

Background Presser: **Anuga Food Tec 19-22 March 2024**

N.B. This is background information - Only quotes in italic text are available for publication.

Food and Drinks Industry can lead the transition!

DENEFF – European Heat Pump Association – European Climate Foundation

Anuga Food Tec - Booth location: Hall 05.2 | Stand D021 - [Full Program here](#)

Exhibition principles: Awareness raising - Intel sharing & Learning – Visitor Engagement – Media & Knowledge hub

Let's get CO2 out of our food systems!

We are at the Anuga Food Tec trade fair to raise awareness on the deployment and application of industrial scale electrification (and heat pumps) amongst stakeholders from the food & beverage sector.

Messages:

- **Delivering energy efficiency with industrial heat pumps would significantly reduce the food & drinks sectors' carbon footprint.**
- **Heat pumps are 3-5 times more energy efficient than existing gas boilers**
- **Industrial heat pumps are readily available to meet the heating (and cooling) needs of the food and drinks industry.**

Why:

- **Why Food & Drinks sectors:** The food and drink industries represented at Anuga Food Tec have the potential to be a leader in carbon reductions, through electrified industrial heating with heat pump already commercially available up to 200 degrees C. This would dramatically reduce the gas demand for the entire sector.
- **Anuga FoodTec:** This is an ideal location to increase awareness and share knowledge on energy efficiency and heat pumps among key stakeholders and business leaders looking for more information how to reduce their company's energy input.

Quotes:

Tom Marren, Astatine CEO *"As industry transitions to renewable heat, industrial heat pumps offer a very cost-effective solution to reduce scope 1 emissions. Typically, in economies, up to 50% of industrial heat production can be electrified through the adoption of available heat pump technologies. Heat pumps can reduce primary energy by 70-80% and can result in similar carbon reductions. It is positive to see the sense of urgency that is beginning to be embraced by industry, particularly in the food sector".*

Thomas Nowak, Secretary General - European Heat Pump Association– *"Reusing waste heat from industry is a no-brainer to decarbonise industrial processes. Heat pumps are available to address nearly 40% of the energy demands in production processes. Platforms like Anuga FoodTec are key to presenting solutions to the many companies facing the need to reduce their fossil fuel dependency!"*

Jozefien Vanbecelaere, Head of EU Affairs - European Heat Pump Association – *"Industrial heat pumps are the most efficient way to decarbonise the industrial sector. Nearly half of the industrial heat demand is below 200°C including in the food and drinks sector. Anuga FoodTec shows that electrification is a win-win for industries and the environment!"*

Sonia Bianconi – EU Projects Manager, EHPA *"High-temperature heat pumps are a game-changer for industries looking to reduce carbon emissions and lower energy costs. Through the R&I EU-funded SPIRIT project, we're showcasing this technology by installing industrial heat pumps at three demonstration sites in the food & beverage and paper sectors. Discover SPIRIT at Anuga FoodTec to learn more about the practical benefits of integrating these solutions into industrial processes, making sustainability more accessible and cost-effective for all."*

Background:

Direct electrification has the potential to play a crucial role in supporting a sustainable low carbon transition across the food and drink sector. Innovation in process heating across the sector is moving rapidly forward, to reduce the sector's gas demand.

Food industry - High ambitious short-term actions could bring [70% reduction](#) in natural gas use.

The main short-term potential lies in electrification of overall processes as heating needs are at low temperature.

Research (2022): <https://climact.com/en/opportunities-to-get-eu-industry-off-natural-gas-quickly/> *"Substantial actions towards this level of electrification along with improvements in energy efficiency and management, and waste reduction could **lead to a 70% decrease of gas use in the food industry, which represents a 10% decrease of gas use in the whole EU industry**" [Climact].*

Heat pump sales in 14 European countries [fell by around 5%](#) overall in 2023 compared to 2022, from 2.77 million to 2.64 million (residential/commercial). This reverses the trend of the last decade, where combined sales increased annually. It has to be noted that 2022 have been an exceptional year for the roll out of Heat Pumps, as gas supply disruption pushed households to purchase alternative systems, and producers have been very responsive to meet the demand.

However, in order to make the increase more structural, the EU was supposed to publish a Heat Pump Action Plan in early 2024 to support investment in the sector, but unfortunately it has been delayed to after the EU Elections, resulting in demand stagnation. The EU plans to install 30 millions additional HP by 2030, which requires producers to step up with their production capacity, and the lack of a clear strategy is clearly hampering their investments. According to EHPA, more [than €7bn](#) are being held back due to lack of a clear signal from the policy makers or the market.

To deliver the clean transition, it is more important than ever that the uptake of energy efficiency technologies like heat pumps are integrated rapidly within the food and drinks industries, to drive scaled demand and send the right investment signals for both tech manufacturers and food producers alike. Examples of this shift is visible already. Successful installation of industrial heat pumps at the **Ahascragh Distillery** in Ireland, is already delivering, carbon and [cost savings up to 50%](#) for the business operations.

More examples of the success businesses are having with direct electrified heating:

Commercial success stories:

Pasta (145 words):

French pasta producer Saint Jean, established in 1935, has been rewriting the playbook for clean heating and cooling since 2022.

When looking for a temporary cooling solution to fight the increased summer load in one of their operations, facility managers brought in Trane Rental Services to explore a more comprehensive strategy.

Rather than simply adding a chiller, the team installed two Trane City™ RTSF water-to-water heat pumps, not only to meet cooling demands but also to replace the existing 300kW fossil-fuel boiler.

The innovative approach harnesses the waste heat generated during the cooling process, delivering significant energy savings. Over four months, shutting down the gas boiler resulted in a staggering 68% reduction in heat generation costs.

The success of this project prompted Saint Jean to extend similar installations to two more sites in 2023, proving that sustainability can be as delicious as their famous pasta.

Whiskey (149 words):

In the heart of Ahascragh, Ireland, a once-abandoned mill has become the country's [first zero-emissions distillery](#).

Ahascragh Distillery, backed by a €10 million investment, including a €500,000 grant from the Sustainable Energy Authority of Ireland, makes world-class gin and whiskey...with a (green) twist!

Here, renewable heat and power specialists Astatine have developed a revolutionary new system combining a high-temperature heat pump, an efficient energy storage system and other renewable energy sources— such as wind, solar and hydropower.

The result? With an input temperature of 60°C and an output temperature of 120°C, the heat pump avoids around 613 tonnes of CO₂ per year.

In this way, Ahascragh Distillery not only uses clean electricity but has also reduced its heating and cooling demands by more than half.

This ambitious project has created 20 direct jobs and supports an additional 60-70 through local supply chains, breathing new life into the rural village.

Milk (145 words):

Schoolchildren in Norway are drinking greener milk thanks to TINE, a dairy company owned by a cooperative of local farmers.

With a €34 million loan from the Nordic Investment Bank, TINE acquired a 75,000m² plot of land and built a brand-new dairy plant where sustainability and circularity are kings.

The combination of heat pumps and rooftop solar panels saves approximately 40% in electricity consumption. The heat from the cold storage is recovered and used to produce steam for dairy products. In addition, excess heat from production will be used for underfloor heating, snow melting and heating water.

Today, TINE's production site includes six production lines, which can produce approximately 36.2 million litres of milk, 1.6 million litres of cream, and 5.7 million litres of juice a year.

These are distributed to shops, schools, and kindergartens turning every sip into a step towards a greener world.

Technology and innovation:

Industrial-scale heat pumps and direct electrification innovation in the food and drinks industry can have a transformative force in the pursuit of energy efficiency, cost saving, increased resilience, carbon emissions reduction, ultimately leading to a greater industry competitiveness.

Powered by clean energy sources, Industrial-scale heat pumps have the capacity to efficiently produce high-temperature heat for various manufacturing processes, replacing traditional energy-intensive methods. In particular, the sector that promises the greatest potential with the lowest cost is the food sector, where heat pumps can meet the needs of numerous processes: drying, cooking, heating/cooling of water (e.g., washing water), heating/cooling of steam (e.g., for sterilization).

Additionally, direct electrification innovations enable the direct use of electricity in heating applications, minimizing energy loss, recycling waste heat and providing a more sustainable alternative. These advancements not only contribute to the industry's commitment to reducing its carbon footprint but also serve as a crucial step towards achieving broader environmental sustainability goals across the sector.

The path to achieving decarbonization targets is not easy given the complexity and constant change in the framework conditions. In industry in particular, the topic of energy has been implemented in-house. The approach is increasingly to outsource this to an external partner on an equal footing. The innovative aspect here is that the external partner not only takes over and is responsible for the topic operationally, but also as part of the corporate strategy.

Regulatory Environment:

Establishing robust regulatory frameworks is crucial to incentivize and support the widespread deployment of industrial-scale heat pumps and direct electrification innovation across the food and drinks industry, thereby effectively reducing the sector's carbon intensity.

Governments and regulatory bodies can introduce targeted policies that provide financial incentives, for businesses adopting these sustainable technologies. This can be underpinned by robust deployment targets and performance standards, encouraging industry players to confidently invest in cleaner alternatives.

Additionally, streamlined permitting processes and supportive policies can facilitate the implementation of these innovations. Collaborative efforts between government entities, industry stakeholders, and environmental organizations can further enhance the regulatory landscape, ensuring that the transition to industrial-scale heat pumps and direct electrification aligns with broader sustainability goals.

Reading:

- <https://www.economist.com/briefing/2024/02/15/first-electric-cars-next-electric-factories>

- <http://HSNR-Kurzstudie-EnEffPotentiale-Industrie-2023-03-31.pdf> (deneff.org)
- <https://climact.com/en/how-much-does-it-cost-to-switch-away-from-fossil-gas-in-the-food-chemical-and-glass-industries/>
- <https://www.ehpa.org/wp-content/uploads/2022/12/Industrial-Heat-Pumps-overview.pdf>
- <https://hthp-symposium.org/media/1379/strengthening-industrial-heat-pump-innovation-decarbonizing-industrial-heat.pdf>
- Examples from US [here](#) and [here](#)
- https://static.agora-energiewende.de/fileadmin/Projekte/2021/2021-05_IND_DE-P4Heat/A-EW_277_Power-2-Heat_EN_WEB.pdf
- <https://zoe-institut.de/wp-content/uploads/2024/01/Executive-Summary-Security-orientated-energy-policy-Energy-Independence-Council.pdf>
- Useful success stories across EU: [Beer](#), [Milk powder](#), [Dairy](#), [Real cases from EHPA](#), [Pasta/Whiskey](#), [Steel](#)



Resources and links

Events:

Expert panel and keynote speakers will join to discuss how advances in heat pump technology is playing a key role in the achieving greater energy efficiency and lower carbon intensity across the food and beverage industry.

Speaker Corner: Anuga [website](#)

Creating enabling conditions for direct electrification to thrive in the food and drinks industry.

Date: Thursday 21 March 15:30-16:30 (Format: Keynote address + panel discussion)

Agenda: Keynote: **Dr. Tatjana Ruhl** DENEFF

Panel – Moderator Natalia Messer

- **Michael Schnoor dos Passos** - Bundesnetzagentur
- **Dr. Tatjana Ruhl** – DENEFF
- **Jill Zaluzkiewicz** – NRW.Energy4Climate
- **Jozefien Vanbecelaere** – European Heat Pump Association
- **Marek Fritz** – BFE

Innovation Stage: [Anuga website](#)

Delivering energy efficient innovation across the food and drink industry

Date: Friday 22.03 11:25 – 12:10 – 45-minute (Format: Keynote address + panel discussion)

Agenda: Keynote presentations – **Tom MARREN** | **Rossen IVANOV** | **Otto KLATTE**

Panel – Moderator Natalia Messer

- **Tom MARREN** – *CEO, Astatine* Deploying energy efficiency in Ireland
- **Otto KLATTE** – *Division Manager, Engie* How to innovate and adapt to the food & drinks sector

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| <ul style="list-style-type: none">· Rossen IVANOV – <i>Managing Director, Armstrong International</i> – High Temperature Innovation in waste heat recycling |
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Affiliated partner companies will also be available for follow up interviews throughout the conference. Please get in touch if you would like to be connected to any of our speakers.

Social Media:

Relevant hashtags: #HeatPumps - #EnergyEfficiency - #AnugaFoodTec2024

Link Tree (QR code): https://linktr.ee/AnugaFoodTec_Hall05.2StandD021

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