CEWEP

ecoprog

WtE plant in Roskilde, Denmark, with kind permission of MARTIN GmbH für Umwelt- und Energietechnik

Industry Barometer
Waste-to-Energy
2017

Contents

Comment of CEWEP

As in the years before, CEWEP (*Confederation of European Waste-to-Energy Plants*) supported ecoprog in conducting a survey regarding the Waste-to-Energy (WtE) industry barometer 2017 and has encouraged its members to actively participate.

The survey displays that the operators of Waste-to-Energy plants remain confident and most of them have positive expectations on future developments. 16% of the operators foresee an increase in the number of their employees, the year before it was 5%.

The survey 2017 tackles two important topics for the operators: bottom ash recycling and future emission limit values.

Whereas the majority of the responding operators (58%) consider that their plants already apply the economically and technically most feasible technology to recover bottom ash, 22% plan further investments and for 20% improving the material recovery of bottom ash is even one of their most important goals for the near future.

CEWEP foresees that further improvement of metal recycling from bottom ash will be incentivised if this will finally count towards recycling targets as discussed in the EU Circular Economy Package.

Another hot topic for the operators is the Best Available Techniques Reference Document (BREF) for waste incineration, which is currently under revision. Although the waste incineration sector is already the most stringently regulated industrial sector, it is discussed if future emission limit values, based on the future legally binding BREF conclusions, will be even stricter.

The European Commission has published the first draft in May 2017, but as it is not clear yet how the final BREF conclusions will look like, respondents showed great uncertainty about its impact. More than a third said they were not capable of assessing this topic. The same number of respondents is sceptical of whether the environmental benefits would justify the efforts. Only about a fourth of the participating companies believe the new specifications to be appropriate and that they could be implemented at reasonable efforts.

The WtE sector is proud of the high environmental standards it has achieved and CEWEP is strongly contributing to the ongoing work regarding the revision of the BREF waste incineration. Some emission levels achieved by WtE plants are so low and close to detection limits that they are even difficult to measure with the appropriate accuracy. Any further requirements and even stricter emission limit values have to be assessed properly bearing in mind the benefits to the environment as a whole. In some cases a very small reduction in emission values, even if achievable, would come at such a high cost in terms of reagents and energy efficiency that the environmental benefit would be questionable and investment costs would be disproportional.

Industry Barometer WtE: companies remain confident

The business climate in the Waste-to-Energy (WtE) sector continues to be positive. Past years' boom has consolidated for the plant operators, while the WtE industry shows a slight upward trend – after pessimism had increased recently.

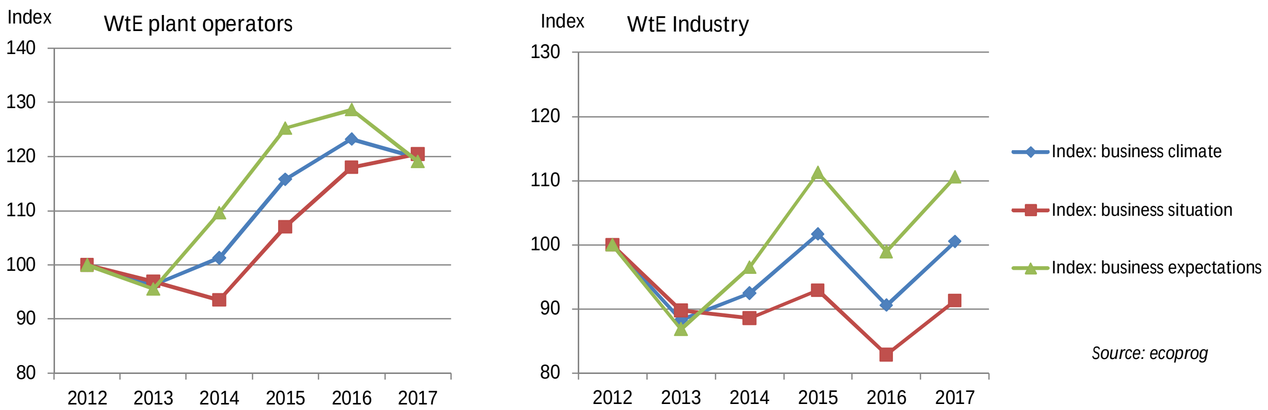
Plant operators experience high-level consolidation

The business climate amongst the WtE plant operators has deteriorated slightly over the past year, but still reaches a very high level of 44 points.

The operators consider their current business situation to be a bit better than in the past. 79% of them report a comparatively high plant utilisation and, consequently, 74% assess their business situation as good. About a third of the operators even report their demand to have increased again in comparison to the previous year. Only 5% are facing decreased demands. Not a single WtE plant operator considers its current business situation as unsatisfactory.

Business expectations, however, have deteriorated over the previous year. While in 2016 about 40% of the operators expected their business to improve, only 22% did so in 2017. Nevertheless, overall expectations remain to be positive and only 2% of the operators expect their business to decline in the future.

Figure 1: Development of business climate amongst WtE operators and WtE industry



This stabilisation at a high level is a result of the waste amounts.[1] They have steadily increased since 2012, because of, amongst others, the positive development of the economy in Central

[1] This and all of the following data interpretation are assessments of ecoprog, which is therefore solely responsible for these statements.

Europe, the declining prices for (secondary) raw materials and, at least in many Continental European regions, the increasing waste exports from the UK and Ireland.

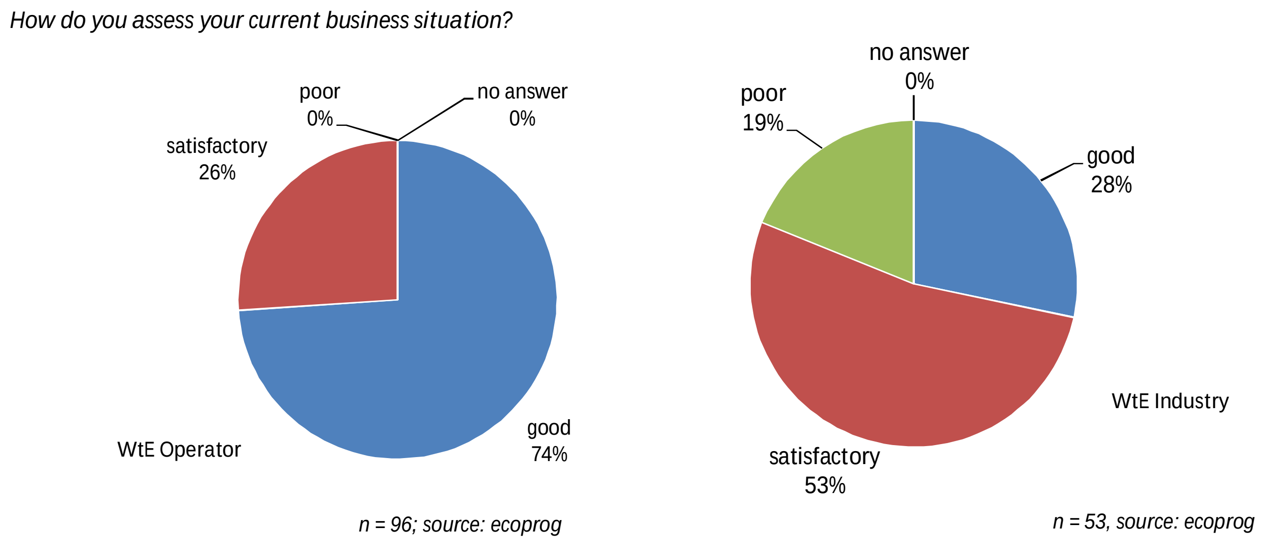
Most of these influencing factors are still in effect, however, there was no increase over the past 12 months. First indications for a decrease have evolved in some sectors, e.g. the exports from the UK. By contrast, the economic outlook in Southern Europe improved slightly when compared to 12 months ago. The overall economic conditions for the WtE operators therefore remain positive.

As most plants will not be able to further enhance their degree of utilisation, a fourth of the operators expect prices and gate fees to keep on increasing. However, this is less than in last year's survey (60%).

Mood in the industry improves

The mood amongst plant manufacturers, engineering and industrial companies working in the thermal waste recovery sector has brightened. Contrary to 2016, most respondents assessed their current business situation to be positive (even though only by a slim majority). A relative and, again, slim majority also considers the current order backlog as satisfactory or even comparatively large. A third of the participating companies report their demand to have increased over the past 12 months.

Figure 2: Business situation for operators and industry

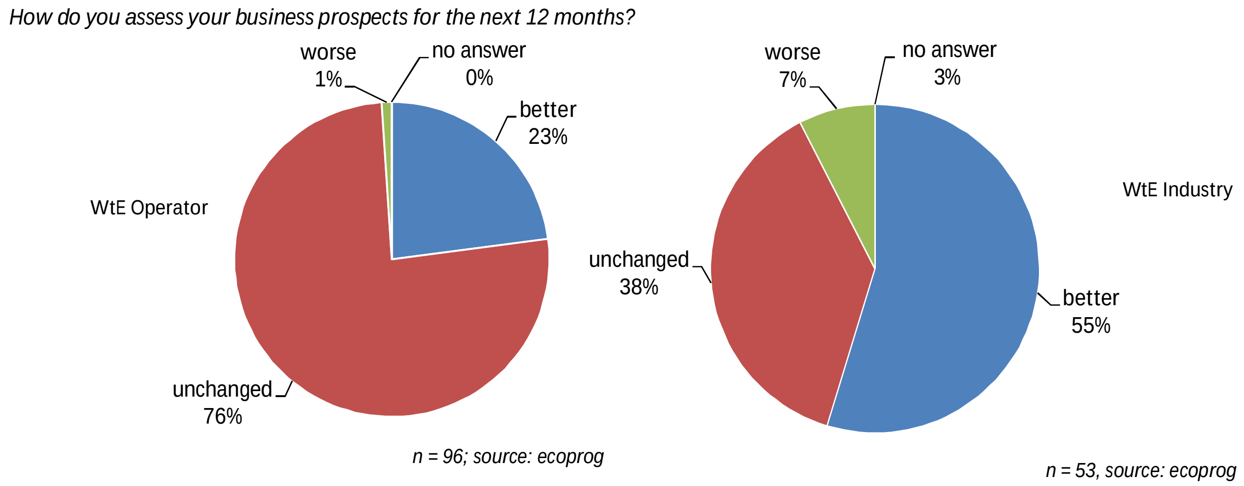


Business expectations are significantly better than the assessment of the current business situation. 41% of the participating industrial companies expect their business to improve in the future and only 6% anticipate business to deteriorate.

For the majority of the responding companies, the European market remains the most important one. Their answers therefore mainly reflect projects in the EU. Some countries, such as France or Poland, have actually unfolded potential for new construction projects and more of those have been awarded in the recent past. In countries such as Germany, it has been easier for operators to determine modernisation measures for their somehow dated infrastructure, thanks to the booming demand of the past months.

However, these results have to be interpreted carefully, as investments in WtE infrastructure greatly depend on political decisions. If such decisions are delayed, investments are postponed as well. In 2015, the sector showed great optimism for their business expectations, also because of the Circular Economy Package of the EU. A year later, however, this was assessed somewhat sceptically.

Figure 3: Business expectations of operators and industry



Investment in metal recycling

The discussions regarding the EU Circular Economy Package also include the question to what extent the recycling capacity of thermal waste recovery plants should be considered in the future. It was proposed to include metals recovered from the ashes into the national recycling quotas. Whereas the majority of the operators (58%) consider their plants to already be applying the economically and technically most feasible technology, still about 22% plan to invest in this respect and about 20% said that improving the material recovery of slags and ashes is one of their most important goals for the near future. This would therefore also be an option for the respective states to increase the recycling quota.

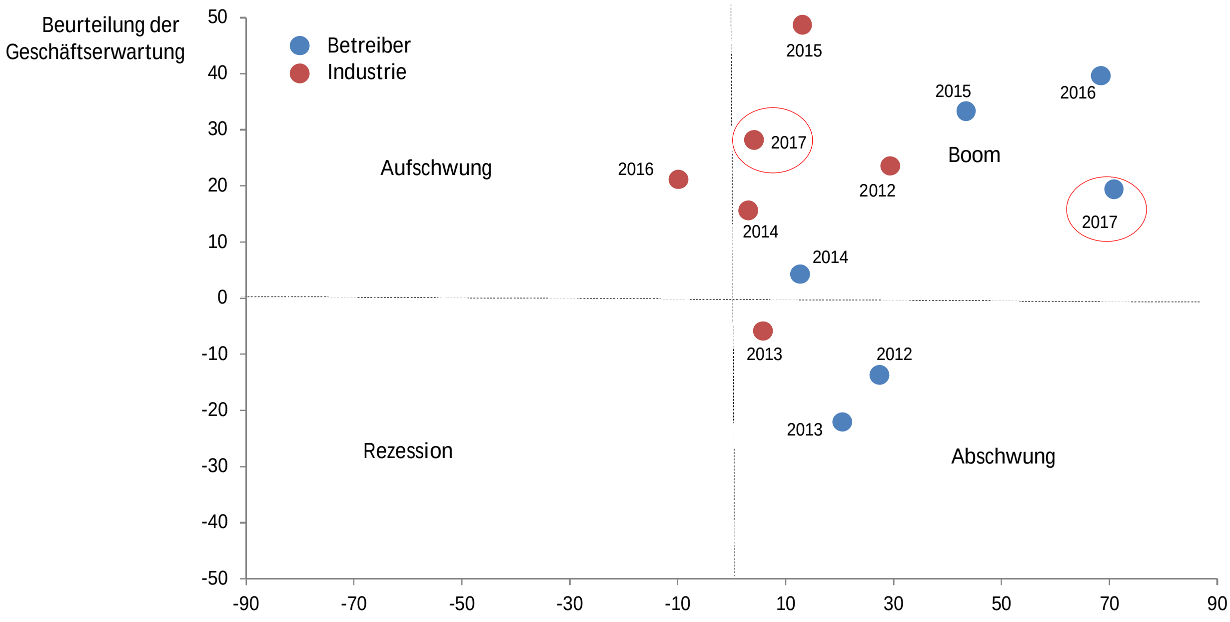
Respondents sceptical about BREF limit values

The participating companies showed great uncertainty when it came to the future emission limit values under the revision of the Best Available Techniques Reference Document (BREF) for waste incineration. The BREF determines the state of the art for waste incineration in the EU. The version in effect dates back to 2006 and is currently being revised. A first draft for a new BREF was published in May 2017. It could lead to stricter emission limit values in comparison to current permits.

More than a third of the respondents said they were not capable of assessing this topic. Uncertainties prevail concerning the question of technical feasibility and the lack of clarity regarding to how the final BREF conclusions will look like.

Another third of the respondents are sceptical of whether the environmental benefits would justify the efforts. Only about a fourth of the participating companies believe the new specifications to be reasonable and that they could be implemented at reasonable efforts. The industrial companies are slightly more optimistic.

Figure 4: Classification of results



Quelle: ecoprog

Europe remains most important market

As expected, Europe remains the by far most important market for the WtE companies included in our survey. However, this importance has decreased slightly. China, the rest of Asia as well as the Middle East follow in the ranking. The markets in Australia/Oceania and India have gained somewhat in importance.

The assessment of the situation in Central and South America has again deteriorated (slightly), reflecting the current political crises, e.g. in Brazil or Venezuela. Brazil had especially raised great expectations in light of the formerly stable economic growth and the reform of the waste management system as initiated in 2010.

The WtE industry barometer was carried out for the first time in 2012. For the survey in 2017, we questioned about 500 operators of thermal waste recovery plants and more than 700 plant manufacturers and suppliers in the WtE industry worldwide. Participants could choose to either complete an online questionnaire or to answer via fax. The survey was conducted between mid-August and mid-September 2017.

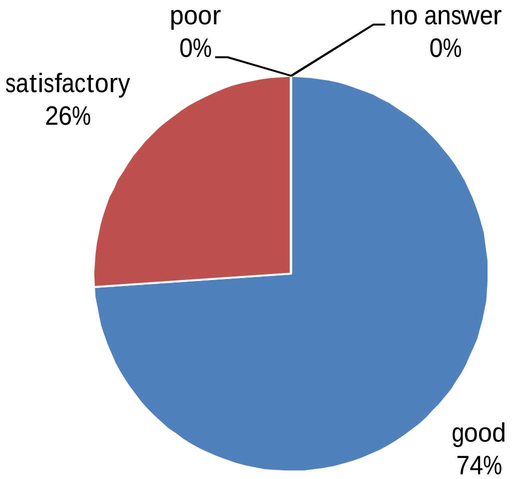
ecoprog GmbH was responsible for executing the survey and the evaluation. As a respected industry expert, ecoprog assists clients from Germany and abroad in dealing with implementation-oriented management issues with political, technical or economic backgrounds in the sectors of environmental and energy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

Annex: data

Survey of operators of thermal waste recovery plants

Current business situation:

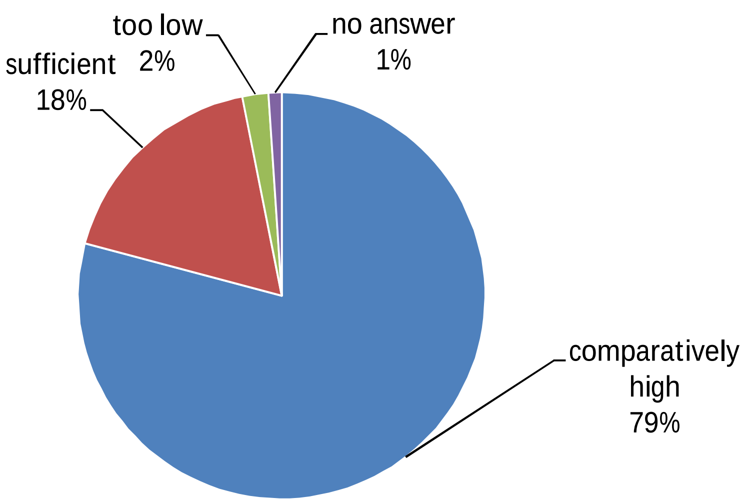
How do you assess your current business situation?



n = 96; source: ecoprog

Current utilisation

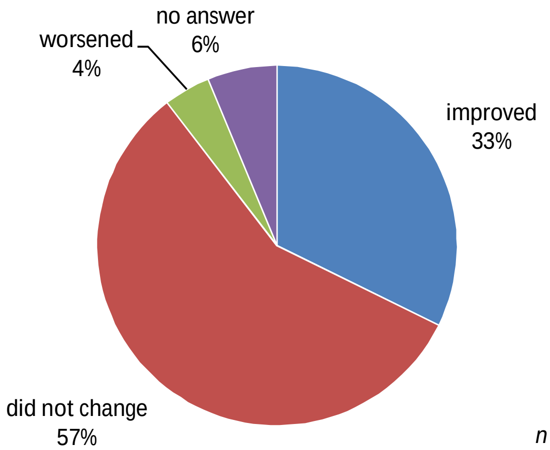
How do you assess the current capacity utilisation of your plant?



n = 96; source: ecoprog

Demand in the past 12 months

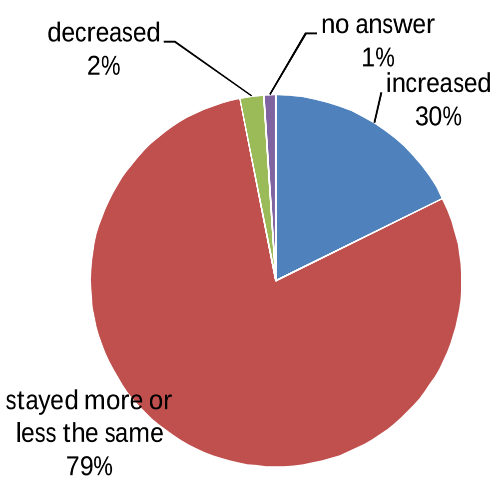
In which way has the demand on the spot market for municipal waste developed in the past 12 months? The demand has ...



n = 96, source: ecoprog

Development of utilisation in the past 12 months

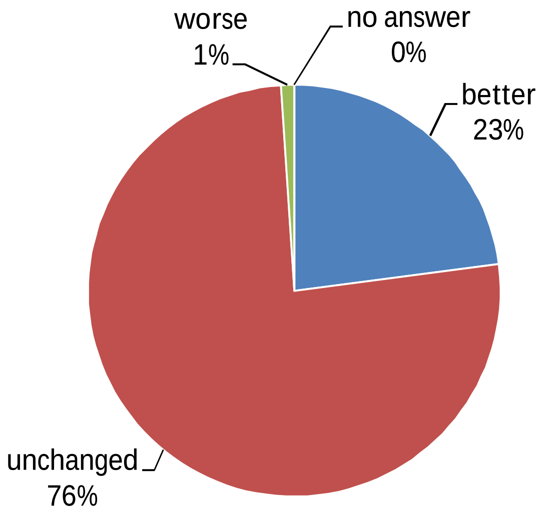
In the past 12 months, the capacity utilisation of your plant has...



n = 96; source: ecoprog

Business expectations

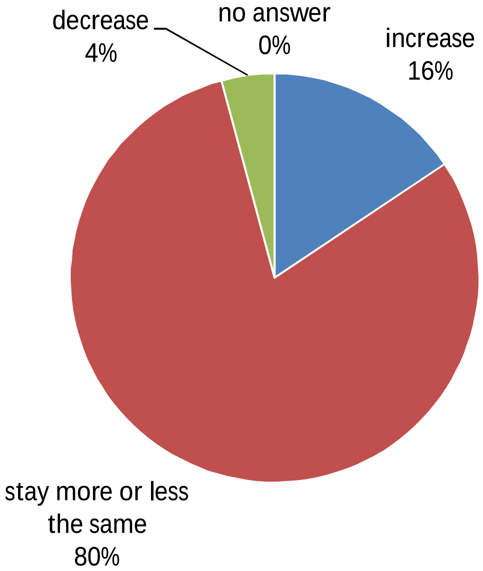
How do you assess your business prospects for the next 12 months?



n = 96; source: ecoprog

Employment

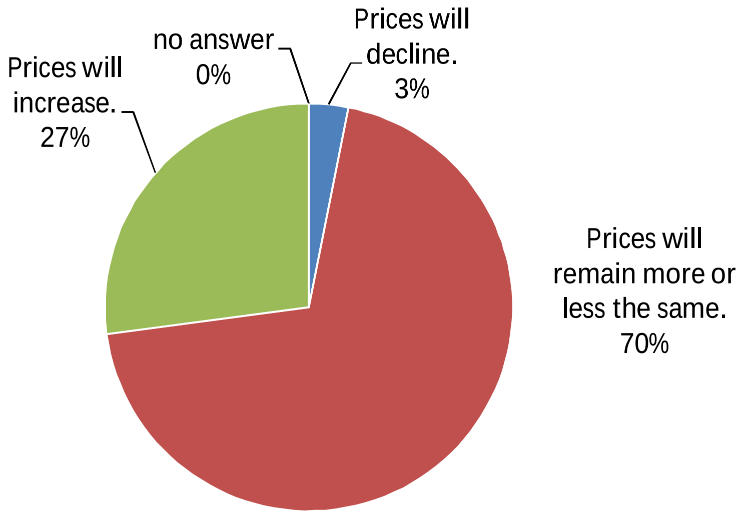
In the next 12 months, the number of employees working for your company will ...



n = 96; source: ecoprog

Gate fees

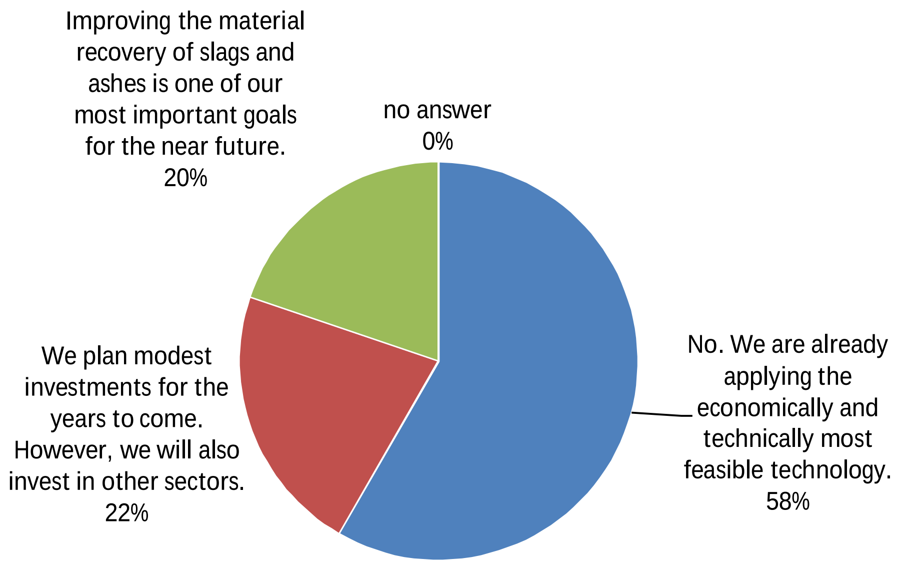
Which development do you expect for gate fees in the 12 months to come?



n = 96; source: ecoprog

Metal recovery from ashes

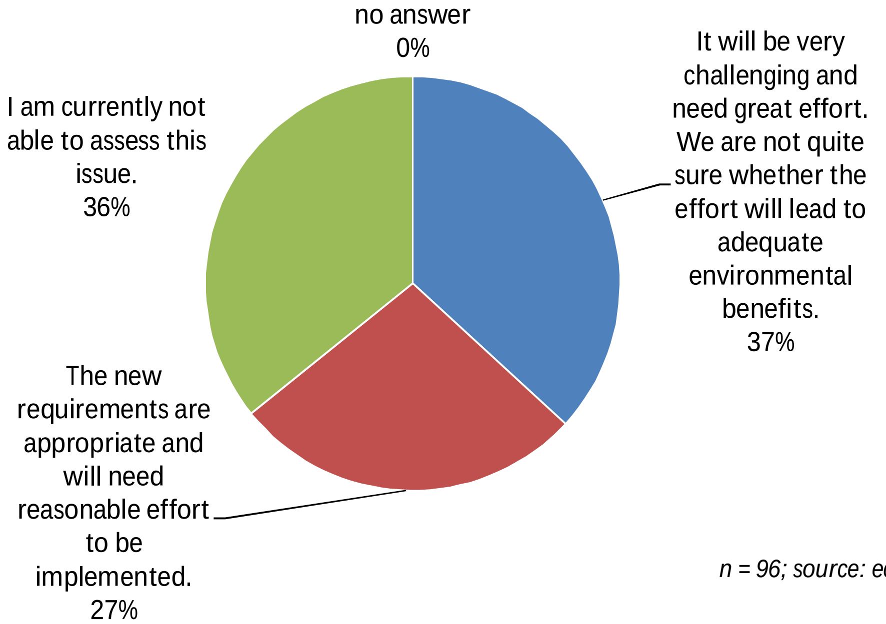
Under the EU Circular Economy Package, material recovery of ashes from thermal waste treatment should also be taken into account for a country's recycling quota. In the years to come, do you plan to invest significantly in this respect?



n = 96; source: ecoprog

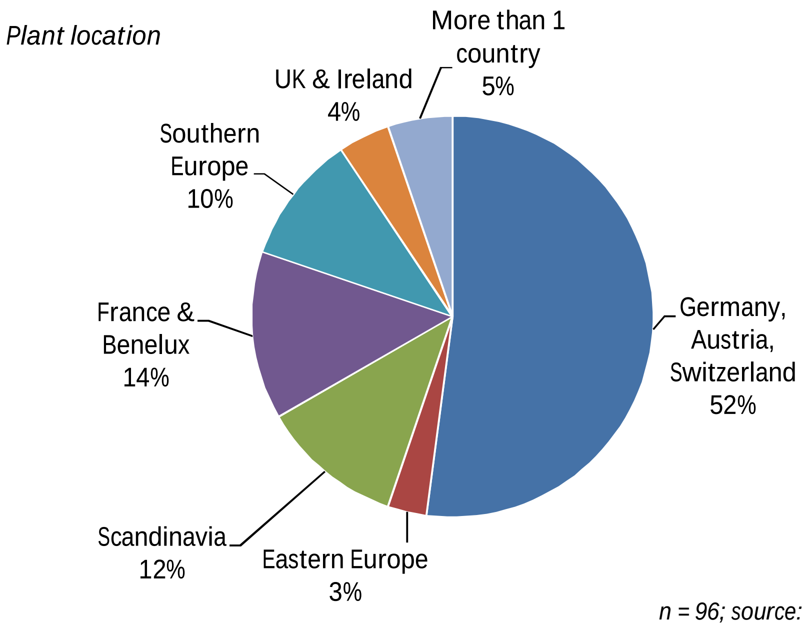
BREF revision

The first draft of the updated Best Available Techniques Reference Document (BREF) for waste incineration envisages ambitious requirements for the future limit values of WtE plants. What do you think about these specifications?



n = 96; source: ecoprog

Location of plants of survey participants by region

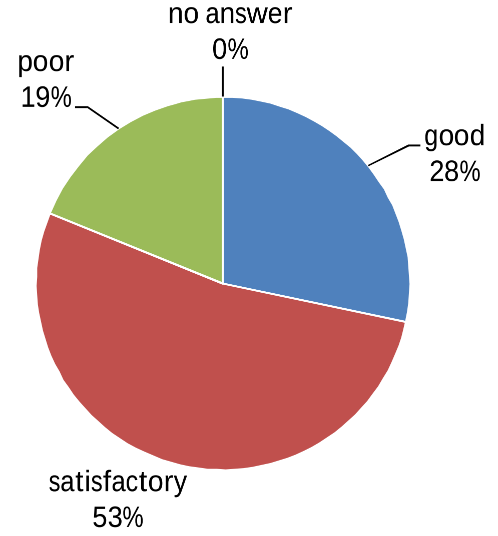


n = 96; source: ecoprog

Survey of WtE industry and WtE plant manufacturers

Current business situation

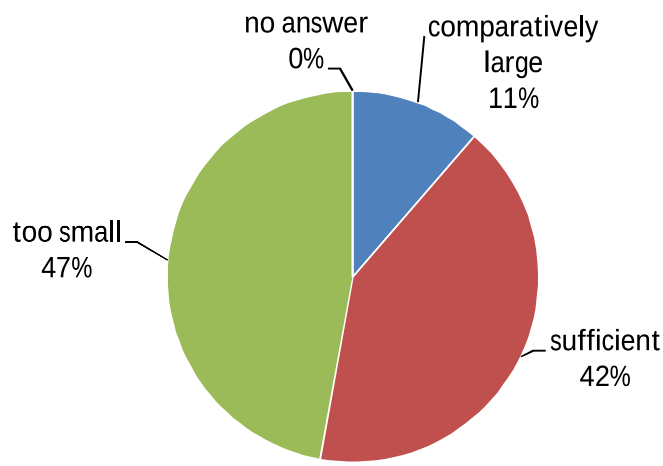
How would you describe your current business situation?



n = 53, source: ecoprog

Current order backlog

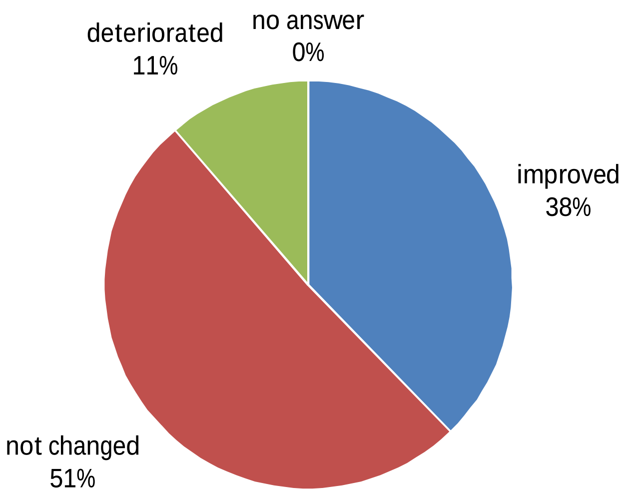
How do you asses your present order backlog in the thermal waste treatment segment?



n = 53, source: ecoprog

Demand in the past 12 months

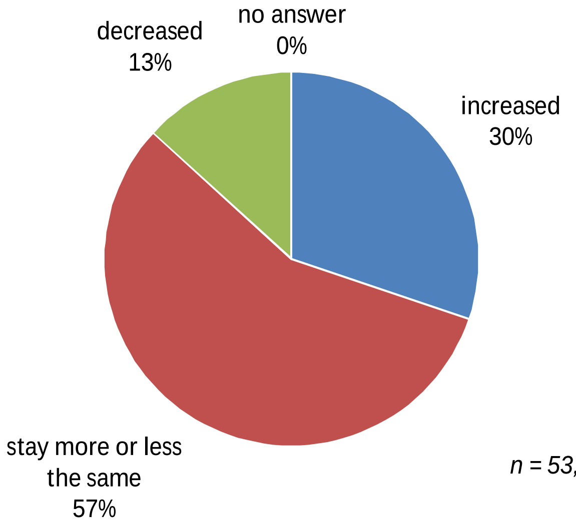
In which way has the demand in the thermal waste treatment segment changed in the past 12 months? The demand has …



n = 53, source: ecoprog

Order backlog in the past 12 months

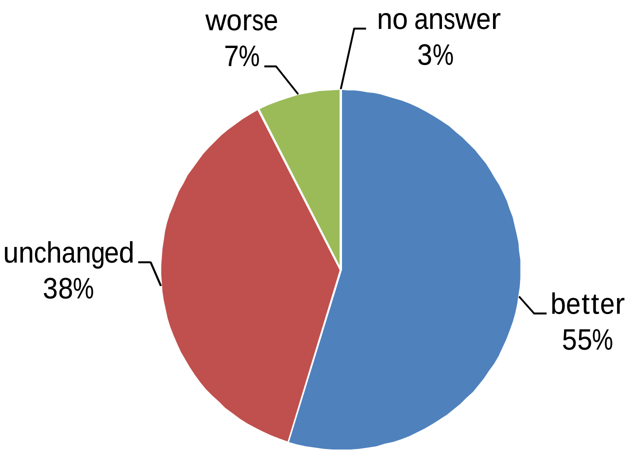
In the past 12 months, your order backlog in the thermal waste treatment segment has …



n = 53, source: ecoprog

Business expectations

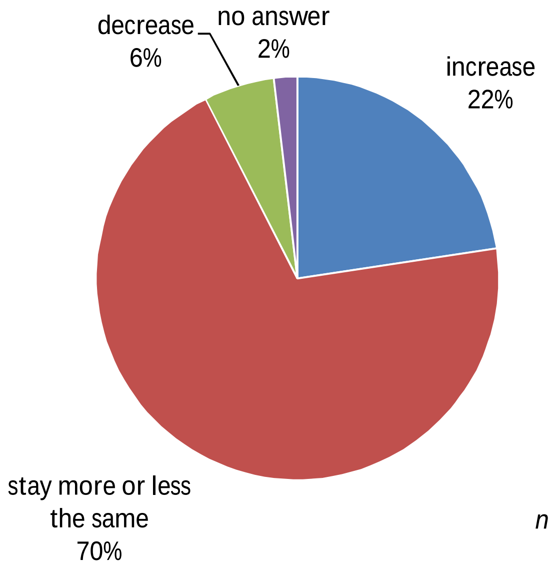
How do you assess your business prospects for the next 12 months?



n = 53, source: ecoprog

Employment

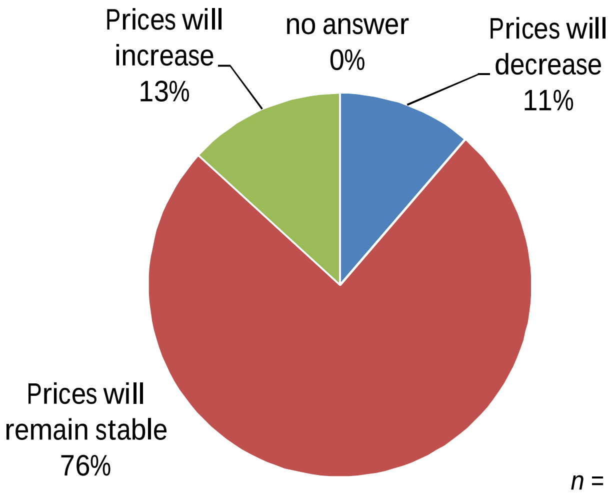
In the next 12 months, the number of your staff will ...



n = 53, source: ecoprog

Future price development

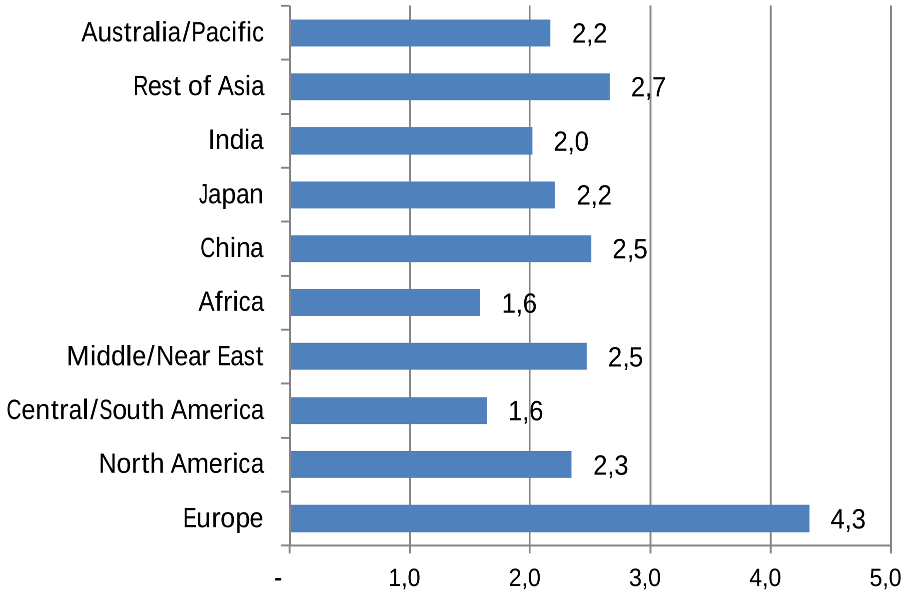
In which way do you expect the prices for constructing, maintaining and modernising thermal waste treatment plants to develop in the next 12 months?



n = 53, source: ecoprog

Current market regions

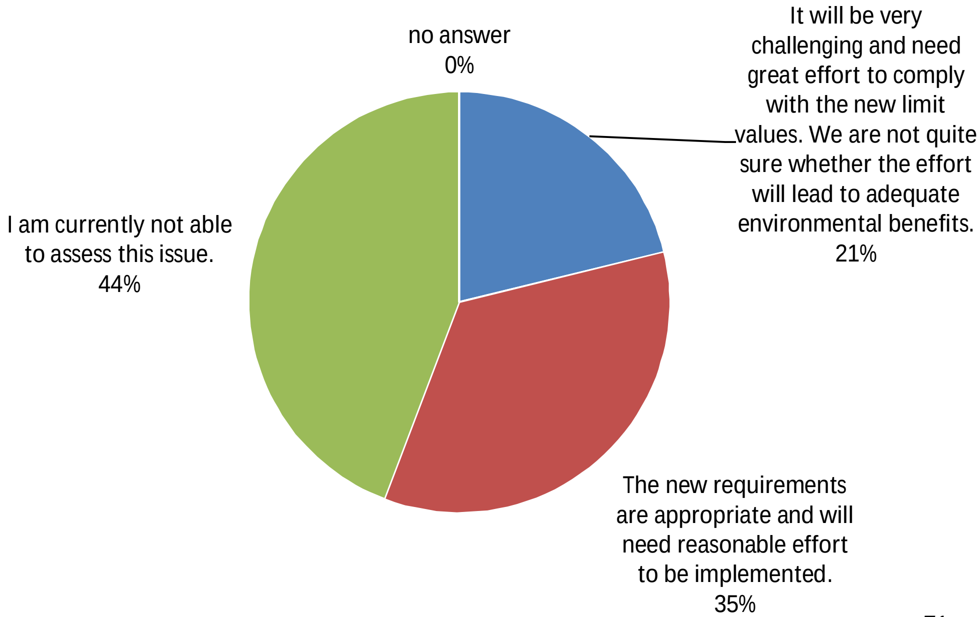
How important are the following markets for your company today? (1=unimportant, 5=very important)



n = 53, source: ecoprog

BREF revision

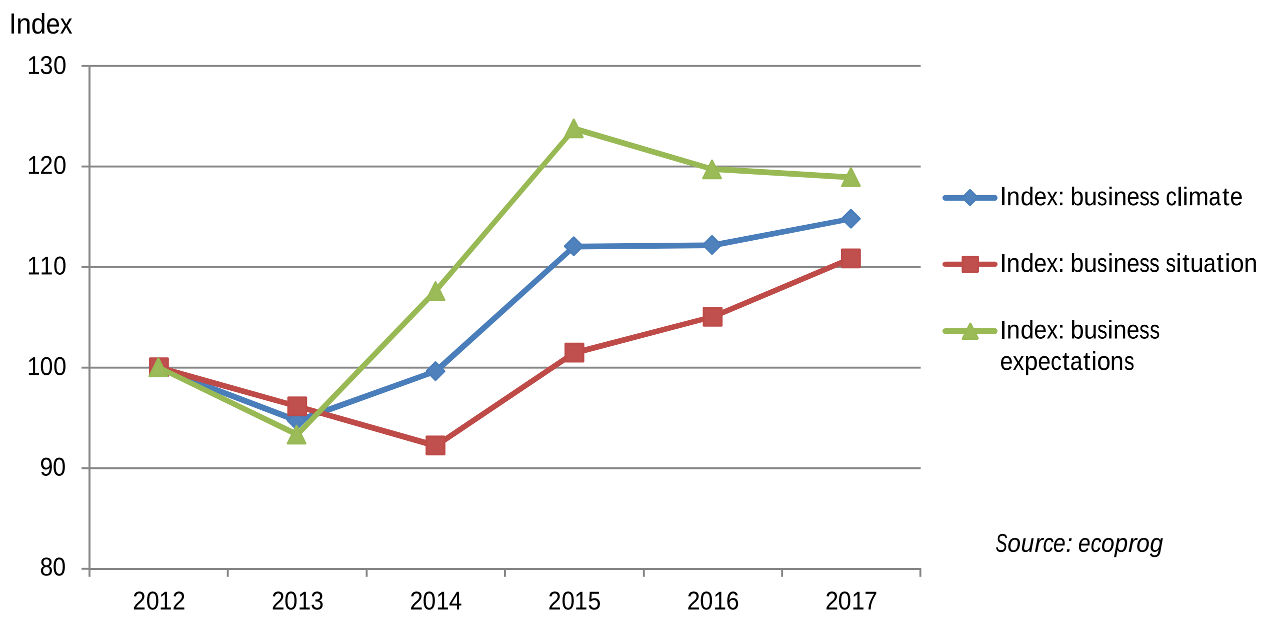
The first draft of the updated Best Available Techniques Reference Document (BREF) for waste incineration envisages ambitious requirements for the future limit values of WtE plants. What do you think about these specifications?



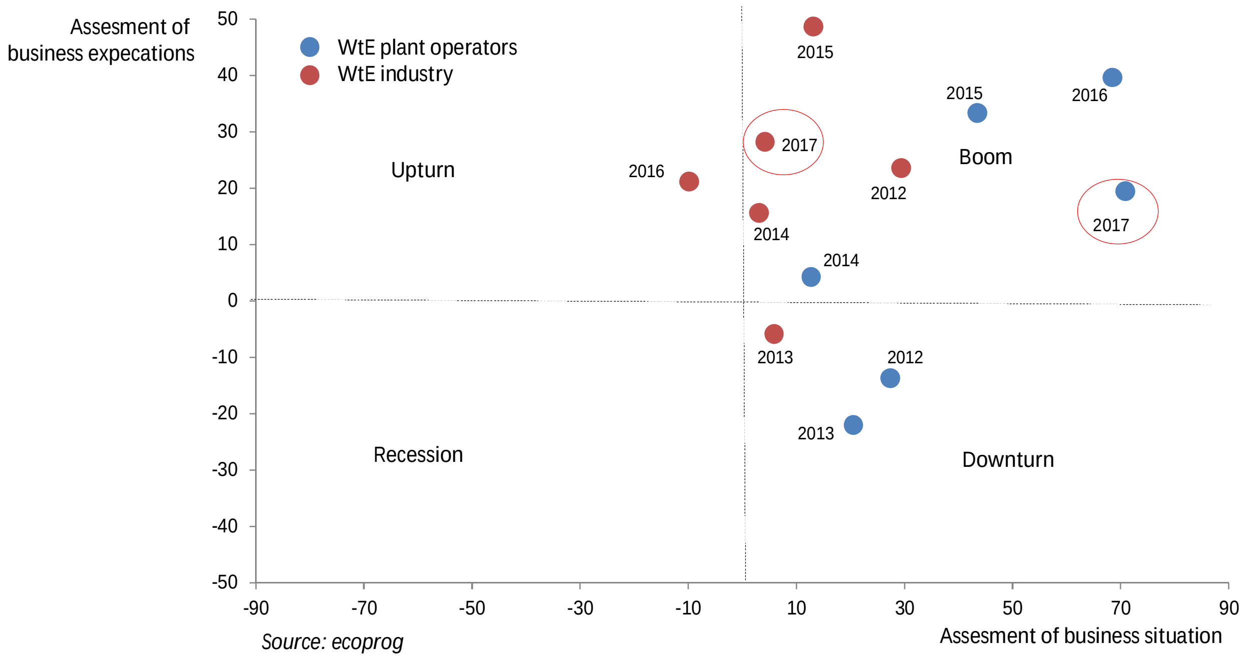
n = 71; source: ecoprog

Time series

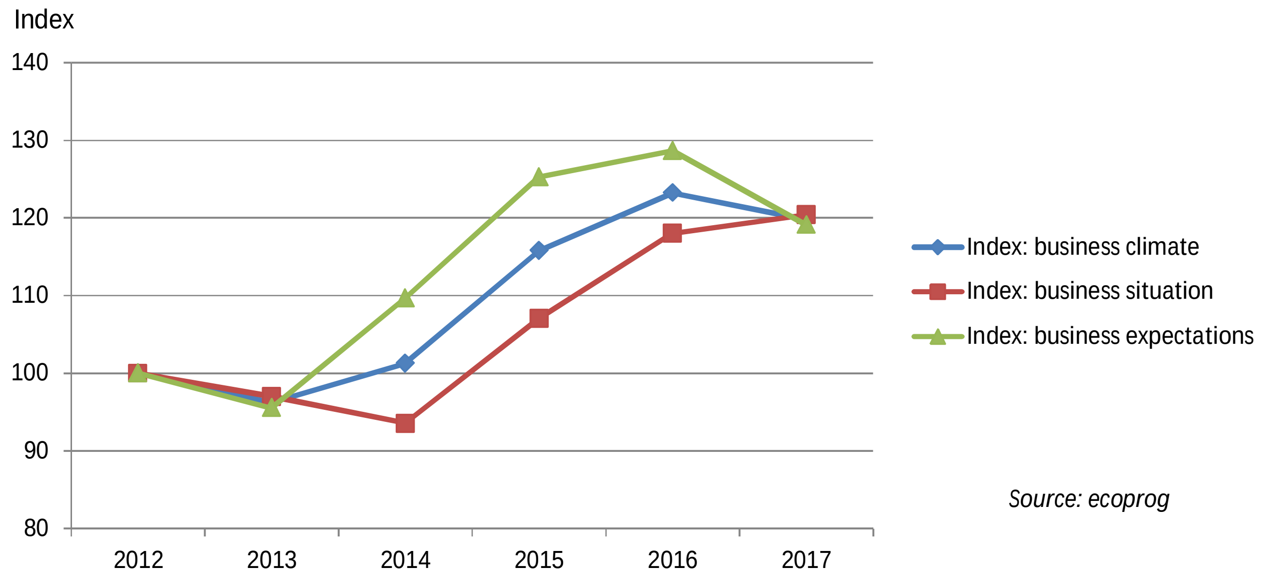
WtE Industry Barometer operators & industry



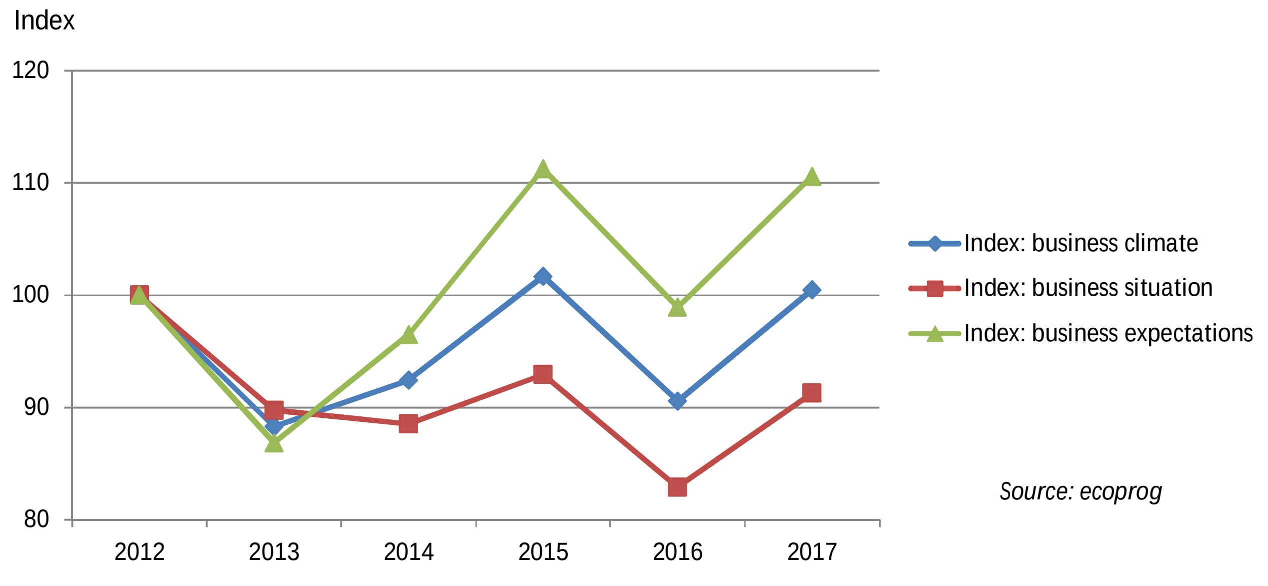
Classification of results



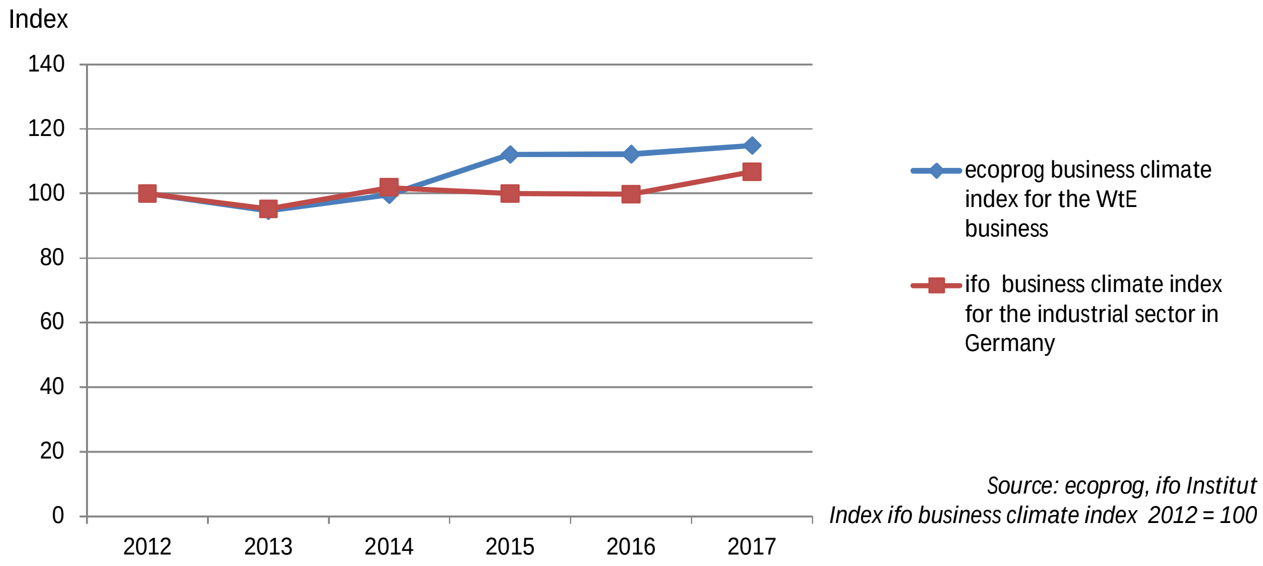
Industry Barometer of operators of thermal waste recovery plants



Industry Barometer of WtE industry



Comparison with ifo business climate index



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

By courtesy of ifo Institute.

Contact:
Mark Döing
ecoprog GmbH
Tel. +49 (0) 221 788 03 88 11
m.doeing@ecoprog.com