



Boiler hopper at the Magdeburg-Rothensee WTE plant, with kind permission of MARTIN GmbH für Umwelt- und Energietechnik.

Industry Barometer Waste-to-Energy 2025

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Comment by CEWEP

Costs increase while Waste-to-Energy remains indispensable as pollutant sink

As CEWEP we are pleased that the operators of Waste-to-Energy (WtE) plants in Europe are doing economically well. The business situation is positive, the utilisation rate high.

Cost will increase

55% of the WtE operators who responded to this year's survey assume that gate fees will increase.

The increase will to a certain extent depend on the carbon pricing. While the European Commission is currently undertaking its ETS impact assessment, investigating if WtE should be fully covered under the EU ETS as from 2028, some Member States have WtE already under the EU ETS (Sweden, Denmark, Lithuania) or a national carbon pricing in place (Germany, Netherlands, etc). If the sector fully falls under the EU ETS, gate fees will rise significantly, while the steering effect to reduce fossil CO₂ emissions from WtE plants, mainly coming from the non-recyclable plastic waste, is limited for WtE operators as they have to safely treat the residual waste that is delivered to their facilities.

It is evident in waste management that if safe treatment of residual waste becomes too expensive, there is a danger of "waste leakage" to less sustainable routes. There is also a concern that people will throw non-recyclable waste into the recycling bags/bins to save money by avoiding the expensive residual waste bin, hence contaminating the recycling bins and compromising quality recycling.

Making WtE too expensive endangers its task: keeping the material cycles clean by serving as a pollutant sink.

Pollution Prevention – key function of WtE

The key role of WtE is the safe treatment of pollutants embedded in the waste, hence preventing contaminated materials from re-entering recycling/reuse chains and protecting human health and the environment. One group of substances that has recently gained increasing attention is PFAS – a large and diverse family of highly persistent chemicals widely used in consumer and industrial products. Despite ongoing restrictions on their manufacturing, PFAS will remain present in waste streams for many years.

According to the survey, 38% of respondents identified the lack of standardised measurement methods to monitor PFAS emissions as a key challenge, while the varied behaviour and toxicity of PFAS leave many analytical unknowns. However, based on current tools and available waste treatment options, WtE remains one of the most effective solutions for handling non-hazardous waste containing PFAS and thereby safeguarding recycling chains and a clean circular economy. And indeed, the answers to the survey show that 45% agree that more PFAS-contaminated waste

will undergo thermal treatment because on the one hand recycling will become more difficult and on the other hand landfilling PFAS-contaminated waste does not destroy their pollution potential.

At the same time, 22% of respondents referred to the ongoing legislative debate focusing solely on the temperatures required to destroy PFAS in WtE plants, highlighting the current knowledge gaps. The implications of this are twofold: Focusing solely on the temperature overlooks the crucial role of the flue gas cleaning systems, which ensure that WtE plants meet strict environmental standards. Furthermore, non-hazardous waste streams containing low PFAS concentrations cannot be redirected to hazardous waste treatment, especially given that already a general lack of hazardous waste treatment capacity is reported by 23% of respondents.

It is also important to recognise that WtE plants must treat residual waste as received, including PFAS-containing products at their end-of-life. While the WtE sector remains committed to contributing to research, effective management and avoidance of polluted substances requires action across the entire value chain.

Call for policy-makers

We should strengthen our efforts to achieve a circular economy. We should make products from as much recycled content as possible and design them to allow complete recycling at their end-of-life.

But as long as we do not completely achieve this target, we need sufficient treatment capacity for the waste which cannot be recycled for economical, ecological (see PFAS) or technical reasons.

The current WtE capacity in Europe is not sufficient to treat all these waste amounts. And the situation is becoming even more critical as landfilling is reduced (for good reasons), power plants where waste is co-incinerated are closing and cement kilns, which do the same, do not operate at full capacity due to the economic situation in Europe. Additionally, in many countries in Europe (e.g. France, Italy and Germany) the WtE plants are quite old, on average significantly older than 20 years. Maintenance and modernisation will lead to operation cuts and lower availabilities.

Therefore, CEWEP asks policy makers to support the sector. The Circular Economy Act is an opportunity to build a coherent framework that recognises WtE as integral to circularity: safeguarding hygiene, preventing pollution, and recovering materials and energy from residual waste. Aligning waste legislation, the EU Taxonomy, and economic tools will send clear signals on the investments the sector needs to contribute to the Green Industrial Deal that the EU aims for.

As in previous years, CEWEP (Confederation of European Waste-to-Energy Plants) supported ecoprogram's survey on the Industry Barometer Waste-to-Energy 2025 and encouraged its members to participate.

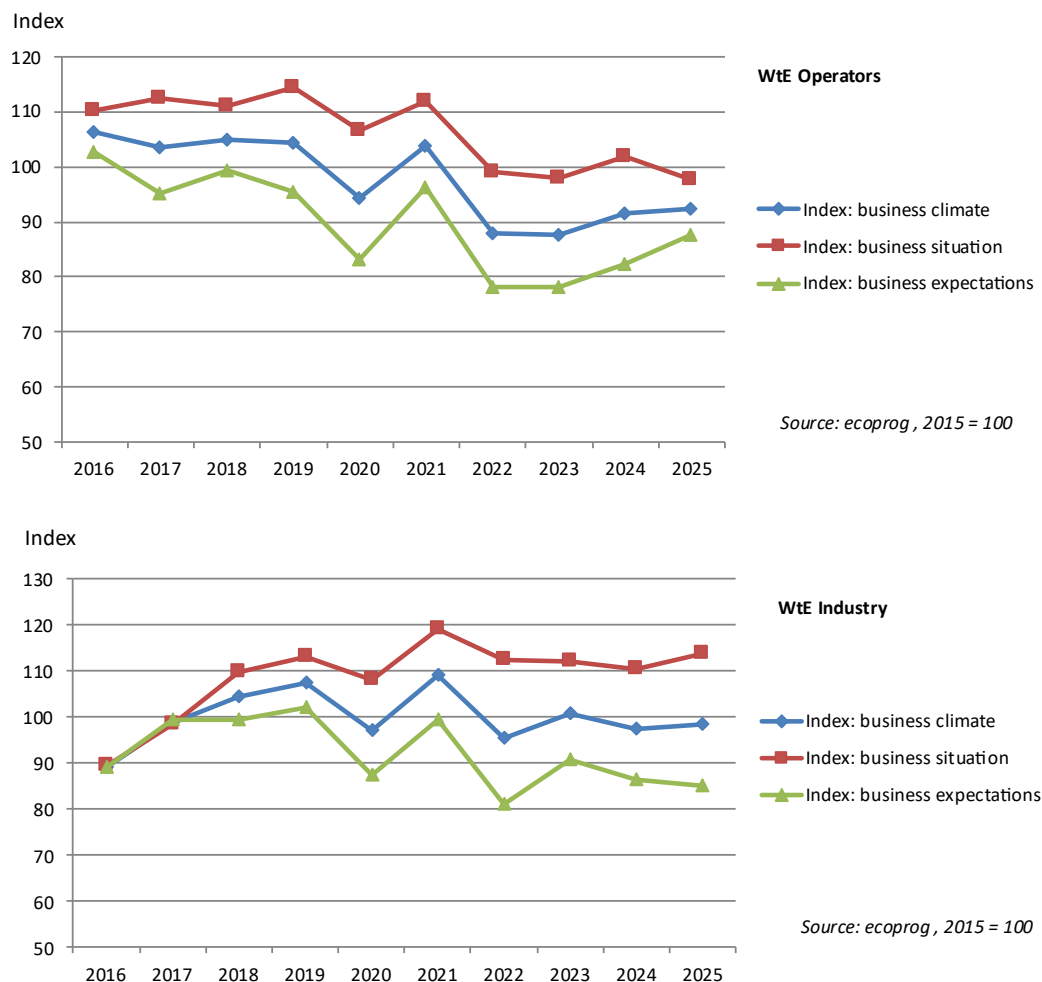
WtE Industry Barometer: stable, good performance

In 2025, the Waste-to-Energy (WtE) sector showed stable performance, although waste volumes were still comparatively low due to a weak economy in Europe.

The index for the current business situation of WtE plant operators fell to 97.6 points (2024: 102.0), while the business climate improved slightly to 92.5 points (2024: 91.7) and business expectations to 87.6 points (2024: 82.4).

In contrast, companies in the WtE industry report a slight improvement in the business situation compared to 2024, but expectations for the coming year are somewhat more cautious. Translated with DeepL.com (free version)

Fig. 1: Development of the business climate among WtE operators and in the WtE industry



Mood among plant operators remains steady

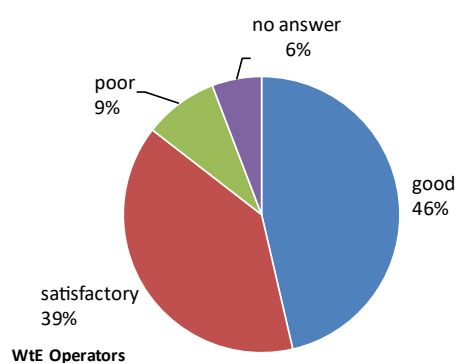
A total of 86% of the operators described their current business situation as good or satisfactory (2024: 95%), while only 9% reported a poor situation (2024: 5%). 46% of respondents rated their current capacity utilisation as comparatively high and another 45% considered it sufficient (2024: 27%).

Demand on the spot market for municipal waste remained largely unchanged in the past 12 months according to 49% of respondents, while 32% observed an improvement. Capacity utilisation has mostly remained stable.

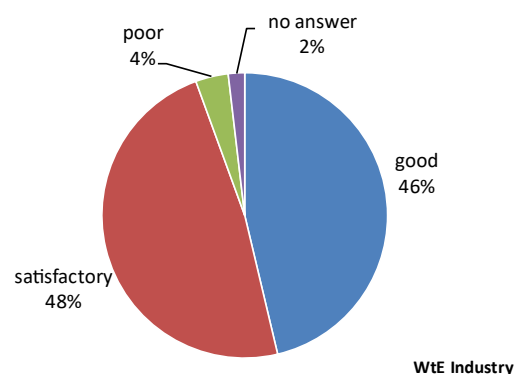
In comparison to 2024, plant operators have expressed a more positive outlook for the forthcoming year. While 20% (2024: 12%) expect an improvement, 16% (2024: 20%) anticipate a decline in business performance.

Fig. 2: Business situation among operators and in the industry

How do you assess your current business situation?



n = 69, source: ecoprolog



n = 54, source: ecoprolog

ecoprolog interprets the operators' positive assessment as an indication that waste treatment capacities for non-recyclable waste in Europe remain limited, primarily due to stricter landfill disposal regulations. Consequently, operators of thermal waste treatment facilities in major markets such as Germany can continue to offset declining domestic commercial waste volumes by increasing imports from other European countries.¹

¹These and all other interpretations of the data are an assessment by ecoprolog. Accordingly, the responsibility for these statements lies solely with ecoprolog.

WtE Industry

Among WtE industry companies, the business climate rose marginally to 98.3 points (2024: 97.5). The index for the current business situation increased to 113.8 points (2024: 110.2), whereas business expectations declined slightly to 84.9 points (2024: 86.2).

Overall, 94% of respondents rated their current situation as good or satisfactory (2024: 90%). The majority (61%) described their current order backlog as sufficient, while 24% consider it comparatively large. Half of the companies reported that demand in the thermal waste treatment segment remained unchanged, whereas 28% observed an improvement.

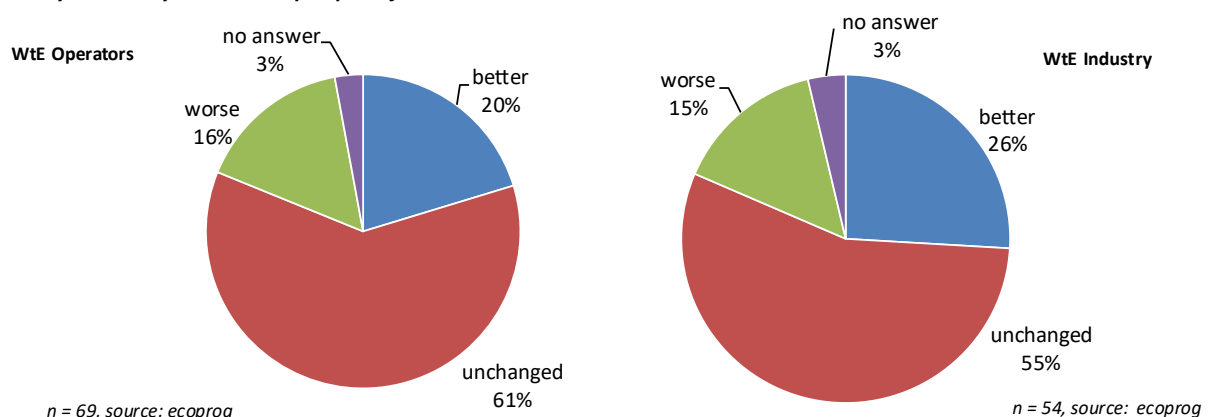
Order backlogs have mostly stabilised: 59% stated no change, 26% reported an increase.

Expectations for the coming year remain generally positive, although optimism has slightly declined compared to 2024. 26% (2024: 29%) expect their business to develop favourably, while 15% (2024: 14%) anticipate a decline.

Prices for construction, maintenance and modernisation of WtE plants are expected to remain stable or increase marginally. 46% of respondents expect prices to increase, 44% anticipate stability, and only 7% foresee a decrease.

Fig. 3: Business expectations among operators and industrial players

How do you assess your business prospects for the next 12 months?



Workforce development - employment in the WtE industry on the rise

For both operators and industry, staff numbers are expected to remain largely stable in the coming year. Among WtE plant operators, 81% do not expect any change in their workforce and 14% expect an increase.

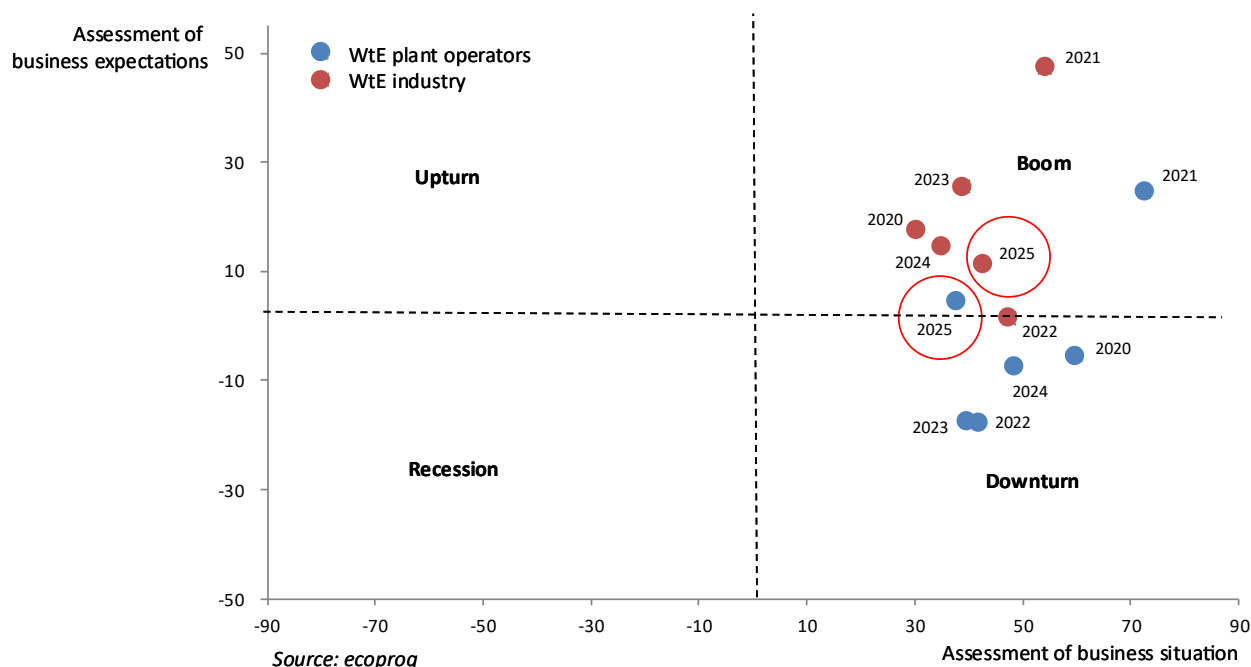
In the industry, 35% of respondents intend to expand their staff, compared to 28% in 2024. This indicates a renewed upward trend after previous years of limited staff growth.

Higher gate fees expected – especially in Germany

Following the positive outlook, operators also expect price adjustments in thermal waste treatment. In 2025, expectations for rising gate fees have further strengthened. 55% of the WtE plant operators surveyed expect higher gate fees in the next 12 months, while only 12% anticipate a decline. This confirms the upward trend that has already been evident in previous years.

The situation in Germany remains a key factor in this development, as the country accounts for a large proportion of survey participants. The CO₂ levy in thermal waste treatment, which was introduced in Germany in January 2024 as part of the national emissions trading system, continues to rise and is now reflected in gate fee calculations.

Fig. 4: Classification of the results



PFAS and hazardous waste

The issue of PFAS - extremely stable, water-, grease- and dirt-repellent organic compounds with strong carbon-fluorine bonds - is gaining importance in the WtE sector. Many operators are currently dealing with related regulatory and technical challenges.

45% of respondents expect that more PFAS-contaminated waste will undergo thermal treatment as recycling options are becoming increasingly limited. 38% identify the lack of standardised measurement methods as a challenge, while 25% expect the introduction of mandatory PFAS measurements in air, water and residues.

Regarding hazardous waste, one third of operators (33%) report adequate treatment capacities in their regions, while 23% see a general lack of capacity. Another 28% say that they are currently unable to assess the situation.

When asked about the development of hazardous waste quantities, 43% state that they do not accept hazardous waste at their plants. 32% observe stable amounts, and 9% note increases due to stricter classifications of hazardous substances.

Market regions and industry perspectives

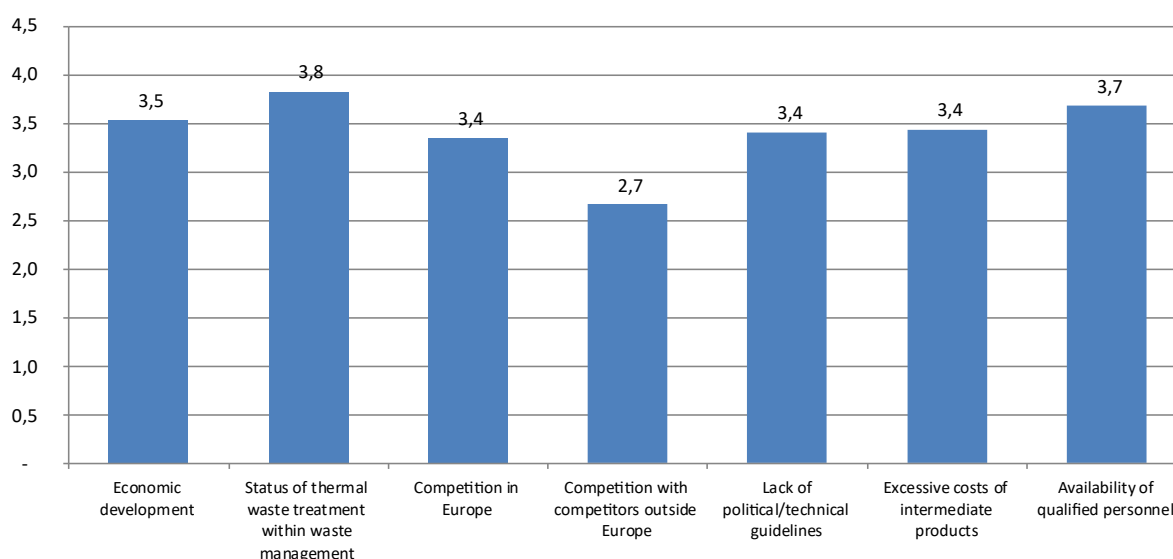
For the WtE industry, the importance of most global markets has slightly declined compared to 2024. On average, the ratings fell by about 0.2 points. Only Europe emerges as more important, rising from 4.2 to 4.4 on a scale from 1 (unimportant) to 5 (very important). This underlines Europe's continuing role as the core market for the WtE industry, especially against an aging plant asset in many countries.

In the assessment of the challenges facing companies, the "status of thermal waste treatment within the framework of waste management" received the highest average rating (3.8). This concerns, for example, the equal treatment of thermal treatment and landfilling in the future CO₂ pricing. Other relevant factors include the availability of qualified personnel (3.7) and the overall economic development (3.5).

The subject of hazardous waste incineration is becoming increasingly significant for the industry. 30% of companies are already active in this field, while another 15% consider entering the market. However, 28% indicate that the topic does not fit their portfolio, and 19% cannot yet assess its future significance.

Fig. 5: Challenges for industry

How do you assess the following challenges for your company? (1 = low, 5 = high)



n = 54, source: ecoprolog

The WtE industry barometer has been elaborated annually since 2012. For the 2025 survey, we questioned around 500 operators of thermal waste treatment plants and over 700 plant manufacturers and suppliers in the WtE industry worldwide. Participants had the option of completing an online questionnaire or submitting their responses via e-mail or fax. The survey was conducted in September 2025.

ecoprolog GmbH carried out the survey and the evaluation. As a respected industry expert, ecoprolog assists clients from Germany and abroad in dealing with implementation-oriented management issues with political, technical or economic backgrounds in the sectors of environmental and energy technology. We work in the fields of strategy consulting, market and competition analyses as well as multi-client studies.

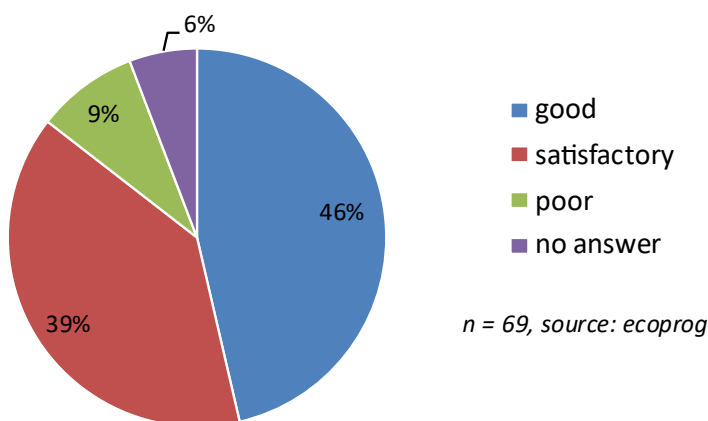
For each valid response to the industry barometer, ecoprolog will donate €10 to SOS Children's Villages.

Data annex

Survey of operators of thermal waste treatment plants

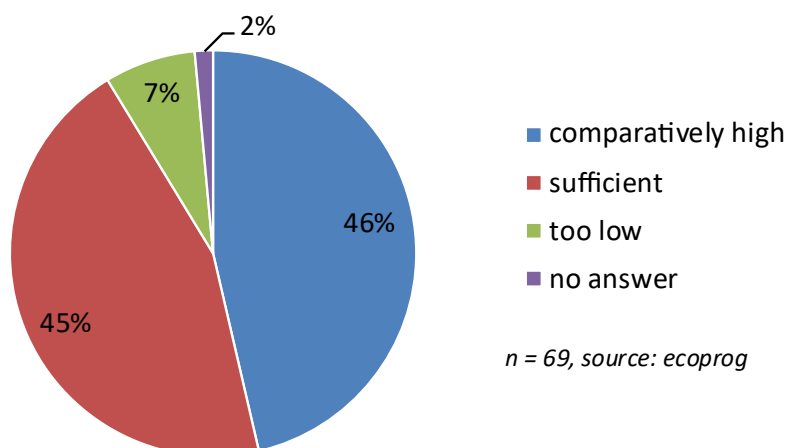
Current business situation

How do you assess your current business situation?



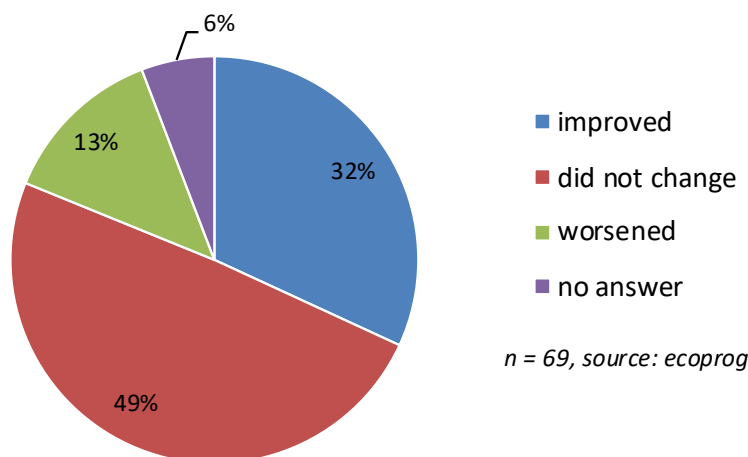
Current capacity

How do you assess the current capacity utilisation of your plant?



Demand in the past 12 months

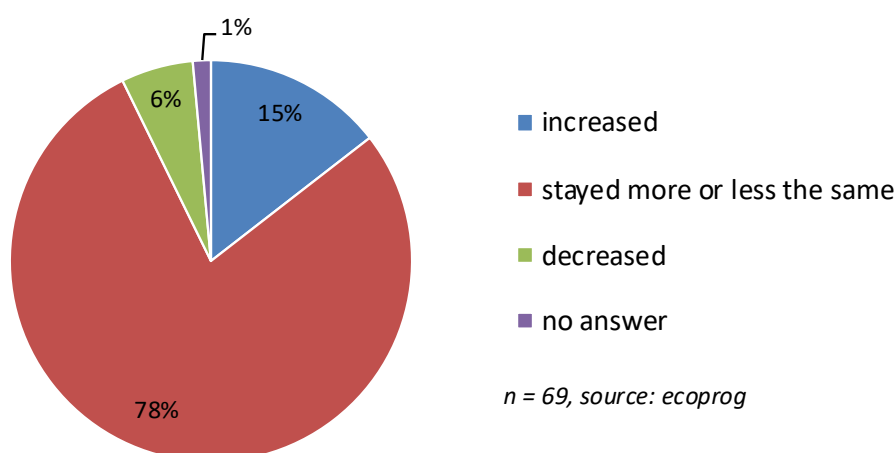
In which way has the demand on the spot market for municipal waste developed in the past 12 months? The demand has ...



n = 69, source: ecoprolog

Capacity utilisation in the past 12 months

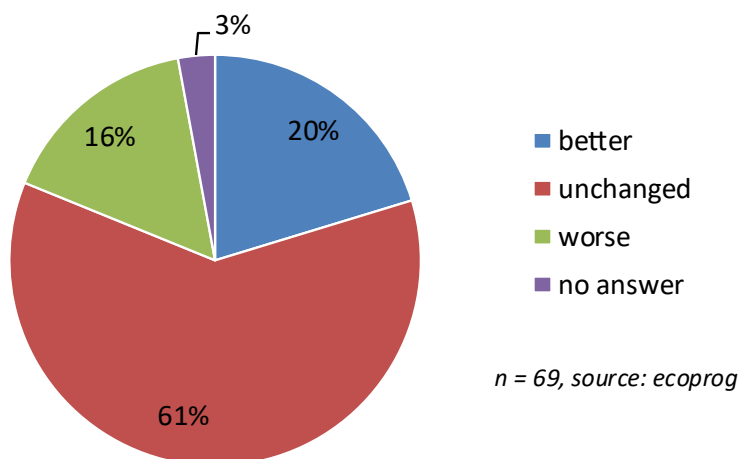
In the past 12 months, the capacity utilisation of your plant has...



n = 69, source: ecoprolog

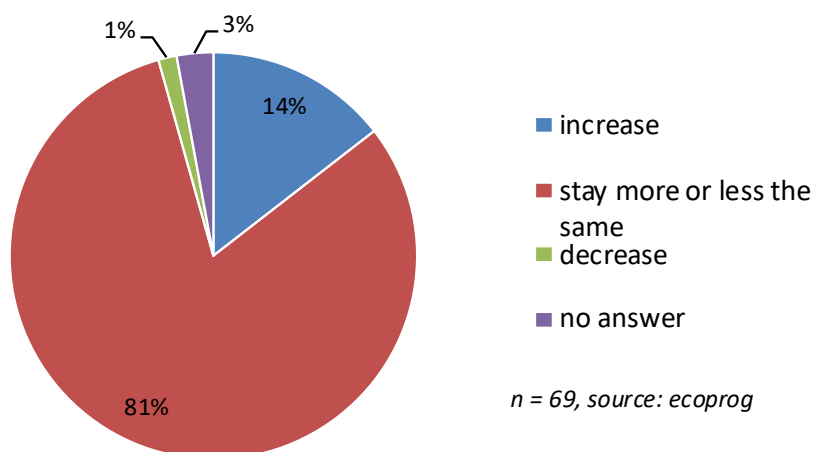
Business prospects

How do you assess your business prospects for the next 12 months?



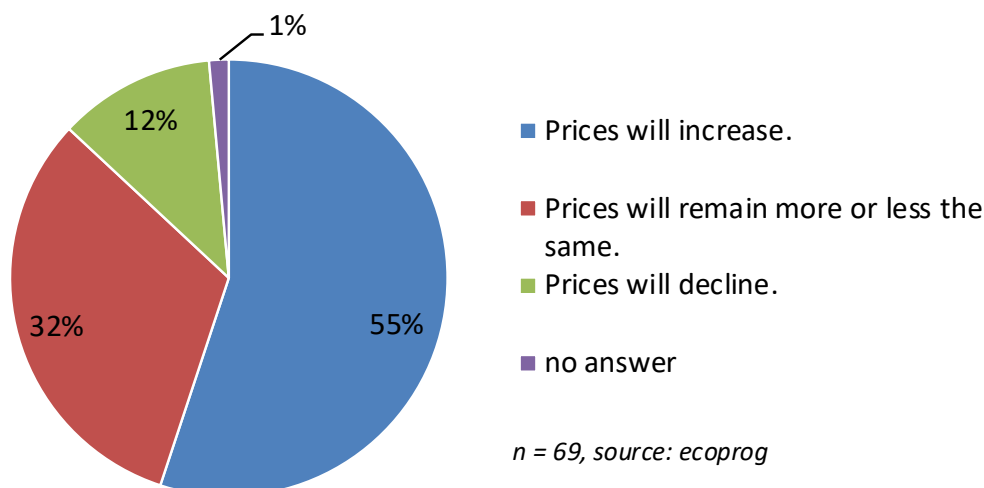
Workforce development

In the next 12 months, the number of employees working for your company will ...



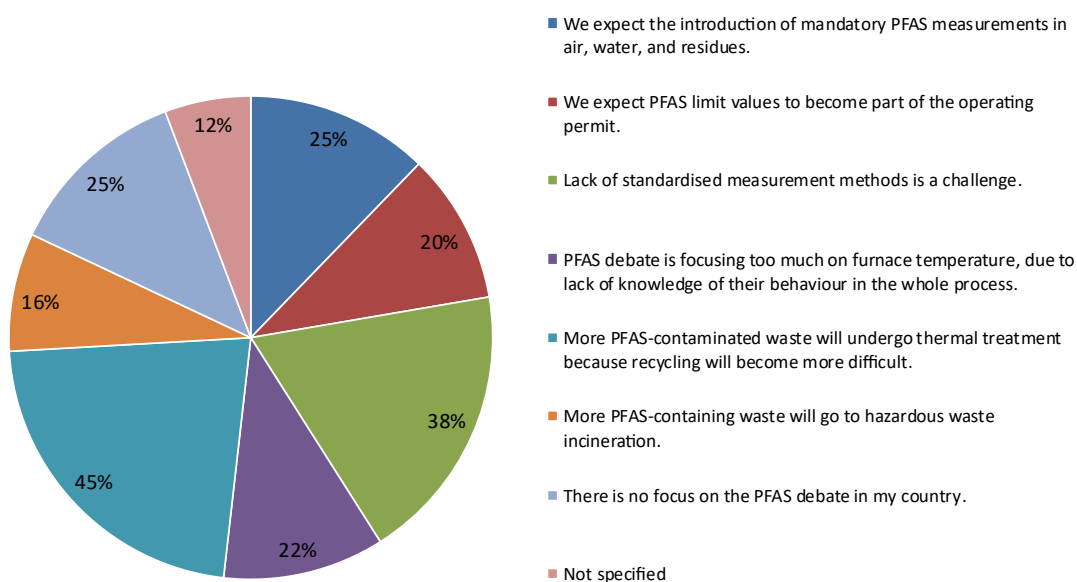
Gate fee development

Which development do you expect for gate fees in the 12 months to come?



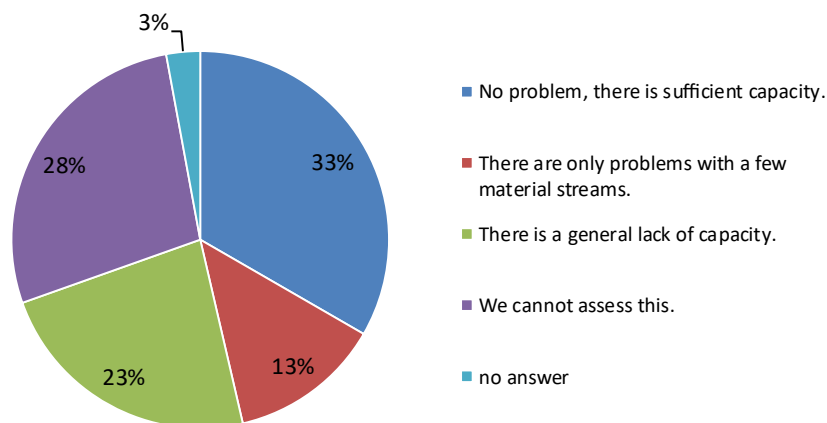
Importance of PFAS

How do you assess the significance of PFAS for your plant? (multiple answers possible)



Regional disposal of hazardous waste

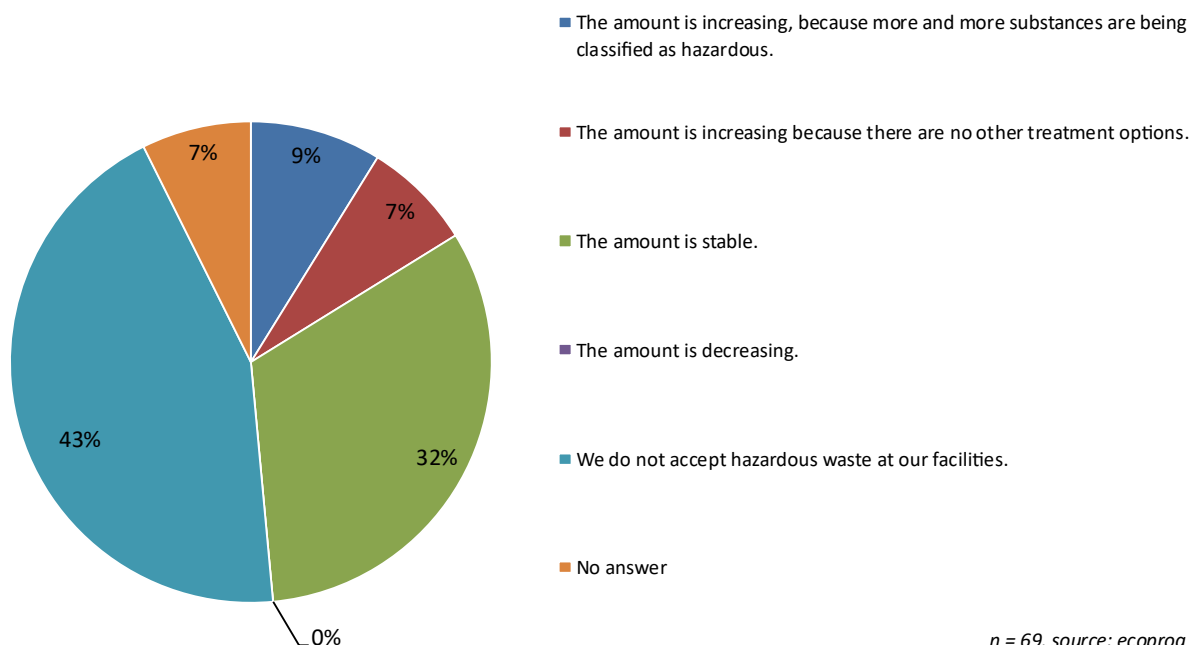
How do you assess the disposal/management of hazardous waste in your region?



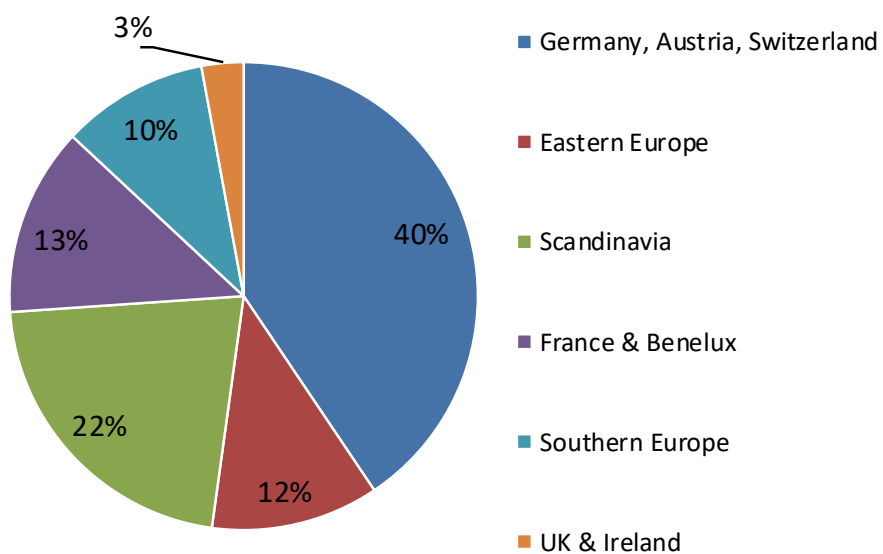
n = 69, source: ecoprolog

Disposal of hazardous waste in own plant

How is the proportion of hazardous waste developing in your plant? (Multiple answers possible)



n = 69, source: ecoprolog

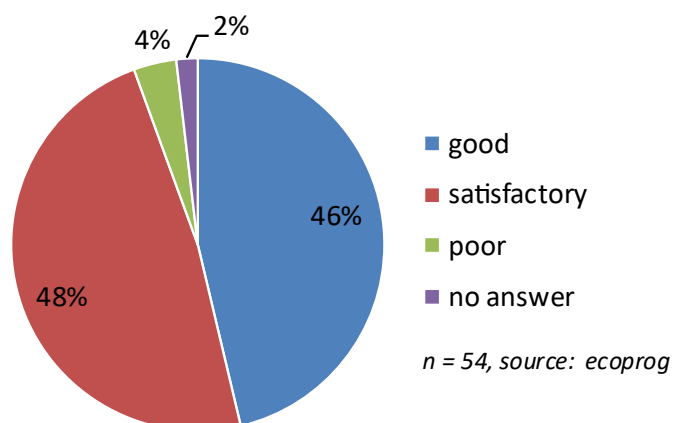
Plant locations of survey participants by region

n = 69, source: ecoprolog

Survey of WtE industry and WtE plant manufacturers

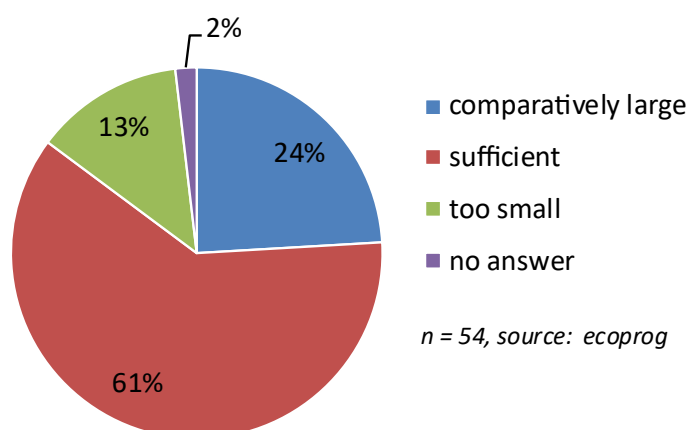
Current business situation

How would you describe your current business situation?



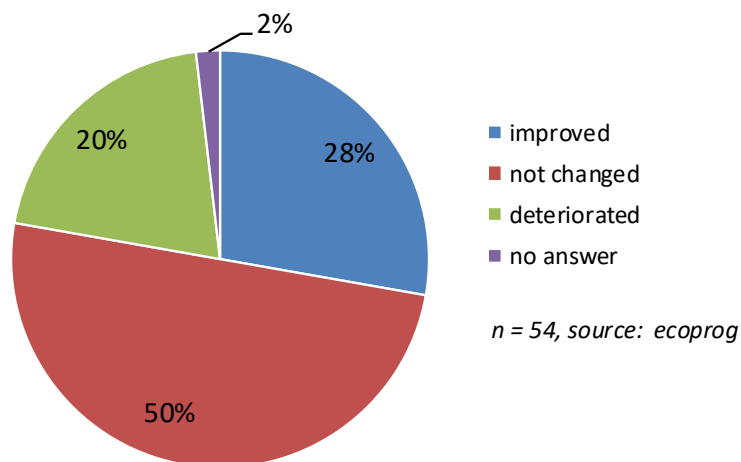
Present order backlog

How do you assess your present order backlog in the thermal waste treatment segment?



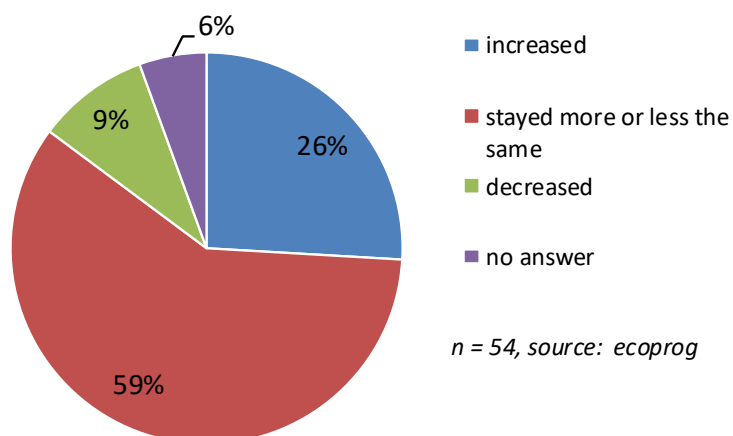
Demand in the past 12 months

In which way has the demand in the thermal waste treatment segment changed in the past 12 months? The demand has ...



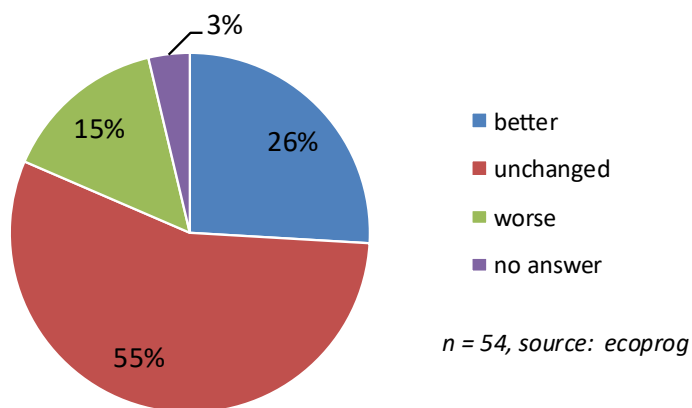
Order backlog in the past 12 months

In the past 12 months, your order backlog in the thermal waste treatment segment has ...



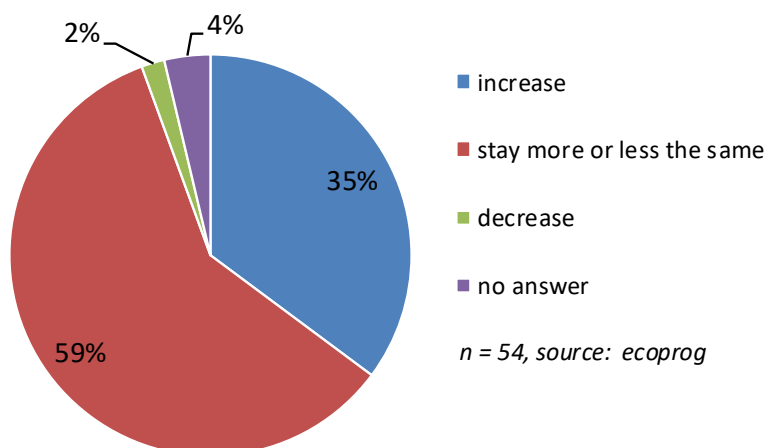
Business prospects

How do you assess your business prospects for the next 12 months?



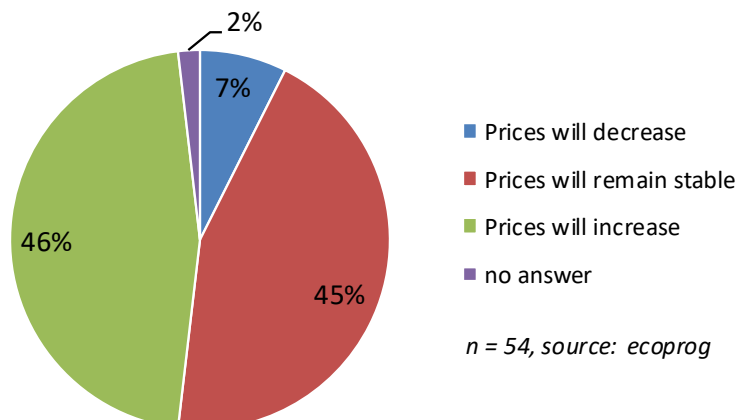
Workforce development

In the next 12 months, the number of your staff will ...



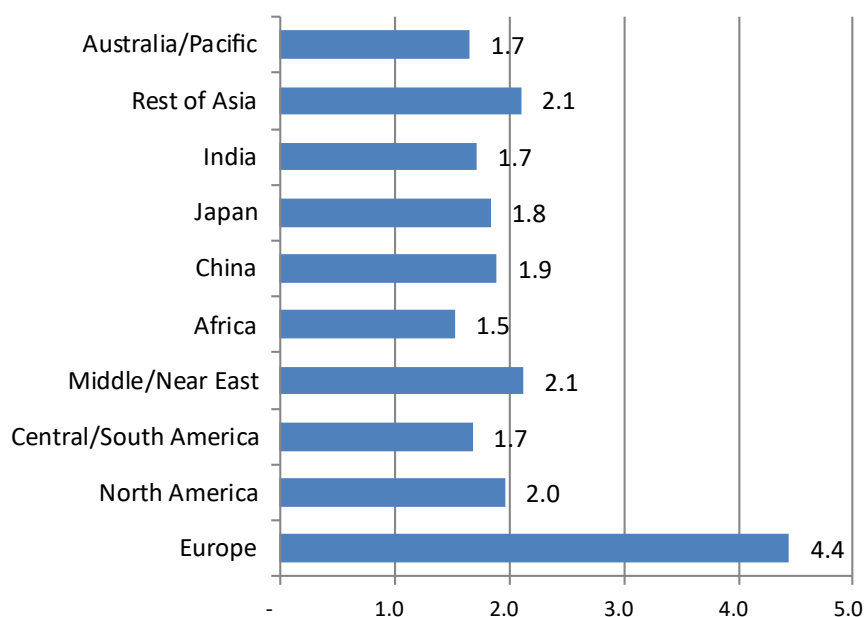
Future price development

In which way do you expect the prices for constructing, maintaining and modernising thermal waste treatment plants to develop in the next 12 months?



Current market regions

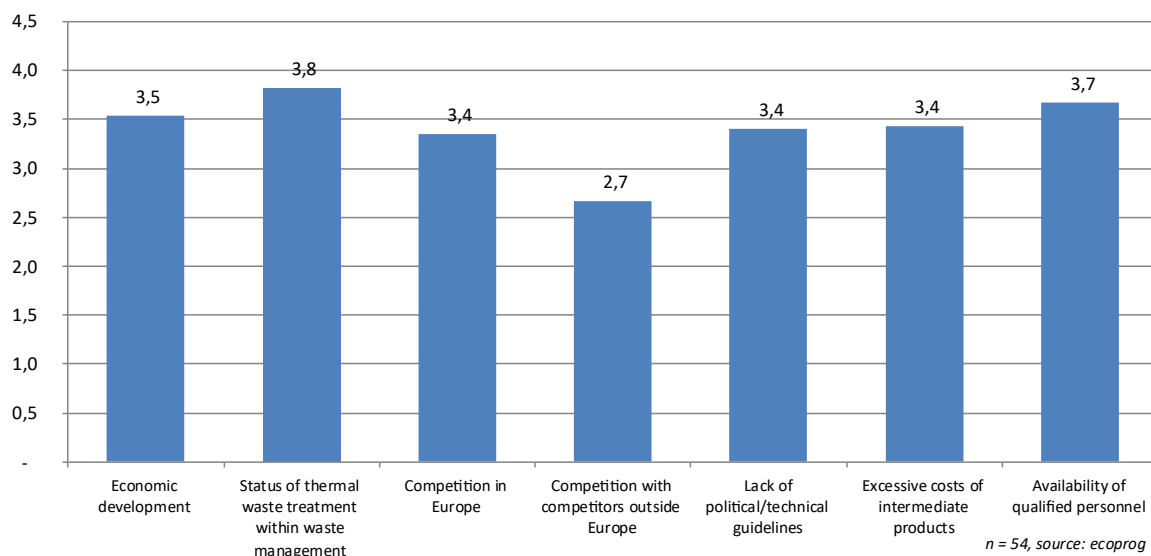
*How important are the following markets for your company today?
(1=unimportant, 5=very important)*



n = 54, source: ecoprolog

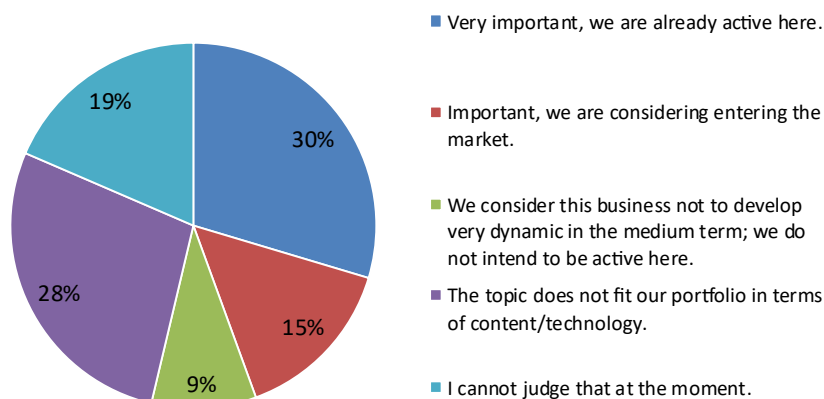
Challenges for industry

How do you assess the following challenges for your company? (1 = low, 5 = high)



Hazardous waste business area

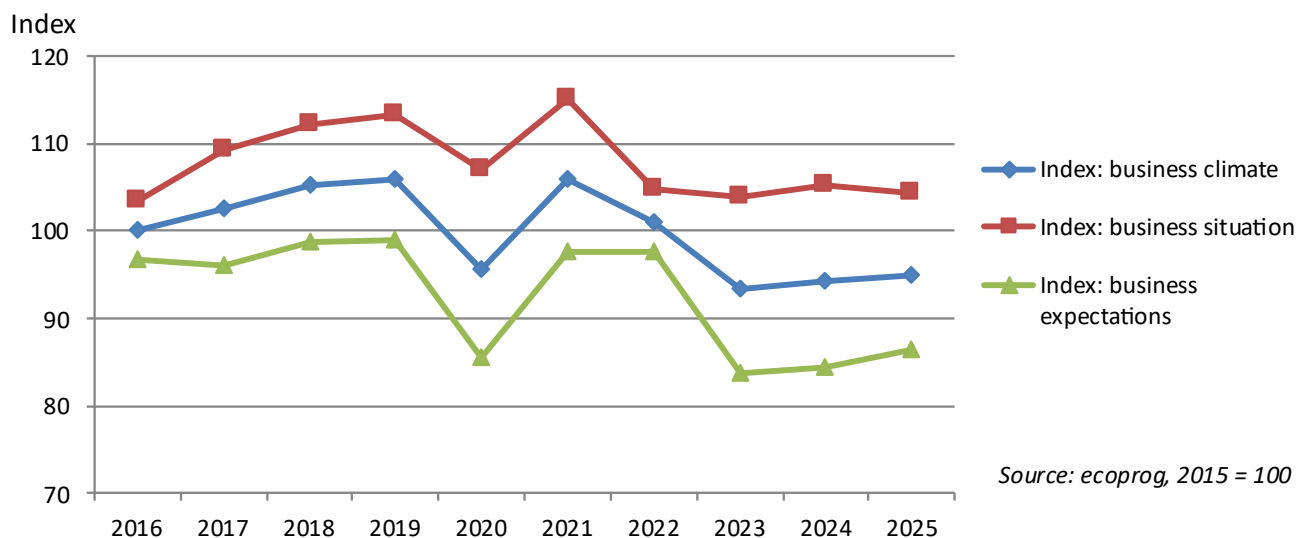
The amount of hazardous waste is increasing, partly as a result of stricter limits. How do you assess the business area of hazardous waste incineration?



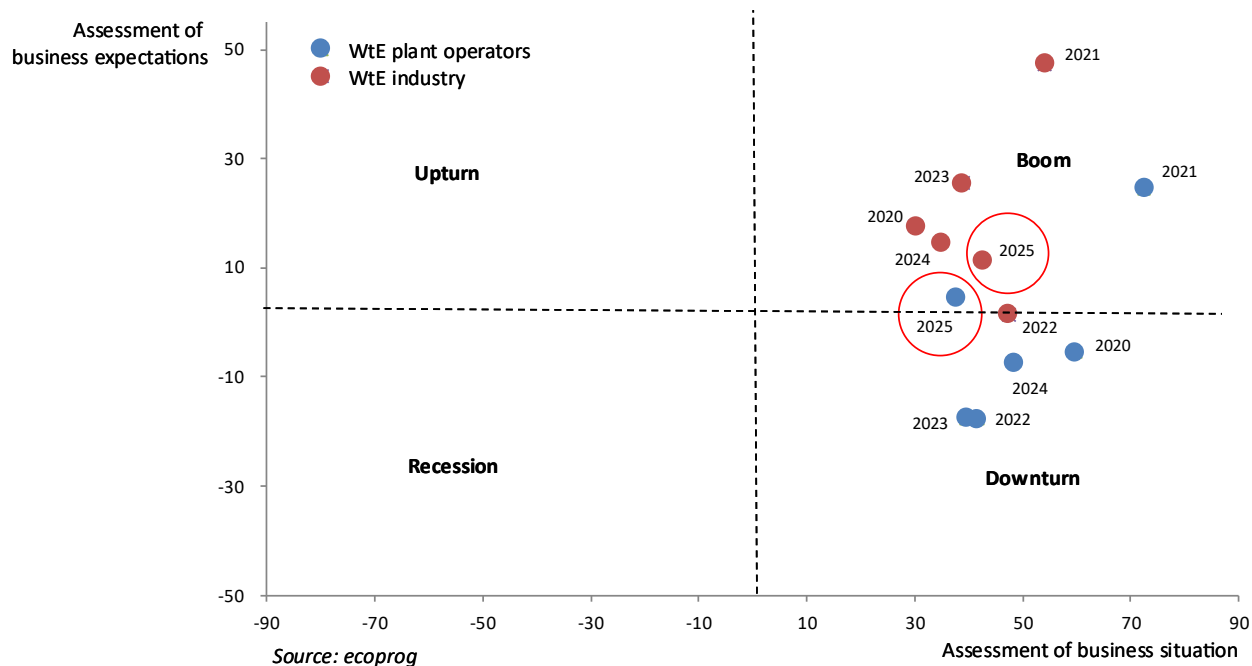
n = 54, source: ecoprogram

Time series

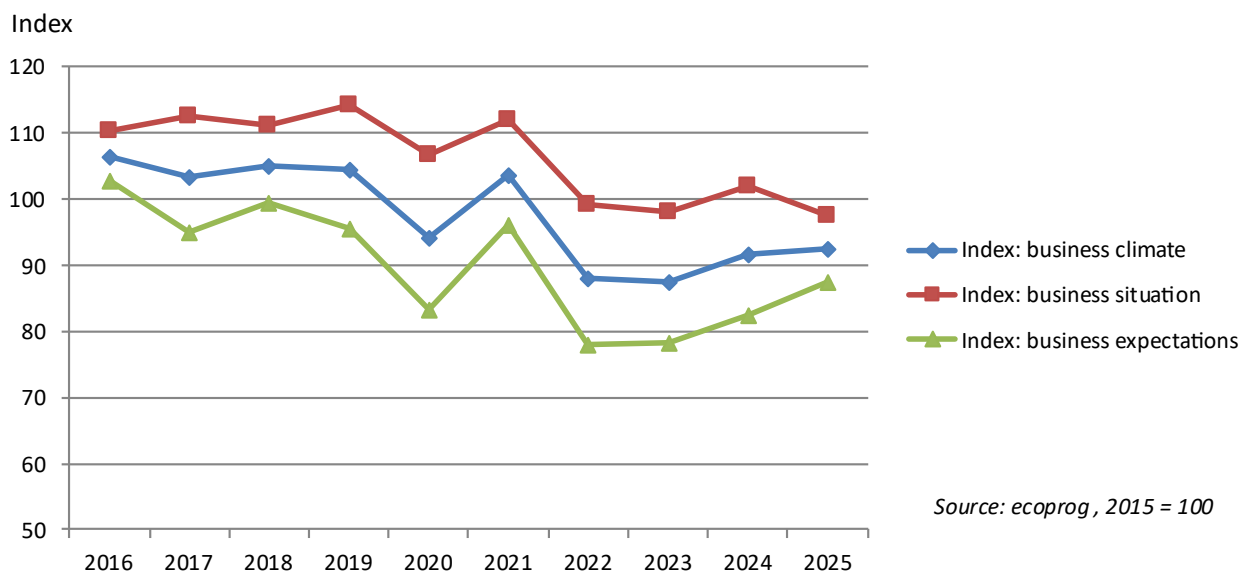
Industry barometer operators & industry



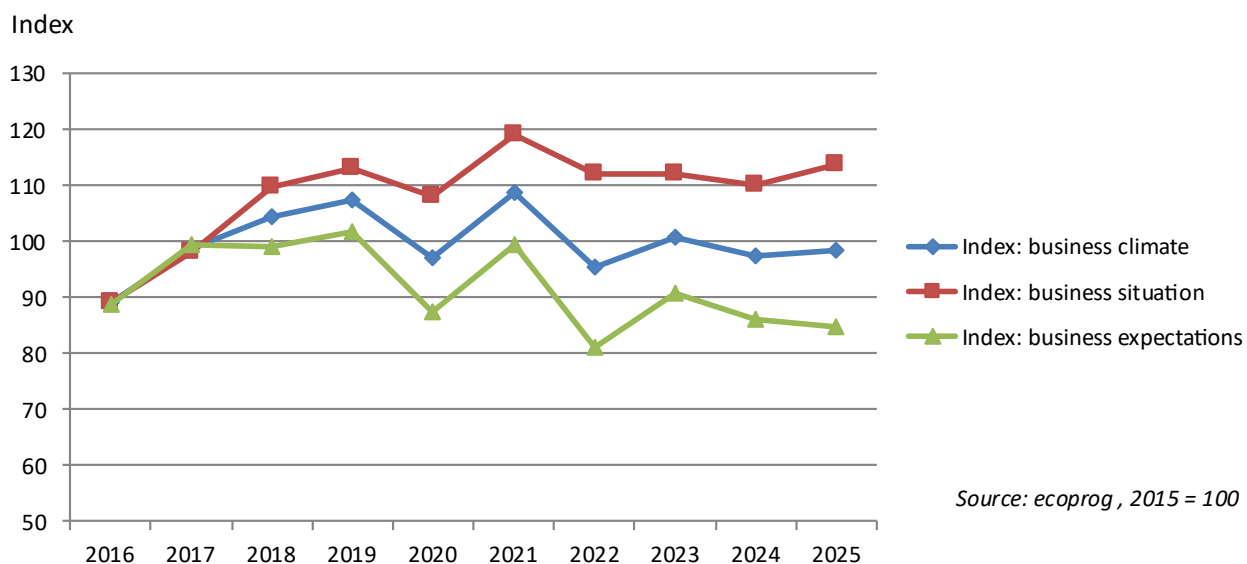
Classification of results



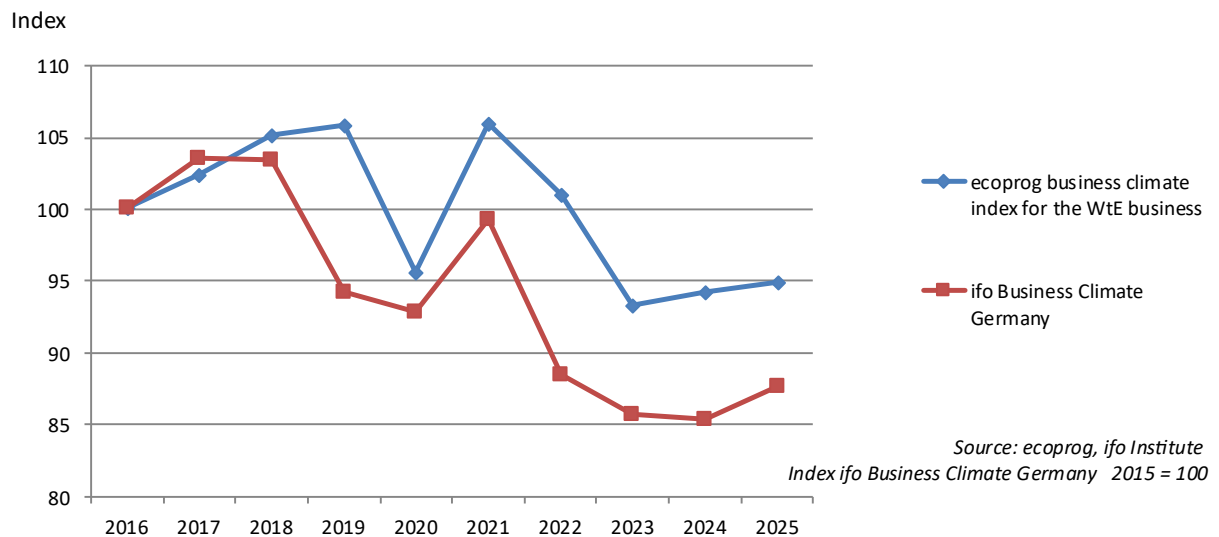
Industry barometer for operators of thermal waste treatment plants



Industry barometer WtE-Industry



Comparison of ifo business climate index



The calculation of the business climate index was carried out according to the method developed by the ifo Institute in the 1950s.

By courtesy of ifo Institute.

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