Thermal Waste Treatment Plant in Tampere, Finland, with kind permission of Steinmüller Babcock Environment GmbH

Industry Barometer Waste-to-Energy 2018

Content

Comment from CEWEP

As in previous years CEWEP (*Confederation of European Waste-to-Energy Plants*) supported the 2018 ecoprog Waste-to-Energy (WtE) survey and encouraged its members to participate.

The results of the survey show that business continues to go well for the operators of WtE plants. Most plants have been seeing very high utilisation rates in the past 2 to 3 years, and this increased once again over the past year for 30% of the operators participating in the survey. This also has a positive impact on the employment situation. After 16% of the operators planned to increase their staff last year, this year's survey revealed that 20% of the operators envisage to add new positions.

Great uncertainty is caused by the question of how the Asian import bans for certain waste streams will affect the capacities of the European WtE plants. In early 2018, China prohibited the import of specific types of waste, e.g. plastics and paper, or made it much more difficult to import them by tightening quality requirements.

Whereas almost one third of the respondents ascribe the currently high WtE capacity demand to the import restrictions, another third does not expect the Chinese policies to have any effect at all. 40% of the plant operators do not feel ready to answer this question yet.

In fact, only some of the waste falling under the import bans seems to go to European WtE facilities. We hope that this does not mean that significant waste shares are returning to landfills. The new EU Landfill Directive does not help either – as the member states that are still landfilling a lot of waste (60% or more, based on the 2013 figures) will be able to prolong the deadline by 5 years, i.e. until 2040. Only then will they be obliged to comply with the target of sending a maximum of 10% of municipal waste to landfills.

However, European countries should see the new restrictions from China (other Asian countries are likely to follow) as an opportunity, as a chance to use waste as a resource within Europe – and in particular to put even more efforts in developing an efficient recycling system at home.

The development of the heat business is another important topic for the WtE sector and this was also included in the 2018 survey. Heat recovery has increased considerably, which we are very pleased about. Over 80% of the thermal recovery plants that participated in the survey already sell their excess heat from thermal waste recovery. The other facilities produce electricity only (especially the ones in Southern Europe). More than 70% of the plants use the heat for district heating networks, about 35% of the facilities deliver local heat to adjacent industrial clients. Around a fourth of all plants are active in both kinds of heat businesses.

Another very positive result is that more than one third of the responding operators plan to expand their district heating business in the future.

WtE industry barometer: all-time high

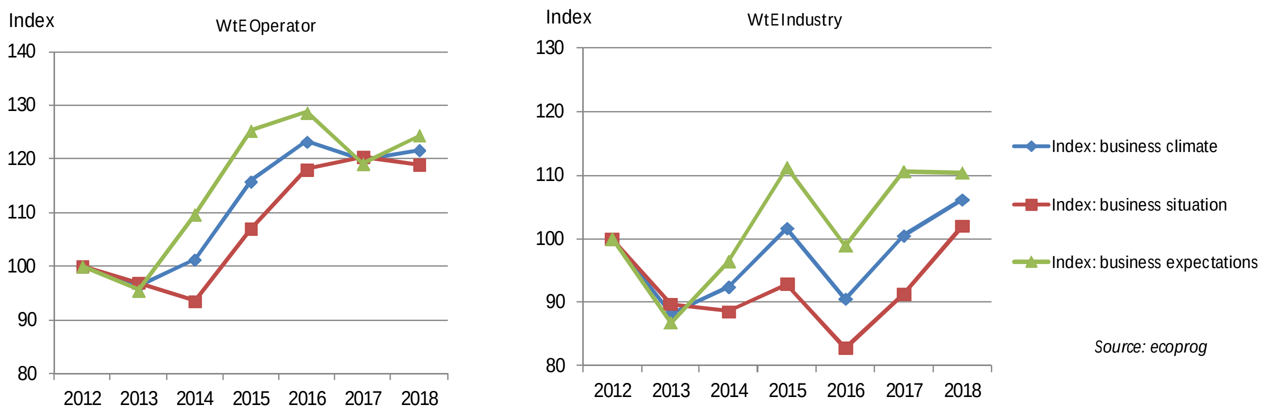
The mood in the Waste-to-Energy (WtE) industry is better than it has ever been since the first survey in 2012. The operators of thermal waste recovery plants continue to benefit from a boom that has been going on for years, and the mood among the industrial WtE companies has once again improved considerably – the barometer therefore reached an all-time high for all groups of respondents.

Plant operators experience consolidation at a high level

For WtE plant operators, the business climate has improved again over the previous year, reaching almost 50 points. This is the second highest figure after 2016.

The currently positive business situation is the first major factor for the excellent business climate, remaining at a very high level for the plant operators (about 70 points). More than 70% of the plant operators assess their business situation to be favourable, only 1% think it is negative.

Figure 1: Development of business climate for WtE operators and industrial WtE companies



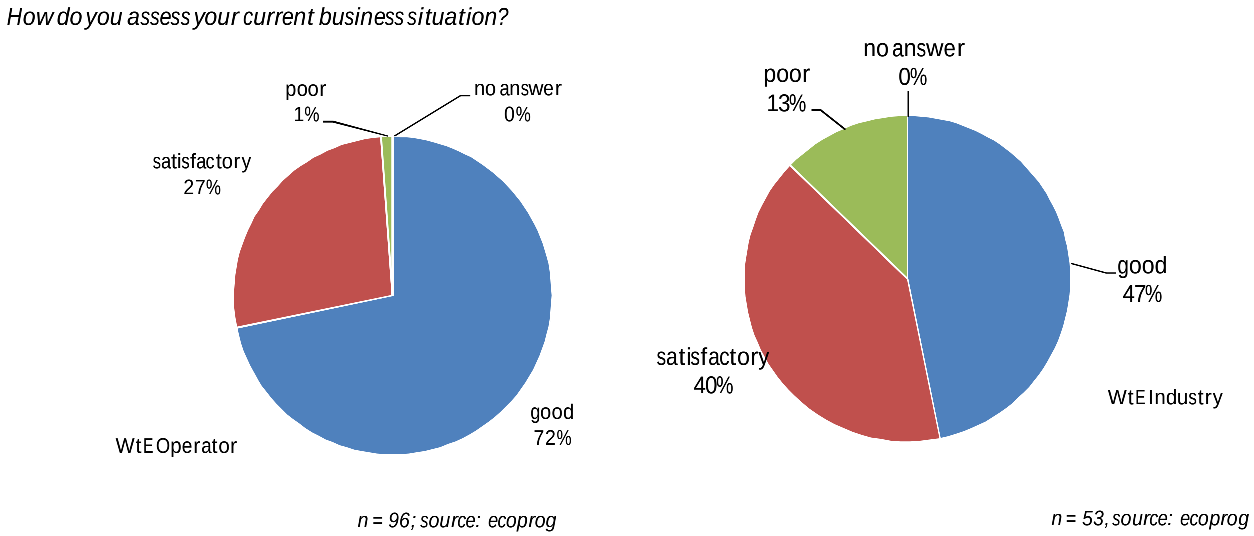
The second pillar of the business climate, business expectations, has again increased considerably when compared to 2017. Almost 50% of the operators report an increased demand for the past 12 months; about a third expects an even more positive development for the next 12 months. The WtE operator's optimism is a sharp contrast to the business expectations of many other sectors, which have been dampened in the past weeks, especially because of the increasing conflicts in global trade.

40% of the thermal waste recovery plant operators anticipate the gate fees to continue to increase in the next 12 months. This is the fourth year of the boom in the thermal waste recovery business.

Even though utilisation rates have been high in the past 2 to 3 years, 56% of the plant operators do not expect the prices to change.[1]

The good economic situation for the WtE operators also has positive effects on employment: 20% of the operators want to create new jobs in the months to come.

Figure 2: Business situation for operators and industry



Turnaround for industrial companies

The industrial WtE companies have experienced a drastic change in the past year. In particular, they assess their current business situation to have improved considerably in the past 12 months. Almost 50% of the technology providers, engineers and suppliers think that their current business situation is positive – compared to less than one third in 2017. With over 30 points, the current business situation has never been assessed as more favourable since the first survey in 2012. In the past months, the order situation has improved for more then 50% of the companies and not a single one reports a deteriorated situation. More than two thirds of the responding industrial companies describe the volume of incoming orders as satisfactory or even as comparatively high. In terms of business expectations, the picture is twofold: while one half expects business to remain the same, the other half expects improvements.

For the industrial companies as well, this upturn should result in additional jobs; almost a third of the companies report plans of this kind.

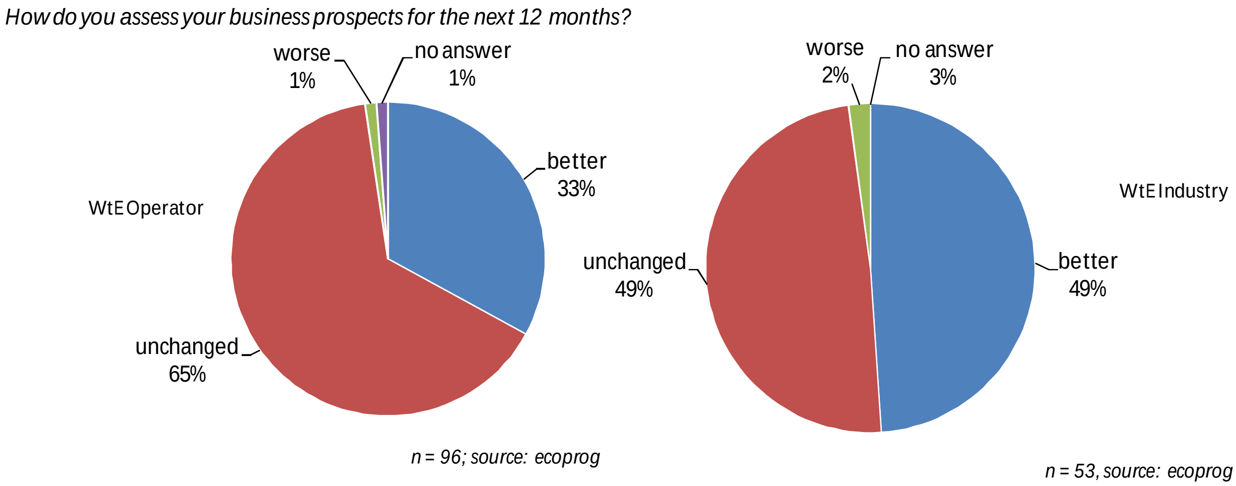
[1] These and all of the following interpretations are assessments made by ecoprog. Therefore, ecoprog is solely responsible for these statements.

Higher investments to modernise aging plant asset

One reason for the positive mood in the European WtE industry is the plant asset, which has become comparatively old, especially in Central Europe. 13 years have passed since the first stage of the EU Landfill Directive came into effect in countries such as Germany and the Netherlands. Many of the facilities that had been constructed for complying with the then new legislation, are even 15 to 20 years old by now.

Therefore, over 90% of the industrial companies anticipate the number of modernisation measures to generally increase in the European WtE market. And about 40% of the respondents even translate this into an increasing number of orders for themselves – in the next 2 to 3 years.

Figure 3: Business expectations of operators and industry



Europe improves, Australian market disappoints

Europe remains the most important market for the industrial WtE companies, also because of the upcoming modernisation boom. The importance of this market has even increased slightly over the past year. However, this also reflects that most of the industrial companies that have been participating in the survey for the industry barometer are European ones.

By contrast, the Australian market has lost much of its importance, as some projects were shelved as the result of planning laws, unfavourable policies and opposition by residents. The American market continues to become less important as well. For many years now, the number of shut down plants have been exceeding the amount of newly constructed ones.

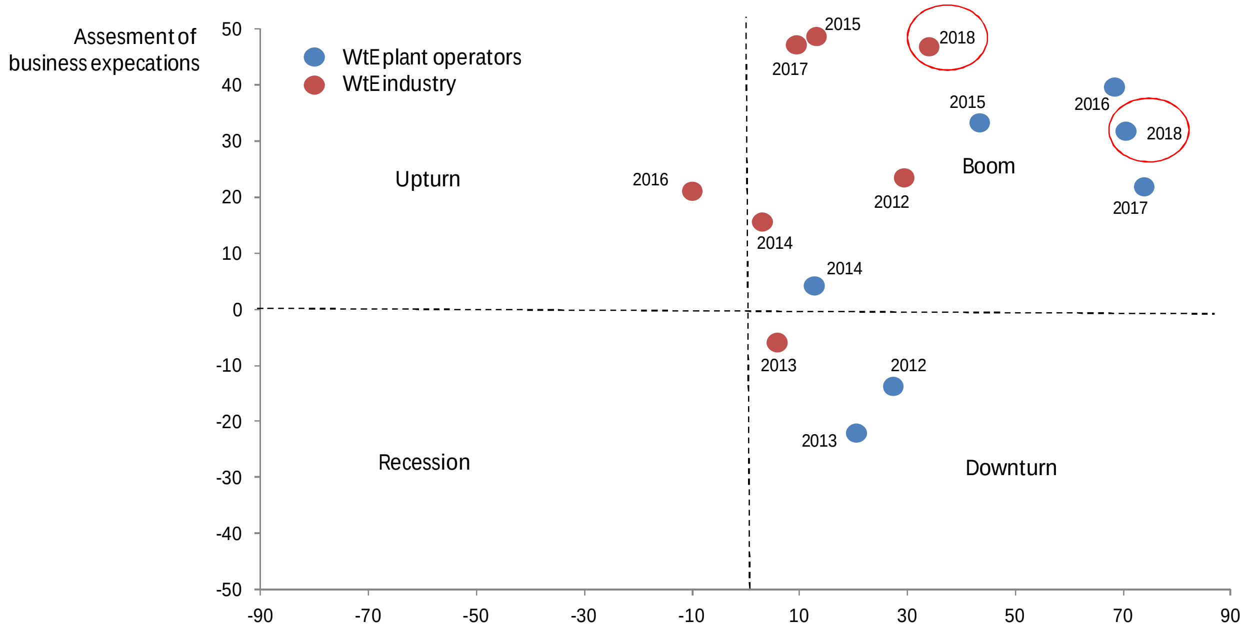
Import bans cause great uncertainty

Great uncertainty is caused by the question of how the Asian import bans for certain waste streams will affect the business of the European WtE plant operators. In early 2018, China prohibited the import of some presorted types of waste, e.g. plastics and paper, and made it more difficult to import others through introducing higher standards. Other Asian countries such as Malaysia, Thailand and Vietnam follow China's example, also to avoid that the formerly Chinese waste streams now crosses their own borders.

Almost a third of the European WtE operators believe that the now more difficult export to Asia will result in higher amounts of waste going to thermal recovery, e.g. in the form of sorting residues.

However, the number of companies expecting the exact opposite is the same. Most of the respondents could not answer this question at all, reflecting the great uncertainty when it comes to assessing this particular development.

Figure 4: Classification of results



Source: ecoprog

Heat use increases

The heat business becomes ever more important within the WtE industry, which is a good thing. Over 80% of the thermal recovery plants that participated in this survey sell their waste heat from thermal heat recovery. The remaining plants generate electricity only.

More than 70% of all plants use the heat for district heating purposes, about 35% of the facilities deliver local heat to adjacent industrial clients. About 25% of all plants are active in both heat businesses.

The answers differ of course on the basis of a plant’s location and thus the climatic conditions at the site. The heat business is especially advanced in Central and Northern Europe, whereas Southern Europe reaches smaller shares of heat use.

Even more positive than the currently high heat use is the fact that more than a third of the responding operators state plans to expand their district heating business in the future. This also incudes most of the plants that have not even entered the heat business yet.

The WtE industry barometer was elaborated for the first time in 2012. For the survey in 2018, we have 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 carried out between late July and late August.

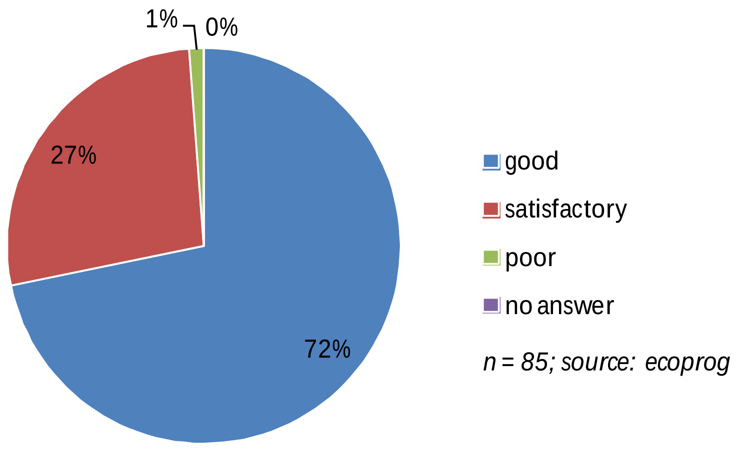
ecoprog GmbH carried out the survey and the evaluation. As a respected industry expert, ecoprog assists clients from Germany and abroad in dealing with implementation-oriented management issues with political, technical or economic backgrounds in the sectors of environmental and energy technology. We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

Annex: data

Survey of operators of Waste-to-Energy plants

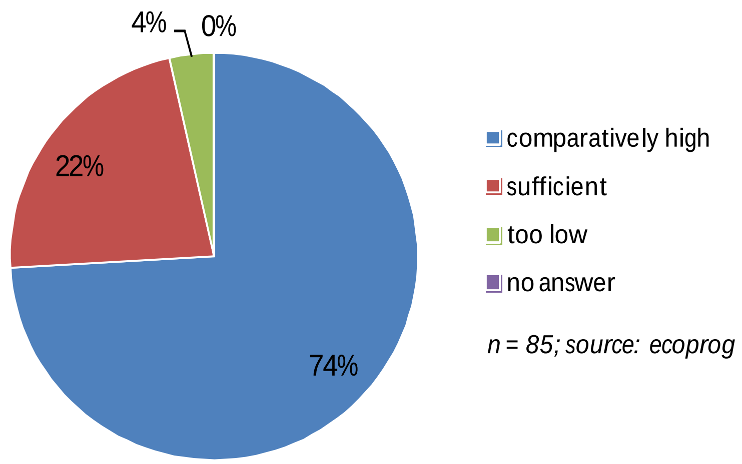
Current business situation

How do you assess your current business situation?



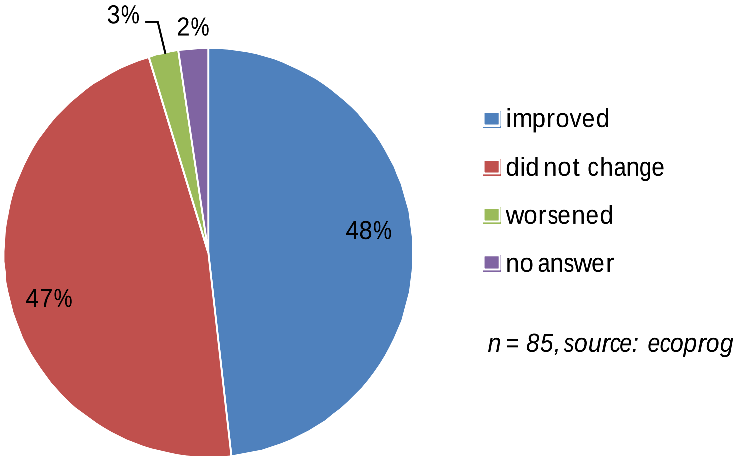
Current utilisation

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



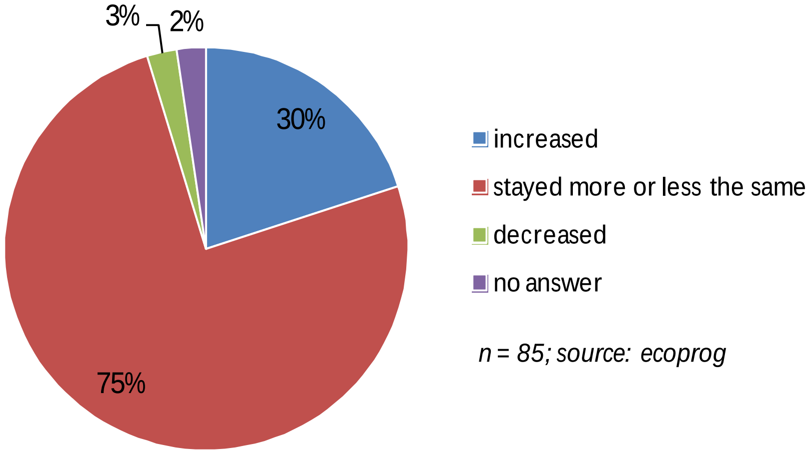
Demand in the past 12 months

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



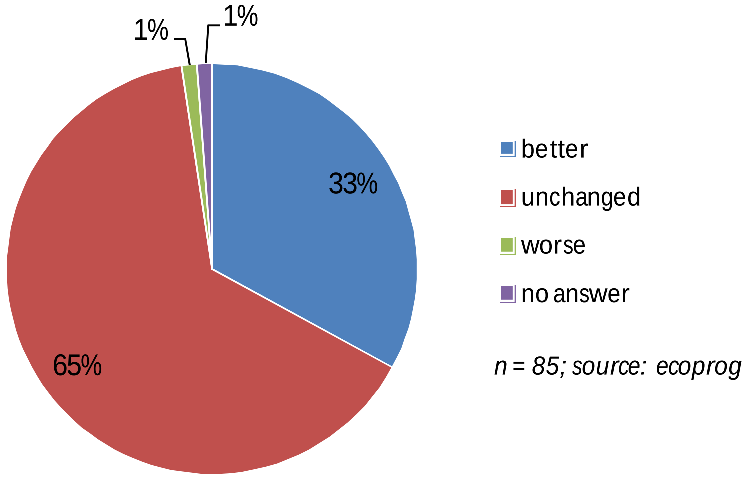
Development of utilisation in the past 12 months

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



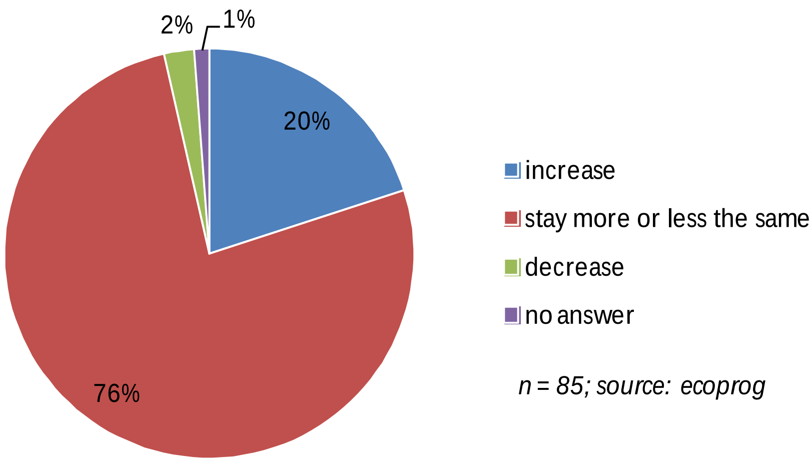
Business expectations

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



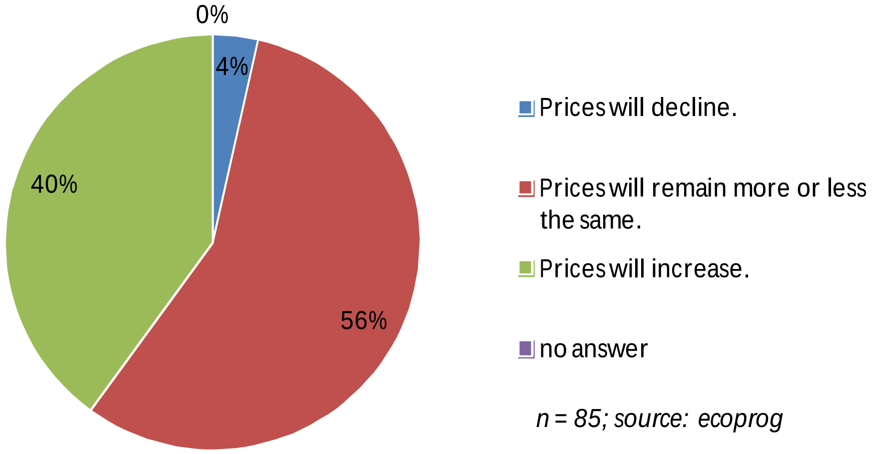
Employment

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

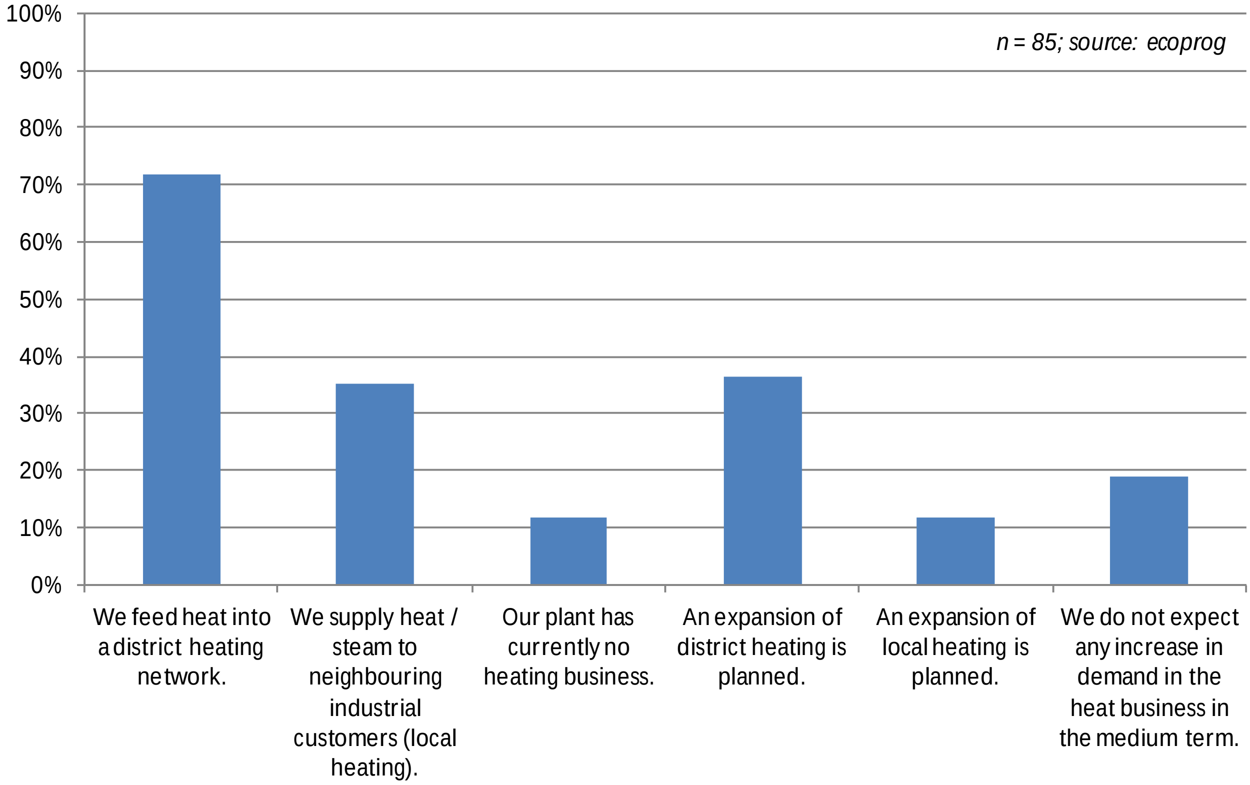


Gate fees

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

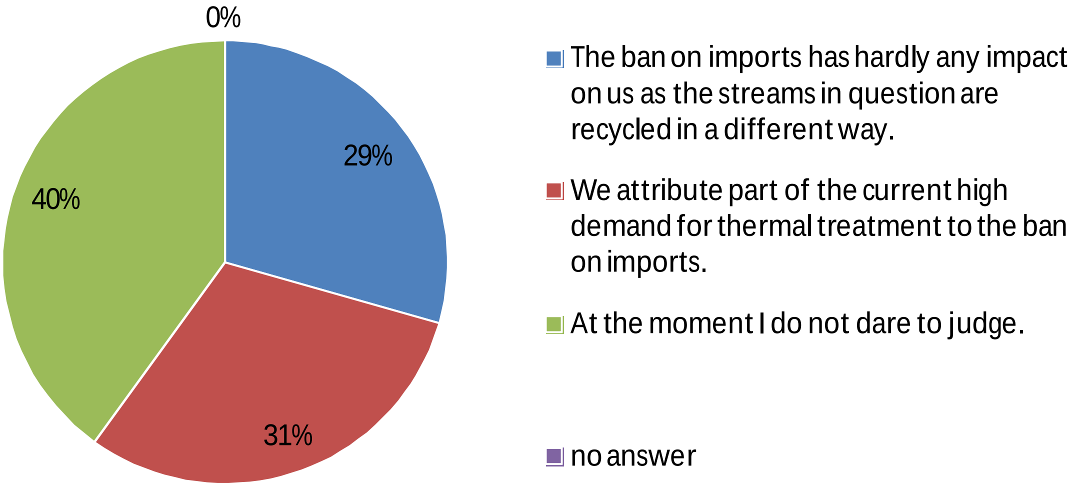


Heat business



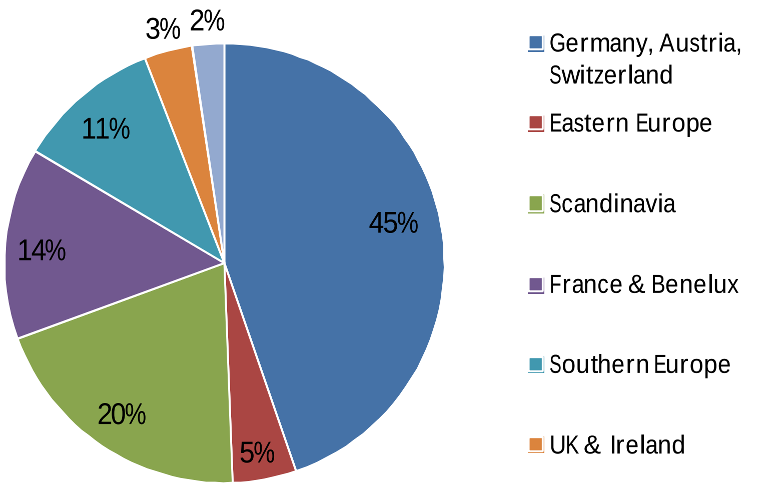
China's waste import ban

Since the beginning of 2018, an import ban on 24 types of waste has been implemented in China. From 2020, the Chinese government plans a general ban on the import of waste amounts. Countries in Eastern Europe as well as Malaysia and Vietnam are also considering import restrictions. How do you perceive the impact of these import restrictions?



n = 85; source: ecoprog

Location of plants of survey participants by region

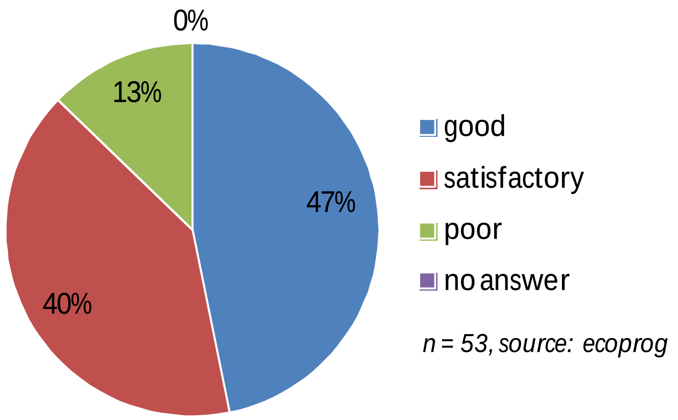


n = 85; source: ecoprog

Survey of industrial companies and WtE plant manufacturers

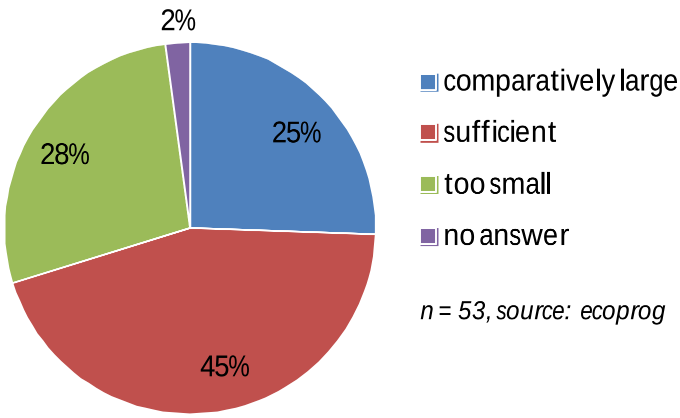
Current business situation

How would you describe your current business situation?



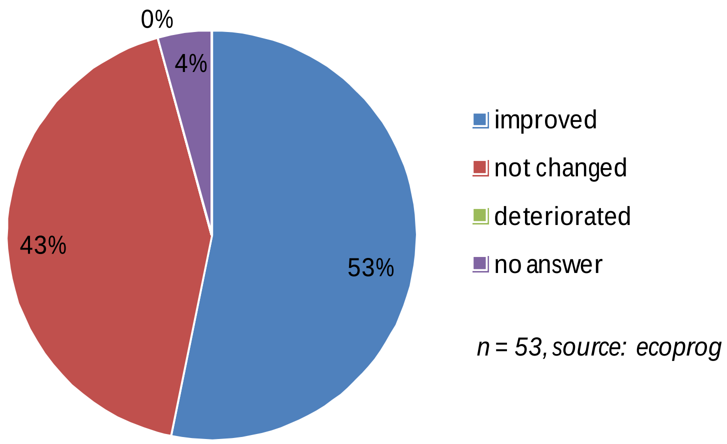
Current order backlog

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



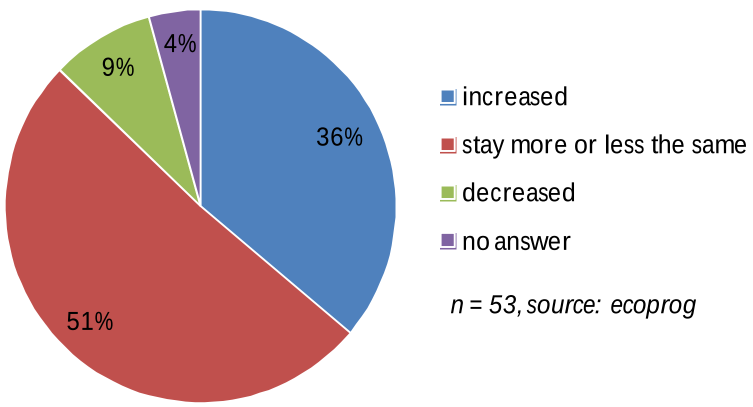
Demand in the past 12 months

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



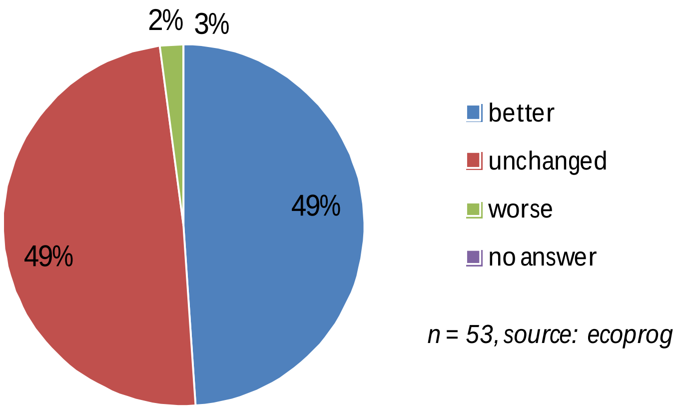
Order backlog in the past 12 months

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



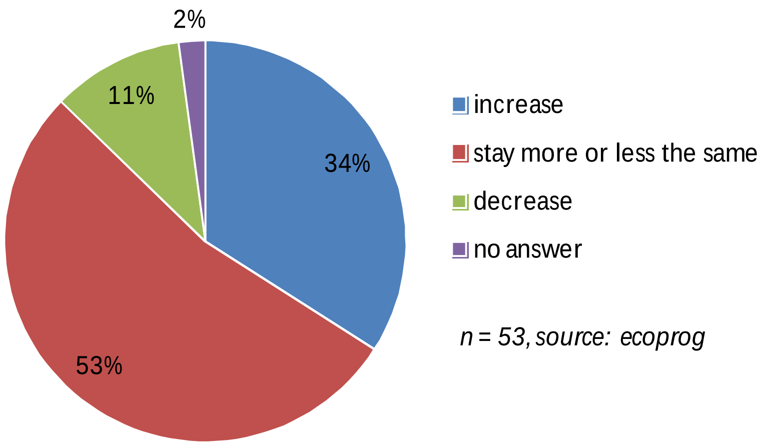
Business expectations

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



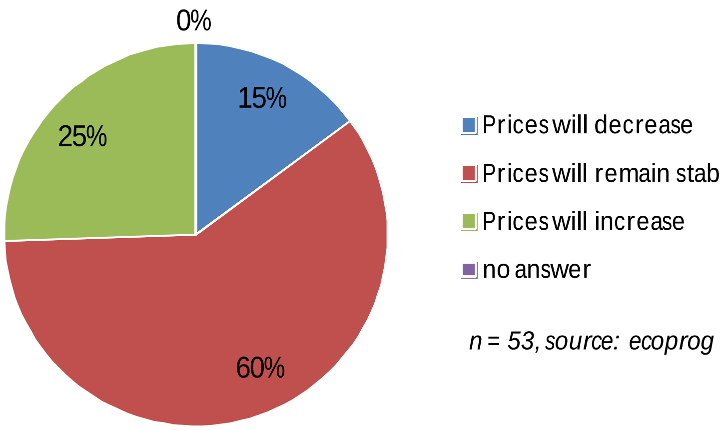
Employment

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



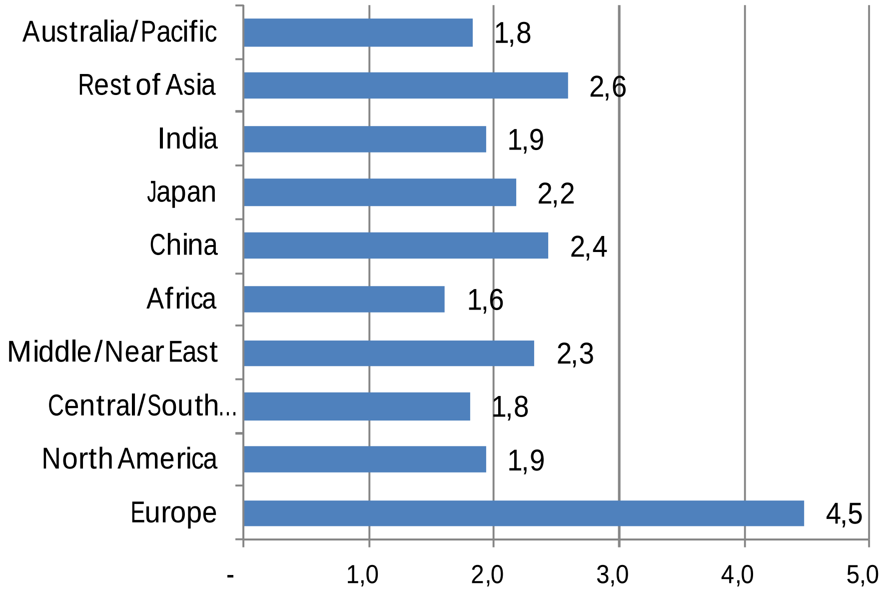
Future price development

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



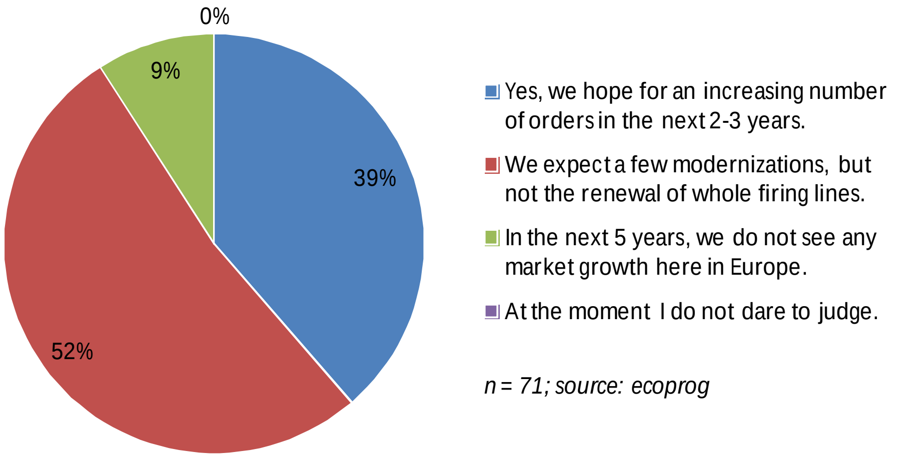
Current market regions

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



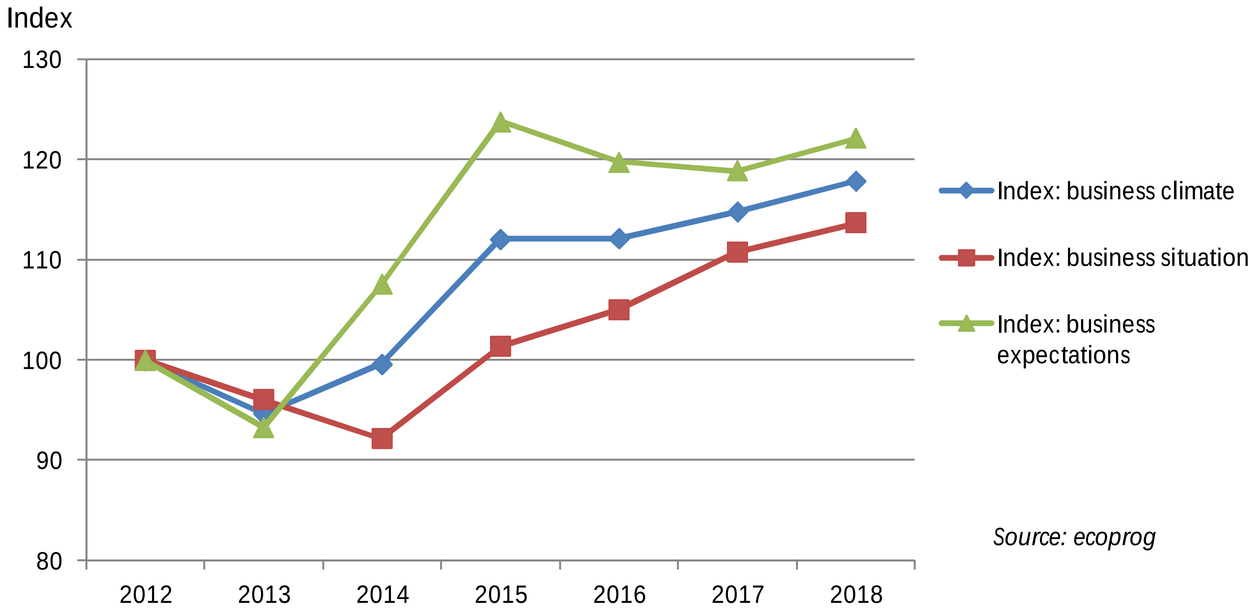
Revision of Best Reference Document (BREF)

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?

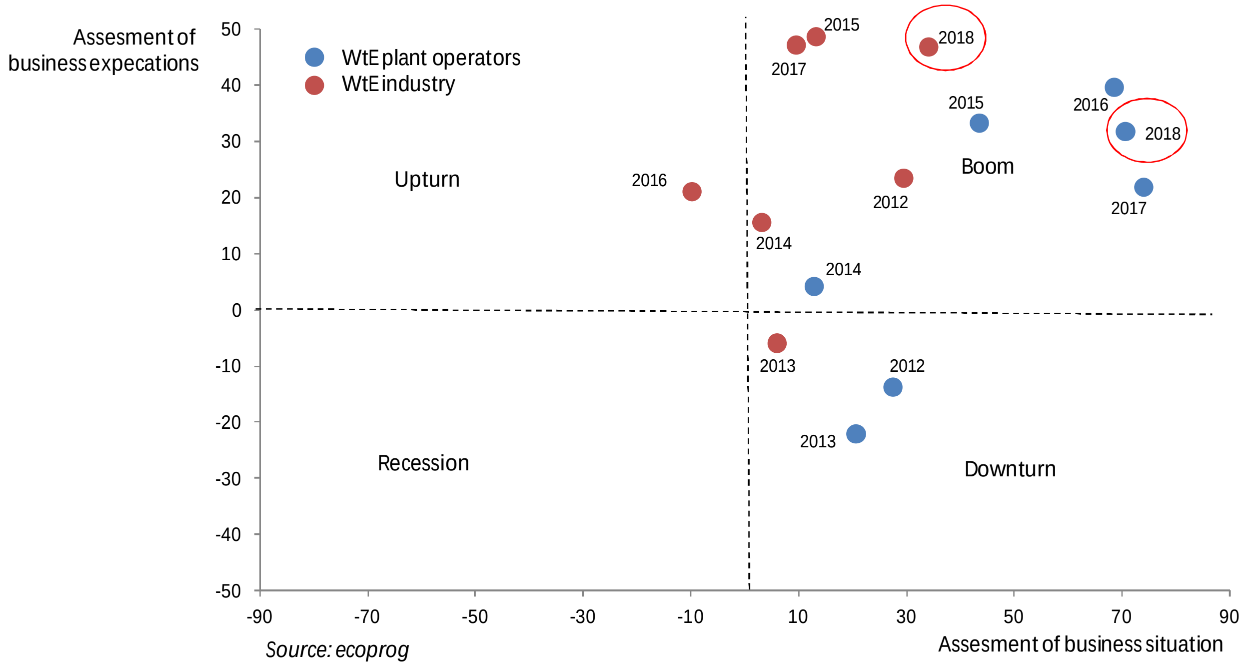


Time series

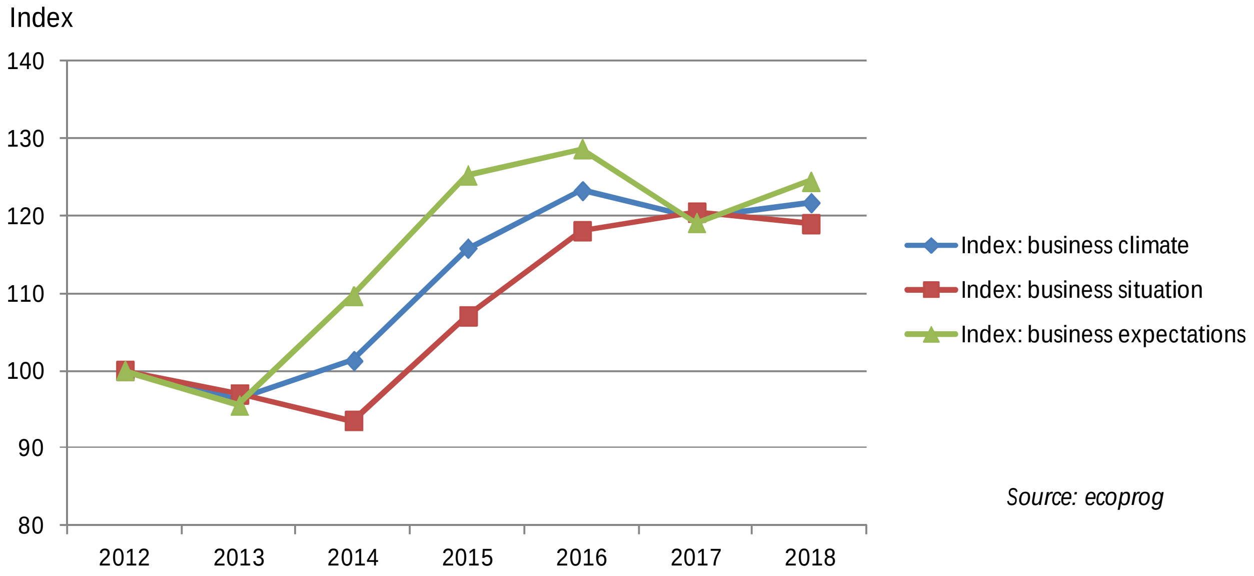
Industry barometer WtE plant operators & WtE industry



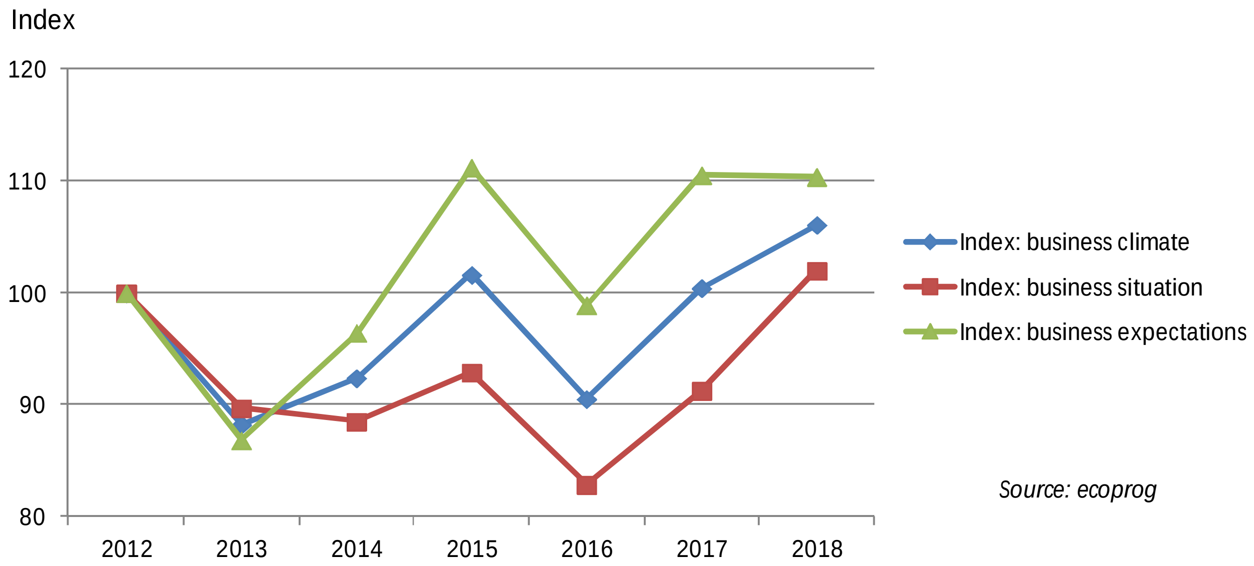
Classification of results



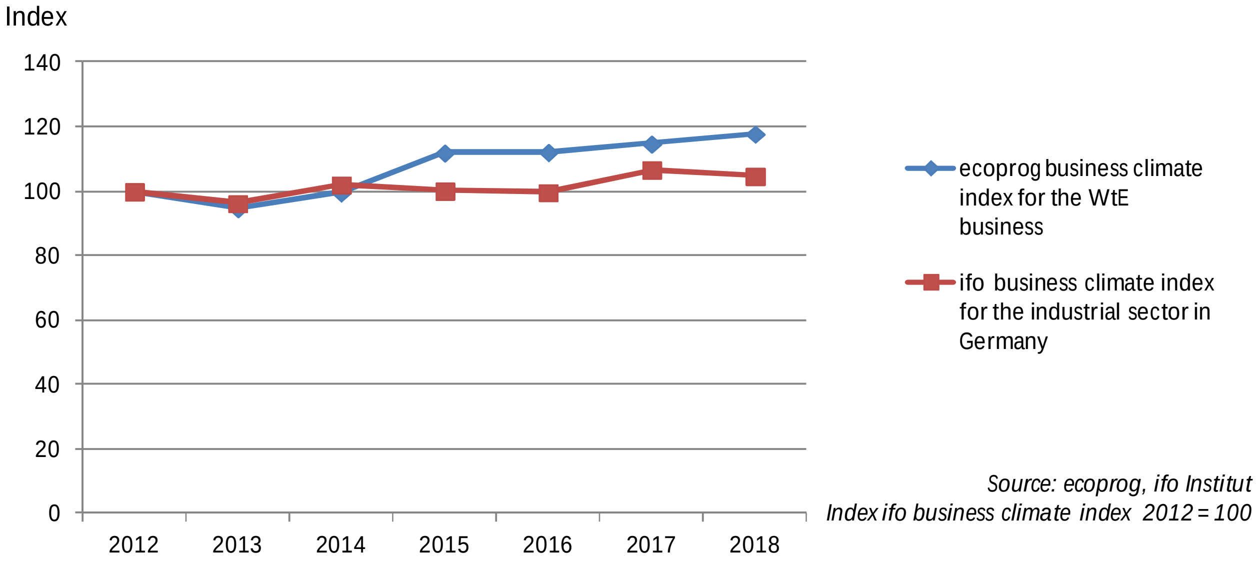
Industry barometer WtE plant operators



Industry barometer WtE industry



Comparison to 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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