high-quality recycled raw materials.

Valuable materials in batteries should be recycled many times over

Fortum underlines that having a strong battery value chain is of strategic value and importance for Europe as well as for our industry. Sustainability requirements should address the entire value chain of batteries from cradle to cradle, including measures for the safe recycling so that valuable battery materials can be recycled many times over. We believe that developing a strong battery value chain that includes ensuring availability of critical materials, battery manufacturing and the safe logistics of worn-out batteries and their recycling would contribute greatly to the competitiveness of Europe. Further information about Fortum's position on actions that will support sustainable batteries in Europe can be found here:

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https://www.fortum.com/media/2019/11/towards-sustainable-battery-business-fortum-calls-eu-ensure-used-batteries-are-recycled-raw-materials-supply-europe

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