CONFESS

Clean Energy Certification

FINANCING OF SMES, INVESTOR TRENDS TOWARDS SUSTAINABILITY AND SME SUSTAINABILITY REPORTING

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Executive summary	This document includes a literature review that highlights the importance of credit institutions for SME financing and analyzes investor trends with regard to sustainability. On the one hand, it looks at investor trends with regard to clean energy. However, as there is little literature on this, the analysis was extended to sustainability in general. Here, both reports in which credit institutions were considered and reports in which other investors are considered were analyzed. An overview of the current state of research on sustainability certificates and labels was also provided. To find out whether credit institutions are actually important for SME financing, we looked at various reports on the one hand and examined data from the SAFE survey from the end of

2021 (Europäische Zentralbank, 2022) on the other. Here we found that bank loans and other products distributed by banks are indeed among the most important financing methods for SMEs. Leasing also counts as an important means of financing, which is why we should also ask credit institutions later in the project whether they would make similar demands on SMEs here.

Another important finding is that different investors may require different levels of detail in a sustainability certificate as for example retail investors tend to make more intuitive decisions when investing in municipal energy projects (Salm et al.; 2016). So for some investors, a simple statement as to whether a company is sustainable may be sufficient, while other investors require detailed information.

Another result of a study by Finance THINK TANK (2021) showed us that many customers of credit institutions are not at all interested in sustainable financing, which shows that motivation is still needed here. Further results of analyzed studies are that sustainability is not included in the lending process due to a lack of resources. For example, there is a lack of expertise or employees. If our tool is easy to understand for credit institutions, such problems could be solved.

Furthermore, the results show us that a certain degree of transparency towards the credit institutions could be beneficial for the acceptance of our tool. If the credit institutions understand how the sustainability of SMEs is assessed, they are likely to be less skeptical about our assessment.

In addition, the results of various studies show that environmental sustainability is the most important point (alongside economic sustainability) for investors in regard to sustainability. These results show that we are starting at the right point.

This report also looks at the current status of sustainability reporting by SMEs in Germany and the Czech Republic. However, as it is difficult to obtain sustainability reports from SMEs, the search in the Czech Republic was also extended to larger companies. In Germany, websites of SMEs were also examined. The results show that there is still some room for improvement with regard to sustainability reporting by SMEs. SMEs often only publish superficial information on their websites. It is noticeable that SMEs that follow a certain sustainability reporting standard produce higher quality sustainability reports compared to others. However, better comparability of the reports would be desirable overall. Overall, these results show us that there is great potential for improvement in sustainability reporting by SMEs. Many SMEs have not yet produced any reports at all and even on websites,

	many SMEs only provide superficial information, if any at all. Our tool could make it easier for SMEs to create sustainability reports in the future. In this context, an overview of different sustainability reporting standards is also provided (TCFD, GRI, DNK and GWÖ).
KEYWORDS	SME financing, Investor trends, Sustainability reporting, Reporting Standards

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SME financing in the EU

The aim of our project is to develop a sustainability certification in the field of "clean energy" for SMEs. To this end, the requirements of the financial stakeholders will first be surveyed. We therefore try to clarify the question of whether credit institutions really have such a great relevance in the financing of SMEs throughout the EU.

According to documentation from the German Bundestag in the year 2021, SMEs in Germany finance around one-third of their investments by bank loans. Half is provided with the help of their own funds. One-eighth is financed with subsidies. Other financing options are of only limited relevance for most SMEs in Germany. In Germany, therefore, banks are the most important investors that SMEs need to convince regarding financing.

Since our certification should not only apply to Germany, the financing measures in other countries should also be considered. In 2019, the IfM Bonn brought out a study by Butkowski et al. (2019) on SME financing in Euro countries. For this, they examined the SAFE Survey from 2014 to 2017. In their EU sample (9 countries), bank loans were relevant for 59% of SMEs, while bank overdrafts came in second with 57.6%. These two financing options are among the three most frequently reported as relevant in all countries. In some countries, supplier credits and leasing are also very relevant financing options. From these results, it can be concluded that, in addition to banks, trading partners are also relevant for the financing of SMEs. It would therefore be advantageous if they, too, saw a benefit in the certification to be issued.

We also looked at the SAFE Survey by ourselves. We analyzed more recent data here, namely that from the end of 2021 (Europäische Zentralbank, 2022). In all 10 EU countries (Germany, Italy, Spain, Ireland, Greece, the Netherlands, Austria, Belgium, Finland), bank loans are among the top 3 financing options mentioned as relevant. Credit line, bank overdraft or credit cards overdraft are among them in 8 countries, leasing in 6 countries, grants or subsidized bank loan in 3 and trade credit also in 3 (see Table 1). These findings show that bank loans as well as other bank products are indeed an important way for SMEs to obtain finance. The results also reveal that credit institutions should be asked whether they impose the same sustainability certificate requirements on leasing and bank overdrafts as on bank loans.

Table 1: Financing options for SMEs

	Bank loan	Grants or subsidized bank loan	Leasing	Bank overdraft or credit cards overdraft	Trade credit
Germany	39,688	35,513	55,927	44,532	11,34
Spain	52,52	58,533	33,562	48,804	38,744
France	64,363	40,727	48,211	38,949	20,887
Italy	48,558	60,753	30,083	48,072	38,317
Austria	43,983	41,231	52,877	50,667	11,081
Belgium	57,394	21,278	37,058	46,767	30,263
Finland	66,404	41,292	66,142	71,058	37,832
Greece	44,883	55,173	25,993	32,925	45,276
Ireland	53,143	50,402	47,846	62,642	63,128
The Netherlands	37,773	12,123	43,658	48,558	28,267

This tables shows the most frequently mentioned relevant financing options for SMEs in different European countries. The results are an own calculation based on the SAFE survey (Europäische Zentralbank, 2022 (ECB Statistical Data Warehouse (ecb.europa.eu))).

Most frequently mentioned relevant financing option
Second most frequently mentioned relevant financing option
Third most frequently mentioned relevant financing option

Investor trends towards sustainability

Investments in clean energy

Furthermore, we wanted to find out what reports and studies already exist on investments in clean energy SMEs. Overall, however, this search turned out to be difficult. There are studies on (clean) energy investments, but they mainly focus on private investors and communities (e.g. Bomberg, McEwen, 2012; Bauwens, 2016, Salm et al., 2016) and their reasons to invest in (clean) energy projects. The results are only of limited interest to us, as we mainly deal with banks as financial stakeholders. Nevertheless, it is an interesting finding that retail investors tend to make intuitive decisions about their investments in municipal energy projects (Salm et al.; 2016). Therefore, it can be assumed that less information conveyed by a certification might be sufficient for retail investors than for credit institutions. This means that if we want SMEs that are certified by us to be able to address different investor groups, the certificate may have to have different design options. An important finding of Polzin et al. (2019) for us is that private investors mainly invest in renewable energy when it has a high (expected) return and/or low risk. Therefore, to attract private investors, measures that increase the expected return or decrease the risk must rather be introduced. A sustainability certificate like the one we want to design should indicate a lower risk, because environmentally conscious firms for example have a lower risk of getting into lawsuits due to polluting activities or can better absorb future regulations. However, it does not necessarily mean a higher expected return for private investors. Since banks are different from private investors, a certificate can be more effective here. Otherwise, the studies also deal a lot with policies (e.g. Bürer, Wüstenhagen, 2009) and their impact on investments in clean energy. The measures that have been looked at so far are more of a political nature, such as feed-in tariffs, and thus differ from our method of introducing a certificate. The main target group addressed also differs, which is why the results cannot be transferred so easily. An overview of (clean) energy studies is given in Table 2.

Table 2: Studies on investing in clean energy

Author	Title	year	country	Subject of the study	Research question	Findings
Bauwens	Explaining the diversity of motivations behind community renewable energy	2016	Belgium	community energy groups	What are the motivations of individuals to get involved in community renewable energy projects?	Individuals have different motivations and levels of engagement. Social norms can promote investment decisions.
Bomberg; McEwen	Mobilizing community energy	2012	Scotland	community energy groups	How do communities get involved in energy projects and mobilize resources?	Government support and the group's ability to leverage it are key factors in how well communities manage to invest in energy projects. Also important for community mobilization is the drive for autonomy
Dinica	Support systems for the diffusion of renewable energy technologies—an investor perspective	2006	Spain	equity investor	How successful are feed-in tariffs and quota models?	Feed-in tariffs are generally viewed rather positively, while quota models tend to be less well received. However, the truth is that it depends on the implementation of the respective measure.

Gamel et al.	Which factors influence retail investors' attitudes towards investments in renewable energies?	2007	Germany	retail investors	What influences private investors to invest in renewable energies	Social norms, trust in NGOs, and assessment of the regulatory framework influence private investors' attitudes toward renewable energy investments.
Kalkbrenner; Roosen	Citizens' willingness to participate in local renewable energy projects: The role of community and trust in Germany	2015	Germany	renewable community energy	What motivates citizens to participate in local renewable energy projects?	Social norms, sense of community, trust, and environmental awareness are important influences on citizens' choices. In addition, people who tend to live in rural areas are more inclined to participate than people who live in urban areas.
Markantoni	Low Carbon Governance: Mobilizing Community Energy through Top-Down Support?	2016	UK (Scotland)	renewable community energy	can top-down strategies support municipal energy projects?	A top down strategy is a necessary motivator. The state must play an important role in steering into low-carbon energy.
Masini, Menechetti	The impact of behavioural factors in the renewable energy investment decision making process: Conceptual framework and empirical findings	2010	Europe	mostly investors who work for a venture capitalist (VC) and private equity (PE) funds or hybrid combinations of both, but also others	What influences investors to invest in renewable energies	They explore what drives investors to invest in renewable energy. In particular, they examine investor confidence in technology as well as market efficiency here. policy scheme, the level of support and the duration of the support. The results show that a priorie beliefs on the technical effectivenes of the investment opportunities are a more important driver thant a priorie beliefs in market efficiency.

Mazzucato; Semieniuk	Financing renewable energy: Who is financing what and why it matters	2018	164 countries	different financial actors and their decisions on investing in energy technologies	how different financial players invest in energy technologies	Different financial actors contribute to different technological orientations. The portfolios are diversified to different degrees. Public financial players in particular invest in portfolios with riskier technologies. Their share has increased sharply.
Polzin et al.	How do policies mobilize private finance for renewable energy?—A systematic review with an investor perspective	2019	high- and upper-middle-income countries	private investors and their decisions on investing in renewable energy	What policies influence private investors to invest in clean energy and how should they be designed?	For investors, investment risk and return on investment are relevant. These must match their expectations for them to invest. Measures such as feed-in tariffs and auctions should therefore be designed to reduce risk and increase return. That is when they are most effective.

Salm et al.	What are retail investors' risk-return preferences towards renewable energy projects? A choice experiment in Germany	2016	Germany	retail investors who are interested in community renewable energy projects	For what reasons do retail investors invest in community renewable energy projects?	In addition to the return, the minimum holding period and the issuer of the municipal renewable energy are also relevant for the decision. The authors find that one can ultimately distinguish between two groups of investors "local patriots" and "yield investors". They also found that the investors surveyed here base their decisions more on intuition and simple decision-making patterns, and do not engage in elaborate financial analysis.

This table shows studies on investing in clean energy.

Investors and sustainability information

Since there is not much to find on investments in clean energy SMEs, we extended the literature search to sustainability investments and looked at reports and studies where investors were interviewed or surveyed. These studies are particularly relevant for us, as we also want to survey investors in form of credit institutions. The results are transferable to the energy sector at least to the extent that we can assume that if credit institutions attach importance to sustainability, they do so in all areas, i.e. also in the clean energy sector. We also assume that general problems with existing sustainability certificates could also occur with a specific clean energy certificate and that we should therefore learn from them. In addition, if there are problems in obtaining data for general sustainability information, it is likely that these problems are also present for clean energy information. What we can't figure out from this general sustainability literature is what points lending institutions specifically value in the clean energy area.

Our survey will focus on different groups of topics. The most important findings for our project are the results on the presentation and hypothetical acceptance of our planned certification. But we also want to query how credit institutions have so far incorporated sustainability into their SME lending process in order to determine the current status and potential shortcomings. In addition, we want to find out how aware credit institutions are of the need or also what problems there may be so far, when it comes to taking sustainability into account when granting loans, that could be solved with the help of our certification.

Surveys have already been conducted with banks on the topic of sustainability. For example, there is the "THINKTANKsurvey Firmenkundenbetreuer" by FINANCE Think Tank. A report on this survey is published twice a year. In the sixth edition of the survey in spring 2021, the topic of sustainability was also addressed (Finance THINKTANK, 2021). In general, the survey series deals with market developments, opinions and perspectives and is aimed at corporate client advisors of banks in Germany (Finance THINKTANK, 2022). The results on sustainability show that about half of the corporate client advisors think that sustainable financing can be a competitive advantage, while a third of the respondents do not feel confident in answering at all. Corporate client advisors were also asked how interested their customers are in sustainable financing (loans linked to sustainability targets.). More than half of the respondents say that most customers are interested in sustainable financing, but that it should not cost more.

However, there are also almost 30% who say that most customers are not interested in sustainable financing at all. For us, this also shows a tendency that we still have to motivate firms, especially since these results relate to all corporate customers and not just SMEs. The planned certification can act as a motivation, as we hope that it will be positively observed by credit institutions and thus also provide an incentive for firms to behave more sustainably. The second part of the survey is also noteworthy. Here, the corporate account managers were asked whether they think their customers generally make more sustainable decisions because they are motivated to do so by sustainable financing. However, over 30% think that is not the case. The survey concludes that sustainable financing is mainly used when sustainable planning was already in place (Finance THINKTANK, 2021). Sustainable financing methods would therefore not show any change in the firms, which we want to bring about with our certification.

In general, quite few questions are asked in the "THINKTANKsurvey Firmenkundenbetreuer", most of which can be answered with an assessment in the form of a rating scale of 0-10. The survey is also publicly accessible (Finance THINKTANK, 2021). One criticism of the results could therefore be that it is not actually ensured that only corporate customer advisors respond here.

Another study on the topic of sustainability is the "Sustainable Banking" survey by Fraunhofer IBP and .msg for banking. Here, 110 Professional and managerial staff of credit institutions in Germany were surveyed. The questions deal, among other things, with:

- current or planned regulations of the German government and the approval of the participants

- the ESG risk measurement according to the EBA paper "EBA Discussion paper: On management and supervision of ESG risks for credit institutions and investment firms"

- the Green Supporting Factor

- the BaFin - Merkblatt zum Umgang mit Nachhaltigkeitsrisiken (BaFin - Merkblätter - Merkblatt zum Umgang mit Nachhaltigkeitsrisiken)

- the current status of the inclusion of sustainability criteria in the lending process

- the approval of the Green Asset Ratio

- and the impact of green investments on the bank's business model.

The questions on the current status are thus of particular interest to us. 60% of respondents believe that their sustainable efforts also bring strategic benefits. Moreover, as many as 27% want to exceed legal requirements. It is a cause for concern, however, that over 40% see sustainability and profit as contradictory. Problems in implementing requirements are seen primarily in the lack of personnel (64%). Too little expertise is regarded as an obstacle by 47% and technical problems by 33%. (Fraunhofer IBP, .msg for banking, 2021). These are problems that can be resolved, at least in part, with the help of our certification, if this is easy to apply and requires little effort and human resources on the part of the credit institution. Unlike our survey, this one addresses general sustainability requirements for banks and not just those in the lending process. 14% of respondents also indicated that they will not finance non-green investments in the lending business in the future. 50% are also in the process of developing a checklist of exclusion criteria for the lending process, and 30% already have one in place. 16% want to include ESG factors in the risk rating, while only 5% completely reject the inclusion of ESG criteria, which shows that credit institutions are open to include sustainability criteria in the lending process. It is also striking that 48% of the respondents stated that they have not yet dealt with the Green Asset Ratio at all and 46% reject it because the data is not yet available (Fraunhofer IBP, .msg for banking, 2021). Since our certification is to be based on the EU taxonomy, it could also lead to greater acceptance of the Green asset ratio.

In Benchmark ESG (2021) investors all over the world were asked about their investment decisions in connection with ESG data. 27% came from the banking sector. Investors were asked which of the three dimensions (environmental, social, and governance) was most important to them, with environmental being the most important, which shows that it is essential to first create a certification that takes into account environmental factors. Nevertheless, potential for improvement in corporate data collection was seen in all three areas. They were also asked whether they would have greater trust in companies that offer investment grade (IG) ESG data, to which the majority responded in the affirmative. Investors also indicated that they would be more likely to invest in firms that collect IG ESG data and a majority finds this data even more important than financial data. ESG ratings are given as the most important source (Benchmark ESG, 2021). These results show the importance of publishing sustainability data. However, it must be borne in mind that all types of investors were surveyed here and that there may be different needs in some cases.

Just like us, Blomeyer (2022) specifically addressed the question of how sustainability criteria are incorporated into the lending process for SMEs. For this purpose, he conducted 14 interviews with experts and managers in the credit analysis area of German credit institutions. His results show that all of them are at least already planning to include sustainability criteria. However, most credit institutions are still in the initial phase. There is hardly any standardized consideration of sustainability criteria when granting loans to small and medium-sized enterprises. This is where our certification could be of help. Although the banks also cite performance considerations as a reason for taking sustainability into account, new regulations are the main cause. The bank's voluntary commitment is also cited as an important reason. In addition, the existing rules have mostly come about because of external or cross-institutional regulations. When granting loans, the information is drawn primarily from personal discussions, sustainability reports, management reports, and the banks' own checklists. The banks are skeptical of external ESG ratings. They are unsure whether they really reflect the aspects that are relevant for banks. Respondents also agree that data availability is a major barrier to incorporating sustainability information into the lending process (Blomeyer, 2022). On the one hand, these problems demonstrate the importance of a standardized sustainability certificate for SMEs, but on the other hand, they also show how central it is for our certification to stand out from others so that credit institutions are less skeptical about it. For example, we could show more transparency than other sustainability ratings. One criticism that can be mentioned about this study is the small data set.

The Swiss Sustainable Investment market study 2022 asked investors in Switzerland for the fifth time about their sustainable investment preferences. Not only banks, but also investment managers and asset owners were surveyed. Only 22% of the 85 respondents were banks. The majority were asset owners with a share of 45%. It is interesting for us that the investment managers were asked which sustainable issue is most important for them when investing. Here, energy came out as the most important topic (Swiss Sustainable Finance, 2022), which means that our certification could also be interesting for this type of investor. However, the most important motivations for sustainable investing were quite balanced, with 40% investing for monetary reasons, while for 32% positive change and for 28% values alignment were the most important reasons. It is also interesting to note that 34 of the asset managers stated that they must comply with EU directives and 6 do so voluntarily. Only 6 others do not implement them.

On a scale of 0 to 4 to measure comfort, however, the EU taxonomy scores just 2.5. Therefore, thought should also be given to how the acceptance of the EU taxonomy could be increased. Furthermore, they were asked about their key drivers for sustainable investments and key barriers. The lack of standards was the most important reason here, which again shows that a standardized certification like ours could be an improvement. Overall, the study focuses strongly on asset managers (Swiss Sustainable Finance, 2022).

In the report "Nachhaltigkeit in der Kreditfinanzierung", 16 cantonal banks in Switzerland were surveyed about the importance of sustainability in the lending process, the significance of the three dimensions (economic, ecological, and social) of sustainability and about measures in the field of sustainability. All these points are also of interest for our study. The results showed that the desired state in the inclusion of sustainability is not yet given. Economic sustainability was seen as the most important, while ecological was the second most important. Overall, however, all were described as at least rather important at most banks. It is striking that exclusion criteria have so far been the most important means of incorporating sustainability, but that this means will not be used by more banks in the future; instead, the inclusion of ESG ratings and the financing of transformations and sustainability solutions will become more important (Swiss Sustainable Finance, 2021).

In Deutsche Bank (2021), both investors and firms were asked about their opinion to ESG. The most important findings for us are the ones got from the investors. Participants were asked which of the three dimensions of ESG (environmental, social and governance) were most important to them in their investment strategy to date and in the future. Environmental, was the most important, which is again a good sign for our certification, as it first takes environmental aspects into account. This result has also been shown to be consistent across all studies. It was also noticeable that investors in Europe incorporate sustainability information into the investment process more than in the US. The ESG benchmarks used are still very different depending on the investor. Few investors include decarbonization targets in their investment strategy. Public ESG ratings also play a smaller role for investors. The data used to determine sustainability therefore also varies widely. However, it is also interesting to note that in Europe, 41% of the firms surveyed have already used ESG financial instruments outside the capital market. As the most important reasons for including ESG criteria, investors cite the demand of their customers, to do something good for the community and to keep up with the current market trend. Considerations for not doing so are that it has not been proven that ESG outperforms the market and that these investments do not fit with current objectives (Deutsche Bank, 2021). Some of these reasons could be true for credit institutions as well. Another interesting point for us is that not many firms yet report according to the EU taxonomy. But that could also be due to the fact that more than half of the firms surveyed are U.S. firms (Deutsche Bank, 2021). A big difference to our study is, of course, that no banks were surveyed here, and it was mainly about investments on the capital market. In the best case not only credit institutions use our certification but also other investors. Nevertheless, our certificate is primarily aimed at SMEs that are not listed on the stock exchange. Therefore, investors cannot invest in them on the capital market. It may also be more difficult to create a certification that meets the different needs of investors in the capital market than those of credit institutions. This could be at least one of the reasons why different sources of information have been used to date.

The "Sustainable financing and investing survey 2021" also asks investors and firms all over the world about sustainability. Many different things were asked in the survey, we focus here only on those that are most interesting for our project. Here, 62% of investors say they are paying more attention to environmental information than in the previous year. However, attention to social issues has increased among more investors. The reasons given for the increase in attention were the Covid-19 pandemic, urgency, and society (HSBC, 2021). These results show that sustainability is becoming an increasingly important topic and that now is the right time to provide investors with a good source of information. An interesting finding was also that larger investors are more interested in sustainability issues than smaller ones (HSBC, 2021). If this can also be applied to smaller and larger banks, it could be interesting for our certification as smaller banks are also more likely to lend to smaller firms, where there has been less regulation to date. If they are less interested in sustainability information on their own initiative, that could reduce the positive impact of our certification. The biggest issue with the inclusion of ESG criteria is that there are too few experts in this area in the firms, although the other problem areas are all rated similarly. Investors would also like to see better comparability of ESG ratings and for firms to publish more data. An interesting point for us is that about half of the investors say they would be more confident if there were global labels for sustainable infrastructure which shows that there may be a need for sustainability labels or certificates not only among credit institutions (HSBC, 2021). While we cannot fix the problem that other ESG ratings are not comparable, a transparent certificate could at least make it more comprehensible to investors than other cerfiticates or ESG scores and thus make it more likely to be used.

Also worth mentioning is a study by Ahmed et al. (2018). They created an ESG score for banks in Bangladesh based on a survey with 30 private corporate banks. Here, they concluded firstly that most banks tend to use qualitative data and secondly, they found out more about the exact criteria banks consider in the lending process. However, as our certification is aimed at EU credit institutions, the requirements of credit institutions here are not necessarily the same.

Another important study for our analysis is the European Sustainable Finance Survey. Here, six banks were asked in interviews about the EU taxonomy. The taxonomy is seen as a tool that simplifies evaluation for banks. Project finance is considered comparatively easy to be designed taxonomy aligned. On the other hand, it is considered difficult to lend in a taxonomy-aligned manner out of the scope of project financing, as some loans cannot be allocated with certainty to individual economic activities. In addition, banks cite the fact that their IT systems have not yet been adapted to the EU taxonomy, making assessments at the level of economic activity difficult. Banks also criticize that gradual improvements are not sufficiently appreciated by the EU taxonomy and that the incentive for companies to seek taxonomy-aligned loans is too low and that more promotional measures should be taken here. It is also criticized that the taxonomy does not consider that there are very different types of loans and borrowers. However, banks may want to treat a small loan from an SME differently than a loan from a large firm. Furthermore, banks criticize that they do not know how previously used sustainability standards provide conclusions on taxonomy alignment. Similarly, banks fear that they will lend less to SMEs because they are not subject to reporting requirements and therefore do not have access to data that provides information on their taxonomy compliance (Adelphi, ISS ESG, 2020). This is a problem we want to address with our certification, as it will be made especially for SMEs. There is also a desire for banks to support taxonomy-aligned lending through, for example, lower capital ratios. The banks surveyed said they would like to see firms' data collection easily accessible and would also like to see third-party verification of the data (Adelphi, ISS ESG, 2020). Since our certification should be based on the EU taxonomy, these problems are of great interest to us. For example, we can structure the certificate in such a way that credit institutions can see which economic activities have been evaluated and how. On the one hand, this could ensure that banks can decide for themselves how much they want to reward certain improvements and, on the other hand, the data on the company would then be transparent and easily visible to them. Equally interesting to us is that lending institutions want a Green Supporting Factor (Adelphi, ISS ESG, 2020). The question here is whether such a factor is necessary to encourage more investment in sustainability. We can therefore ask whether such a measure would be necessary for our certificate to be used or whether it would be included even without such a measure. Furthermore, the question arises whether there might be other measures that might even have a stronger effect.

A study by Degryse et al. (2020) looked at banks' barriers to investing in sustainable firms. However, their focus is less on the barrier of obtaining information, but more on the question of what prevents banks from investing in sustainable firms about which the sustainability information is also known. One major problem Degryse et al. see is that banks have legacy contracts with polluting firms. If they now support green firms, they thus endanger their old business, as competition for their old customers could now become stronger and their probability of default is thus increased. (Degryse et al., 2020). Our planned certification cannot ensure that this problem will be fixed, but the certificate could be built in such a way that even old customers can see where their potential for improvement lies. Thus, banks could also use it for consulting purposes and polluting customers could become cleaner. In the long run, this could then also lead to investments in green companies becoming more attractive again, as the old customers themselves become greener.

Mueller and Sfrappini (2022), on the other hand, already addressed the question of how regulations affect bank behavior. They find that in the U.S. banks are more likely to support firms that are negatively affected by regulations, while in Europe it is the other way round. This suggests that our certification is also more likely to support firms that perform positively, as the certification is supposed to be based on the EU taxonomy principles, which is also closely related to (upcoming) regulations. Moreover, the authors recognize that banks, which are also more likely to be negatively affected, are more likely to support negatively affected firms. Reghezza et al. (2022) likewise find that since the Paris Agreement, European banks have lent less to polluting firms. These results show that if we manage to get our certificate used by credit institutions in Europe, it is likely to be used in the intended way. It would be fatal if we were to create a certificate and credit institutions were to deliberately invest in polluting companies without wanting to drive their transformation process. An overview of the studies is given in table 3.

Table 3: Studies and reports on sustainable investments

Author	Title	Year	Country	Investors
adelphi, ISS ESG	European Sustainable Finance Survey	2020	Europe	banks
Ahmed et al.	Why banks should consider ESG risk factors in bank lending?	2018	Bangladesh	banks
Benchmark ESG	Investment-Grade ESG Performance Data: Critical to Sustainable Business	2021	Worldwide	all kinds of investors
Blomeyer	ESG-Kriterien in der Mittelstandfinanzierung	2022	Germany	banks
Degryse et al.	Banking barriers to the green economy	2020	Belgium	banks
Deutsche Bank Research	ESG Survey – What corporates and investors think	2021	USA and Europe	all kinds of investors and firms
FINANCE Think Tank	THINKTANKsurvey Firmenkundenbetreuer	2021	Germany	banks
Fraunhofer IBP and .msg for banking	Sustainable Banking	2021	Germany	banks
HSBC	Sustainable financing and investing survey 2021	2021	Worldwide	all kinds of investors and firms
Mueller and Sfrappini	climate change related regulatory risks and bank lending	2022	USA and Europe	banks
Reghezza et al.	Do banks fuel climate change	2022	Europe	banks

Swiss Sustainable Finance	The Swiss Sustainable Investment market study 2022	2022	Switzerland	all kinds of investors
Swiss Sustainable Finance	Nachhaltigkeit in der Kreditfinanzierung	2021	Switzerland	banks

This table shows studies and reports on sustainable investments.

Investors and Labels

There have already been a few studies on eco-labels (Seal of approval to identify environmentally friendly products and/or companies) and investors (an overview is shown in Table 4). However, many eco-labels only refer to the environmental compatibility of products. Although the study by Heinzle and Wüstenhagen (2011) also only deals with the energy efficiency labeling of household products, its results are interesting. They found that the complexity of this labeling should not be too high, which also suggests that if our certification is to appeal to small and private investors, a less complex certification might be sufficient for them. Nevertheless, it is also possible that private investors need more information than consumers of household products.

Luna et al. (2021), Gutsche and Zwergel (2016), and Feng et al. (2019) are more concerned with what effect sustainability certificates have on the stock market. All find that the announcement of a certification has a positive effect. This can at least be an additional incentive why firms should also get certified, even though only the stock market and not credit institutions are dealt with here. The disadvantage, on the other hand, is that many SMEs are not even listed on the stock market, so this incentive is not available to them. An interesting discovery is that these certifications have a stronger effect on first-time certification and that additional voluntary reporting has no additional effect (Feng et al., 2019).

Bassen et al. (2019) also try to figure out how a certificate should best be designed for private investors. They find that a star rating works better than a traffic light design or simply an award or no award. While these results are interesting, they cannot be easily applied in this way to lending institutions, which may want more information.

Table 4: Studies on sustainable labels

Author	Title	Year	Country	Subject of the study	Research question	Findings
Bassen et al.	Climate Information in Retail Investors' Decision-Making: Evidence From a Choice Experiment	2019	Germany, France, the United Kingdom, Italy, Sweden, Switzerland	climate labels of investment fonds	How do climate labels influence the decision of retail investors?	Intuitive decision-makers place more importance on the climate friendliness of funds than on financial performance even independent of their own climate preferences. Three different label designs were tested. The star rating design was the most effective.
Feng et al.	Legitimacy in operations: how sustainability certification announcements by Chinese listed enterprises influence their market value?	2019	China	sustainabability labels and their effect on stock market returns	What effect do sustainability labels have on stock market performance?	The announcement of sustainability certification has a positive effect on the share price. However, initial certification is more effective than recertification. Additional voluntary sustainability reporting also has no positive effect.

Gutsche; Zwergel	Information barriers and SRI market participation: Can sustainability and transparency labels help?	2016	Germany, France, the United Kingdom, Italy, Sweden, Switzerland	transparency and sustainabability labels and their effect on private investors decisions	What are the barriers to private investors investing in sustainability?	A major barrier for private investors to invest in sustainability is difficulties in obtaining information. Transparency and sustainability labels can counteract this.
Heinzle; Wüstenhagen	Dynamic Adjustment of Eco-labeling Schemes and Consumer Choice –the Revision of the EU Energy Label as a Missed Opportunity?	2011	Europe	ecolabeling on domestic appliances	Does the expansion of the A-G classification have a positive or negative impact on the perception of energy efficiency labels on household products?	The results show that expanding the label reduces its effectiveness and weakens consumer awareness of the importance of energy efficiency.
Luna et al.	How do investors value firms' decision on obtaining an eco-label? Evidence from the fishing industry.	2021	world	ecolabeling on fishing companies	Does certification to the Marine Stewardship Council Chain of Custody standard have an impact on the stock value of a fishing company	The announcement that the company is certified leads to positive abnormal returns.

This table shows studies on sustainable labels.

Sustainability reporting by SMEs

Legal framework for sustainability reporting by SMEs

With regard to sustainability reporting in the EU, the Corporate Sustainability Reporting Directive (CSRD) has applied since the beginning of 2023. The CSRD will become effective for fiscal year 2024. It replaces the NFRD (non-. financial reporting directive) which requires large (>500 employees) firms of public interest (credit institutions, insurance companies and listed companies) to disclose their sustainability information. The CSRD expands the group of reporting entities. Now, all capital market-oriented (except micro) firms must file sustainability reports. In addition, all large firms (Firms that meet at least 2 of the following criteria: >250 employees, and/or > €40 Mio revenue and/or >€20 Mio. total assets) must report regardless of their capital market orientation. About 50.000 firms in the EU will be affected by these changes. The changes will be introduced gradually for different groups of firms. Firms must report according to the European Sustainability Reporting Standards (ESRS) which includes reporting on the EU's six environmental objectives, which are also listed in the EU taxonomy. In addition, information on social and governance issues must be provided. The CSRD will be introduced gradually. For SMEs, however, this means that if they are listed, they will have to prepare a sustainability report based on the CSRD in the near future. However, there is still no reporting obligation for unlisted SMEs and for micro-enterprises. Since a large proportion of SMEs are not listed on the stock exchange, reporting therefore remains voluntary for many SMEs (EU, 2021).

Sustainability reporting standards with special respect to the German environment

Tools or guidelines already exist to enable SMEs to easily report on their sustainability. These include the Task Force on Climate-Related Financial Disclosure (TCFD), the Global Reporting Initiative (GRI), the Deutscher Nachhaltigkeitskodex (DNK), the Gemeinwohlökonomie (GWÖ), and the integrated reporting, Streamlined Energy & Carbon Reporting (SECR). Since the SECR was developed for firms in the United Kingdom, which is no longer part of the EU, it will not be examined here.

The TCFD gives firms a guideline on how they should report on their sustainability. They differentiate between four criteria: governance, strategy, risk management, and metrics and targets. For all four criteria, a firm should report on its sustainability strategy and risks. In addition, the TCFD recommends that firms analyze climate related scenarios and analyze and evaluate their strategy in these scenarios. (TCFD, 2022a) According to the TCFD website, over 40 firms from the energy sector in Europe support it. 21 of these firms belong to EU countries (TCFD, 2022b).

The Global Reporting Initiative (GRI) provides another guideline on how firms can report on their sustainability performance. They provide universal standards (GRI 101, GRI 102 and GRI 103). In addition, there are also specific guidelines on certain topics. One example is the topic of energy (GRI 302: Energy). This includes guidelines for publishing energy consumption within the organization, energy consumption outside the organization, energy intensity, reduction of energy consumption, reduction of energy demand for products and services. According to the GRI, it must be stated exactly how the calculations were made. For example, base years must be stated and reasons must be given as to why the figures were calculated in this way (GRI 302: Energy, 2016). If a firm indicates that they report according to GRI, they should report on all material topics and their impacts. They should also publish how they deal with these issues (GRI, 2022). In the report "CSR-REPORTING IN GERMANY 2021", both large firms and SMEs are examined. Unlike large firms, however, SMEs participate here voluntarily. 28 of the 39 SMEs surveyed apply the standards of the Global Reporting Initiative (GRI). (Schöpflin and Lautermann, 2022) This picture cannot be generalized, however, as it can be assumed that only SMEs that are already well advanced with their sustainability reporting voluntarily participate in such a survey. In addition, many of the firms defined here as SMEs are not SMEs according to the EU definition.

The DNK is a German reporting standard, which is why it is mainly used in Germany, but it can be used by firms in other countries too and is also available in other languages. The DNK states that more than 1000 companies now report according to the DNK standard. They advertise their standard as a good introduction to sustainability reporting. A company reporting according to DNK must publish information on 20 DNK criteria (DNK, 2022a). The DNK offers that within these 20 criteria one uses either the performance indicator set according to GRI or according to EFFAS (DNK, 2022b). In the meantime, the DNK also offers the option of expanding the reporting to include the requirements of the EU taxonomy (DNK 2022c). Criteria to be reported on are:

- Strategy

- Materiality

- Targets

- Depth of the value chain

- Accountability

- Rules and processes

- Control systems

- Incentive systems

- Stakeholder participation

- Innovation and product management

- Use of natural resources

- Resource management

- Climate-relevant emissions

- Employee rights

- Equal opportunities

- Qualification

- Human Rights

- Community

- Political influence

- Conduct in compliance with laws and guidelines (DNK, 2022b)

The Gemeinwohlökonomie is also a standard that can be applied in sustainability reporting. The GWÖ is also mainly applied by European firms. The report covers 20 topics regarding the common good (see table 5). The companies must both describe how they proceed in the different topics and provide information on how they are evaluated in the respective topics.

The Gemeinwohlbericht (report) can be prepared by the companies themselves without assistance, or with the help of a consultant. Another option is to prepare one's report in workshops with the help of a consultant, in which other firms in a peer group also participate (Gemeinwohlökonomie, 2022a). Once the report has been prepared, firms still have to undergo an audit. Here, a final assessment is made and feedback discussions are held (Gemeinwohlökonomie, 2022b). According to Gemeinwohlökonomie, there are approximately 1000 companies that have up to 250 employees that have received a Gemeinwohlzertifikat (certificate). In Germany, 684 firms (both SMEs and large firms) have already received a certificate (Gemeinwohlökonomie, 2022c).

Table 5: 20 topics of Gemeinwohlökonomie

Value understanding / groups	Suppliers	Owners and financial partners	Employees	Customers and ohter firms	Social environment
Dignity of man	A1	B1	C1	D1	E1
Solidarity and justice	A2	B2	C2	D2	E2
environmental sustainability	A3	B3	C3	D3	E3
Transparency and co-decision-making	A4	B4	C4	D4	E4

This table shows the 20 topics of the Gemeinwohlökonomie (Gemeinwohlökonomie, 2017)

Status quo of sustainability reporting by SMEs

The following paragraphs will focus on the current situation of sustainability reports. First we will concentrate on written reports, analyze what they describe and where they lack substantial description. Based on this, possibilities for improvement will be shown and discussed shortly. Subsequently, we will highlight the status quo of website based sustainability reports.

Written sustainability reports

It can be seen that the number of sustainability reports from SMEs raised in the period 1999-2020 (Krawczyk, 2021). However, it has become apparent that 55.1 % of all reports presented in 2017 by SMEs have not adhered to the GRI reporting standards (van der Walt, 2018).

The examination of sustainability reports from German SMEs in the manufacturing sector reveals that adhering to standards and fulfilling their requirements leads to higher-quality reports. Thus it becomes observable that following the GRI standards leads the reports to outperform those that only loosely reference them or do not utilize any standard (Steinhöfel et al., 2019). Beyond that the analysis conducted for the 2021 ranking by the Institute for Ecological Economy Research (IÖW) demonstrates that SMEs excel in the area of company profiles (Hoffmann et al., 2022). Due to the size criteria used to classify SMEs and a resulting pre-selection of reports, SMEs lose a great deal of visibility. Another finding resulting from a survey conducted by the Institute for SME Research (IfM) regarding consumption and sustainability information among German companies reveals significant variations in the reported data. One example is that most of the companies overlook information related to greenhouse gas emissions, while most systematically or sporadically provide data on water, electricity and fuel consumption (Löher et al., 2022). Since this study is not exclusively limited to SMEs, these results should not be overestimated. In the following, we have taken a closer look at the sustainability reports of the SMEs that are also considered in the IÖW report.

In terms of design, several things can be described about sustainability reports. First of all it is gratifying to see that most reports refer to accepted standards or at least use them as an orientation. Typical examples are standards published by the GWB, DBK or the GRI. Second, companies who are disclosing sustainability reports do so on a regular basis. In practice, that means those reports appear at intervals of 1 to 3 years and refer to a similar period of time.

Content fulfilment of the reports

By looking at the reports and their fulfilment in terms of content, we can see that the reports show different levels of compliance depending on the standard according to which they were written. Overall reports, which are written in conformity with the GRI standard, show the highest degree of fulfilment. After that there are the reports written in line with the GWB and DNK standards. In case of no standard which the report refers to the level of compliance is lowest. A closer examination of the reports and their degree of fulfilment reveals that there is substantial difference in their focus. Especially texts that are not written according to the GRI standard have a considerable scattering. The reports based on the German Sustainability Code (DNK) have a particular focus on the topic of "Governance." Reports without a specific standard tend to have a lower level of fulfilment, with a particular emphasis on "strategy and goal development." Meanwhile reports following the GWB tend to emphasize the "Corporate Profile" and the "Social Environment." The fulfilment levels of reports based on the GRI standard are relatively consistent across different areas. However, reports that do not adhere to a specific standard generally exhibit lower levels of fulfilment, with a stronger emphasis on "strategy and goal development".

Disclosure of quantitative data

Quantitative data are very interesting regarding sustainability reports. However, there is a considerable amount of heterogeneity observable. Thus, we can see most reported quantities in reports, which are written in line with the GRI-standard. The majority of reports include information on equity, followed by stating key performance indicators (KPIs) on profitability or on revenue. Some of the reports provide details on liabilities/debt ratio or mention expenditures for advertising/marketing, capital investments, and strategic expenses.

In terms of quantitative information regarding environmental and sustainability themes the most common information provided are consumption and greenhouse gas (GHG) emissions. Reports oftentimes include details on electricity, energy, fleet and water consumption. Other emissions and paper consumption are infrequently reported. Key performance indicators (KPIs) on material consumption waste and disposal, and mobility are less often present in the reports. Concrete target values including goals (e.g. for GHG emissions, waste and material consumption, energy consumption, water, and logistics) are rare.

In summary, the disclosing of quantitative data is of special importance to keep the credibility of a sustainability report high. However, the costs that come with collection and processing of those data are very high. Furthermore, it is questionable whether the indicators that apply to large companies can be meaningfully applied to SMEs at all. Looking at SMEs, it is striking that the financial as well as personnel strength of a company often determines how much quantitative information is published. In this respect, however, studies are divided.

Problems regarding sustainability reporting

Right now, sustainability reporting suffers three major weaknesses: lack of comparability, lack of informative reliability and relevance, and individual national requirements in the EU. Since Companies have leeway regarding what they report, stakeholders are sceptical about what the reports hide from them on purpose. This is especially true for SMEs because of their limited resources and structures. Moreover, they lack the necessary expertise to exhibit professional and comprehensive sustainability reports.

Two possible options to improve those weaknesses are the introduction of standards as well as implementing audits carried out by externals. Regarding the implementation of standards, it can be said that a majority of SMEs already utilize them for their sustainability reporting if they report. However, there is no clear trend in the choice of the latter. To address the challenge of selecting the appropriate standard, a new European-wide standard is being planned under the CSRD (Corporate Sustainability Reporting Directive). This could be quite useful as Steinhöfel et al. (2019) found out that following standards more comprehensively has a positive impact on report quality. Nevertheless, SMEs' voluntary adoption of sustainability reporting standards lacks legal obligations, potentially hindering transparency.

On the opposite side it must be said, that while a uniform reporting framework offers advantages such as increased transparency and comparability, implementing a standard entails higher costs for companies compared to reporting without a standard. Moreover, the new requirements introduced by the CSRD pose challenges even for experienced large companies in terms of data collection.

In summary, while SMEs generally adopt standards for their sustainability reporting, the choice of standard varies. The forthcoming European-wide standard aims to address the challenge of selecting an appropriate standard, with a particular emphasis on adjusting it based on company size. The quality of a report tends to improve as compliance with the chosen standard increases. However, the influence of this correlation requires further investigation. It is important to consider the lack of legal obligations for SMEs in disclosing all required information, which could impact the completeness of their reports. Despite the potential benefits of a uniform reporting framework, the higher costs associated with implementing a standard need to be considered. Additionally, new reporting requirements pose challenges for both SMEs and experienced large companies.

With regard to the external audit of the reports, it is apparent right now there is a lack of substantial external assurance. Although some reports undergo external audits, comparability based on indicators remains limited. Currently, only a small number of reports are subjected to external assurance, indicating a clear need for improvement in this area. However, the potential costs associated with external assurance pose a challenge for SMEs, with an average expense of approximately 32000€ (Commission et al., 2021). It is crucial to critically assess whether the benefits outweigh these financial burdens.

Sustainability information presented on companies websites

To evaluate sustainability information that is presented online, we prepared a group of criteria regarding data quality, companies' objectives, employees or climate protection based on the criteria used by IÖW (Hoffmann et al., 2022). The individual criteria are embodied by one or more questions, each of which can be answered in a closed manner. If necessary, additional information are added to the analysis to get a better impression of the information presented on the respective website. We examined six companies with regard to a total of 27 questions. Those companies contain the *Polarstern GmbH*, *ews-schoenau*, the *Ökostrom AG*, *Josef Küppers Söhne GmbH*, *AGO GmbH Energie + Anlagen*, and *LK Metallwaren GmbH*.

Regarding data quality and quantity it quickly becomes clear that qualitative data is usually available while quantitative data mostly is not. This holds true for environmental as well as for social data. It is interesting that although most of the companies present their long-term goals, they lack of a sustainability strategy to achieve those goals. Moreover, key figures on the extent to which the described goals have been achieved can be found almost nowhere.

When it comes to addressing climate protection and how the companies' contribute or detract from it (e.g. emissions, usage of water or materials, waste or recycling) just half of the observed firms do provide information regarding that. Fortunately, the opposite can be found for communicated product responsibility. Almost every company does address environmental and social aspects of their products.

The last aspect, about which we were looking for information on the web pages are human resources. Here we especially focused on employees, their rights and companies' sustainability regarding satisfaction of the former. It is observable that about 66% of the firms display their goals with regard to the employees as well as the working conditions. In terms of equal opportunities, almost no company provides information. This leaves open the question of whether equal opportunities are taken for granted to such an extent that they do not need to be reported on, or whether the companies deliberately do not want to publish anything here. The same holds true for occupational safety and health protection. Here either information on how accidents can be prevented nor information about how a company promotes health protection are presented.

Sustainability reporting in the context of the Czech Republic

According to the International Monetary Fund (IMF, Jan 2023), the Czech Republic has entered a more advanced stage of its development. Its close proximity to Germany and specialization in automotive supply chains have contributed to rapid economic convergence. The country's exports demonstrate a significant level of economic complexity and active involvement in European value chains. However, the World Bank's findings indicate that innovation performance among Czech SMEs remained stagnant or weakened from 2010 to 2017.

The Czech economy is undergoing a transition towards a new model that focuses on higher value-added sectors. According to the European Innovation Scoreboard 2018, the country's performance is below the EU average but surpasses its regional peers such as Hungary and Poland. However, SMEs in the Czech Republic contribute relatively less to innovation. Furthermore, the Regional Innovation Scoreboard 2018 reveals that while Prague is considered a strong innovator, other regions like Central Bohemia, Southwest region, and Northwest region are experiencing a decline in innovation performance and are classified as moderate innovators (OECD, 2020).

To enhance the competitiveness and innovative capacities of SMEs, the Ministry of Industry and Trade has published a strategic plan called the STRATEGY TO SUPPORT SMALL AND MEDIUM-SIZED ENTERPRISES IN THE CZECH REPUBLIC (2021–2027). This strategy aims to unlock the innovation potential, knowledge, and education of SMEs while promoting energy efficiency in their operations. The document sets specific objectives for increasing renewable energy production and usage, as well as targets for improving energy and material efficiency. The Ministry emphasizes that SMEs have a role to play in on-site renewable energy production and usage.

Sustainability issues for SMEs

The SME EnterPRIZE project, sponsored by Generali, conducted a research report [1]analyzing the sustainability practices of SMEs in Austria, the Czech Republic, France, Hungary, Italy, Spain, and Switzerland. The findings revealed that Czech SMEs tend to withhold their strategy and direction, focusing instead on their social impact through employment and support to local charities. However, there are sustainability awards[2] available in the Czech market that allow SMEs to showcase their sustainability efforts.

SMEs in the Czech Republic face pressure from international trade partners and consumers to adopt more sustainable practices. The 2017 Ipsos CSR Reputation Research survey showed that over half of consumers consider a company's responsibility when making purchasing decisions.

[1] Report retrieved from: https://www.sme-enterprize.com/wp-content/uploads/2021/09/SME-EnterPRIZE-White-Paper.pdf

[2] Top odpovědná firma - jediný nezávislý rating udržitelného podnikání v ČR https://www.odpovednefirmy.cz/cena-top/kategorie/top-odpovedna-mala-firma.html. The 2022 results are available: https://www.odpovednefirmy.cz/pages/serve.php?file=Vysledkova_listina_TOP_2022.pdf

Additionally, 70% of Czechs are willing to pay extra for environmentally friendly products or products that support socially beneficial projects.

A study by Šebestová-Sroka (2020) compared waste management and circularity practices among Czech and Polish SMEs. The findings indicated that Czech small businesses are adopting circularity methods, especially when entering the market or engaging in export activities. The study also highlighted that Czech entrepreneurs have more knowledge and experience in implementing green approaches compared to their Polish counterparts.

Media coverage of corporate reporting practices in the Czech Republic has highlighted the tight labor market and entry barriers, leading to prejudice against certain groups such as women or individuals nearing retirement age[3]. These barriers hinder diversity gains and contribute to precarious work situations. Furthermore, a survey conducted by Flagship Consulting in 2019 revealed that 75% of the 50 SMEs surveyed observed corporate social responsibility (CSR), while 17% were aware of CSR and 8% relied on reported information from other companies to understand CSR.

Table 6: Top performing Czech SMEs in 2022

Company name	Main activity	NACE code of the main activity	Number of employees category	Rating achieved (in 2022)
Good Sailors s.r.o.	IT consulting and digital services	62010	25 - 49	80.3
MHA s.r.o.	Printing and marketing solutions	4778	25 - 49	80.2
PRK Partners, s.r.o.	Legal services and advisory	69100	25 - 49	76.5
Biopekarna Zemanka s.r.o.	Bakery	10720	25 - 49	75.6
eBRANA s.r.o	Professional services	620	25 - 49	75.6
ASIO NEW spol s.r.o	Wastewater treatment; technology	461	25 - 49[4]	66.7

[3] https://archiv.hn.cz/c1-66383970-jak-na-udrzitelne-podnikani

[4] The group level: ASIO: 90; ASIO group (production): 125 employees.

Vuch s.r.o.	Retail sale of fashion accessories	46900	25 - 49	62.2
Accace s.r.o	Professional advisory and services for tax, accounting, HR.	69200	25 - 49	62.6

This table shows the top performing Czech SMEs in 2022 according to https://www.odpovednefirmy.cz/cena-top/top-of/448/top-odpovedne-firmy-roku-2022-vyhlaseny.html?pg=

A comprehensive survey conducted by Změna k lepšímu[5] in late 2022 gathered a substantial sample size of 448 responses, representing both large and small companies operating in the Czech market-oriented sector. The findings shed light on various aspects of sustainability within these organizations:

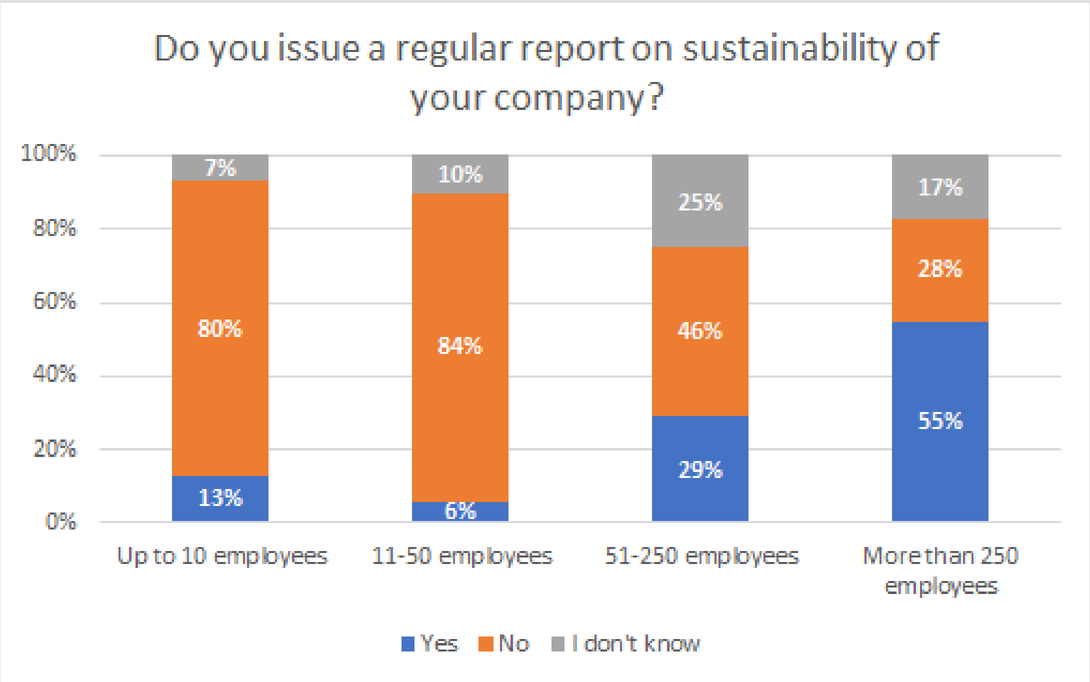
- An overwhelming majority of respondents (83%) stated that their company prioritizes sustainability. Among small company respondents, 42% highlighted sustainability as a key focus for top management, while in companies with over 250 employees, this figure slightly increased to 55%.
- Manufacturing firms (93%) and companies with 250 or more employees (87%) placed a slightly higher importance on sustainability.
- The primary reasons cited for companies not addressing sustainability were a lack of capacity (33%), knowledge (29%), or support from owners and top managers (27%).
- The survey revealed significant employee engagement, with 90% of respondents reporting that their staff actively supports sustainability initiatives.
- While energy held importance for 56% of companies engaged in sustainability, an even greater emphasis was placed on the circular economy, material efficiency, and waste management (62%). Energy was prioritized more by respondents from larger companies compared to small businesses.
- Only half of the respondents (51%) considered sustainability as a criterion for supplier selection, with the banking/finance sector showing the highest level of activity (almost 70%). Additionally, 62% of respondents already offered sustainable products.

[5] Retrieved from: https://www.klepsimu.cz/udrzitelny-byznys-2023. The report is available at: https://www.klepsimu.cz/_files/ugd/f430b5_f8ef28e8f2e64a76b47e394f632907d4.pdf

- Motivations for pursuing sustainability varied based on company size. Overall, brand reputation played a significant role. Legislation had a greater impact on companies with 250 or more employees (59%), especially considering future regulatory changes starting in 2026. On the other hand, small companies placed higher priority on competitiveness (44%). Surprisingly, financing and supply chain pressures were not major concerns for the surveyed companies.

These findings highlight the increasing focus on sustainability within Czech companies, with notable differences based on company size and industry sectors. While many organizations prioritize sustainability, challenges such as capacity limitations and knowledge gaps need to be addressed to further enhance sustainability practices across the board.

Figure 1: Survey results from Změna k lepšímu



Survey results from Změna k lepšímu

Analysis and findings

We conducted desk research to examine the sustainability reporting practices of clean energy SMEs. The following criteria were established to evaluate the reports:

Initially, we identified small and medium-sized companies operating in the energy sector, specifically those primarily utilizing clean energy sources such as solar, wind, hydropower, biomass, and geothermal energy. To accomplish this, we referred to the energy licenses issued by the Czech Republic's regulator, ERU[6], aiming to encompass companies from all regions.

We screened a total of 41 companies, analyzing their economic activities and publicly available information on sustainability from their websites. Our findings can be summarized as follows:

- The majority of companies in our sample were small-sized; however, further examination in the business registers revealed that most of them had a mother company (61%).
- Out of the companies we assessed, 26 did not have a website.
- None of the companies had accessible sustainability reports.
- In nine cases, we found sustainability-related information disclosed on the company websites. However, the disclosed information mainly focused on ongoing projects such as extensions, fuel switching, and portfolio diversification toward clean energy sources. Such limited disclosure is inadequate for making informed investment decisions.

In light of Změna k lepšímu's findings (2023), we expanded our research to include larger companies operating in the clean energy sector. Their survey revealed that just under 55% of companies with over 250 employees published sustainability reports. These companies are likely to face legislative obligations in 2026, reporting data for 2025 with 2024 as a reference year.

Companies with over 250 employees are proactively preparing for sustainable transformation by hiring specialists. However, approximately 25% of respondents are uncertain whether their

[6] ERU. https://www.eru.cz/vyhledavac-licenci

company employs such individuals. Among the surveyed companies, 81% have a staff member responsible for sustainability, 55% have a dedicated person handling ESG matters, and 36% have a department specifically focused on the Green Deal.

In the Czech energy sector, major players have published sustainability reports[7]. These reports generally adhere to the Global Reporting Initiative (GRI) template and reference the UN Global Compact. Additionally, the energy companies reviewed included the EU Taxonomy breakdown table in their most recent reports. These companies maintain diversified energy portfolios, with most engaging in a mix of Taxonomy-eligible and non-eligible activities. Furthermore, all reviewed companies disclosed information about installed capacities for different energy sources and corresponding greenhouse gas (GHG) emission statistics. Notably, some energy companies went beyond emissions and energy source-related issues by including details about water usage, forestry, land use, and certain biodiversity aspects.

However, we observed some deficiencies in the reporting practices of larger energy companies. Explanations of exclusions, omissions, and discussion on the current limitations of reporting were absent in the Czech reports. It is advisable for Czech companies to give greater consideration to future-oriented aspects of sustainability and adopt a more integrated approach to reporting.

Conclusion

The analysis of sustainability reports from SMEs reveals that while the number of reports has increased over time, adherence to reporting standards, particularly the GRI standards, is still lacking. Reports that follow the GRI standards tend to be of higher quality, but there are significant variations in the reported data. The inclusion of quantitative data is crucial for credibility, but there is heterogeneity in reporting practices. Overall, there is a need for improved adherence to standards and greater consistency in the reporting of quantitative data to enhance the quality and reliability of sustainability reports.

[7] The reviewed companies were: CEZ Group, Photon Energy Group, Se.Ven, e-on Group. SOLEK Group.

In terms of sustainability information presented on companies' websites, qualitative data is usually available, but quantitative data is lacking. Companies often lack a sustainability strategy and do not provide key figures on goal achievement. While some companies address climate protection and product responsibility, information on human resources, equal opportunities, and occupational safety and health protection is scarce.

The analysis of sustainability practices among Czech SMEs highlights a focus on social impact and engagement with local charities. However, adherence to sustainability reporting standards is lacking. Pressure from trade partners and consumers drives the need for more sustainable practices, with a significant percentage of consumers willing to pay extra for environmentally friendly products. Czech small businesses show a stronger adoption of circularity methods compared to their Polish counterparts. Barriers to diversity gains and precarious work situations exist in the labor market. While many companies prioritize sustainability, capacity limitations and knowledge gaps hinder progress. Employee engagement is high, with emphasis on the circular economy and waste management. Supplier selection criteria and offering sustainable products vary. The analysis of clean energy SMEs reveals a lack of accessible sustainability reports. Larger energy companies published reports but need to address deficiencies in reporting. Overall, there is a need for a more integrated approach to reporting and consideration of future-oriented sustainability aspects.

In conclusion, there is room for improvement in sustainability reporting practices among Czech SMEs. While social impact and engagement with local charities are strong, adherence to reporting standards is lacking. Pressure from trade partners and consumer demand drives the need for more comprehensive sustainability practices. However, capacity limitations and knowledge gaps hinder progress. Employee engagement is high in the circular economy and waste management areas. The analysis of clean energy SMEs highlights a lack of accessible sustainability reports. Overall, there is a need for standardized reporting practices, including the inclusion of quantitative data and transparent reporting on human resources, to enhance the quality and reliability of sustainability reports. By addressing these weaknesses, sustainability reports can become more informative, reliable, and relevant, contributing to sustainable business practices and meeting stakeholder expectations.

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