



EUROPEAN SUPPLIERS
OF WASTE-TO-ENERGY
TECHNOLOGY

ACTIVITY REPORT 2020



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ESWET

EUROPEAN SUPPLIERS OF Waste-to-Energy TECHNOLOGY

Active in Brussels since 2004, ESWET is the European association representing manufacturers in the field of Waste-to-Energy.

ESWET has currently [28 members](#) which are all suppliers of the main components of Waste-to-Energy plants and are active building and maintaining Waste-to-Energy plants in Europe and throughout the world.

The purpose of ESWET is to raise awareness of the positive implications of Waste-to-Energy in terms of sustainable waste management, reliable energy, and protection of the environment.

Technology from the ESWET members is the heart of most of the Waste-to-Energy plants in Europe and worldwide, allowing the recovery of energy and materials from non-recyclable waste which would otherwise be landfilled!

ESWET promotes Waste-to-Energy with a wide range of activities across different tools and channels. Our main audience are the policymakers of the European institutions, the European associations, and the general public.

We publish informative and political documents such as position papers,

fact sheets, video, infographics and reports, including a guidance document on the WI BREF, our Vision 2050, and a communications campaign to discover the hidden beauties of Waste-to-Energy.

We organise events on circular economy, energy and the environment, and we regularly exchange with researchers and policymakers to provide the latest information on the Waste-to-Energy sector.

For any further information, please visit our website: <http://www.eswet.eu/>



Waste-to-Energy: BEAUTY OR THE BEAST?

Foreword by Dr. Siegfried Scholz,
ESWET President

Waste is not exactly a fashion product. It's the unwanted residue of what we consume, and we often produce it despite our will.

As we face the challenges posed by climate change, we realise how waste management practices are paramount to keeping our environment clean and healthy.

Today, with 70% of the global waste landfilled or dumped illegally, we are dangerously lagging in our efforts.

Waste-to-Energy, the procedure of recovering energy (and materials) from the combustion of non-recyclable waste, has been heavily criticised for many years, not always fairly.

Focusing on waste reduction and recycling cannot solve the waste issue alone. On the opposite, it would be an environmental disaster - for both Europe and the rest of the world - to decree the end of Waste-to-



Energy plants.

That's why ESWET - the EU association which I have the honour to chair - has launched the campaign "The Beauty in the Beast."

The campaign aims to debunk some old myths about Waste-to-Energy in Europe, and has the ambition to launch a public debate on the sustainable options for the integrated European waste treatment.

Together with more significant waste prevention and recycling efforts, Waste-to-Energy is here to help society and the environment to treat its non-recyclable waste sustainably.

The "Beauty in the Beast" campaign is there to share this story. Discover how at <http://thebeautyinthebeast.eu/>

The treatment of non-recyclable waste

Products which are not fit for reuse or recycling are called “non-recyclable waste”.

In Europe in 2019, 118 million tons were non-recyclable waste, out of a total of 225 million tonnes of municipal waste generated (Data from EUROSTAT).

There are two options for this kind of waste: **Waste-to-Energy** or **Landfilling**.



The advantages of Waste-to-Energy

- Recovery of energy and materials
- Avoidance of methane emissions
- Abatement of odor nuisance
- Over 90% reduction of volume
- Saving of valuable land

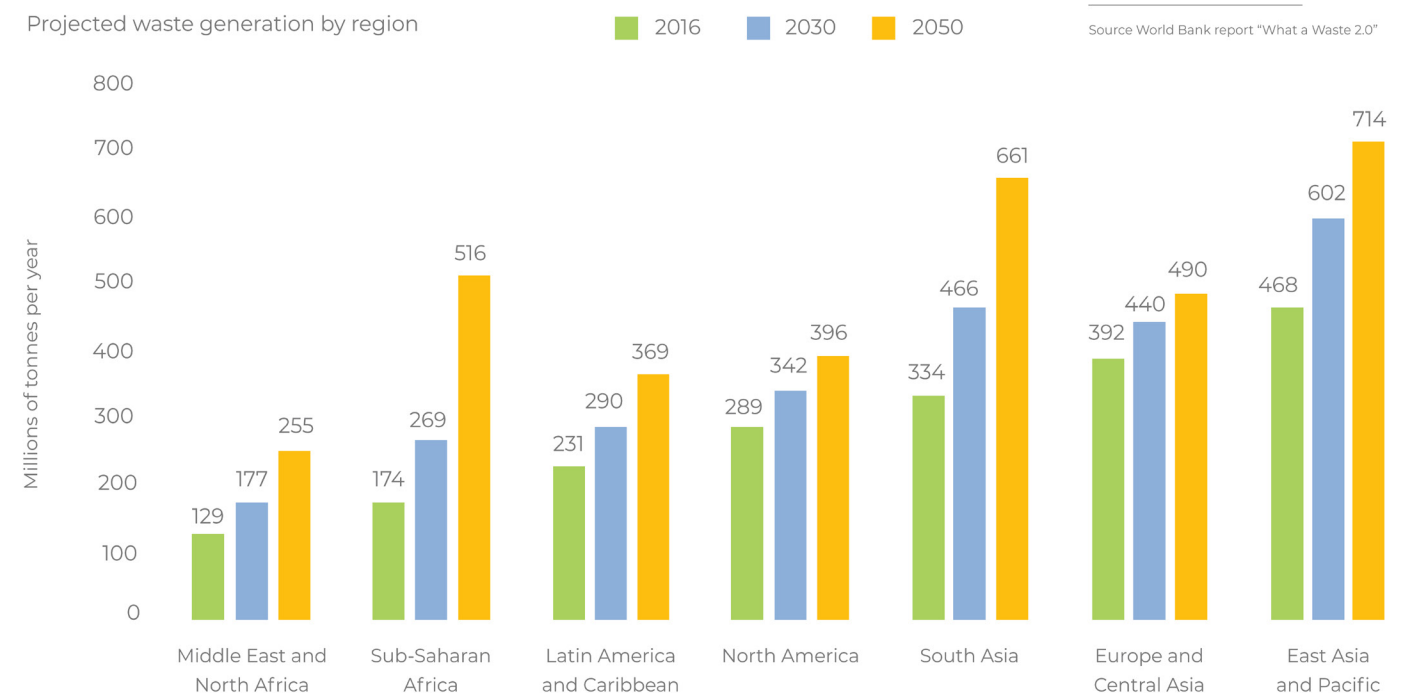
The treatment of non-recyclable waste

Non-recyclable waste can be quite diverse items, for a variety of reasons:

- **Polluted** waste
- **Degraded** waste (e.g. after several rounds of recycling)
- Waste made up of **composite materials**



Waste generation will greatly increase worldwide by 2050. **Our duty is to manage it in a sustainable way!**



DID YOU KNOW?

Waste-to-Energy technologies contain many hidden economic and ecological benefits. It is possible to see the effects of this technology in our daily lives without even realising it.

There are around 500 Waste-to-Energy plants in Europe. Their services contribute to Europe's Circular Economy and to the European targets for carbon neutrality.

Let's discover some of them!

AUSTRIA

Vienna's municipal waste management system is considered one of the most environmentally-friendly in the world. Vienna has two Waste-to-Energy plants, famous for the brilliant architecture and state-of-the-art environmental technologies. In 2019, Vienna has been named the most liveable city in the world for the tenth year in a row.

BELGIUM

Most of the Waste-to-Energy plants in Europe implement the process of supplying steam to local industrial facilities. In Belgium, the ECLUSE network supplies steam to six chemical companies at the port of Antwerp, replacing the use of fossil-fuel fired boilers, and saving up to 100,000 tonnes of CO₂ emissions per year. Also in Belgium, 40% of recycled metal packaging comes from Waste-to-Energy plants.

DENMARK

99% of the bottom ash generated by the Waste-to-Energy plants is recovered and used as an aggregate for construction

purposes. Also, Copenhagen hosts the first Waste-to-Energy plant with a ski slope on it, Copenhill, with plans to turn carbon-neutral by 2025 thanks to CCS!

FRANCE

Around 50% of Paris' district heating network is supplied by the 3 Waste-to-Energy plants of the city, supplying all the hospitals of the city and most of its museums, including Le Louvre. Near Toulouse, an innovative heating network connects a Waste-to-Energy plant with a tomato greenhouse providing the required heat. Near Paris, the Waste-to-Energy plant in Créteil will have a production and distribution capacity of 500 kg/day of green hydrogen by the end of 2022.

GERMANY

With more than 65 plants running, waste incineration is one of the main pillars of waste management in Germany. Talking about innovation, the Waste-to-Energy plant in Wuppertal uses non-recyclable waste to generate hydrogen to power public transportation buses.

ITALY

The Waste-to-Energy plant in Brescia provides heat from non-recyclable waste to over 60.000 apartments through over 670 km of district heating network.



NETHERLANDS

All the Waste-to-Energy plants signed a "Green Deal Bottom Ash" with the Government guaranteeing the recovery of more than 75% of all non-ferrous metals. Granulates must be so clean that they can be 100% applied for useful purposes. Also in the Netherlands, the CO₂ from the Waste-to-Energy plant of Duiven is captured and reused in horticulture.

NORWAY

The Klemestrud Waste-to-Energy plant initiated a full-scale carbon capture and storage (CCS) project to capture around 400,000 tons of CO₂ per year, up to 90% of the CO₂ emissions generated by the plant.

SPAIN

The Waste-to-Energy plant located in Barcelona provides 29MW cooling capacity to nearby businesses and households, including offices, hotels, a hospital, shopping centres and private residences.

SWEDEN

About 99% of all household waste in Sweden is recycled or reused and turned into energy or materials, with a zero-landfill approach.

UNITED KINGDOM

The Waste-to-Energy plant in Runcorn generates up to 564 GWh of electricity, enough to power the site itself and the equivalent to around 150,000+ homes. In addition, it generates 51 MW of heat for exclusive use by the nearby INOVYN chemical manufacturing site.

... and this is just part of the story!

THE BEAUTY IN THE BEAST

ESWET invites you on a journey through five different stories to discover Waste-to-Energy's contribution to a sustainable future!

Waste-to-Energy manages non-recyclable waste – waste that is unfit for recycling and reuse – and transforms it into a resource, recovering energy and materials and avoiding landfills.

But that is just one part of the story, as Waste-to-Energy provides several other services, often little known by those who are not very familiar with the sector.

For this reason, ESWET decided to launch [The Beauty in the Beast](#) campaign, showing how Waste-to-Energy can help Europe in its ambition to reach climate neutrality,

reduce pollution, and move towards a more circular economy

In order to provide an easy and complete message, the campaign is structured around five stories, each targeting one hidden feature of Waste-to-Energy. Each story is presented through a video, an article and an infographic.

The topics of the campaign have a broad spectrum, as they range from the recovery of secondary raw materials, including precious such as silver and gold, to the integration of a Waste-to-Energy plant in

the life of a European capital. Other topics include hydrogen generation from non-recyclable waste, used to power public transports, to the necessary development of CCUS technologies that can make Waste-to-Energy become carbon-negative.

Turning Trash Into Gold

The first story of the campaign: [“Turning Trash Into Gold”](#), is a modern fairy tale of the circular economy, telling the tale of the beauty in the beast and the golden ring.

Did you know that Waste-to-Energy plants in Europe can recover secondary raw materials from the bottom ash?

Materials such as aluminium, copper, iron, steel, and even silver and gold, which save resources and reduce the need to extract raw materials and import them in Europe.

Gold is certainly one of the less expected things we would think can be recovered from a Waste-to-Energy plant. Instead, the residual waste generated yearly by around 650 Europeans contains enough gold to produce one golden ring!



A Plan(t) for the Future

For the second story: [“A Plan\(T\) For The Future”](#), we flew to Copenhagen to discover the unique feature of CopenHill, the only plant in the world with a ski slope and a climbing wall on it.

The example of CopenHill shows at which point a WtE plant can be involved in the life of the surrounding community, providing urban integration, collaboration with the residents and open-air features.

The third, fourth, and fifth stories will focus on waste exports, hydrogen and carbon capture technologies, and will be published monthly on the campaign's website.

[The Beauty in the Beast](#) aims to spotlight the unexpected solutions offered by Waste-to-Energy to treat non-recyclable waste and to support the EU Green Deal's.

Find out more on the official website of “The Beauty in the Beast” campaign: <http://thebeautyinthebeast.eu/>

Join us on a journey through **five different stories** to see the importance of Waste-to-Energy in creating a **pathway to a more sustainable future!**

THE IMPACT OF Waste-to-Energy

Waste-to-Energy technologies contribute to the goals of the EU Green Deal. Particularly, when it comes to topics such as Circular Economy, Zero Pollution, and Climate Neutrality.

Circular Economy

Prevention of waste generation, reuse, and recycling are top priorities for any sustainable waste management system.

However, not every waste is recyclable. For instance, polluted waste that would contaminate the recycling stream, low-quality waste degraded after several recycling rounds, and waste made of composite materials.

Residual waste (around 114 million tonnes generated in Europe in 2019) has two treatment options only: Waste-to-Energy or landfills.

The two options are very different: waste ending up in landfills is a lost resource. It overfills valuable lands, creates a risk of pollution to water and soil, and generates methane emissions up to 84 times more potent than CO₂ over 20 years.

Landfills are at the lowest level of the waste hierarchy and should only be a last-resort option for ultimate residual waste.

Waste-to-Energy is the only viable technology that can support a circular economy by taking care of its non-recyclable waste. This was acknowledged by the European Commission in its *Communication on the role of Waste-to-Energy in the circular economy*.

Unfortunately, waste generation is not declining as it should. On the contrary, the World Bank foresees for 2050 the generation of almost double the waste generated worldwide today. Even in Europe, conservative estimates show a significant gap in residual waste treatment capacity for 2035.

In 2018, the European Union still landfilled around 23% of the municipal solid waste generated. Following the EU waste policy, this amount needs to be reduced to a maximum of 10% by 2030.

This issue will not be overcome without helping the member states reach a proper mix of recycling and Waste-to-Energy capacity.

Zero Pollution

Waste-to-Energy plants are subject to some of the most stringent requirements under the EU legislation on industrial emissions.

As acknowledged by the UN Environment Programme (UNEP), *"thermal Waste-to-Energy plants with advanced emission control technologies that are well-maintained have minimum public health impacts"*.

Thanks to its technologies' continuous progress, the Waste-to-Energy sector is ready to become a zero-pollution sector.



In 2019, researchers reviewed the academic literature on environmental and human health impacts by Waste-to-Energy plants, founding no studies *"indicating that modern-technology waste incineration plants, which comply with the legislation on emissions, are a cancer risk factor"*.

Currently, 70% of worldwide waste is either landfilled or illegally dumped, with an enormous weight on the environment.

As Europe sets the tone of environmental legislation globally, it is paramount to consider the role that Waste-to-Energy plays in reducing pollution.

Climate Neutrality

The treatment of non-recyclable waste with Waste-to-Energy allows the offset of greenhouse gas emissions.

Why? Because non-recyclable waste no longer ends up in landfills. Because Waste-to-Energy plants recover energy, turned into electricity and heat for the community.

And because WtE plants recover metals

and minerals, reducing the energy-consumptive extraction of virgin materials.

Waste-to-Energy is also a complementary tool with renewables to substitute fossil fuels for energy supply. In 2018 in Europe, Waste-to-Energy plants supplied electricity to 18 million citizens and heat to 15 million. Waste-to-Energy plants' energy output is about 50% renewable due to the organic portion of municipal residual waste.

Metals and minerals recovered from Waste-to-Energy plants prevent the unnecessary extraction of primary raw materials. They have the potential to save up to 3.8Mt of CO₂eq per year. The same impact of taking around 825,000 cars off the roads.

Moreover, the full-scale deployment of CCUS technologies can allow Waste-to-Energy to become carbon-neutral and even carbon-negative.

The Klemetsrud plant in Oslo (Norway) and the Copenhill plant in Copenhagen (Denmark) are prime examples: their CCS projects aim to capture up to 90% of the Waste-to-Energy plant's carbon emissions by 2025!



CAN Waste-to-Energy BECOME CARBON NEGATIVE?

With the previsions of a global waste generation almost doubling by 2050, the application of carbon capture technologies in Waste-to-Energy is a great opportunity to move away from landfills and limit global warming.

Considered vital to reach EU's climate objectives, Carbon Capture and Storage, a very promising set of technologies to decarbonise Europe, is rolling out in the EU. But how is this innovative technology adaptable and usable for the Waste-to-Energy (WtE) sector?

Supplementing WtE plants with CCS technology presents a considerable advantage since it is said to be the appreciable solution to eliminate CO₂ emissions from the sector.

In other terms, CCS in WtE plants allows the sector to abate its CO₂ emissions while producing energy and handling the ever-growing amount of municipal solid waste.

In addition, the implementation of CCS in WtE plants is a notable opportunity for bioenergy with carbon capture and storage (BECCS). Such technology is one of the few to be given the status of carbon negative.

The idea behind this concept is that bioenergy utilises CO₂ for its own production, then storing the carbon emissions upon its combustion which results in a net reduction of CO₂.

CCS is considered the only effective and actual solution to decarbonise the waste sector.

With conservative estimates predicting the waste generation to practically double in the EU in the next 25 years, the combination of CCS with WtE therefore presents a

pathway to move away from landfills, thus avoiding methane emissions, a GHG 84 times more potent than CO₂ over a 20-year period, and to mitigate climate change by avoiding CO₂ emissions from waste.

On this subject, ESWET organised a webinar on Friday 27th of November 2020: "[Can Waste-to-Energy become carbon negative?](#)". Three high-level speakers were invited to discuss the topic: Jannicke Bjerkas, Director CCS Fortum Oslo Varme, David Kearns, senior consultant at the Global CCS Institute and Maria Velkova, policy officer at the European Commission.

The discussion evolved around how CCS can turn non-recyclable waste into carbon negative and what is still needed to make it happen.

As it has been well depicted during the webinar, currently the main barrier for the roll out of CCS in the waste sector is the economics of such projects. In other terms, CCS cannot be economically viable if there are no public investments supporting WtE plants.

The Innovation Fund

To overcome such economic barriers, EU funds exist, such as the Innovation Fund.

Besides providing financial support, the Innovation Fund will require projects to

[Click here](#) to read the slides of the presentations, the takeaways from the panel discussion, and to watch the recording of the event!

share experiences and knowledge, which will also consequently accelerate the cost reduction of such projects, unlocking the deployment of CCS globally.

Collaboration of companies is as well a key factor for the deployment and decrease of costs of CCS projects in the waste incineration industry.

Moreover, if financial or regulatory incentives would be existing and supporting CCS in the waste management sector, it would make it easier and safer for waste incinerator actors to invest in CCS technology.

This is for example the main reason why the sector is advocating for positively considering Waste-to-Energy in the EU Taxonomy, as the contrary would impede access to subsidies and recovery fund for the sector.

European Pilots

A great example of CCS project that received public funding is the Northern Lights CCS. This CCS project is composed of 3 big partners; Equinor, Shell and Total, and has received a green light – and funding – from the government of Norway.

The Northern Lights is the world's first cross-border, open-source CO₂ transport and storage infrastructure network that

has confirmed its feasibility. It will thus allow industrial emitters the opportunity to safely and permanently store their emissions underground. Phase one of the Northern Lights is planned to be completed by mid-2024.

Part of the Northern Lights, the Fortum Oslo Varme's project, a vast CCS project, has been initiated. The project plans to build the world's most advanced facility for capture and storage of CO₂.

The CO₂ will be directly captured from the biggest waste incineration plant of Norway and then transported and stored thanks to the Northern Lights infrastructure. It is said that when the plant is built, Oslo's waste management will be fully decarbonised.

Another notable project of capturing CO₂ from waste incineration is evolving at Amager Bakke, Denmark. As from 2022, it is expected that the demonstration plant will capture and convert 12 tonnes of CO₂ every day.

In the longer run, when the full-scale plant will be built, the project should be able to capture all the CO₂ emitted from the non-recyclable waste treated at Amager Bakke, which accounts for 500.000 tonnes of CO₂ each year.

NEW FUELS: WASTE-TO-HYDROGEN

Hydrogen generation is seen by many as a paramount tool to support the transition to green and circular economies. Several projects linking hydrogen and Waste-to-Energy are beginning to roll out.

European policies on hydrogen

Hydrogen recently gained momentum in European policy. Several of the initiatives presented below were launched by the EU institutions as of 2020.

According to the European hydrogen strategy, the production of hydrogen in the EU should reach 10 million tonnes by 2030.

Hydrogen strategy

Adopted in July 2020 by the European Commission, the hydrogen strategy states that renewable and low carbon hydrogen should contribute to the 2030 climate target.

According to the European Commission, hydrogen will be necessary to decarbonise energy-intensive sectors, it will help to achieve European technological leadership, and it will be beneficial for the post-COVID 19 economic recovery.

European Clean Hydrogen Alliance

Established in July 2020, the Alliance brings together industries, national authorities, stakeholders and civil society. It is supposed to support and coordinate investments for the deployment of renewable and low-

carbon hydrogen by 2030.

Clean Hydrogen Partnership

Announced in 2021, the private-public joint partnership is expected to accelerate the development of an European value chain for clean hydrogen.

The partnership will focus on the production, distribution and storage of clean hydrogen in hard to decarbonise sectors and transports.

Hydrogen and Waste-to-Energy

Current projects and pilot projects from the Waste-to-Energy sector are focused on the production of hydrogen for transport, especially fuel cells buses and trucks.

Wuppertal hydrogen buses

10 buses are now using green hydrogen generated by the local WtE plant in Wuppertal, Germany. The plant burns over 1000 tonnes of municipal solid waste per day, with a small amount of the power being used to charge the electrolyser.

Each bus is equipped with an 85 kW Ballard Power Systems fuel cell to convert the hydrogen to motive force, which avoids around 700 tonnes per year of CO₂ (as compared to diesel). 10 more vehicles are



now under production, and half of all the trucks should run on hydrogen by 2025.

The project is likely to be reproduced in other cities, and expended to the local taxi fleet and the Düsseldorf airport's utility vehicles.

REVIVE

The project involves demonstration pilots of WtE to hydrogen in the Netherlands and Sweden. The aim is to build the largest demonstration of hydrogen fuel cells refuse trucks, with 15 heavy-duty vehicles in 8 sites in Europe.

The project also conducted a study on a potential "Waste-to-Wheels" business model. Here, the advantage of using Waste-to-Hydrogen is that it reduces the need for investments as the refuse trucks operate close by the plant. A first fuel cell refuse truck was deployed last year in the city of Breda, in the Netherlands.

GenComm

The main purpose is to integrate renewable hydrogen value chains in remote energy communities. One of the partner of the project is the Pure Energy Centre, which operates an anaerobic digestion CHP plant in Scotland that produces hydrogen and oxygen (used for local fish farms) from electrolysis.

Hydrogen from WtE in France

A Waste-to-Hydrogen plant is under construction in Créteil and should be operational by 2022. The plant is expected to produce 500 kg of hydrogen per day, with a price of 9 to 10 € per kg at the hydrogen fueling station.

This hydrogen will be made available for public buses, utility vehicles and waste collection trucks.

Waste-to-Wheels model

This business model was first developed by Tractebel (ENGIE) during the REVIVE project.

The purpose is to adopt a fully circular approach to waste collection and waste management: hydrogen produced from WtE plants is used as a fuel for refuse trucks, which lead to a loop and allows to use renewable and local energy for utility vehicles.

The goal is to use part of the energy produced by the plant to generate hydrogen via electrolysis. Another project under development in Belgium (Brussels Energie) is inspired by this Waste-to-Wheels model.

THE NEW CIRCULAR ECONOMY ACTION PLAN

On 11 March 2020 the European Commission published its new Circular Economy Action plan (CEAP) where it highlights its ambitions and measures to be taken, with a real impact on the waste management sector.

The Circular Economy Action Plan comes within the context of the EU Green Deal and its environmental objectives, including reaching carbon-neutrality in Europe and securing raw materials in Europe.

The text includes many proposals focusing on waste prevention and management with the aim of boosting growth, competitiveness and EU global leadership in the field.

Joint statement: We need more ambition to divert waste from landfilling

In reaction to this publication, [ESWET issued a joint-statement](#) together with 4 other European business associations. The organisations welcomed the CEAP as a good step forward for resource management in Europe.

However, they highlighted that not enough measures had been taken to prevent the leaking of waste streams suitable for recycling or recovery to large-scale landfills.

With 175 million tonnes of waste still being landfilled in Europe annually, ESWET stressed that the plan should have included

further efforts on the diversion of waste from landfills.

The statement called on the Commission to stimulate recycling and other recovery for industrial and commercial waste and also set a cap on the landfilling of these waste streams (same as is applied on municipal solid waste).

Following the publication by the Commission, the Parliament worked on its assessment of the Commission's strategy through an initiative report on the circular economy action plan. The Rapporteur for this text was Jan Huitema, a Dutch MEP from the Renew Europe Group.

The initial draft report called for more ambition on landfill diversion, describing it as one of the first priorities of the circular economy and highlighted the need to secure secondary raw materials and prevent abuses in international waste trafficking.

However, it still overlooked the importance of residual waste treatment, focusing solely on the upper part of the waste hierarchy.

ESWET took advocacy action and contacted Members of the European Parliament to explain the importance of Waste-to-Energy in the circular economy as the most preferable option for the treatment of residual waste.

Over a thousand amendments to the



draft report on the CEAP were tabled by the ENVI Committee. Several amendments called on the Commission to consider Waste-to-Energy as an unsustainable waste management option.

However, other MEPs understood the role of the sector and tabled amendments calling on non-recyclable waste to be directed to the most advanced Waste-to-Energy facilities

Further actions were performed by ESWET and other stakeholders to highlight the mission and positive impact of Waste-to-Energy in the circular economy, leading to the adoption of favourable amendments.

Indeed, the final report of the European Parliament supported a reasonable approach, as it encouraged the Commission to define a common EU-wide approach for the management of residual municipal waste.

The MEPs called for an EU-wide approach to ensure optimal treatment of non-recyclable waste and to avoid building overcapacity of waste incineration at EU level. But the report also acknowledged the role of Waste-to-Energy, stating that

when incineration is used, it should take place in the most advanced facilities with high-energy efficiency and low emissions.

ESWET's comment on the Circular Economy report by the EU Parliament

The report on the Circular Economy Action Plan was released in late January and adopted by the European Parliament in plenary session on 10 February 2021. ESWET commented it with a [press release](#).

The approval sent a clear message to the Commission that the Parliament wants the EU executive to take measures to cut waste and primary resource use, while ensuring the efficiency of waste management systems through an integrated approach.

It is important for EU decision-makers to understand where the Waste-to-Energy sector fits in the circular economy, and the Parliament's report is a step in the right direction.



EU TAXONOMY FOR SUSTAINABLE ACTIVITIES

Though it was first designed as a tool for financial markets, the EU Taxonomy is likely to be used in order to determine who is “green” enough to deserve support and positive coverage in future EU legislation.

2020 has seen the adoption of the «EU Taxonomy» Regulation (Regulation (EU) 2020/852 on the establishment of a framework to facilitate sustainable investment) which is likely to become a milestone for any EU legislation related to sustainable transition.

The publication of the EU Taxonomy happened in the wake of the European Green Deal, the European Commission's main strategy to lead the continent on the path towards “zero-pollution” and “carbon neutrality”.

The Regulation is only one part of the puzzle as the legislation is supposed to be completed by Commission's “Delegated Acts”. In other words, the Commission has to define concrete conditions and criteria for covered activities to be considered sustainable.

The Commission has been assisted in this task by a dedicated group of stakeholders: the “Platform on sustainable finance”, which succeeded to the “Technical Expert Group” (TEG).

Joint statement on the role of Waste-to-Energy in the EU Taxonomy

ESWET and 8 major EU associations, representing not only the waste management sector but also the energy sector and the aluminium industry, published in October 2020 a [Joint-statement calling on the Commission to acknowledge the role of Waste-to-Energy in the circular economy](#).

Despite the importance of waste management to address ongoing and incoming environmental issues, no open discussion on Waste-to-Energy has happened in the Platform on sustainable finance.

The publication of the Commission's Delegated Acts in its entirety has been significantly delayed as controversies have surfaced between the Commission, Member States and Members of the European Parliament.

In particular, many Member States which heavily rely today on carbon-intensive energy sources raised their concerns over natural gas not being considered as a transitional solution in the initial Commission's draft Delegated Act, which they fear would make energy transition impractical.

On the other hand, NGOs monopolised the consultation processes with tens of thousand of replies which further delayed the Delegated Act's publication as the institution is now taken in a crossfire of expectations from opposite sides.



The Delegated Acts

Though the consideration of Waste-to-Energy seems now unlikely in the first Delegated act (addressing climate-related objectives), ESWET believes the role of the sector can still be recognised in the second Delegated Act addressing environmental objectives such as the Circular Economy and Pollution prevention.

Both Delegated Acts should be published in 2021, then updated in the following years. The absence of Waste-to-Energy in the Taxonomy could run against the EU objective of maximum 10% of landfilled waste in all Member States by 2035.

Some of the countries with the most advanced waste management systems are now assessing whether they should reduce their residual waste management capacity and how to do that on the long-term.

However, the situation is not the same in the many EU countries where more than 40% of the waste is still landfilled, sometimes up to 80%.

Especially for these countries, the solution is not to pile up new obstacles, be they financial or legal, to the developments of Waste-to-Energy plants. Ultimately, it will always lead to more landfills or more waste crime.

While Waste-to-Energy is not a one-size-fits-all solution for waste management, it certainly performs a key mission in the treatment of non-recyclable waste by using it as a resource and avoiding landfilling.

To further improve sustainable waste management in Europe, it is even more important to openly discuss Waste-to-Energy in the context of the European Taxonomy.

To this aim, ESWET will keep voicing its message, together with all stakeholders and associations sharing the same concerns.

Given the issue at stake in terms of waste management, and despite the political challenges the Commission has to face, it is definitely not sustainable for the EU institutions to keep ignoring the safe treatment of non-recyclable waste.

THE EUROPEAN EMISSION TRADING SCHEME (EU ETS)

ESWET calls for an efficient EU waste management framework aligned with the EU Green Deal. Including Waste-to-Energy in the EU ETS won't help sustainable waste management.

On the 1st of October 2020, the European Commission launched a public consultation on the review of the European Emission Trading Scheme (EU ETS).

This review aims at adapting the EU ETS to the new and more ambitious EU climate targets of at least 55% emissions reduction by 2030. The adoption of the reviewed EU ETS is planned for the second quarter of 2021.

This revision intends to extend the coverage of the EU ETS to new sectors such as the maritime sector, road transport, buildings and all fossil fuel uses.

According to the EC, waste incineration might potentially be included in the EU ETS under the terminology "all fossil fuel uses".

ESWET therefore [replied to the public consultation](#) with the core of its argumentation being to call for waste incineration not to be included in the EU ETS and to remain covered by the Effort Sharing Regulation.

The EU ETS is not fit for Waste-to-Energy

If the EU ETS would happen to cover waste incineration, this would trigger many adverse consequences for the sector.

It would first of all not support the overarching goal of the EU ETS to reduce emissions, since the inclusion of waste incineration could globally increase the greenhouse gas (GHG) emissions from the waste management sector.

In point of fact, the EU ETS is not fit to foster GHG reductions in the sector, as its GHG impact is not limited to direct CO₂ emissions.

The GHG impact of Waste-to-Energy also includes other factor such as methane emissions from landfills, energy savings through recycling and GHG emissions offset by energy recovery - all of which are not taken into account by the EU ETS.

In addition, the inclusion of waste incineration in the EU ETS also implies that less energy would be recovered from waste, meaning a possible increase in fossil fuel demand.

Furthermore, the non-recyclable waste diverted from thermal treatment will then either be landfilled, increasing methane emissions, or transported outside the EU ETS zone, to countries with less stringent environmental standards.

Lastly, including waste incineration in the EU ETS would likely have a negative impact on the Members States' objective of 10% maximum landfilling rates by 2035.

Waste-to-Energy remains the best



technology when it comes to dealing with waste unsuitable for recycling.

Applying the obligations of the EU ETS on energy recovery from waste would not only hurt climate mitigation but would also affect the circular economy objectives

[Click here](#) to read the full reply by ESWET to the Public Consultation on the revision of the EU Emissions Trading System (EU ETS).

ESWET's proposal

However, if waste incineration were nonetheless included within the scope of the EU ETS, ESWET asked the European Commission to consider the following elements:

- 1) Take into account not only direct emissions but also the offset of carbon emissions in Waste-to-Energy plants.
- 2) Avoid the creation of disruptive effects on EU waste management systems.

ELABORATION OF CONTRACTUAL GUIDELINES FOR WASTE-TO-ENERGY



Contractual uncertainties can hamper the efficiency needed by European waste management. To improve this issue, ESWET is coordinating the development of guidelines for the stakeholders of the Waste-to-Energy sector.

ESWET – the European Suppliers of Waste-to-Energy Technology – is currently working on the elaboration of non-binding guidelines to address contractual uncertainties and challenges in the Waste-to-Energy sector.

The process started with a kick-off meeting which took place online on Wednesday 21 October 2020.

The first meeting served to set the scene, exchange views on the items to cover and to develop a mutual agreement on the desired scope of the document.

This process aims to provide a set of guidelines agreed by the main players of the sector and validated by a lawyer.

Once drafted and approved, the guidelines will be officially published. The publication is foreseen throughout the year 2021.

ESWET FACT SHEETS IN 2020

Find all the fact sheets at <http://www.eswet.eu/document-cat/fact-sheets/>

The participation is open to all the relevant stakeholders involved in the Waste-to-Energy sector.

The ESWET members are fully represented and CEWEP (Confederation of European Waste-to-Energy Plants) has a role of observer in the development process.

ESWET NEW WEBSITE AND NEW MEMBERS

New website



During 2020 the ESWET website prepared its brand new look!

The new website, launched in January 2021, is more modern and features new sections and functionalities to better assist

users in discovering what the Waste-to-Energy sector in Europe is all about.

Have a look at it: <http://www.eswet.eu/>

New members



ESWET had the chance to experience significant growth in 2020. Indeed, seven new members joined the association.

Other two members joined in the first months of 2021, resulting in a new total of 28 Members, with 8 associate Members and 20 full Members.

The new ESWET members are AC Boilers, Clyde Bergemann, IEM Conveying Systems, Loibl Conveying Technologies, Lisega, Mitsubishi Power Europe, Nooter/Eriksen, Sumitomo SHI FW, and Valmet.

The full list of ESWET members is available here: <http://www.eswet.eu/members/>

ESWET ORGANISATIONAL STRUCTURE

The Secretariat

The ESWET Secretariat is in touch with representatives of all member companies. It provides support to the Members when they have special needs and also acts as the contact and follow-up point with the EU Institutions, the media, and the general public.

General Assembly

The General Assembly is the decision-making body within ESWET, where top representatives of the member companies meet to define the way the association operates as well as its key policies. The General Assembly is hosted twice per year.

Executive Board

The Executive Board implements the decisions made at the level of the General Assembly. It is composed of the full members that supply main components (grates, fluidised beds, rotary kilns, boilers, flue gas cleaning systems).

Technical Committee

The Technical Committee (TC) oversees the policy, legal and technical work of ESWET. Its members are regularly updated on EU developments. They implement the policy positions of ESWET, they provide feedbacks on all the technical questions addressed by the association and provide input to the work of the EU institutions whenever required.

Public Relations Committee

The Public Relations (PR) Committee defines the way ESWET communicates. It covers a broad range of tasks, from organising ESWET-branded events and workshops to ensuring the visibility of the association by creating attractive campaigns and slogans. As ESWET engages with a wide range of people, the PR Committee identifies the appropriate level of communication, ranging from technical exchanges to simple explanations of how Waste-to-Energy works.

ESWET STRUCTURE

ESWET PRESIDENT
Siegfried Scholz,
Standardkessel Baumgarte

ESWET VICE-PRESIDENT
Bruno-Frédéric Baudouin,
Hitachi Zosen Inova

CHAIRMAN OF TECHNICAL COMMITTEE
Hubert de Chefdebien,
CNIM

CHAIRMAN OF PUBLIC RELATIONS COMMITTEE
Ole Hedegaard Madsen,
Babcock & Wilcox Volund

ESWET SECRETARY GENERAL
Patrick Clerens

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EUROPEAN SUPPLIERS OF WASTE-TO-ENERGY TECHNOLOGY

