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Bodecker Carbon

Carbon Update & EU ETS

Market Insight for Decision Makers Third Quarter 2021

A News and Politics:

Interesting and relevant decisions, statistics and discussions globally, within EU and in Sweden, effecting EU ETS and the carbon market.

B Price development (EUA)

What has effected carbon prices during the last months and what do we believe going forward?

C Analysis and reports:

Short summaries of selected reports and price forecasts.

D Insight EU ETS:

Consequences for the waste industry of Fit-for-55 and the society's increased plastic production.

Welcome to the first issue of Bodecker Carbon's quarterly report on EU ETS and Carbon pricing!

In these reports you will be updated on the latest in global, European and Swedish climate policy with an impact on the EU ETS and the carbon market. We briefly go through statistics, system changes, new regulations, relevant national policies and updates from the Swedish Environmental Protection Agency.

We summarize EUA price development, forecasts and analysis, and we take a look at interesting industrial projects within, for example, CCS. Our final »Insight« offer interesting interviews on relevant topics.

In this issue, we take you through the reasons for the extremely rapid price increases on EUAs, gas and coal. We summarize analysts' comments, reports ahead of the Glasgow climate summit and China's new trading scheme. We also look at »Fit-for-55« and its effect on the EU ETS as well as adjustments in Swedish free allocation from this year.

In the concluding interview, we speak to Lia Detterfelt Renova, where she discusses consequences of Fit-for-55 and the taxonomy for the waste industry, effects from the rapid price increase, and increased plastic production.

Enjoy your read!

And feel free to visit our website if you want to know more about Bodecker Carbon!

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The Global Paris Agreement forms the basis for the EU's targets of net zero emissions by 2050 and a 55% reduction by 2030. In its 'Fit-for-55' package, the EU Commission proposed measures to achieve the 2030 target, including a substantial tightening and enlargement of the EU ETS and a border adjustment mechanism.

Globally

The latest IPPC report

In early August, the UN Intergovernmental Panel on Climate Change (IPCC) presented its latest report. One of the most important conclusions was that reducing emissions in the energy sector is crucial to avoid a climate catastrophe. The temperature increase will exceed 1.5 degrees within the next 20 years unless radical, large-scale, and immediate measures are taken now. The latest scientific findings indicate that the temperature will instead rise by 2-3 degrees.

"Must make multiple investments in solarand wind energy"

Secretary-General Antonio Guterres addressed the world's leaders pleading to make multiple investments in solar- and wind capacity. The IPCC report also clarifies that investments in absorbing CO2 are also required, but that the technology is so far immature and that it cannot be the base method for climate strategies.

The report is so distinct that it should be tough to weaken the proposed 'Fit for 55' package, currently negotiated between the EU Member States. It should also put pressure on the climate negotiations in Glasgow next month.

Global electricity demand The enormously rapid economic ►►

2.6–2.9 degree temperature increase

ACCORDING TO THE Climate Action Tracker, current climate and energy policies will lead to a global temperature increase of 2.9 degrees, while commitments so far would reduce this to a 2.6-degree rise. The IEA also states current commitments are not enough.

"The greatest challenge humankind has ever faced"

Achieving net-zero emissions by 2050 is considered possible, but "the greatest challenge humankind has ever faced," according to a summarizing article on Montel. The IEA's new roadmap contains over 400 milestones with a variety of measures. It concludes that the global electricity sector must reach net zero emissions by 2040 and that solar- and wind capacity must quadruple by 2030.

 \rightarrow read the report:

\rightarrow <u>climate action tracker</u>:



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recovery after the pandemic, especially in Asia, has resulted in sharply rising CO2 emissions. At the end of the summer, emissions were 5% higher than before the pandemic, according to the British think tank Ember. They conclude that the development, despite political commitments, is going in the wrong direction.

Although Chinese President Xi has promised the UN to stop building coal-fired power plants in developing countries, the development continues at home, in India, and Bangladesh. This year we have seen steadily higher prices for energy-related raw materials such as coal and gas, primarily driven by seemingly insatiable demand from the above-mentioned countries. However, the report shows a glimmer of light; that solar and wind energy reach 10% of the global energy mix for the first time.

"Global electricity consumption increases by 5% with emissions all-time-high "

The IEA has estimated that global electricity use will increase by 5% this year and 4% next. This can be compared with 2020, where it was 1% lower due to the pandemic. The largest increases are in China and India. Renewable energy production is expected to increase by 8% this year and 6% in 2022 resulting in only half of the higher consumption to be covered by renewable electricity. The remainder is expected to be covered by fossil fuels (45% and 40% respectively this year and next) and nuclear. GHG emissions will increase by 3.5% this year and 4% in 2022 - a new "all-time high".

IEA: Emissions could reach record levels 2023

The International Energy Agency (IEA) states that global greenhouse gases will reach a new record level in 2023. And this is not the peak. Only 2% of pandemic recovery stimuli have been earmarked for green energy. At the current rate, emissions will continue to increase. They estimate investment will only amount to about 1/3 of the required \$1 trillion in 2021-2023. The IEA urges states to increase their investment and to provide support to electrification of the transport sector.

> "Coal production must reduce 6% per year to achieve zero emissions by 2050"

According to the IEA, to reach zero emissions by 2050, coal condensate production needs to be reduced by 6% per year. Current development shows an opposite trend with 5% this year and 3% next. Gas condensation, cleaner than gas but still a fossil emitter, is also expected to rise by 1-2% next two years.

China's National ETS

China's new emissions trading system initially covers only the electricity sector with 2,225 plants. It will be expanded to eight sectors by end-2025. Allowances

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will be allocated based on type of plant and fuel. If the plant exceeds a "carbon intensity" measure, it needs to buy allowances from more efficient plants.

"Coal producers could gain from ETS"

Prices are significantly lower in China than in Europe, and according to Matthew Gray at Transition Zero, coal producers in China with relatively efficient coal-fired power plants could even receive a positive source of income from the scheme. This is also the case in other states such as South Korea. This is because allocation is based on carbon intensity targets instead of absolute emission reduction targets. According to the Zero transition, China's ETS market is expected to have a surplus of approximately 1.6 billion allowances. ►►





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EU ETS review in "FIT-FOR-55"

ON 14 JULY, the EU Commission presented "Fit for 55" with proposals for measures to reach 55% emission reduction by 2030. The package contained over 10 different parts where one of the most significant was the revision of the EU ETS Directive, including the launch of CBAM (Carbon Boarder Adjustment Mechanism) and expansion to several sectors etc.

The proposal met most expectations and will essentially result in a significant tightening of the scheme with lower allocation, continued high intake into the Stability Fund, expansion to several sectors, and the introduction of a border adjustment mechanism (CBAM) to, long-term, be able to remove free allocation to competitive industry.

Here are some key proposals affecting carbon prices.

- EU ETS emissions to be reduced by 61% by 2040 (current target 43%). Thereby, EU ETS industries take on greater responsibility than other industries.
- To achieve the 61% target, annual EUA allocation must be reduced as this sets the cap. Total allocation (free and auctioned) is proposed to decrease by 4.2%/ year from 2021 (retroactively for the first years due to later implementation, so also a "one-off" reduction in 2024). In addition, industry must show adequate measures for carbon reduction to avoid having 25% of allowance cut.
- The Stability Reserve (MSR) intake rate is proposed to remain at 24% of system surplus until 2030 (would otherwise have decreased to 12% from 2024) but with slightly changed rules.
- A carbon border mechanism (CBAB) with data collection from 2023 and full implementation from 2026. First industries to be included are aluminum, cement, electricity, fertilizers, iron and steel. The purchase of "CBAM certificates", linked to EUA prices, will be required to cover emissions for imported goods. Annual annulments and certificates not "tradable".
- Sectors within CBAM are proposed to have free allocation phased out 2026-2036.
- A separate EU ETS is proposed for road transport and buildings.

The MSR negotiations are held separately from the rest to ensure a faster decision process. Electrolyzers may be covered by the ETS and receive a free allocation until 2026, after which they will be reduced by 2.5% annually. If the Commission's hydrogen strategy of 6 GW 2024 is met, it means 1.6-4.1 million in free allocation, depending on volume of produced hydrogen.

The proposals did not contain any change in the possibility for states to provide compensation to industry for indirect cost increases as a result of high EUAprices (not used in Sweden).

The burden-sharing structure (ESR) based on countries' GDP, is maintained, but features for increased flexibility to strengthen cost-effectiveness are introduced. Sweden will have a sharper target to reduce emissions in the non-trading sector 50 percent by 2030.

Negotiations are now awaiting with the EU Parliament and the Council of Ministers. This will probably take at least a couple of years.

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The Industrial Emissions Directive

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The EU's Industrial Emissions Directive (IED) regulates emissions to air and water for industrial activities. The directive covers binding requirements linked to best available techniques, so-called BAT, for different process steps. During 2020-2023, the IED will be revised, as part of the Green Grant, to make the IED compatible with other policies and legislation for climate, energy, and the circular economy. The revision also focuses on facilitating emerging technology and innovation.

The Swedish Association for Iron- and Steel, Järnkontoret, works to ensure a continued effective IED and has summarized their conclusions and overall positions in an audit. "Common EU rules are good for the environment and competitiveness, but too detailed and overlapping legislation must be avoided."



AN INTERESTING READ FOR THOSE INTERESTED: Industrial Emissions Directives and BAT conclusion

Revenues from EUA auctions to double

Due to a price increase by over 100% this year, auction revenues will in many states double this year. The EU Commission has pointed out that this income could be used to ease the burden on industries and households suffering from the current extreme energy costs. The revenues are generally to be used for climate action and, according to the Commission, this is currently true for about 75% of the revenues, but not in all Member States. Many countries are already providing industry compensation for indirect cost increases (mainly from electricity prices) due to the EUAs. This is not used in Sweden.

Concern EU ETS tightening in "Fit-for-55" may not happen

The very high electricity prices in Europe have resulted in politicians in several countries pushing for price regulation and questioning the proposed sharpened and enlarged EU ETS. Within the EU Parliament, discussions have included **>>** Α

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stricter EU ETS regulation to prevent speculative actors. Some countries have also put forward demands for price caps and demands of temporarily higher auction volumes. There is now some concern that the high ambitions in "Fitfor-55" can be harder to live through the negotiations. The discussions of potential EU intervention have caused the price of EUA to dip slightly temporarily.

Adjusted auction EUA calendar

The German electricity exchange EEX has published an adjusted auction calendar for EUA auctioning. The adjustment is based on the new calculation on intake of surplus into the MSR. 379 million EUAs will be transferred to the MSR instead of being auctioned in September - August (2022).



INFORMATION ABOUT EEX AUKTIONS

The German election and EU ETS

The Social Democratic Party, SPD, will be the largest party, probably in coalition with the Green Party and the liberal FDP. The SPD's leaders have emphasized strong action on climate, but have not communicated any promises about e.g., earlier phase-out of coal. The Greens, however, want to increase emissions targets to at least 70% by 2030, set a minimum price of 60 euros on emission allowances, phase-out coal power earlier, and set a high price on emissions from transport and buildings (heat).

"Difficult to pass through demands on faster decommissioning of coal"

According to the analysis firm Refinitiv, the Greens will probably find it difficult to pass through their demands for faster decommissioning of coal power, but they may succeed in increasing renewable targets. Within the Fit-for-55 negotiations and tightening of the EU ETS, the Greens could ensure Germany supports proposals for a parallel ETS for transport and buildings (Germany already has a system for these industries since last year). Germany's support is vital for this proposal to be passed through. However, the analysis firm points out that the SPD strongly defends the industry and would probably not vote in favour of phasing out free allocation to industry within the new CBAM.

> "Risk delaying EU ETS negotiations"

If the formation of a government takes too long, there is a risk that the EU negotiations is also delayed. Germany will probably not want to take a stand on the most controversial issues. The separate negotiations on tightening the MSR are also at risk, especially in light of recent high energy prices.

According to the think tank Agora Energiwende, German CO2 emissions increase at the fastest rate in 30 years. Significantly slower build-out of renewables and high gas prices are stated to be some reasons. **>>**

Shipping sector in the EU ETS

GHG EMISSIONS FROM maritime transport have increased since 1990 and are expected to grow further under the business-as-usual (BAU) scenario. To shift this trend, the European Commission is proposing to extend the EU ETS to maritime transport, particularly for large ships (above 5,000 gross tonnage) from 2023. The extension would apply to emissions from intra-EU voyages, to 50% of the emissions from extra-EU voyages, and to emissions from ships while at berth in EU ports. These provisions would result in additional coverage of 90 million tonnes of carbon dioxide (CO2) – around two-thirds of maritime transport emissions within the EU – and send a price signal to incentivize the application of energy-efficient and low-carbon solutions in the maritime sector. To ensure a smooth transition, the provisions mean shipping companies would be initially required to surrender a portion of their verified emissions, which would then be gradually increased to 100% in 2026.



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Sweden

THE SWEDISH REGULATION for emission allocation was slightly adjusted in May. In short, this means that the Swedish Environmental Protection Agency now has a better basis for rejecting free allocation applications.

> "49 district heating plants rejected for free allocation"

This spring, the EU Commission decided that 49 Swedish biomass district heating plants are no longer covered in the EU ETS directive and therefore not entitled to free allocation of EUAs. In contrary to other EU countries, Sweden also has a tax for waste incineration. In our final interview at the end of this report, you find a lot more on this issue and EU ETS for the waste incineration sector.

By 2045, Sweden must have achieved GHG net-zero emissions, which means a need for negative emissions to compensate for the remaining. To achieve this, the government has in the autumn budget bill allocated SEK 400 million per year between 2022-2025 for bio-CCS through a reverse auction procedure. A bio-CCS means that cogeneration and district heating emissions are collected and stored, resulting in negative emissions.

Some interesting industry projects OVAKO has invested in CO2-neutral steel production from 2022 and will heat steel with fossil-free hydrogen. The plant is built in collaboration with Volvo, Hitachi ABB, H2 Green Steel and Nel Hydrogen. The small remaining emissions are compensated with climate compensation credits.

GREENSAND, a consortium of 29 energy and industrial companies, including German Wintershall Dea and Ineos, have secured financing for the next step in a joint investment in large-scale CO2 storage off the Danish coast in the North Sea. They will develop methods and technology for pumping down and storing CO2 under the seabed. Commissioning of a pilot plant is planned for end next year and large-scale facilities may be in place by 2025. Up to 1 million tonnes of CO2 can be stored annually from 2025 and 4-8 million tonnes annually until 2030. Last year, the Danish Parliament approved a funding pool for CCS projects.

AKER CARBON CAPTURE has received SEK 840 million for further investment in CO2 storage. Aker has also partnered with Carbonor to capture and store their CO2 emissions through its "Just Catch 100" service. Aker's technology will reduce Carbonor's emissions by 90% starting in 2024. This will coincide with the CCS project Northern Light, to where liquid CO2 will be shipped.

SÖDERENERGI starts a bio-CCS project at its facility Igelstaverket in Södertälje in SE3. They will capture 650,000 tonnes of CO2 emissions per year, and the goal is to become a hub and, further on, produce negative emissions. They collaborate with the Port of Södertälje, and the project has a SEK 5 million support from the Swedish Energy Agency.

More industrial projects in, for example, hydrogen, e-methanol, batteries and electrolyzers are summarized in the section Investments & Build-out in our Nordic Renewable Report.





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The price of EUA's has been on the rise since the EU commission presented the "FIT-FOR-55" package in mid-July and set a new all-time-high just above €65 per tonne at the end of September.



THE UPWARDS PRICE trend is supported by the EU Commission's increased ambitions and the anticipated tightened measures within the EU ETS. These efforts have led to market confidence of the EU ETS, which has attracted financial capital, further accelerating the price rise.

The global trend following the pandemic, with rising prices for energy-related raw materials such as coal and gas, has continued. At the same time, Europe, in late summer, experienced spiking gas prices hitting consumers hard.

"Energy crisis in Europe with concerns ahead of the heating season"

This has caused a genuine concern ahead of the heating season when

demand will be significantly higher. The reason for the high gas prices is already low stocks of gas since last winter, low supply of LNG (instead steering to Asia due to positive premium all 2021), and low flows from Russia. It has resulted in a comeback for coal condensation, which could have contributed to even higher EUA-prices. But instead, EUAs have, from the beginning of October, fallen back to the 60 euro level.

"Political pressure to intervene in EU ETS"

One reason for the recent slightly softer prices is probably that some financial capital has exited the market from fear of political intervention. The Commission has, however, stated they would not make any ad hoc changes. Instead, they have presented a toolbox containing possible tax adjustments and proposed member states to support vulnerable consumers. There is fundamental solid buying interest, so we shouldn't see prices below 50 euros.

In connection with gas prices exploding on the upside, the economic conditions for fossil power production changed. The EUAs 2022 should be around 80 euro/ tonnes for gas to be more favorable than coal (so-called fuel-switching). The problem now is that there simply is not enough gas available.

> "EUA no longer follows gas price"

As the lack of gas supply stood clear to the market, EUAs could no longer keep pace with German power prices. You see in the Switchingprice graph that coal-fired plants have been the most profitable alternative since the beginning of September. SEE GRAPH ON NEXT PAGE ►

As it looks today, power production from coal will be the most economical alternative (over gas) until at least April 2022. As most utilities planned to run primarily gasfired plants during the winter, they now have to buy more EUAs to cover increased emissions from the more polluting coal. This should provide support around 60.

> "The Commission stands firm"

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In the near future, the EUAs are likely to be traded mostly on political statements. Financial participants are awaiting whether the Commission will give in and lower their ambitions within the EU ETS system, which would be devastating for the confidence of ETS. We believe that this risk is low as the EU ETS is the cornerstone of the EU's climate work. When the acute gas crisis is over, we believe EUAs will once again turn into the long-term rising price trend. ■

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In this section we summarize price comments and forecasts as well as reports with an impact on the carbon market.

Analysis emission allowances (EUAs) Refinitiv's chief analyst, Yan Qin, has commented that the price development for gas and EUAs have disintegrated somewhat. The price of emissions (EUA Dec-21) fell by 7%, to 60 EUR/ton, on the same day (6 October) as the front gas contract rose to new record levels of 160 EUR/MWh. Yan saw three reasons for this divergence.

MARKET ACTORS HAVE been forced to close positions to cover losses incurred in the power and gas markets.

2 RISING CONCERNS ABOUT lower EUA demand as rising energy prices have caused industries to reduce production (thus less need to purchase EUAs to cover emissions).

3 THE EU DISCUSSIONS to tackle the energy crisis by intervening in the EU ETS system.

"No fuel-switching due to lack of gas to replace coal"

Refinitiv also sees another reason why the EUA price may have been recently disconnected from the gas and energy complex. The decisive role of EUAs in choosing fossil fuel is not relevant until at the earliest April 2022, as even the least efficient coal plants are far from being pushed out of the production mix. As there will be no fuel switching (replacing coal with gas), the gas contract for the next month, currently at € 70/MWh, is no longer relevant to the EUA price.

"10–15 euros from the price increase on gas"

REFINITIV believes that about 10-15 euros of the current EUA price stem from the high gas price. They highlight a potential downside risk to the EUAs if the gas market returns to more normal levels. Emitters in the system do not have to comply for 2021 until the end of April 2022, and they can choose to refrain from buying at current high levels.

ICIS analyst Sebastian Rilling forecasts increased interest in compliance buying when EUAs are traded below 60 EUR/ tonne. Thus, 60 euros becomes a form of "lowest level."

ENERGYMONITOR'S Mark Nicholls writes that for fossil-based hydrogen with CCS technology, within the framework of the EU hydrogen strategy presented last year, to be profitable to produce, a EUA price of up to go euro/tonne is needed.

PLATTS ANALYTICS believes that EUA DEC-21 will trade around 60 EUR/ton until delivery in December. They point to downside risk if the industry needs to sell its free allocation to release capital. However, as this would eventually lead to a shortage situation, that risk should be limited.

THE POTSDAM INSTITUTE FOR CLIMATE

IMPACT RESEARCH (PIK) has published the report "Economic damages from on-going climate change imply deeper near-term emission cuts," where they write that the IPCC does not take into account the climate consequences that already occur below 2 degrees.

"Optimal emission price should be \$115/tonnes"

PIK uses econometric models to study the impact of climate change on GDP and concludes that the optimal price of emission allowances should be 115 USD/ tonnes (equivalent to 107 Euro/tonnes at today's exchange rate). **>>**



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Other reports

Expectations on Western countries ahead of COP26

ENERGYMONITOR's Sebastian Shehadi concludes it is time for Western countries to take the initiative during the COP26 meeting in Glasgow. For almost ten years, China's new Belt and Road has invested billions in road investments, dirty power generation (~240 new coal-fired power plants) and left a huge debt burden in developing countries in Asia and Africa. According to Sebastian, calculations show that more than half of global emissions by 2050 will come from these countries.

"The Western world to combat China for political and economic influence"

With renewed governance in the US, the UK, and the EU, we have seen a rapid change, he writes, where the EU and India have announced cooperation on infrastructure projects, incl. energy, on a global basis. EU Commission President, Ursula von der Leyen, announced the "Global Gateway,"; the EU's official plan to increase international infrastructure efforts to reduce Chinese influence. Sebastian emphasizes that combatting climate change can only succeed if developing countries participate in the green transition, but there must be funding. In 2009, developing countries asked for \$100 billion/ year from 2020, but this has not happened. For many countries, funding is a big challenge, and it will be one of COP26's significant challenges.

"High hopes for President Biden"

TIME MAGAZINE's Justin Worland writes in an article that expectations of President Joe Biden are high ahead of COP26. With the USA back in the Paris Agreement, great efforts are required. The temperature has already risen 1.1 degrees and is accelerating. The US accounts for 14% of world emissions; only China is worse. Biden has promised to halve emissions by 2030 (cf. 2005). Frans Timmermans, leading the EU Commission's "European Green Deal" and the EU's climate law, has pointed out that his American friends must develop a plan with clear targets and strategies. Finally, Worland notes that Congresswoman Nancy Pelosi has taken COP26 as a reason for a rapid legislative process.

The Confederation of Swedish Enterprise concerned

The Confederation of Swedish Enterprise supports the Swedish climate goals and EU's net-zero targets by 2050. They emphasize that the ambition (for EU climate policy) should be to prove it possible to reduce emissions while stimulating growing businesses. Therefore, financial incentives must result in significant emission reductions at low costs.

"Concern for Swedish industry's competitiveness"

They express some concern for the EU Commission's proposal that the EU ETS sector must reduce emissions by 61 percent by 2030 (as of 2005), while the non-trading sectors must reduce their emissions by 40 percent ("Effort-sharing"). They believe too much burden is put on EU ETS and would have preferred an increased focus on the non-trading industry as they think there are significant emission reductions to be achieved at a lower cost there. The Confederation presents its calculations in the report "Stricter emissions target for 2030".

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Link to the report (Swedish) BIT.LY/3MLSEKC



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Renova is Western Sweden's leading company within waste and recycling, owned by ten municipalities. We have interviewed Lia Detterfelt, development strategist at Renova and chairman of the financial incentives group for energy recycling within the industry organization "Avfall Sverige." She talks about Sweden's inclusion of waste in the EU ETS, Fit-for-55 and its effects on the waste incineration business, the taxonomy, and other relevant updates for the industry.



THE TAXONOMY is part of the EU's Action Plan on Sustainable Finance, where a classification system assesses if an economic activity is environmentally sustainable. In June 2019, the EU released its Taxonomy Technical Report, containing criteria and definitions for green investments according to which companies must report from end-2022.

FIT-FOR-55 is a package of measures proposed by the EU Commission this summer on how to reach the 55% emission reduction target by 2030.

Does the EU's new taxonomy affect you?

Not so much yet, but we are discussing what may come. We try to understand why waste incineration, strangely enough, is not included. "Waste incineration is a consequence of the problems with increased plastic production"

Europe faces a significant climate challenge and has a vast need to replace landfills with more small-scale waste incineration and material recycling. Financial incentives should be used to reduce fossil plastic production. It should not be self-evident that waste incineration is "punished" when this is only a consequence of society's increasing production of plastic and other fossil materials.

An analysis by Anthesis (on behalf of "Avfall Sverige") shows that if you follow the economic values in the production chain, plastic producers should pay at least 80% of the emissions from waste incineration. But it's easier to charge this on waste incineration. What is your opinion on that, apart from Denmark and Lithuania, only Sweden has included waste (energy recycling) in the EU ETS? In Sweden, there is also a waste incineration tax.

Sweden has chosen to include waste incineration even though the EU does not deem household waste to be included. Renova has worked with this since the plans were known in 2011 and implemented in 2013. The regulation means, in practice, that Sweden puts financial burden on those "best in class". Swedish waste incineration is one of the best at extracting energy in the world. This decision distorts competition. Regulations must be the same throughout the EU.

"Regulations must be the same throughout the EU"

Together with the rapidly rising prices of emission allowances (EUAs), this has led to sharply rising costs. Several waste incineration plants in Sweden now risk negative results. It also leads to an increased risk of poorer or unscrupulous waste management with landfilling or even dumping, especially plastics. It goes in precisely the opposite desired direction. We are looking for ▶▶



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a chance for the industry to correct its fossil impact.

"The taxable waste incinerator is several steps away from the actor generating the waste."

In its regulation letter for 2020, "evaluation of the waste incineration tax," the Swedish Tax Agency expressed significant doubt on if the waste incineration tax's contributes to the net-zero target 2045. One problem is that the taxable party, the waste incinerator, is often several steps away from the party generating the waste. Therefore, it is uncertain to what extent the price signal reaches the responsible party and the tax's contribution to the circular economy.

Are there any significant changes for your industry from this year (start EU ETS phase 4 etc.)?

For waste energy plants, phase 4 means a lower free allocation, resulting in increased costs.

"It is wrong that Swedish waste incineration has a heating benchmark"

Waste incineration in Sweden has "heat" as benchmark and is seen more as an energy producer than as waste treatment operator. This gives the wrong incentives and leads to reduced climate benefits as Sweden's waste incineration is much less climate-affecting than landfill, which is still a prevalent waste treatment practice in the EU.

How will your industry be affected by the EU Commission's proposed "Fit-for-55"

It is very positive that the EU raises its climate ambitions and pushes to minimize waste and recycle more materials. We have courted Sweden to push for the same regulation to apply in all EU member states and for waste incineration to be included in the EU ETS, as in Sweden. Our wish is for Sweden to pursue the issue as the rapidly increasing costs for serious waste management is a major problem for waste energy plants.

Any other major changes, from the EU or nationally, that will affect you in the coming years?

We hope that there will be more regulation on the production of plastic. It is increasing exponentially year by year, although awareness of the drawbacks of plastic has increased. Even though Renova rejects plastic waste, has increased prices on mixed waste with a high plastic content, and advanced material recycling, the fossil share in incineration rises due to increased plastic production.

"Financial incentives needed earlier in the value chain"

Instruments are needed earlier in the value chain. Rising emissions from waste incineration are just a symptom of society's fossil material use.

The use of CCS (Carbon Capture and Storage) technology is also a must if Sweden is to reach climate targets. Financial incentives and amendments to the EU ETS regulations have to be adapted to benefit the technology.

What are the consequences of the extremely rapid price increase for you and your customers?

Many in the industry are probably shocked. It is too early to say what the consequences are for the survival of companies. For example, Stockholm Exergi has made a calculation published in the Swedish Tax Agency's report: "Evaluation of the waste incineration tax", seen in the graph below. [BP comment: at the time of writing, EUA DEC-21 is ~60 Euro). **>>**



SOURCE: Stockholm Exergi Note: The calculation is based on information on Högdalenverket. The following assumptions are made; 1) deduction for ash of 20 percent of the tax, 2) the price of emission rights 50 euros / EUA 2025 and 90 euros / EUA 2030, 3) from 2030 no free allocation of emission rights, 4) to calculate the costs of ETS equals the amount of waste that burned from 2020 with the average amount burned in the plant between 2014–2018



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Were you prepared for this? What can be the effects if these prices persist?

I can't say we were prepared that prices would rise so quickly, but we expected higher levels and we understand it is necessary to cope with climate change. We have seen analyzes showing a need for prices of around 130 euros / tonne by 2030.

Other comments?

Our main task is to reduce the environmental impact of waste. Rising emissions due to an increased amount of plastic being recycled is a symptom of society's failures.

I have been in the industry for a long time and have seen many good, and some strange, tools and measures. Basically, the ETS system is sound. The significant advantage is that money is allocated to where they make the most cost-effective benefit. But there are risks in including waste incineration, especially if only a few member states' facilities are involved. The environmental and climate impact of waste risks deteriorating if not hand-in-hand with stricter requirements on waste management and if conditions within the EU are not equalized. The Swedish Tax Agency also recently stated that the waste incineration tax risks increasing the EU's costs for reducing greenhouse gases.





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