



# Handbook for an integrated GEAR@SME methodology

**GEAR@SME: GENERATE ENERGY EFFICIENT ACTING  
AND RESULTS AT SMALL & MEDIUM ENTERPRISES**



## Project Factsheet

Acronym:	Gear-at-SME
Title:	Generate energy efficient acting and results at small & medium enterprises
Coordinator:	Nederlandse Organisatie voor Toegepast-Natuurwetenschappelijk Onderzoek (TNO)
Reference:	894356
Type:	Coordination and Support Action
Program:	Horizon 2020
Call:	H2020-LC-SC3-2018-2019-2020
Start:	1 <sup>st</sup> September 2020
Duration:	30 months
Website:	<a href="http://gearatsme.eu">gearatsme.eu</a>
Consortium:	Nederlandse Organisatie voor Toegepast-Natuurwetenschappelijk Onderzoek (TNO) CIT Industriell Energi AB (CIT) CertiMaC Soc. Cons. a R. L. (CERTIMAC) Berlin Energy Agency (BEA) Servelect (SVT) Cornelissen Consulting Services B.V. (CCS) SYNYO GmbH (SYNYO) Technical University of Cluj-Napoca (TUCN) Confederazione Nazionale Dell'Artigianato e Della Piccola e Media Impresa Associazione Territoriale Di Ravenna (CNA) Stichting CLOK (CLOK)



## Deliverable factsheet

Number:	D3.1
Title:	Handbook for an integrated GEAR@SME methodology
Lead beneficiary	CIT
Work package:	3
Task:	3.1, 3.2, 3.3, 3.4 and 3.5
Dissemination level:	Public
Submission date:	30.04.2021
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### Document history:

Revision	Date	Main modification	Author
0	30/04/2021	Original version	Lead: Ingrid



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*“This project has received funding from the European Union’s Horizon 2020, research and innovation programme, under Grant Agreement No 894356”*

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## Background – A common methodology for the GEAR@SME project

The GEAR@SME project addresses the challenge of scaling up energy efficiency and renewable energy in SMEs. The core idea of the project is that support will be coordinated to groups of SMEs, for example, linked to industrial areas or business parks, and provided through an organization or actor that is already known and trusted by the SMEs.

This handbook describes the common methodology developed within the GEAR@SME project from the principles of **activating** (motivating SMEs to take action to increase energy efficiency), **organizing** (creating networks and opportunities for common action), **enabling** (providing knowledge, support and tools) and **embedding** (acting within existing structures to maximize the efficiency). A starting point for the methodology is the hypothesis that SMEs can benefit from energy efficiency actions but have limited time and resources to implement them.

For the methodology and throughout this handbook, the following **key concepts**, are vital:

- **A collective approach** – a cluster of SMEs are offered the same coordinated services and activities and supported to exchange experience and increase networking;
- **A local SME energy collective** – the local cluster of SMEs, e.g. a business park or industrial area, that together with its Trusted Partner address energy efficiency collectively;
- **The Trusted Partner** – a neutral actor, trusted by the SMEs, that drives the development of the energy collective and supports the SMEs in tasks related to energy efficiency;
- **Energy Service Suppliers** – energy consultants, ESCOs, grid operators and technology suppliers, that provide energy expertise and services for the local SME energy collective;
- **Multiplier Organizations** – generally non-profit organizations with a large potential to support and reach SMEs on the regional or national level, who play an important role for establishment and scale-up of local SME energy collectives.
- The **'Energy Efficient SME' portal** – an online portal dedicated to the project, which will provide support material, and tools linked to the methodology<sup>1</sup> ([www.energyefficientsme.eu](http://www.energyefficientsme.eu)).

The methodology is based on literature and experiences from successful energy efficiency initiatives in Germany, Italy, the Netherlands, Romania, and Sweden<sup>2</sup>.

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<sup>1</sup> The development of the online portal is part of the GEAR@SME project. The online portal will be launched in Q3 of 2021.

<sup>2</sup> For a detailed description of such initiatives, see Deliverable 2.1 from the GEAR@SME project.



To ensure the effectiveness of this common methodology, it will be tested and validated in four use cases in industrial areas in Germany, Italy, the Netherlands, and Romania, before upscaling to a larger group of local/regional clusters and roll-out activities across Europe. To further support the methodology and roll-out, a toolset will be developed. The toolset will include a database on best practices for energy efficiency measures, analysis and calculation tools, contracting support tools, and training interventions and materials.

This document describes an intermediate version of the methodology. The validated and updated common methodology will be made available through the '[Energy Efficient SME portal](#)'.

This handbook is the result of work done in Work Package 3 Define common methodology, including feedback from partners involved in the use cases and other stakeholders. The [Introduction](#), below, describes how – and by whom – the handbook can be used, motivates the proposed methodology and describes the key concepts above in more detail.





### The role of the GEAR@SME project and consortium

The GEAR@SME project runs from September 2020 until February 2023. During this period, the project and the consortium partners play important roles for supporting the development and operation of local energy collectives linked to this project. This handbook should thus also be useful for GEAR@SME project partners.

Advice, training materials, and supporting tools for Trusted Partners are developed in the project and made easily accessible via this handbook and the online 'Energy Efficient SME' portal. Further, the partners drive the roll-out to additional energy collectives and support the long-term Multiplier Organizations in their work.

The GEAR@SME project partners in Germany, Italy, the Netherlands, and Romania identify the local energy collectives in the use cases and activate the Trusted Partners of these collectives. In addition, the consortium partners provide additional direct support, motivation and energy expertise to the Trusted partners of the use cases, in all the steps of initiating and operating a local energy collective. The actual support is adapted to the specific situation and the needs of the Trusted Partner.

This support is needed, since methodology, material and other structures are developed in parallel. However, also for the use cases, it is the Trusted Partner who is the link to SMEs and Energy Service Suppliers.

Consequently, the consortium partners have a "hybrid" role of Multiplier Organization, coach for the Trusted Partner and Energy Service Supplier, in relation to the use cases.



## Introduction

### How can this handbook help you?

This handbook is designed to help any organization or individual who wants to support SMEs in their efforts to improve energy efficiency. The handbook explains a coordinated approach for addressing energy efficiency in SMEs, and aims to inspire you and provide you with practical insights on this approach. *It should be useful for you, if you*

- Represent an organization that has the interest to inspire and establish energy efficiency initiatives in SMEs and the capacity to communicate and scale up the experiences on the regional or national level, for instance an SME association, energy authority, (local) government, NGO or research organization.
- Have, or intend to take on, a coordinating role in relation to a local cluster of SMEs. You may be, for example, a business park manager, an operator of local business or industry association, or a local energy and climate advisor that want to increasingly address energy efficiency in your collaboration with SMEs, and
  - are just starting to focus on energy aspects within the group of SMEs;
  - need inspiration and guidance to further developing and continuously follow up and make improvements in your work with energy efficiency in the SMEs; and/or
  - need to know more about what your SMEs might need support with, in order for them to take the next steps towards improved energy efficiency.
- Represent a company that sells energy audits, energy efficient equipment, or other energy services, and you see that your services towards SMEs could be improved, by reaching many potential and co-located customers in a coordinated approach.

The following introductory sections provide an important starting point, regardless of which above-mentioned stakeholder group(s) you belong to. Here, you will find arguments for why it is important and beneficial to improve the energy efficiency in SMEs, and information about why the proposed collective approach has proven to be successful.

This is followed by five chapters that give concrete advice on how to develop the work with energy efficiency in SMEs, from a collective approach. This includes:

- Establishment and long-term support to local SME energy collectives (Chapter A),
- Defining the scope and stakeholder network of a local SME energy collective (Chapter B),
- Activities for the SMEs in the collective (Chapter C),



- Monitoring and following up on results (Chapter D), and
- Areas in which SMEs may need support related to energy efficiency (Chapter E).

## Why energy efficiency in SMEs?

Addressing energy use, increasing energy efficiency and renewable energy in SMEs can be of great benefit to both the SMEs and to society.

For SMEs, increased awareness about energy use and improvements in energy efficiency will of course save energy and reduce energy cost. On top of that, there are more potential benefits, which could even be the main drivers for the SME. **Table 1** includes a range of potential **multiple benefits**<sup>3</sup> that may contribute to the overall motivation for energy efficiency.

*Table 1. Examples of potential multiple benefits for an SME from increasing energy efficiency<sup>4</sup>*

Multiple benefits of energy efficiency for the SMEs	
Energy cost savings	Decreased energy costs are a direct effect from implementing measures that improve energy efficiency.
Higher productivity and less maintenance	Adoption of new, more energy efficient, technologies often bring benefits in terms of overall productivity and less maintenance stops.
Improved competitiveness, robustness and independency	Higher productivity and reduced operational costs improve overall competitiveness. Further, the sensitivity to, e.g., varying energy prices decrease.
Improved work environment	Better ventilation, lighting and routines may improve work environment and employee safety as new energy-efficient technologies are often cleaner and quieter.
Reduced environmental impact and increased sustainability	Many companies have internal environmental goals, requirements from regulators and/or from customers. Energy efficiency helps to reach these goals and requirements. The market demands for such goals are also expected to increase.

<sup>3</sup> Also often referred to as non-energy benefits (or co-benefits, ancillary benefits) (Rasmussen, 2014)

<sup>4</sup> Learn more about multiple benefits from other European projects (e.g. Multiple Benefits project, 2021; Odyssee-Mure, 2021), or find more information in recent academic reviews (Killip et al., 2019; Nehler, 2019)



Improved company image	The image and trademarks of the company may be strengthened by taking a societal responsibility to lower the environmental footprint, which may be important for increasing demands from customers.
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For society, more energy efficient SMEs contribute to<sup>5</sup>:

- **Increased sustainability** – Energy is a resource that we need to use efficiently to achieve a sustainable future. Production of electricity and combustion of fuels affect the environment in different ways. Use of fossil energy has direct negative impacts on the climate. Increased energy efficiency and use of renewable energy thus contributes to sustainability.
- **Growth and viable economy** – SMEs represent more than 95% of the number of companies in most countries. Consequently, the SME sector is a major driver for the European economy in terms of investments, economic growth and exports. SMEs also contribute significantly to innovation and development. Energy efficient SMEs are also more economically viable.
- **Employment** – Economically viable SMEs that can grow and prosper. They can also employ more people, in more qualified roles, and spend resources on developing competences and skills. In many countries, SMEs represent the majority of employees in the industrial and tertiary sector.

## How to address energy efficiency in SMEs?

To increase energy efficiency in SMEs, the first step is often to help them find the interest and motivation to start working with energy-related matters in the company – to be aware of the multiple benefits that energy efficiency can provide. A second step would be to identify and provide required support.

SMEs commonly lack capacity, time and resources to work systematically with energy efficiency. They may need support to raise awareness about energy, find someone that can make an energy audit, to apply for audit subsidies, to interpret the result of the audit, and guidance on how to finance measures. These difficulties form a barrier for implementing energy efficiency and renewable energy measures<sup>6</sup>. Therefore, there is still a large potential for cost-effective efficiency improvements in SMEs.

Such support is typically offered by Energy Service Suppliers. However, the SME may have limited trust in the Energy Service Suppliers, especially if they do not have a previous business relation or if they have links with specific technologies causing doubt about their role and independency. At the same time, Energy Service Suppliers do not always

<sup>5</sup> See e.g. Thema et al. (2019)

<sup>6</sup> Read more about barriers to energy efficiency in Thollander and Palm (2013) and Thollander et al. (2020).



have the capabilities, tools and organizational approach necessary to adapt to the needs of SMEs. For example, some energy consultants focus mainly on energy aspects, which are generally low on the strategic business agenda of the SMEs. Furthermore, they may not have enough knowledge about the energy maturity of the SME, what type of service the SME needs or how the service can be communicated to be understood by the SME<sup>7</sup>.

Altogether, this creates a need to bridge and overcome the gap between the needs of SMEs and the services provided by the Energy Service Suppliers. One proven method for bridging this gap for clusters of SMEs is to use a [coordinated – or collective – approach](#) in which a person or organization that is already trusted by the SMEs (a [Trusted Partner](#)) serves as a link to such support. Trust has been shown to be an important factor for well-functioning energy efficiency networks<sup>8</sup> and this includes mutual trust between the SMEs themselves as well as between the SMEs, the project leader (i.e. the [Trusted Partner](#)) and the energy experts (i.e. the Energy Service Suppliers). The collective approach enables resources and efforts to be coordinated to minimize the costs and time required by individual companies and the [Trusted Partner](#) can match and connect the energy services provided by Energy Service Suppliers to the business strategy and interests of the SMEs.

### What do we mean by a collective approach?

By working with increasing energy efficiency in SMEs from a collective approach we mean:

- offering the same [coordinated services and activities](#) (such as an energy scan or seminars about energy efficient equipment) to effectively support a group of SMEs; and
- designing and planning these activities to [increase communication](#) about good examples, [exchange experience and networking](#), in order to spur motivation and results.

The clusters of SMEs that we address here are typically located in close proximity, for example, in the same industrial area or business park. However, the methodology can also be applied to SMEs that are spread over a larger region, especially if they belong to the same business sector or utilize the same type of processes. The collective approach is more effective if it is embedded in existing structures of, for example, a local area or a certain sector.

Similar to individual SMEs, a local cluster of SMEs generally needs motivation and support to become more energy efficient and sustainable. A so-called [Trusted Partner](#) (described below) can provide such support, coordinate activities and act as an intermediary between the SMEs and other stakeholders, such as the Energy Service Suppliers. In this

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<sup>7</sup> See e.g. Palm and Backman (2020).

<sup>8</sup> The importance of trust in this context is described in e.g. Palm and Backman (2020).



handbook, we refer to the group of SMEs together with their Trusted Partner as a [local SME energy collective](#).<sup>9</sup>

The activities of a local SME energy collective are typically organized by a Trusted Partner and can for instance be to (see also [Table 4](#) in Chapter C, page 54 for more detail):

- arrange regular meetings, workshops and networking events to spread knowledge and share experiences between the SMEs;
- update and communicate energy achievements to the SME collective;
- provide coordinated support to individual SMEs, e.g., to scan their energy use to identify potential energy efficiency measures, take steps to implement measures and to finance their actions;
- support the SMEs to jointly hire consultants to conduct energy audits or to pursue other types of collective energy projects.

In a local area with limited knowledge on energy efficiency, the aim could be to motivate, inform, and unburden individual SMEs in the collective, and together they could gain knowledge about opportunities of working (collectively) to improve their energy efficiency. When the SMEs are more aware of the potential opportunities for energy efficiency and their benefits, the next step could be to agree on the aim and scope of a continued collective approach and which activities to pursue. And for a local area e.g. where the SMEs already have some general interest and awareness and, for example, have expressed the desire to invest in solar PV, the Trusted Partner could support these SMEs by helping them organize collective purchasing for the group of companies.

It should be emphasized that an individual SME does not have to be involved in all activities of the energy collective. For example, the Trusted Partner in a local area runs a campaign to make SMEs aware of the opportunities for energy saving and offers to jointly find the best solution. The SMEs who are activated by this can then choose to either implement a solution by themselves or to take the next step together.

This also means that a local energy collective should focus on different aspects of the collective approach and different activities depending on the interest and energy maturity of the SMEs. The services and activities offered, as well as their degree of “collectivity”, and the order in which they are carried out will differ between local energy collectives and depend on both the group of SMEs and the context. This will likely develop and change over time.

## Key stakeholders in a collective approach

There are four roles or functions that are important to these local SME energy collectives. For simplicity, these four roles are described below as four different stakeholders, even though in reality, one stakeholder could function in more than one role or – vice versa –

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<sup>9</sup> When clear from context, this may be shortened to a “local energy collective” or even “energy collective”.



a group of stakeholders can together function in one role. The stakeholders are illustrated in Figure 1 and Figure 2.

The four types of key stakeholders are:

- **The local cluster of SMEs** that participates in the local energy collective to overcome barriers to implement energy efficiency measures. The cluster can be linked to for instance a local industrial area or a business park.
- **The Trusted Partner** that drives the development of the energy collective and functions as a neutral actor, which the SMEs trust. The Trusted Partner supports the SMEs and takes up the role of an independent intermediary between Energy Service Suppliers and SMEs. Further, the Trusted Partner brings together different stakeholders in the collective, initiates and organizes activities within the collective and inspires, develops and amplifies the implementation of energy audits and subsequent energy saving measures in SMEs. Most often, a non-commercial entity that is already known by the SMEs will serve as Trusted Partner, such as a business park manager, an independent local foundation for entrepreneurs, an association of SMEs, or a municipality.
- **Energy Service Suppliers**, such as energy consultants, ESCOs, grid operators and technology suppliers, that provide energy expertise and services for the local SME energy collective. The involvement depends on the local energy collective. Often, they are not a direct part of the collective, but rather involved in specific projects or activities. In some cases they have a more long-term collaboration, for instance, when there are Energy Service Suppliers that are themselves SMEs in the collective or if there is funding for external energy expertise or hiring of an energy manager working for the whole SMEs consortium. A local energy collective may even decide to establish an Energy Service Company (ESCO) and take up partnership with the supply side.





- **Multiplier Organizations**, who have an important role for establishment and scale-up of local energy collectives. Multipliers identify local areas that are suitable for organizing a local energy collective, identify suitable Trusted Partners and support the Trusted Partner in the establishment and operation of the local energy collective. Multiplier Organizations are generally non-profit organizations with a large potential to support and reach SMEs on the regional or national level. They have an ambition – as part of their purpose – to support SMEs in becoming more economically viable and/or to foster sustainability, reduction of climate change and energy efficiency. Examples are Federations for Industrial Business Parks, Chamber of Commerce, branch organizations and SME associations, but also public authorities such as national energy agencies, or universities or other research institutes.

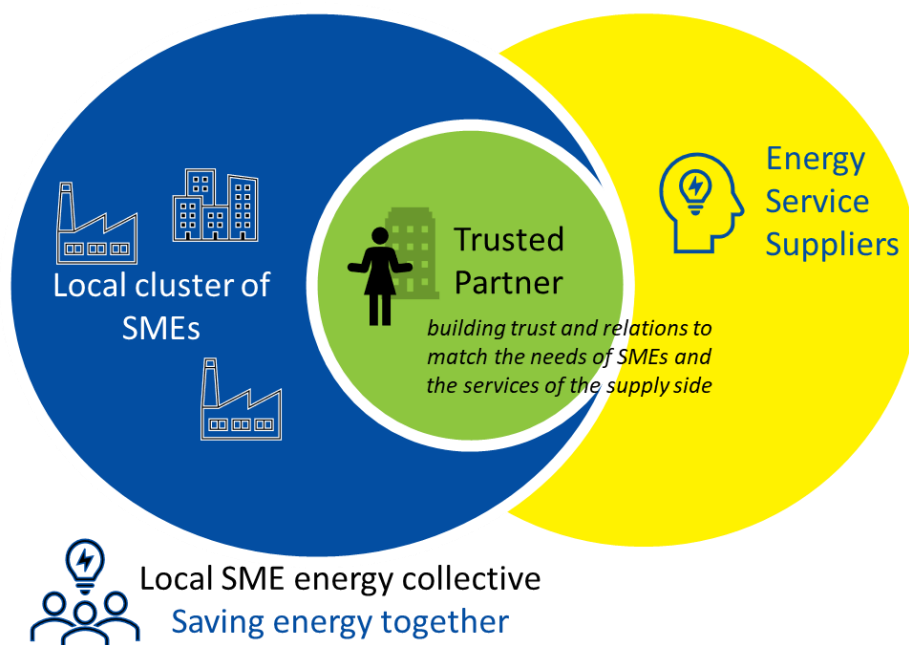


Figure 1. A local SME energy collective and its key stakeholders.



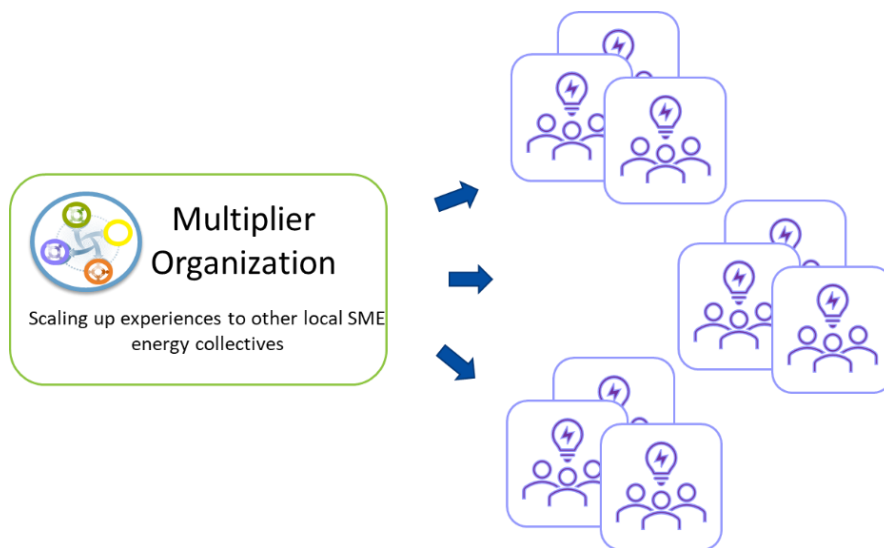


Figure 2. Role of Multiplier Organizations.

As mentioned, these roles or stakeholders are not fixed. The diversity in the local context of different areas leads to a diversity in role divisions. In some cases, the local energy collective is established and run by a Multiplier Organization, which means that their role merges with the role of the Trusted Partner. The same goes for the Energy Service Supplier. For example, an energy advisor can take up the role of Trusted Partner by bringing the SMEs of a local area together in a local energy collective. An energy collective may also be started by one or several SMEs, and their initiative then becomes the Trusted Partner – or the role of the Trusted Partner can be carried over to the group of SMEs.

### Example: Local energy collectives in the Netherlands

In the Netherlands, SMEs in a business park are often linked to a local entrepreneurial organization with an appointed business park manager, who is responsible for overall park management, including, for instance, waste management, security, etc. Through park management, energy efficiency initiatives can be presented to all SMEs connected to the business park. These park managers take up the role of Trusted Partner and initiate energy projects for their members, thereby, creating a local energy collective. In addition to supporting individual energy audits, networking and enabling activities, these local energy collectives also aim to collectively invest in energy measures, such as purchasing green electricity or installation of solar photovoltaics.

There are also coordinated efforts towards developing sustainable – and more specifically energy efficient – business parks. An example of an initiative that coordinates the development of local energy collectives is the Business Parks energy positive (BE+) initiative (In Dutch: *Bedrijventerreinen Energie positief*). This organization brings the local park managers together to exchange experiences, identify lessons learned, and inspire new business parks. Thus, BE+ takes up the role of the Multiplier Organization.



### Example: Local energy collectives in Italy

In Italy, examples include SMEs in industrial parks forming consortia to reduce energy costs and environmental impact. Representatives from the SMEs in the consortia or industrial park managers take on the role as Trusted Partner in these local energy collectives.

In the agri-food industrial district of Parma in Italy, more than 200 ham-producers are gathered together with local institutions in a consortium, aimed at reducing the environmental impact of the activities and improving economic and energy performance. Acting as a collective allows companies in the district to interact more directly with local authorities and to get access to financing and support.

In the ceramic district of Sassuolo in Italy, some of the local companies (40 out of 100) joined a consortium with the aim of collectively managing contracts with gas suppliers. As a result, local, highly efficient cogeneration plants now supply about 28% of the local energy demand. Furthermore, local authorities joined together with industrial associations to develop a district-level environmental management plan, which resulted in the definition of 134 actions for an overall investment of 800 million euros.

The Macrolotto of Prato textile Eco-Industrial Park in Italy houses about 380 SMEs, each one specialising in a specific activity of textile production. The area is managed by a private consortium of 240 enterprises located in the area, which also coordinates efforts to tackle sustainable mobility within the industrial park and, consequently, acts as a Trusted Partner. The park management consortium bought several electric and natural gas vehicles for the local collective, which the SMEs can use to transport goods and persons. As a result, about 104,500 km of private transport was spared, equivalent to 18 ton of CO<sub>2</sub> saved.

## What are the benefits of a collective approach?

A proposed collective approach, in which a Trusted Partner reaches several SMEs with coordinated offers and services, can **reduce the costs and resources** required by individual companies. Further, **inspiration and guidance** for adopting energy management practices and implementing measures are convincingly provided by peers in similar situations. This **increases motivation, and results in energy efficiency improvements** and several added benefits to the SMEs. Finally, shared success makes the work more fun, and therefore more motivating to continue.

Research and experience from previous initiatives in several countries show that approaches involving collective elements, such as energy efficiency networks or sustainable business parks, add various benefits. These benefits are listed in **Table 2**.



**Table 2.** Potential benefits from using a collective approach towards energy efficiency in SMEs. These effects have been verified through research and experience in several countries.<sup>10</sup>

Benefits from a collective approach	
Significantly increased implementation rate of measures	SMEs that participate in, for example, energy networking programs implement a larger share of the energy efficiency improvements identified in an audit compared to those taking part in pure energy audit programs.
Reduce barriers to energy efficiency	Barriers to energy efficiency that many SMEs are facing as, for instance, lack of time, resources and knowledge can efficiently be addressed.
Provide linkage to Energy Service Suppliers	SMEs can, as a group, receive help to connect to appropriate energy experts and technology providers based on the SMEs' needs, thereby facilitating knowledge transfer as well as actual implementation.
Increase use of energy management practices	Help SMEs to adopt energy management practices that have proven to be important factors for realizing energy efficiency improvements. Examples of such success factors include long-term energy strategies, concrete energy targets, and clear responsibilities.
Provide basis for collective energy measures	A collective approach is necessary for efficiently implementing collective energy measures, such as local heat grids or common solar panels in a business park.
Increase cost efficiency	A collective offer can be more cost-efficient from the perspective of Energy Service Suppliers (and for the SMEs). SMEs are many and small, and it might not be worth-while to offer individual services – while a joint offer to several SMEs can be a good project for the supply companies.
Facilitate access to financing	Financing institutes and banks may be more willing to provide financing for e.g. collective purchases, since the activities of an individual SME may often be too small to spur interest.
Lead to benefits beyond energy efficiency	Examples include improved company image, establishment of new contacts and business relations (e.g. that SMEs find new customer relationships through the collective).

<sup>10</sup> Based on experiences from, amongst other, three initiatives in the Netherlands (BE+, 2021; BEST Energy CheckUp, 2021; ECUB, 2021), various Energy Efficiency Network initiatives in Germany (see e.g. Initiative Energieeffizienz- und Klimaschutz-Netzwerke, 2021) and Sweden (see e.g. EENet, 2021), see also Odyssee-Mure (2016) for a policy brief on such programs. Further support for the claims can be found in research studies such as Johansson and Thollander (2019), Kalantzis and Revoltella (2019), Köwener et al. (2014) and Paramonova and Thollander (2016).



## Handbook structure and chapters

This handbook is designed to be helpful to any organization or individual who is reaching out to support SMEs in realizing energy efficiency improvements. Especially, it is focusing on how to [develop a collective approach towards energy efficiency in clusters of SMEs](#).

The handbook is divided into five chapters that each describe different aspects related to forming and operating a local energy collective. Primarily, [Chapter A is directed towards Multiplier Organizations](#), while [Chapters B through E are directed towards Trusted Partners](#).

### A. Multiplied the collective approach

Describes how to find suitable local areas where local SME energy collectives could be established, how to identify and motivate Trusted Partners who can initiate and operate the collectives and advice for long-term support of the Trusted Partners.

### B. Defining scope and organizing stakeholders

Describes organizational aspects of starting up and further developing energy efficiency initiatives from a collective approach, i.e. motivating SMEs to get involved and developing a local supporting network for the collective. It also describes development of more long-term organizational and financial structures.

### C. Activities for the SMEs in the collective

Describes the core services and activities of a local energy collective, directed towards the SMEs. These include maintaining the motivation of the SMEs to continuous and active participation, setting up activities for training, networking and communication, and providing support for implementation of energy efficiency and renewable energy projects. (individual and collective).

### D. Monitor and follow up your results

Provides guidance for monitoring and following up of the local energy collective, its activities and results. Based on the monitoring, adaptations can be made to the collective and its operations. In addition, concrete results can be used to further motivate the SMEs.



### E. Areas in which SMEs may need support

Provides a detailed descriptions of the needs that individual SMEs often have related to understanding the multiple benefits of energy efficiency, identifying and implementing measures. In addition, guidance to tools that may be used to support the SMEs addressing these needs.

The illustration in Figure 3 shows how the chapters are related to each other. As you can see, they do not follow a linear process. This is because the collective approach to energy efficiency in SMEs is very much an iterative process, where activities and services are developed in parallel with the successively raised ambition levels and more formalized organization.

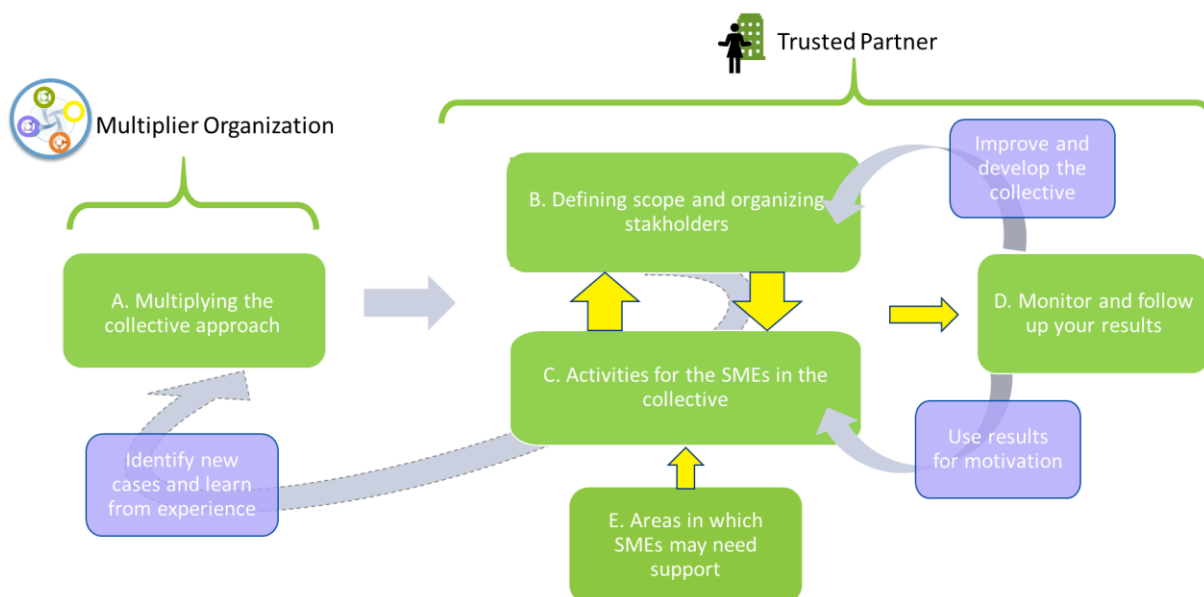


Figure 3. The relations between different chapters of the handbook. After a Multiplier Organization has identified a suitable area and Trusted Partner for a local energy collective (Ch. A), the figure highlights the need for the Trusted Partner to continuously develop the collective by working both on the overall ambition and organization (Ch. B) and the activities offered (Ch. C). To guide the development, monitoring and follow-up plays a key role (Ch. D). The needs of individual SMEs lay the ground for what activities are needed to support them, and is given special emphasis in Ch. E.

In Figure 3 above, the iterative process between the organizational actions described in Chapter B and the actual activities directed towards the SMEs, described in Chapter C, should be especially noted. An [example](#) of how this could start developing in practice is included in Figure 4.

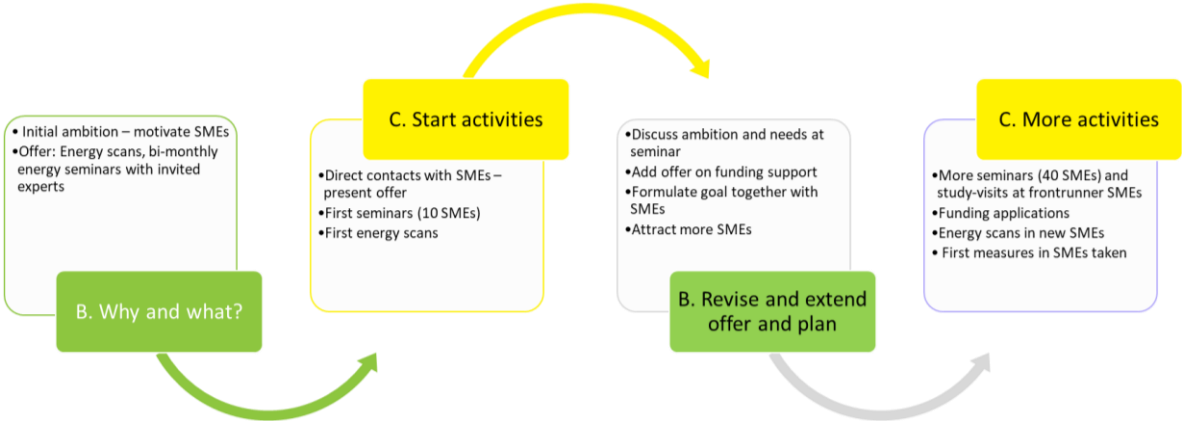


Figure 4. Illustration of the iterative process of developing both the organization and activities of a local SME energy collective. NOTE: This is just a *principal example*. In reality, each collective will have its own specific development.



## A: Multiplying the collective approach

This chapter is primarily relevant to you if you have the role of a **Multiplier Organization**. This means that you belong to an organization that has the interest to inspire and establish energy efficiency initiatives in SMEs and the capacity to communicate and scale up the experiences on the regional or national level, such as an SME association, energy authority, (local) government, NGO or research organization.

As a Multiplier Organization you have an ambition – as part of your organization’s mission – to support SMEs in becoming more economically viable and/or to foster energy efficiency, sustainability or reduction of climate change in SMEs. In addition, you have realized that using a collective approach towards reaching and supporting SMEs is a viable strategy that can contribute to your mission. Therefore, you have decided to dedicate time and resources to spreading the methodology to relevant clusters of SMEs and their Trusted Partners.

Before you start working directly with identifying relevant clusters of SMEs, you need to have a clear ambition and focus for your efforts. This means that you should, for instance, determine:

- Your primary purpose and goals for reaching out to the SMEs;
- The primary benefits you expect to achieve for your organization, the SMEs and the Trusted Partners;
- The resources your organization will put into these efforts – if it primarily will be a communication effort or development of a structured programme; and
- The overall focus of the collectives and the type of support offered.

Below, we call this your **offer** to the Trusted Partners and SME clusters that you approach. The strategic work of developing your offer is probably integral to the work of your organization. If you need support in developing it, the methods described in Sections 0 and B.3 under Chapter B are applicable.

In this chapter, we focus on activities that are directly linked to the identification, motivation and support needed for contributing to the initiation of local SME energy collectives. This will be presented in two parts:

- **Identifying relevant SME clusters and Trusted Partners.** Firstly, the potential of existing SME clusters and networks is evaluated. Secondly, you identify potential Trusted Partners for these networks, assess their potential to take on this role and motivate them to engage in the initiative. Thirdly, potential external barriers and opportunities for the initiative are identified. For details about all these activities, see Section A.1.
- **Organizing and developing long-term support** for the energy collectives. To achieve well-functioning collectives, the Trusted Partners will need long-term





support. This can be provided directly from your organization or from other organizations that you identify. Either way, you need to have a plan for how to organize, develop and provide the support needed. For more details, see Section A.2.

### A.1 Identifying relevant SME clusters and Trusted Partners

<p><b>Short description</b></p>	<p>You evaluate the potential of new collectives, by looking at existing SME clusters, potential Trusted Partners, and existing support and barriers. The aim is to engage a Trusted Partner for a local SME energy collective.</p>
<p><b>Tools provided</b></p>	<p>A future energy collective initiative – Trusted Partner bilateral discussion guideline (Appendix A.1)</p>

Local SME energy collectives come in many forms and shapes across Europe. This step focuses on assessing existing SME clusters and networks (Section 0) and Trusted Partners related to those clusters (Section A.1.2). Existing SME clusters or networks and their Trusted Partners might not currently be focusing on energy efficiency, but provide an excellent starting point for a local energy collective, because of the network strength and/or the Trusted Partner skills. Another set of qualifiers can be found in existing policy support or parallel SME supporting initiatives (Section A.1.3). As shown below, it is not a straightforward process in which you will find a Trusted Partner and a list of SMEs that want to work together. These items are all pieces of a puzzle (see Figure 5) that has multiple feasible (=good) outcomes.

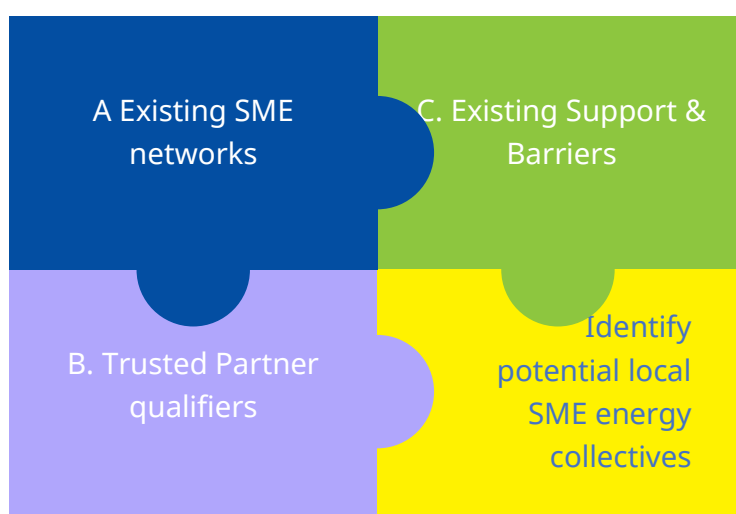


Figure 5. The process of identifying potential local SME energy collectives.





### Examples: Identifying a suitable Trusted Partner for an industrial park

In the Motzener Straße industry park in Germany, the SMEs founded an association to revitalise and strengthen the industry park. The association has a coordinating role among the SMEs but also acts as a facilitator. The NEMO project (in German: Null Emission Motzener Straße) was a project launched by the association on the subject of climate protection. A climate manager was put in charge of identifying measures in the companies and supporting their implementation. Both the climate manager and the entire association are suitable Trusted Partner for the local collective.

In the Roveri industrial district (Italy), companies are affiliated to various industrial associations operating in Italy. The Trusted Partner identified for the local collective is a member of one of these industrial associations, and already acts as an advisor for all her affiliated companies for matters concerning safety and the environment.

The Ponte a Egola industrial park (Italy) is a homogeneous industrial area with more than 100 companies (mainly SMEs) active in tannery or businesses related to the tannery industry. Many companies are interested in fostering energy cooperation solutions, and the park has been awarded as an Eco-Industrial Park. The key stakeholder of the project is a public-private consortium that includes approximately 80 companies located in the local municipalities. The consortium has been appointed as Park Manager and is a suitable Trusted Partner for the local collective of SMEs.

#### A.1.1 Evaluate the potential of existing SME clusters and networks (both national and local)

Developing a network from scratch can be incredibly difficult. SMEs can be hesitant to enter a new network or association they are not familiar with, sometimes simply because they do not have the time or resources to prioritize getting involved in new collectives if the connection with their core business is not immediately clear. It is therefore important to try and collaborate with organizations the SMEs are already familiar with and trust. This means that you try to align a local SME energy collective with existing formal or more informal clusters of SMEs and the (potential) Trusted Partners that are linked to these clusters. The boundaries and structures of local SME clusters are often not crisp and clear. It can also help to align with existing sector associations or other types of associations present at an industrial area or business park.

To get more insight into the potential of a specific SME cluster, you, as a representative for the Multiplier Organization, could ask the questions in the table below. The more 'yes' answers you write down, the higher the potential of the SME cluster to serve as a starting point for initiating a local SME collective. The main aspects you want to get insight into are the "level of collectiveness" and how the cluster is currently organized. A strong and active network of SMEs is a good starting point for a local energy collective.



Minimum Requirements	Yes/No
Does the cluster of SMEs include between 10 and a few hundred SMEs?	
Is the network of SMEs confined to a local, geographic, area?	
Are the SMEs voluntary member of the network because of the (perceived) added value?	
Is there regular contact between these members? Are there for instance general meetings or yearly recurring activities?	
Extra qualifiers	
Do the SMEs have an aligned ambition with regards to energy efficiency?	
Is the network of SMEs organized with a formal, common management?	
Is the network connected to other national/regional organizations or programs focusing on SME and/or EE support?	
Can the network of SMEs influence individual members?	
Does the network of SMEs already participate in energy-related activities together?	

### A.1.2 Identify and engage potential Trusted Partners

Next to a cluster of SMEs, you also need to identify a Trusted Partner for the energy collective. As explained in the introduction, a Trusted Partner can be a regional or local authority, an Energy Service Supplier, or the management of an existing SME network or business park. Make sure you consider any organizations or stakeholders that already act as a Trusted Partner towards the group of SMEs you are targeting (e.g. in other matters than energy).

When you have identified a *potential* Trusted Partner, it is important to start a dialogue to learn more about him/her (and the organization). The most important aspects for successful coordination of the local energy collective are whether the Trusted Partner is motivated, trusted by the SMEs, and has the capabilities and expertise to organize a local collective (or people in his or her network that can support with this).<sup>11</sup> Moreover, to motivate and, ultimately, engage the Trusted Partner, it is also highly relevant to find out *why* approaching energy efficiency for this group of SMEs would be interesting to him/her.

In summary, an initial assessment is needed, based on which a realistic expectation of the potential role of the Trusted Partner in this specific collective can be built. Please keep in mind that he/she is the main actor in developing a successful energy collective and before reaching out to the SMEs, the Trusted Partner needs to be fully motivated and engaged. Below, you will find support for making such an initial assessment in dialogue with the potential Trusted Partner.

<sup>11</sup> The three main factors of trustworthiness: Ability; Benevolence; Integrity, identified in Mayer et al. (1995), translates into that the Trusted Partner need to be able to influence the group of SMEs; to be believed to want to do good for the SMEs; and be perceived by the SMEs as adhering to a set of principles that the SMEs find acceptable.



To get more insight into the potential capabilities, expertise and motivation of a Trusted Partner, you could ask the questions listed below. These questions are not set in stone and should preferably be used as a guideline for a direct conversation, a bilateral meeting, or call, with the purpose of getting to know the Trusted Partner. Before the meeting, you should have prepared your offer, information about available support (see Section A.2), and other general arguments (see also Introduction). After the meeting, decide together how to continue your dialogue and what the next step is. The more **'yes' answers you write down, the higher the potential** of the Trusted Partner. A more detailed guideline, can be found in Appendix A.1.

Minimum Requirements	Yes/No
Are you currently connected to and familiar with members of the SME network?	
Are you interested in (and motivated about) coordinating a local collective of SMEs?	
Are you interested in (and motivated about) energy-related subjects?	
Would you say that SMEs in your network see you as a Trusted Partner?	
<b>Extra qualifiers</b>	
(If applicable) Do you currently organize activities & services for the SME network?	
Do you have expertise in organizing and coordinating a collective of SMEs? In what way?	
Do you have expertise in energy-related subjects? In what way?	
In your own network, do you have connections to stakeholders that could play a role in setting up the collective/supporting the SMEs/helping with the organization of energy projects? ( <i>see Section XX for stakeholders that could play a role</i> )	
Do you have (concrete) ideas for shaping a local energy collective?	
Do you have sufficient resources for being the coordinator (Trusted Partner) in the local energy collective?	

The motivational aspects for the organization or actor to be interested in the role as the Trusted Partner may be linked to different values and drivers. Some examples can be:

- A desire to support the companies to improve their business case by increasing overall productivity and improving customer value.
- A more direct focus on reducing the SMEs operational costs by decreasing energy and maintenance costs.
- An interest in contributing to sustainable development and reduced climate impact by decreasing energy use and shifting to renewable energy sources.

Finally, to find out how the Trusted Partner is perceived by the SMEs, you could also consider asking questions to a (few) SME(s) at the area you are targeting:

- Would you say that you trust that this person will take into account the benefits for SMEs, is reliable, etc.
- Would you say this person is a good coordinator for a group of SMEs in your area, based on his/her (technical/organizational) skills and competences?



Though it is probably not always necessary, talking to SMEs can be insightful for evaluating the Trusted Partner and, even more important, the relationship between the Trusted Partner and the SMEs.

### A.1.3 Identify potential starting points from external barriers and opportunities

In preparing to develop potential energy collective, it is also important to understand the external context in which the Trusted Partner and the cluster of SMEs might start a local energy collective. This concerns understanding general opportunities and barriers for a successful local energy collective, as well as understanding the typical needs and energy efficiency maturity of participating SMEs. The latter are important factors: a potential case for a local energy collective is after all one in which the SMEs have needs that the local energy collective can address and in which their energy efficiency can be increased.

As a Multiplier Organization, striving to identify a potential case, it is probably enough to gather background information on SMEs in the same context, whether this is a certain sector, geographical region, etc. What is currently happening regarding energy efficiency in this context? In some countries, this information is available through national or regional energy agencies or national or regional entrepreneurial agencies. For more information about assessing conditions for *specific* SMEs, see **Table 3** (Chapter B, page 38). The general areas described in **Table 3** are applicable also for the more general picture, however, the level of detail and information sources will differ.

In addition, it is insightful to understand barriers and opportunities for a local energy collective. Barriers are factors that discourage stakeholders initiating a local energy collective, such as the administrative burden and a lack of resources (time/money). Opportunities mostly come in the form of funding possibilities and supportive initiatives and policies. It is important to add that the barriers for increasing energy efficiency experienced by *individual* SMEs might be overcome by the local energy collective.

Questions you could ask yourself and search for answers to include:

Questions
What is the <i>typical</i> energy maturity of SMEs in the same context, e.g. in the same region or sector
What are the barriers for SMEs in the same context to implement energy efficiency measures (and would a local energy collective help to take some of these away?)
Are local energy collectives in your country/region eligible for funding?
(AND/OR) Are there direct financial incentives for SMEs to improve energy efficiency?
Are there strict policies/targets that SMEs should meet regarding energy efficiency?



## A.2 Organizing and developing long-term support

Short description	You make sure you have a clear plan for how to provide long-term support to the collectives initiated and their Trusted Partners.
Tools provided	—

As a Multiplier Organization, you can take various strategic actions to foster the initiation of new local SME energy collectives. In developing these actions, you need to present an [offer](#) to the Trusted Partners and SME clusters. This offer will most likely include some kind of [long-term support](#). Long-term support can be provided at different levels and include different types of support.

The GEAR@SME project has identified needs that Trusted Partners may have, depending on their specific background and situation. These include:

- Enabling support relating to all the aspects of organizing and running an energy collective as described in this handbook, such as organizational and communication activities and skills (see Chapters B, C and D).
- Enabling support in all the areas where SMEs need support from the Trusted Partner, such as increased knowledge about the process of increasing energy efficiency in SMEs (see Chapter E).
- People to discuss plans, activities and hurdles with, on a continuous basis.

In general terms, the type of support that can cater for the needs above often include:

- Making knowledge and supporting tools available via [handbooks and web-sites](#). Many Multiplier Organizations, national energy agencies, sector associations, and universities collect relevant knowledge and material in a structured way.
- Providing [training and seminars](#) for the Trusted Partners, including opportunities for networking and exchange of experience. You could provide this type of support by organizing and offering training sessions yourself, by providing funding for the Trusted Partners to participate in training that is available from other organizations, or by simply making information available to the Trusted Partners about which training opportunities are available and where to find them. Governmental agencies, sector associations, and universities often organize events on specific relevant topics. Examples of highly relevant topics that might be less self-evident to focus on are: the *multiple benefits from energy efficiency* improvements; and the complex provisions linked to *applying for funding* from e.g. European funds. Training on these topics may also be especially relevant to offer to Energy Service Suppliers.



- **Communication** efforts aimed at keeping Trusted Partners up to date with information about policy changes, funding opportunities, good examples, best practices, etc., via for instance a regular newsletter.
- Providing online support for developing a **Trusted Partner community** for peer support and exchange of knowledge, networking and experience. Such a community could be developed specifically for the Trusted Partners supported by your organization, or you could inform about potential communities available elsewhere.
- **Financial support** to the Trusted Partners, to make it possible for them to put in the time needed to take these actions and to run a successful local energy SME collective. Your support could be part of a structured programme, in which all engaged Trusted Partners receive a certain level of funding; it could include the possibility to apply for funding; or your support could focus on making information available about potential funding opportunities and help to apply for these funds.

This handbook and the online 'Energy Efficient SME' portal are specifically designed to facilitate the long-term provision of the above-mentioned support to Trusted Partners, without cost. In addition to the support of the handbook, the portal will provide advice and guidance and include multiple tools, best practices, lessons learned, training materials and a Trusted Partner community platform. The community platform, which will be established as a part of the GEAR@SME project objectives, intends to give peer-to-peer support and knowledge sharing concerning how to initiate and operate a local SME energy collective, as well as to give potential added value in form of an accessible network also for other issues.

Based on this overview, you can then specify the type and level of long-term support that your organization will include in its offer to the Trusted Partner. The level and organization of support can differ widely, depending on the type of organization you represent and the needs you see. What is important is that you determine and communicate what will be available and how, and then deliver on this. More specifically, you need to describe:

- The type of support, including potential funding or economic support, you will be able to provide to the collectives and the Trusted Partners, and;
- If there will be any specific conditions linked to receiving this support (e.g. goals for the collectives, activities that should be included, co-funding or reporting requirements).

Lastly, it should be mentioned that the experience from various support programs for energy efficiency in SMEs shows that it is a long-term work, and the effects can often be measured years after a specific initiative has ended. It is therefore important to set up





initiatives for an extended period and to have a long-term plan for evaluation of results and measures at least a year after the end of a project.

#### Example: Energy Efficiency Networks (Sweden)

Energy Efficiency Networks (EENet) is a Swedish national initiative, co-funded between the Swedish Energy Agency (SEA) and the National regional fund programme. Within the EENet initiative, local/regional energy efficiency networks (consisting of 8 - 12 SMEs) were initiated, set-up and run for about four years.

The networks are run by regional coordinators (acting as Trusted Partners), who organize network meetings, act as important motivator and support the companies in their energy efficiency work at a more general level. The profile of the coordinators varies quite strongly between networks: in some cases they have technical and/or energy related background, in other cases they are experienced process leaders, focusing more on the organizational and motivation aspects of the network.

The SEA, who has the role as a Multiplier Organization, helps the coordinators with a support program and sharing lessons learned from the various regional energy networks. Depending on the needs of the regional coordinator, the SEA can educate them in specific capabilities and knowledge, enabling them to be effective network leaders. The SEA was able to create this support program by utilizing expert consultants for monitoring tasks, in training activities directed at the coordinators (including both technical areas and motivation techniques and employee engagement), and for development of guides and information material.

## B: Defining scope and organizing stakeholders

This chapter is primarily relevant for you if you have the role of a [Trusted Partner](#) towards a cluster of SMEs and have the ambition to contribute to increasing energy efficiency in this cluster. A six-step guidance on how to define the scope of your work in terms of overall objectives, activities and services to offer, motivate the SMEs to participate, and organizing the stakeholders, is presented in sub-sections B.1 to 0.



**B.1 Forming an Energy Working Group**

You form a core group of persons who can support you in the development of the collective. The group could consist of representatives from SME frontrunners, energy associations, or other enthusiastic stakeholders.

**B.2 Setting your ambition**

You set and formulate the ambition and focus of your local energy collective - together with your Energy Working Group - and with the needs and priorities of the SME cluster in mind. The ambition level can vary widely between collectives.

**B.3 Services and activities you want to offer**

You tailor the services and activities of the collective to the needs of the SMEs. The focus vary between collectives and will develop, as the energy maturity of your SMEs grows. The offer is summarized in a value proposition.

**B.4 Motivating SMEs to participate**

You get to know the SMEs and highlight how the services and activities offered answer to the specific challenges and business values of the individual SMEs that you contact. Ask questions and go back and adapt your offer if needed.

**B.5 Involving the right stakeholders**

You identify and mobilize relevant stakeholders, such as Energy Service Suppliers or public organizations, that may play a role in the local energy collective and develop your network. The network stakeholders may be more or less involved, and in different roles.

**B.6 Setting organizational structure**

You develop a long-term structure for the organization, ownership, membership and revenue flows of your collective. For less mature energy collectives, free participation for the SMEs might be preferable - as the collective evolve so does organizational structure, into more formal commitments.

Depending on your specific situation, all steps might not be equally relevant for you and your local energy collective – at least not right now. The idea is therefore to focus on the steps that currently seem most relevant to your own collective.

To give an overview, two examples of outcomes for each of the six steps are briefly summarized in the table below.

Example A	Example B
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Energy Working Group	Trusted Partner with representatives from active SMEs	Trusted Partner with the municipality’s energy advisor
Impact Ambition	Achieving a sustainable business park – zero climate impact	Motivate SMEs to start thinking about energy
Value proposition	Focus on collective energy projects	Focus on offering free energy scans and free energy workshops.
Approach towards motivating SMEs	Kick-start a well-prepared first project to let its success motivate further actions	Focus on the needs of individual SMEs and target multiple benefits of energy efficiency
Network development	Detailed stakeholder analysis and long-term agreements with key Energy Service Suppliers.	Energy experts from Multiplier Organization engaged to lead the workshops.
Organization structure and revenues	A formalized long-term organization where SMEs are partners.	All activities included in Trusted Partners current role and funding

## B.1 Forming an Energy Working Group

Short description	You form a core group of persons who can support you in the development of ambition and activities of the collective.
Tools provided	—

Setting up a local SME energy collective could take quite some time and effort. It will therefore be helpful to form a team with enthusiastic stakeholders from your own network. This working group can motivate each other in the process, support you in all activities, and contribute to all the decisions that need to be made. Let’s call this team the Energy Working Group. Note that you can re-use the efforts and analysis from this step for the local stakeholder analysis in Section B.5.

The Energy Working Group can be made up of various types of stakeholders. To identify the potential members, you can start by making a list of potential stakeholders active in the local area based on your own experiences, discussions with people from your network and possibly a quick internet search. You can think of enthusiastic SMEs, existing sector or energy associations, non-commercial agencies, municipalities and other governmental agencies, grid operators, financial service providers, etc. After completing the list, you plot these stakeholders in a circle diagram (see example in Figure 6). You put



the stakeholders that you know best and collaborate most closely with in the central circle and the ones you know less, further out.



Figure 6. Example of a stakeholder overview<sup>12</sup>.

From this overview, you want to invite stakeholders for your Energy Working Group. The most important criteria are that they are enthusiastic and that you think they would be willing to work on developing the collective with you. Ideally, these team members have also complementary skills and knowledge, e.g. a broader network, knowledge of a specific sector or knowledge of SMEs.<sup>13</sup> Approach your selected stakeholders (potential members for the Energy Working Group) personally and invite them to be part of the team. Make sure to focus on the benefits: ‘what’s in it for them’. More tips on how to reach out to SMEs and other stakeholders can be found in Sections 0 (SMEs) and 0 (other stakeholders).

Together with these stakeholders, you can start the process of developing the local SME energy collective.

<sup>12</sup> Adapted from TNO et al. (2016).

<sup>13</sup> The other stakeholders in these circles, who you did not select as members of the Energy Working Group, can be people that could be helpful for other or next steps of forming and shaping your collective.



## B.2 Setting your ambition

<b>Short description</b>	You set and formulate the ambition and focus of your local energy collective – together with your Energy Working Group – and with the needs and priorities of the SME cluster in mind.
<b>Tools provided</b>	Impact ambition development tool (see Figure 7)

When initiating a local energy collective, a good starting point would be to describe the goals you want to achieve: the impact ambition. Below, you will find two examples.

### Example: Impact ambition for a local energy collective focusing on energy auditing and energy management in an industrial district of 200 SMEs

The Impact Ambition, set with a time horizon of 5 years:

- Conduct energy scans with at least 100 SMEs
- At least 50 SMEs purchase a full energy audit, out of which 20 through collective purchases
- At least 30 SMEs implement at least some type of energy efficiency measure, in accordance with a supplier
- At least one collective purchase of some type of service/technology is performed
- At least one SME is certified with ISO 50001

### Example: Impact ambition for a Zero Emission industrial park

In the framework of the NEMo project in Germany (see also example in A.1, page 16), SMEs of the Industrial Park wanted to show that voluntary environmental initiatives by companies are possible – instead of via government requirements. A systematic initial assessment of the potential was carried out with the objective of reaching 80-95% CO<sub>2</sub> savings by 2050 (in comparison with 1995), which can be seen as the overall impact ambition. This was then broken down into smaller steps, where the first aim was to determine the necessary measures for the next 10-15 years focusing on savings in the joint purchase of fuel oil and photovoltaic panel project and central heating system.

The impact ambition helps you understand what should be included (and not) in your local energy collective and to what extent you should get involved in certain activities. It also helps to create support from others for your goal. Your impact ambition determines how you create impact, in other words, which approach your local energy collective uses to create value for the SMEs. Collectives with a clear impact ambition are more successful, since they are able to select activities that directly contribute to the goal they aim to achieve.<sup>14</sup>

<sup>14</sup> See e.g. Bauwens et al (2020), Han and Shah (2020), Jacobs et al. (2018) and Schut et al. (2020).



An impact ambition is aimed at a positively formulated outcome, it might be ‘the whole business park energy neutral before 2030’ or ‘95% of SMEs in this cluster have performed an Energy Audit by 2025’. Your impact ambition does not directly focus on the challenges experienced by SMEs. These are addressed when designing activities and services needed to achieve the ambition (see Section B.3).

You can formulate the impact ambition by answering seven simple questions (see Figure 7). If you already have or are assembling an Energy Working Group (see Section B.1), setting and formulating the ambition can be a good team exercise. If you already have ideas for additional potential partners for the local energy collective, you could also involve them. Finally, you can also look for other types of support or background information to shape your impact ambition. For example, insights in challenges and drivers of SMEs towards energy efficiency, alignment with national impact ambitions or alignment with existing business driven impact ambitions might be helpful.

If an impact ambition is supported by (potential) partners, this will result in clear guidance on what type of activities and services to focus on. It will also help to evaluate in later stages if the activities conducted by the local energy collective have actually led to the intended impact.

Figure 7 shows the impact ambition development tool, consisting of seven questions. If you want to use (potential) partner input, every partner first answers these questions individually, after which the outcomes are shared and discussed to create consensus. The answers to these seven questions together form your impact ambition.

What?	•Our intended outcome is ...
How?	•We aim to reach our intended outcome by ...
For whom?	•Our target group is ...
Where?	•Our invention area is ...
How many?	•Size of the target group aimed for ...
By Whom?	•The leading organizations are ...
When?	•The time to reach the desired outcome is ...
Why?	•The social change we contribute to is ...

*Figure 7. Impact ambition development tool.*

Once your impact ambition is well defined, you can use it to follow up on the results of your work. This might require that you break down the overall impact ambition into several, more specific objectives, which should be measurable and time-bounded so that



they can be monitored and followed-up. Chapter D gives more guidance on how to define SMART objectives for monitoring.

**Example: BE+ (business parks energy positive, the Netherlands)**

The Impact Ambition: Making 250 business parks energy positive before 2030, by facilitating and supporting local approach/initiatives with mutual contacts, deployment of specialists and the development of generic instruments.

*What? Our intended outcome is... to make 250 business parks of SMEs energy positive.*

*How? We aim to reach our intended outcome by... facilitating and supporting local approach/initiatives with mutual contacts, deployment of specialists and the development of generic instruments.*

*For Whom? Our target group is... business parks consisting of SMEs*

*Where? Our invention area is... the Netherlands*

*How Many? Size of the target group aimed for... is 250 business parks consisting of SMEs*

*By Whom? The leading organizations are... BE+ together with local initiatives*

*When? The time to reach the desired impact is... within 10 years (by 2030)*

*Why? The social change we contribute to is... to make the Netherlands more sustainable by achieving a total energy saving of 32PJ, which is 33% of the Energy Agreement in one swoop (according to calculations by TNO)*

### B.3 Services and activities you want to offer: value proposition

<b>Short description</b>	You tailor the services and activities of the collective to the needs of the SMEs. Your offer is summarized in a value proposition.
<b>Tools provided</b>	Value proposition in one sentence tool (see Figure 8)

You have described the impact ambition of your local energy collective: the end goal you want to achieve. In this step, it is time to select and describe the services and activities that you will set up to reach this end goal. You will do this by selecting activities and services that address both SMEs’ motivation to participate and alleviate or overcome challenges they face.

In **Table 4** (Chapter C, page 54), you can find a list of potential services and activities a local energy collective can offer. These activities differ in complexity and impact on SMEs – from setting up networking events and arranging energy audits, to setting up an ESCO (Energy Service Company) that takes over the entire energy management of a group of SMEs. In this step, you select those activities that are:



1. Best matched with the needs and desires of your target SMEs.
2. Suited to your organization and ambition – (with support of partners) you need to be able to organize these activities in a collective setting.

You can also think of this as a **value proposition**<sup>15</sup>: a statement which identifies clear, measurable and demonstrable benefits that SMEs get when joining and participating in the collective. It should convince SMEs of the added benefit of your local energy collective: that they are better off with the services and activities of the collective than doing nothing. So, a good selection and description of your local energy collective offer will help you in attracting SMEs to be part of the collective, and thereby realizing your ambition. You will use this when motivating SMEs to participate in the collective (see Section 0).

Value propositions may change over time. There are multiple ways to come to a selection of services and offers. Maybe you can write your proposition (or propositions) down directly, or you may need more work. In this section, we offer two pieces of support, first about unraveling SME needs and challenges, which you can use as input for the second step, developing your value proposition(s) in a simple one sentence format.

A value proposition is also a marketing instrument. You can offer the same services or activities to different target groups and fulfill different needs. This would result in multiple value propositions.

### B.3.1 Unraveling SMEs needs and challenges

To select and frame the services that your local energy collective should focus on, you want to identify both the needs and challenges the SMEs in this specific cluster encounter (as a group).

Examples of challenges SMEs could encounter are the lack of:

- Awareness of benefits of energy efficiency measures.
- Access to finance to implement measures.
- Knowledge on which energy suppliers to turn to.
- Time and resources to focus attention to energy efficiency measures.
- Organizational capacity to develop collective measures.
- Connection to other SMEs for collective projects.

The level of maturity of SMEs when it comes to implementation of energy projects can differ greatly, both individually and between regions. In some regions, simple measures such as solar panels and LED lighting might still only be implemented by some, while in other regions, these measures are wide-spread and SMEs are considering collective energy storage or charging infrastructures. More examples can be found in Chapter E.

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<sup>15</sup> See Osterwalder et al. (2014).



To identify these challenges, you can interview or have informal talks with some of the SMEs regarding their experiences and beliefs on these topics. In these meetings, you should focus on discovering what (i) their level of maturity and interest is regarding energy efficiency measures and (ii) what their biggest challenges are or could become regarding implementing energy efficiency measures (see also **Table 3** in Section B.4.2, page 38). In the next step, you determine the services and activities you offer that contribute towards the impact ambition while overcoming the challenges.

### B.3.2 Value proposition in one sentence

Here are a few examples of services and activities and how they are presented in relation to the needs of the targeted SMEs.

#### Example: One of the Dutch Business Parks energy positive (BE+) initiatives

*The Boekelermeer<sup>16</sup> initiative, a part of the Dutch BE+ initiative, organizes itself around multiple value propositions, two of which are included below*

“For Boekelermeer SMEs in the Netherlands, who want to invest in solar PV but do not have the time and knowledge for acquisition and supplier selection, we offer collective solar PV purchasing services that result in a good quality product and obtain quantity discounts.”

“For Boekelermeer SMEs, who want to comply with new energy standards, but do not know where to start, we offer qualified and subsidized energy audits and local guidance during the process.”

#### Example: Local energy collective focusing on energy scans and training

*In this fictive example, the assumption is that the Trusted Partner has connected to the local association of energy auditors and the national energy authority to be able to propose the following value proposition.*

“For SMEs in the local industrial area, who want to reduce costs and improve their competitiveness, but lack resources and knowledge for individual actions, we offer:

- Free energy scans performed at business park level
- Collective purchases for SMEs that sign up for full-scale energy audits
- Support by a Trusted Partner
- Opportunities to take part in training events”

If you look closely at the examples, you can see that a good value proposition can be summarized in one sentence. For SMEs who want [... something related to EE ...] but [ ...

<sup>16</sup> Boekelermeer is a municipality in the Province of North Holland.





*face a challenge ...*], we offer [ *... services and activities ...*]. The value proposition is about combining SME needs with your offer.

You can formulate multiple value propositions for one local SME energy collective. Depending on your ambition, the size of your organization and your mission, it can be that you want to target multiple groups of SMEs with different services and activities (see e.g. the Boekelermeer initiative example, above). As a guideline: ideally you describe the value proposition per different offer and if relevant per different target group.

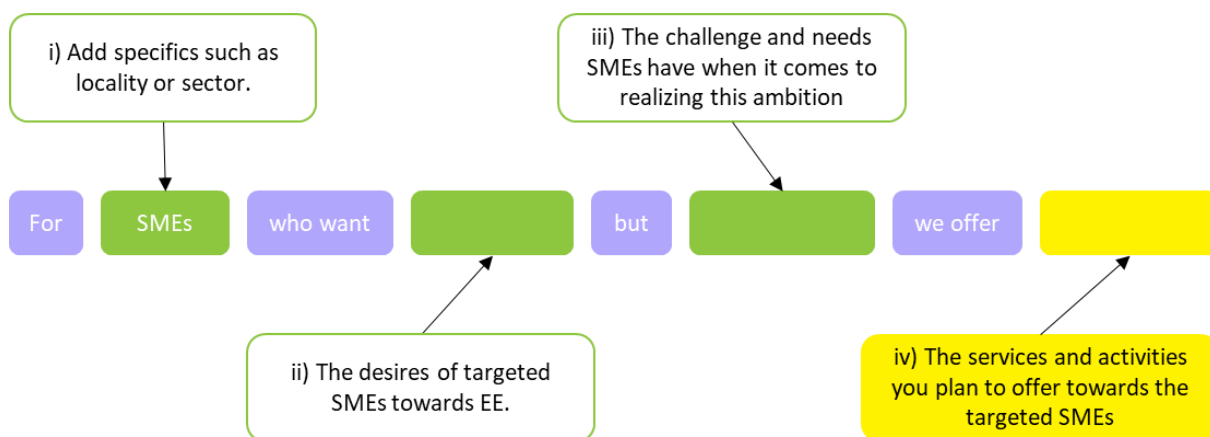


Figure 8. A value proposition in one sentence.

In Figure 8, you can find the structure of the value proposition. You can use this in the following way:

- i) Describe the target group of SMEs you have identified earlier on, e.g. a business park, a SME sector, a region of SMEs.
- ii) Describe the main desires/wishes/ambitions of this target group with respect to energy efficiency. These needs might, in the eyes of the SMEs, be something other than energy efficiency and linked to different potential benefits (see **Table 1** in Introduction, page 2). The table below shows a few examples of SME needs related to energy but framed into core business benefits. Depending on the SME, you can use the left-hand-side (energy efficiency on management agenda) of the table in your offering, or the right-hand-side (little energy efficiency awareness).

SME needs related to Energy	Core Business Benefits
-----------------------------	------------------------





Comply with environmental standards	Reduce Risk
Improve sustainable image	Be an attractive employer for young talent
Make use of lots of waste heat in process	Value Proposition (sell waste heat)
Energy management should be on the management agenda	Reduce Risk – Reduce Costs

Double check whether the desire you have described really is a desire from SMEs. Maybe you are very familiar with the needs of SMEs in your environment, but it can also be quite challenging to find out their actual needs (see also **Table 3** in Section B.4.2, page 38).

- iii) Describe the challenges of your target SMEs in realizing their ‘want’ (ii). Typical challenges are: ‘not enough time’, ‘not enough know-how’, ‘administrative burden of subsidy applications’, ‘only works or makes sense if others join’ (see also Section B.3.1 and Chapter E). Select those challenges that you think you can alleviate. For example: you cannot create an easier subsidy application processes, but you might be able to apply for a subsidy on behalf of a group of SMEs.
  
- iv) Based on (ii) and (iii) you can select the services and activities your local energy collective will offer (see **Table 4** in Chapter C, page 54). For each of the services and activities you come up with, keep asking yourself in this step whether they truly help realizing an ambition in ii) or help taking away one of the challenges in iii). Taking the perspective from the SME’s needs and challenges is key here. Add a reason why this offer through a local energy collective is better suited to the SME needs than the alternatives (doing nothing, or addressing the challenge individually) – see also **Table 2** (Introduction, page 10). The table below gives some *examples* of what types of services and activities can be connected to what needs or desires.

SME Need	Challenge	Local SME collective offer
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Comply with environmental standards	No time & no know-how	Energy Audits
Reduce environmental compliance risks	Unfamiliar with Energy Efficiency Directive and energy efficiency standards	Seminars on experiences and factual information w.r.t energy efficiency measures and standards
Improve sustainable image	No marketing capabilities	Be part of sustainable & entrepreneurial community (including its marketing)
Improve sustainable image	No marketing budget	Group purchasing of externally visible PV panels
New waste heat value proposition	Dependent on others in cluster	Initiating a local heat network project in local industrial area

When developing a value proposition, use your creativity and business sense of what might work in the local context you are familiar with. Possibly some iterations and feedback rounds within your group are required before you come up with a value proposition that feels right.



## B.4 Motivating SMEs to participate

Short description	You get to know the SMEs and highlight how the services and activities offered answer to the specific challenges and business values of the individual SMEs that you contact. The multiple benefits of energy efficiency are crucial selling points.
Tools provided	Checklist for energy maturity (Appendix B.1) Guidelines for collecting SME energy profile (Appendix B.2) Guidelines for collecting information about energy and environmental consciousness in SMEs (Appendix B.3)

The activities and services mentioned above aim at benefitting the SMEs, but it is not self-evident that the SMEs are interested in receiving those services. As a Trusted Partner you, therefore, need to find out what would motivate the *individual* SME to participate. How much effort this takes depends on the relation you already have with the companies and if the companies already have an interest in energy and environment. In any case, **be aware that it often takes more time than you expect**. Earlier initiatives have shown this to be the most challenging part of all.

One advice is to start out with the companies that show an interest in the energy collective. Maybe there are SMEs involved in your Energy Working Group, or maybe you have received input from SMEs when you developed your impact ambition and offered services and activities. Alternatively, you could start with SMEs that are large energy users. Once you have a small group gathered, the motivation of additional companies will be easier. Good examples of how other SMEs have acted can have greater influence on environmentally friendly behavior than pure information.<sup>17</sup>

As a Trusted Partner, you may already have active contacts with a cluster of SMEs in relation to other issues, i.e. the SMEs are already part of a collective. This is, of course, an advantage, since then you do not have to initiate the energy collective from scratch but instead introduce an energy focus in an existing collective. If you are setting up the collective from scratch, engaging the SMEs is likely to require more effort.

<sup>17</sup> See e.g. Abrahamse and Matthies (2018).



### Example: Motivating SMEs by building on experiences and relationships from successful examples of other local energy projects

In one business park, the Trusted Partner was a park manager, who already had a strong relation to the companies. Here, the collaboration around energy aspects was initiated through an initiative by a smaller group of companies to collectively invest in solar panels. This concrete action was used as a starting point for continued and further work with energy efficiency and the recruitment of other SMEs in the park.

### Examples: Introducing energy aspects in existing SME collectives

In the Roveri industrial district, companies are affiliated to one of the industry associations operating in Italy. The Trusted Partner is a member of one of these industry associations, and already acts as an advisor for all her affiliated companies for matters concerning safety and the environment. Once the “Roveri energy collective” project is started, and the Trusted Partner has started drafting the value proposition, she starts mentioning the project to individual SMEs during routine calls. The Trusted Partner introduces the value proposition and gathers feedback about how it could be improved and tailored to the needs of the SMEs in the collective.

In another example, the local energy advisor planned to initiate a local energy collective addressing all the SMEs within the municipality. At the municipal level, there was also a local SME association, which had regular meetings. The local energy advisor, who acts as a Trusted Partner in this example, asked to present his idea at this meeting and brought along one SME he knew worked actively with energy efficiency and that had achieved great improvements. To the meeting he brought a simple one-pager of his idea and all participants could sign up if they were interested to receive more information. After that, he contacted each SME that had signed up individually. Since he had already established an initial interest, he could then add a short questionnaire to ask about their main interests and adapt the focus of the energy collective to these.

Figure 9 shows the main areas of importance for the process of engaging SMEs to participate in the activities of the local energy collective. They are explained in more detail in the following sections. You can, of course, use “collective” approaches (such as newsletters, group emails and invitations to information meetings) to inform the SMEs on the energy activities planned. However, to **motivate them to actively participate, one-on-one contacts will be needed**. Below, the main focus is on these contacts.

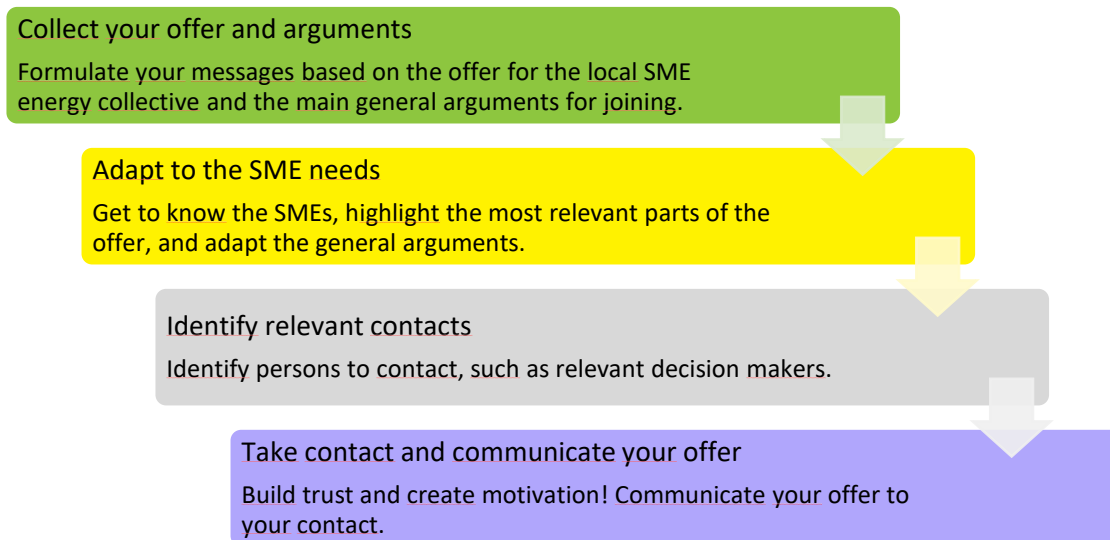


Figure 9. Main steps of the process of involving SMEs in the local energy collective.

Note that this is an iterative process – communication will be enhanced by each contact you are taking. A successful motivational strategy may be to, early on – before the collective is fully formed – offer an activity to the SMEs that you are contacting, such as a seminar on energy management or regulatory aspects or preparations for energy scans. For inspiration for this type of activities, see Chapter C.

The table below lists a summary of approaches that can be used to motivate the SMEs to get involved in the local energy collective.

A local energy collective with a value proposition focused on coordinating energy efficiency improvements in the individual companies	A local energy collective with a value proposition focused on collective energy projects
<p>Show examples of similar companies, which successfully implemented energy efficiency measures.</p> <p>Highlight the multiple benefits of energy efficiency. Provide examples – tailored to the needs of the individual SME.</p> <p>Offer the first activities without requiring formal commitments from the SMEs.</p>	<p>Build on experiences and relationships from other collaborative projects in the business park.</p> <p>Show examples of successful collective energy projects from other business parks.</p> <p>Ask about results from previous work with energy efficiency in the company and what the plans for their next step are. Find connections to the ambition for the collective project.</p> <p>Highlight the benefits of a collective approach to reduce time, resources and risks for the individual SME.</p>



#### B.4.1 Offer and general arguments

Before you start contacting the SMEs, you should have developed your value proposition, so that you can describe the services and activities you offer and why (see also Sections 0 and B.3). Additionally, it is useful to define general arguments for the SMEs to take part in the activities, to be communicated at the same time. Examples of such arguments can be found above in **Table 1** and **Table 2** (Introduction, page 2 and 10) and are linked to:

- the potential multiple benefits for the SMEs from saving energy, including reduced energy costs and contribution to climate mitigation,
- the additional benefits from doing this with a collective approach, including for example that the SMEs can support and learn from each other, and may benefit from collective energy projects.

Try to present concrete, good examples from other ongoing or earlier local energy collectives (see examples included in this Handbook). If you have access to examples with a local connection, this is even better.

#### Example: Recruiting SMEs to Energy Efficiency Networks in Sweden

For the Energy Efficiency Networks (EENet) in Sweden, a short brochure describing the concrete offer was available to the Trusted Partner from start. The coordinators (Trusted Partners) then recruited companies by direct contacts via telephone, email and – in many cases – visits to the specific companies. The contacts focused on asking questions to the companies about their interests, challenges and ambitions. The coordinators had also prepared material, beyond the brochure, on all the strong points and multiple benefits associated with the planned network and could refer to this directly in the dialogue with the companies. For these networks, recruitment might have been an especially challenging step, since in most cases the link between the coordinator and the SMEs beforehand was not very strong.

#### B.4.2 Company information

To motivate SMEs for energy efficiency work, you need to identify why joining certain activities of the local energy collective would be especially relevant to the individual SME. To do that, you need to know each company well enough. Start with what you already know about the company, collect information that is openly available at the company's website, and ask questions in your contacts with the company. The type of information that you are interested in is summarized in **Table 3**. However, your knowledge will of course develop gradually, when you work with the collective and the SMEs longer-term.



**Table 3.** Type of information that is relevant for you to know about the individual company.

Facts and figures	Description	Further guidance
The business segment of the SME	What products/services are they offering, and what does the overall economic situation look like for this segment.	Appendix B.2 can be used as support for collecting information.
Company size	Provides a background relevant to understanding their capacity to address aspects related energy efficiency improvements.	
Total energy use / energy intensity	A rough estimate, including main type of energy source and use of renewables. SMEs having high energy intensity may be easier to motivate. For SMEs with lower energy intensity the “multiple benefit” concept may be especially relevant and attractive.	
What energy is mainly used for	For instance, is energy used in production processes, for buildings (e.g. ventilation and lighting), and/or for transport.	
Energy maturity	Description	Further guidance
Overall maturity in terms of energy management practices	To what extent do they already have experience of energy efficiency actions, defined responsibilities and planning processes in relation to energy use.	Appendices B.1 and B.2.
Existing ‘energy culture’ among the staff		Appendix B.3 <sup>18</sup> .
Values and drivers	Description	Further guidance
Dominating values and drivers	Examples can be security for employees, profit maximizing, environmental consciousness, or to be a force of innovation.	Appendix B.3 <sup>18</sup> .
The core business and which KPI:s that are monitored	Contributes to identification of the SMEs specific benefits of energy saving, e.g. positive effect on productivity, working	See also <b>Table 1</b> (Introduction, page 2).

<sup>18</sup> Note that Appendix B.3 mainly addresses the aspects of ‘energy culture’ that relate to environmental consciousness.





	environment, customer satisfaction or company image.	
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If it is difficult to find information about the individual company’s energy use, it may also be possible to find relevant information in public sources, such as the online ‘Energy Efficient SME’ portal. You can also search the internet for information about energy efficiency for the specific sector or activity of interest, whether it is offices, textile manufacturing, or restaurants. This may also provide you with good examples of successful energy efficiency projects that can serve as motivation and inspiration.

Based on your knowledge about the company, **highlight the parts of your offer that are most relevant for this company**. Also, use the company information to adapt the general arguments from the previous section (B.4.1).

The purpose is to make your information about the energy collective as relevant as possible for the specific company. Tailored information usually encourages behaviour change more effectively than general information.<sup>19</sup> For example, if you know that a company mainly uses energy in the form of transportation fuels for their vehicles, you can focus your questions and information on energy efficiency in transportation and logistics, while an office company is likely to be more interested to hear what can be done about heating, ventilation and appliances in their premises.

This task might seem daunting, considering that there may be hundreds of SMEs in the local cluster that you are addressing. Then remember to **start with a few companies, and with some information, and develop the group and your knowledge gradually**. For instance, you might want to save issues relating to values/drivers and core business for later (but do not forget it since it can help you both to discover what is important for the specific company).

### B.4.3 Persons to contact

You also need to figure out who to call at the company. Who is making decisions, and especially decisions that relate to participating in a local energy collective? Maybe there are several people, and maybe at different organizational levels. It is usually a good idea to start by contacting people you already know at the company. Otherwise, try with the best option you find at the company’s website. Ask questions during the call (see Section B.4.4) that help you get the whole picture.

To create a broad engagement for energy aspects at the company, you might also need to contact persons who especially would benefit from an energy collective, that is, persons that need the support of such a collective (for example the energy or production

<sup>19</sup> See e.g. Abrahamse and Matthies (2018).



manager). Another aspect is who can contribute with relevant company information (see the lists above).

#### B.4.4 Contacting the SMEs

In the direct contacts with the company your primary aim is to **communicate the offer and arguments for participating**, especially the aspects you think are most relevant to the specific SME (see Section B.4.2). Almost as important is to **ask questions** to find out more about the specific SME and what would motivate it to take part in planned services and activities. This means that you continue in all contacts to tailor your information to what is most relevant for the specific SME. Also, try to find out if there are more persons you should contact for specific questions (for example energy related) or regarding the decision process. Strive to end all contacts with an agreement regarding the steps to follow. What you are able to agree upon may vary, but at least you need to decide on how to continue your dialogue.

In your contacts, adapt your information as much as possible to the one you are talking to – based on the person’s role and expertise as well as on the answers and reactions you receive on your questions and information. For example, if a person is driven by environmental concern, failure to recognize this may result in that the motivation for participating in an energy collective will risk to fade out due to one-sided attention to, for example, cost savings, or vice versa.

The first activities offered are not likely to require any formal commitment from the SMEs. You might want to ask them to sign up for a newsletter or accept to come to a first meeting. But at an appropriate, later stage in the process, it might also be relevant to formulate and make commitments between you and the SME (see Section B.5.4). Formal commitments can give a stronger base for collaboration.

As noted above, there may be other types of information channels that you can use, for example, to reach several companies at the same time. However, personal contact is important for building trust as well as for creating and capturing motivation. Keep in mind that to build trust, you not only need to get to know the SMEs, but they also need to get to know you. Two-way communication via calls or meetings gives the possibility for them to ask you questions and to develop their trust and confidence in the initiative.

## B.5 Involving the right stakeholders

<b>Short description</b>	You identify and mobilize relevant stakeholders that may play a role in the local energy collective and develop your network.
<b>Tools provided</b>	Value Creation Canvas (see Figure 10) Stakeholder analysis table (see Figure 11)



Apart from you and your Energy Working Group, additional stakeholders (such as Energy Service Suppliers, linked SME associations, entrepreneurs and the municipality) can play a role in the activities of a local energy collective and in the realization of collective energy projects. This step revolves around engaging those organizations, mobilizing them and formalizing the collaboration.

When designing the value proposition of the local energy collective, you have decided on an initial selection of the type of activities and services you are going to organize for (and with) the collective. To effectively carry out these activities, you need a team with suitable resources. It is therefore important to understand which resources are required, which role the partners in the Energy Working Group have, and which additional partners are needed as complements. Four activities have been designed to help get insight into these questions and into the potential partners for the local SME energy collective. These are described in sections B.5.1 – B.5.4 below.

#### B.5.1 Identifying the needs and resources

First, you want to have a clear view on what resources are required to fulfill the impact ambition and value proposition of the local SME energy collective. These can be resources or capabilities that you, as a Trusted Partner, have yourself, but also things that you might seek to provide indirectly by building external partnerships. Most of the resources needed are intangible resources (knowledge and capacity). Experiences of other local SME energy collectives show that fully mature collectives operate best if they have access to the resources listed below (see Section B.5.2):

- Collaborative capabilities to build a strong network, find partners for the network and exchange information within the network
- Innovative and technical knowledge to implement the energy projects, this includes knowledge on energy efficiency and novel energy measures
- Strategic capabilities to keep track of the (potentially changing) needs and individual ambitions of the SMEs and multiple benefits on energy projects
- Leadership capabilities to be inspiring and to create a long-term vision for the SMEs
- Mediating capabilities to be a trustworthy intermediary between the SMEs and the Energy Service Suppliers
- Financial resources and capabilities for financing the local energy collective (Section 0 explains various ways to structure the revenues)
- Organizing capabilities for the networking events and creating promotional materials
- Support from local governmental agencies

For realization of your specific impact ambition and related services and activities, it might be necessary to add some extra, specific resources to the list.



The idea is to then identify or recognize which resources are readily available to you, and what activities you would easily be able to perform. Next, you can identify which resources are still lacking and should be provided by partnerships with external organizations and/or individuals.

One way to get a clear overview of your internal resources, and required external resources is to use the Value Creation Canvas (Figure 10). In the middle, you write down the value proposition of the local SME energy collective. On the top, you fill out what you can offer: your own activities and resources. And at the bottom, you write what you need from other stakeholders. The canvas, then, simultaneously captures the activities and the connected resources that you have or that your partners should have.



Figure 10. Template of the Value Creation Canvas<sup>20</sup>.

### B.5.2 Scanning your network

As described above, some of the resources and activities you need to find externally. For this, you need to find enthusiastic partners to take up a (supporting) role in the local SME energy collective. By analyzing the stakeholders in your network, you get insights into their resources and interests, which enables you to identify potential partners.

<sup>20</sup> Adapted from Groote Schaarsberg et al. (2015)



**Example: Partners in the NEMo project of the Network Motzener Straße**

In the NEMo project (a zero emissions initiative in the German network Motzener Straße), cooperation was established with an engineering office, that supported participating companies with measurements as part of the actions identified for the initiative’s climate protection plan. The network also participates in EU-projects with different actors, particularly with universities (for example on circular economy).

First, you want to assemble a long list of stakeholders (e.g. Multiplier Organizations, municipality, progressive SMEs and sector organizations) within your network. If you have formed an Energy Working Group (see Section B.1), then you can use that stakeholder overview as a basis. You can also extend the overview by adding stakeholders from the network of the Energy Working Group. Important stakeholders to include are Energy Service Suppliers that can support the SMEs with energy efficiency measures. Energy Service Suppliers include, for instance, energy auditors, energy advisors, energy service companies (ESCOs), technical experts, and equipment suppliers.

Once you have this long list of stakeholders, you can analyze the stakeholders and their current roles. By understanding their interests, resources, and influence, you can identify which parties are most important to involve. Based on your own experiences, discussions with the Energy Working Group, and possibly a scan of the stakeholder’s website, you can fill out the table below for each stakeholder<sup>21</sup>.

When analyzing which Energy Service Suppliers to involve, it is important to match them with the needs of the SMEs in this specific local SME energy collective and to the actual services to be offered (see examples below).

Stakeholder	Name	Interest	Influence	Resources / possible role
Sustainability department municipality	Jane Do	Very high	High	Network of SMEs and local service suppliers, access to finance
Chair of entrepreneurial organization	...	...	...	Access to SMEs, initiating the idea to the SMEs
...				Specialist in renewable energy
				Access to data on energy consumption

Figure 11. Example of way to structure information in a stakeholder analysis table that needs to be completed for each specific case (i.e. table incomplete on purpose)<sup>21</sup>.

<sup>21</sup> Source: TNO et al. (2016)



### B.5.3 Reaching out to supporting stakeholders

Based on this analysis, you can identify the most important stakeholders to involve to fulfill your ambition and which combination of stakeholders suits best, e.g. stakeholders that already have a good relationship, or stakeholders with aligning visions. Stakeholders with high influence and high resources can enable the local SME energy collective, and stakeholders with high interest provide a driving, enthusiastic force.

You might also want to think about the timing: who do you need now, and who can be involved later for specific activities. For example, an important element of the local SME energy collective is to bring SMEs and Energy Service Suppliers together. Some of the suppliers can be (more or less) continuously involved as their services are included in the offer of the energy collective. Others can be more temporarily involved, depending on the activities over time.

The next step is then to reach out to the key stakeholders and start shaping the collaboration. Together with the Energy Working Group, you can engage them by discussing their mutual interest of establishing a local SME energy collective. By focusing on “what’s in it for them”, you can make potential partners enthusiastic in joining and taking up responsibility. The table below shows some examples of relevant motivation aspects for Energy Service Suppliers.

Motivational aspects for Energy Service Suppliers
Raising awareness and contributing to energy savings
Benefits of scale due to the collective approach (many small customers included at the same time)
SMEs have expressed need for its services, involvement will give positive PR
Increased network with other entrepreneurs
Good examples of supplier involvement in similar ongoing/earlier initiatives (see example below, or even better, from your own local experience)

It is advised to start approaching the potential partners that are already enthusiastic and have high influence on others. Connecting these stakeholders to your local SME energy collective could increase the interest of others. In your contacts, you can try to identify additional benefits for the stakeholders to engage in the collective and understand what would motivate them to be involved.

After discussing the local SME energy collective, its ambition and value proposition, you should discuss their commitment. Once you have all the required stakeholders on board, you will need to discuss these roles and responsibilities together. Roles to think of are:

- You, as Trusted Partner: chair of the local SME energy collective, enthusing SMEs, awareness for the local SME energy collective in your network;





- Municipality and/or regional governmental agency: co-financing, information about measures, taking energy-saving measures in the public space, subsidy contributions, information about tax deductions, assistance with communication; and
- Development company: offering financing from funds, integration of renewable energy in restructuring projects.

#### Example: BEST Energy Check-up Enschede Harbour Area

In the Enschede Harbour Area (Netherlands), a local energy initiative has been developed by the Belangenvereniging Ondernemers Havengebied (BOH, local entrepreneurial association) and the BEST initiative (Climate-KIC project consortium). The goal of the initiative is to activate SMEs to invest in energy efficiency measures. The local initiator of the project is the BOH that plays the role of Trusted Partner in this initiative. The BOH provided the organizational resources for, e.g. a secretary through which SMEs on the business park could be contacted. To stimulate SMEs to participate in the collective initiative, the support of the municipality was used. Due to their strong, trustworthy relationship with the SMEs, the municipality was able to actively address them.

The local entrepreneurial association had already organizing and interaction skills, but only limited knowledge on energy efficiency. Therefore, the resources of the BEST initiative were used to fill this gap. Skills on energy measures and financing was supplied by the BEST initiative, as well as the capacity needed to execute the energy project. For continuation of the local energy collective after the BEST initiative, funding from the province has been obtained, which provides BOH with resources to run the local energy collective over multiple years.

#### Example: Involving Energy service suppliers in Energy Efficiency Networks in Sweden

In the Swedish Energy Efficiency Network programme (EENet), each network was connected to a dedicated energy expert. The energy expert visited each company in the network to help to make an energy audit and provided continuous guidance in the work with energy efficiency, for example setting energy-related goals and strategies and develop action plans for implementation of measures. The network programme was partly financed by public funding, which supported this service and allowed for hiring energy experts so that this service could be included in the offer to the SMEs. For the energy experts, the involvement in the energy efficiency networks was a large, long-term commission, involving great opportunities to reach many new potential customers with a similar type of projects.

#### B.5.4 Formalizing the collaboration

To formalize the collaboration and ensure commitment from all stakeholders, there are multiple options. The local SME energy collective can have a less formal (or legal) status.





It can also be part of an existing organization, like an entrepreneurial organization, a sector association, or perhaps even a local energy advisor. It is important to consider the most appropriate form to suit the activities of the initiative.

Creating a legal structure requires a significant investment in time and money. It is, therefore, only advised to establish this legal entity when you already have a solid group of motivated partners and, for example, have already experience with these partners in energy projects. Being a legal entity does have its advantages, as you would be able to sign contracts for assignments, subsidies, and projects directly, instead of having separate contracts for all individual members.

Several legal forms may be applicable for a local SME energy collective. The ultimately chosen legal form will play a central role in the implementation of the activities, managing costs, and revenues, and is the point of contact for the SMEs and possibly for (external) financiers. In Appendix B.4, information on these various legal forms is enclosed:

- Association
- Cooperative
- Foundation
- Private company.

It is important that there is a good match with the (future) activities and the various participating parties. And remember, a choice for one legal form is not binding. Over time, you can decide to change the legal form, if the activities change. It is also possible to combine legal forms. For example, a foundation that is the full shareholder of the private company of which the participating SMEs receive certificates. It is important to involve the participating SMEs in the initiative and in the ultimate choice of legal form. It is recommended to seek advice from your lawyer in this process.

You can also choose not to form a legal entity. The local SME energy collective only needs to be a legal entity when it will sign contracts for assignments, subsidies, and projects itself. If this is not the case, signing a *collaboration agreement* is a less formal way of ensuring the commitment of all partners. In this agreement, you write down the intentions you have with the local SME energy collective. This includes the impact ambition, how you are going to achieve this ambition (value proposition, services and activities), the roles and responsibilities of each stakeholder, a timeline and the cash and in-kind contributions of each stakeholder. All partners have to sign this document.



### Example: Funding of the NEMo project

In the Motzener Straße industry park (Germany), the SMEs themselves have founded an association (also mentioned under A.1, page 16). This association initiated a climate protection concept (the NEMo project, see also B.1, page 23), which was developed with the association's own funds and with the help of various funding supports (local and national). The creation of the association allowed member SMEs to have a structure that coordinates actions and activities and can access, in addition to its own funds, grants on a local or national scale.



## B.6 Revenue structure

Short description	You develop a long-term structure for the organization, ownership, membership and revenue flows of your collective.
Tools provided	—

In this section, we will look a bit deeper into how you expect to fund or finance your activities within the local energy collective. Probably you will combine different revenue streams, e.g. from regional or national funds, subsidies, and direct payments from SMEs.

Considering your revenue structure can help you for multiple reasons. Firstly, funding may be required to make it possible for you to spend time and effort in the initiative. Secondly, potential revenue streams (e.g. subsidies or funds) can be used for kick-starting new projects with local SMEs. Thirdly, some forms of revenues (membership fees) can create more commitment of SMEs towards the local SME energy collective and future willingness to pay for energy efficiency measures. If a local SME energy collective has overcome its first kick-off and initiating hurdles, you want to grow (both in maturity and in success of implementing measures). We know from past experiences that a good way to make a collective grow and be successful is to have SMEs actively contributing both financially and in-kind to a collective (see Section B.6.1).

If you have decided to opt for creating a legal entity (see Section B.5.4), part of your revenue streams are already set. Still, these revenue structures should fit your value proposition and the (near future) level of engagement of your SMEs. In Section 0, we combine potential revenue streams and zoom in on how to determine the size of the revenue streams (i.e. fees or service payments). We would also like to note here that you will need to operationalize your chosen revenue structure and make sure proper reporting to authorities is in place, e.g. you would have to collect member fees, report to governmental agencies that proved you with funding, make an annual financial statement, etc. And you need to organize the legal boundary conditions, such as keeping relevant registrations up-to-date and organizing general meetings for your members.

### B.6.1 Revenues from SMEs

First, you want to determine how to organize the SMEs in your collective. A common method is to work with a membership structure in which SMEs can become a member. Each member then pays a membership fee and services and activities are only offered to the members. A membership fee can be a fixed price per year, per month, or depend on the size of the SME. You can also think of a membership fee structure that decreases when SMEs implement more measures to motivate them even further. In some collectives, participation is free for the SMEs.

There are plenty of variations possible to this standard ‘membership’ model. In the table below, you can find an overview of options and their advantages and disadvantages.



If your ambition level is high and you involve already strongly motivated SMEs that are rather familiar with the topic of Energy Efficiency, we recommend developing towards a membership structure, in which SMEs become a member and pay a monthly or annual fee for this membership. But if SMEs are not yet clearly motivated towards this topic, starting with a competitively priced service or activity might fit better.

Revenue source	Description	Advantage	Disadvantage	Legal entity
Membership fee	SMEs become a member of the collective and pay a membership fee	Keep SMEs engaged and motivated, creating a sense of 'us' as members	Can be a barrier to participate if fee is too high or added value is not clear	Direct result from being an <i>association</i> or <i>cooperative</i>
Payment per activity or service	Each SME that participates in an activity or service of the collective pays a small fee	SMEs only pay for what they actually use in a direct way	You need to convince SMEs to join for every new activity or service	Works for any legal entity  Also if the payment is direct to Energy Service Suppliers, a legal entity for the collective is not necessary
Percentage of EE saving	If SMEs apply EE measures through your network or advice, they pay a percentage of their monthly savings	'no-cure no-pay', they only spend money they saved	You want SMEs to really feel how much more can be gained from applying EE, this omits insights in the non-energy benefits	Works for many legal entities  Also if the payment is direct to Energy Service Suppliers, a legal entity for the collective is not necessary
Completely free	The services and activities you offer are free and you are funded by government subsidies or other type of funding	SMEs do not need to pay anything, to them activities, advice and other services are free	When SMEs pay for things they might be more motivated to make it a success (if it is for free it can be easily taken for granted)	Not necessary
A mixture of the options above. For example, members pay a small membership fee, and in return they get a discount on the services offered that can also be used by non-members.				





### B.6.2 Revenue structure

In the previous section, we talked about revenues collected from SMEs. But determining the exact combination and the size of e.g. a membership fee is dependent on two other important items:

- The other potential revenues, such as subsidies and grants.
- The cost structure of your organization (marketing costs, labor costs, utility costs).

To get an overview you can set up a balance sheet, including an indication of all the costs that you have as a collective and a list of all expected revenues through funds, fees and so on. In the following table, a list of potential costs and revenues is included. From a balance sheet tool, you can determine the size of the revenue streams that you can influence, and also to roughly assess if your collective is financially sustainable. Note that once your collective grows, a simple balance sheet tool is not sufficient anymore. Then you might want to hire professional support (e.g. an accountant and a business analyst) for running your business.

Relevant questions include: how high does a potential membership fee need to be to cover your costs? Would this be low enough that SMEs would want to participate? If I can find other types of revenues (such as additional payment for certain services or activities), then what would happen? Are there available subsidies from my local or national government or entrepreneurial funds in my surroundings? Can I arrange for in-kind contributions from local stakeholders or partners for specific services or activities?

Potential costs	Potential revenues
Communication and marketing costs	Membership fee
Building rental or mortgage	Payment for activities
Utility costs (energy, water, internet)	Subsidy from European, national or regional governments
Material supplies	Subsidy or grants from local or national entrepreneurial organizations
Labour costs	In kind contributions
Tax and insurance	Energy savings rewards
Activity or service specific costs	



### Example: The energy collective of companies in Utrecht (ECUB)

ECUB (in Dutch: EnergieCollectief Utrechtse Bedrijven) is a non-profit energy collective in Utrecht, the Netherlands. ECUB regards their role to be a connector between various parties, such as companies, governments, business organizations, installers, and knowledge institutions. ECUB builds a network of SMEs, provides financial support, information, and serves as a link with Energy Service Suppliers and governments.

ECUB has a strict membership policy and only admits SMEs as member if (i) they are also member of a partnering business association, and (ii) they agree to an energy audit. Based on this audit, ECUB and the SME together decide what the energy efficiency priorities of the SME should be for the coming years. Each SME is assigned a certification of maturity when it comes to energy efficiency, which is reevaluated each year. The results are published through newsletters, the ECUB website, and partner websites, unless the SME objects to this.

Obtaining a level of certification will contribute to a positive sustainability image for ECUB members. But apart from that, it also aims to ensure that certified companies are less likely to be visited by municipal enforcers. This is an important and unique benefit, since enforcement agencies do have the right to inspect randomly. In practice, however, they appear to be more lenient towards ECUB members.

The main revenue streams of ECUB are via membership fees and additional funding from the 'Utrecht Entrepreneurs fund'. ECUB is also supported by the Municipality of Utrecht, the Utrecht Economic Board, The Utrecht Energy Fund, and The STIP (Innovation and Promotion Foundation De Wetering-Haarrijn).

ECUB did not start out with this membership fee strategy straight away. In the beginning, they experimented with a percentage fee, i.e. a percentage of the member's financial savings as a result of energy saving projects facilitated by ECUB was paid to ECUB to cover its costs. However, this proved to be a barrier for SMEs to use ECUB's services.





## C: Activities for the SMEs in the collective

This chapter is primarily relevant for you if you have the role of a **Trusted Partner** towards a cluster of SMEs and have the ambition to contribute to increase energy efficiency and thereby sustainability and business viability in this cluster.

The purpose of this chapter is to provide guidance in relation to how to develop and carry out the **actual activities** of the local energy collective. This chapter includes:

- Practical advice on how to motivate SMEs to stay involved in the energy collective.
- Relevant activities and methodologies for supporting SMEs in their needs.

There are two sections included in this chapter. These do not represent different steps in the development of the energy collective, but rather different aspects on the design of activities and different types of activities. The two sections are briefly summarized in Figure 12, and described in more detail in Sections C.1 and C.2. Note that more in-depth information on areas in which SMEs generally require support related to energy efficiency measures as well as guidance to supporting tools can be found in Chapter E.

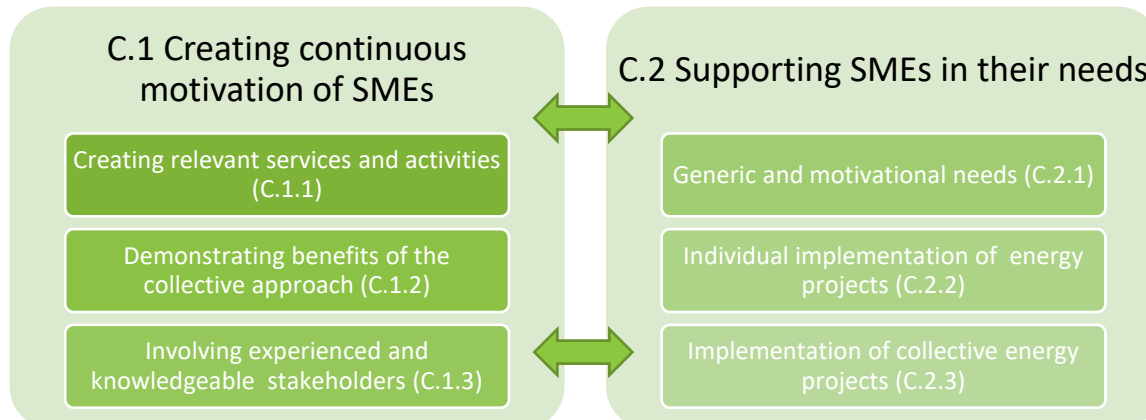


Figure 12. Overview of the content and structure of Chapter C.

**Table 4** includes an extensive list of alternative activities that can be carried out as part of running a local energy collective. Note that many activities contribute to several objectives, and that, consequently, there is a substantial overlap between activities for motivation and support. For instance, many of the networking activities are both motivational and supportive.



**Table 4.** Extensive list of possible activities and services that may be included in the offer of a local SME energy collective.

Services and activities	Examples	Further guidance
Regular networking events	Organized meetings in collective for exchange of experiences, based on the activities of SMEs in the collective (e.g. energy scans and measures, monitoring or collective projects).	See Section C.1 and C.2.1
	Workshops and seminars to build SME skills and knowledge – in the same areas where you provide individual support or plan collective projects, and with support from your network.	
	Study visits at participating SMEs – to strengthen and concretize the exchange of experience.	
Other activities to strengthen the collective	Setting collective targets, which are followed up and communicated to the collective.	See Section C.1
	Support for knowledge building on energy and energy management.	See Section C.2.1 and Chapter E
Communication on energy achievements to SME collective	Regular updates via newsletters, web-site, group emails, direct contacts and meetings, etc.	See Section C.1
	Present good examples from SMEs in the local cluster (or elsewhere).	See Section C.1
	Communicate success and celebrate achievements.	
Coordinated support to individual SMEs for identification and implementation of energy efficiency measures	Energy scans and energy audits, to identify energy efficiency potentials and their associated (multiple) benefits.	See Section C.2.2 and Chapter E
	Support for different steps in selecting, planning and implementing measures.	
	Support for applying for public funding for audits and measures.	
Collective energy projects	Planning and organization of collective energy projects.	See Section C.2.3 and Chapter E
	Collective purchases of energy audits/energy scans or energy efficient equipment.	
	Collective energy measures, e.g. common solar panels, heat exchanges between companies etc.	
External communication – to broader network and wider	Communicate achievements via web-site, local news channels, and directly to your network.	See Section C.1





The activities and services that are relevant to different energy collectives vary, of course, depending on ambition level, organization, value proposition (see Chapter B), and its stage of development. Therefore, not all aspects described below may be interesting to you right now. The idea is that you make use of the parts that are relevant to your own collective.

Note, however, that the scope of the collective and its activities also may and should change and develop over time, so that activities that originally were not planned may become relevant at later stages. Continuous development is central to a successful and vibrant energy collective.

### C.1 Creating continuous motivation of SMEs

Short description	You support the SMEs to maintain the motivation to continuous and active participation in the activities and services offered, with the goal of implementation of energy measures.
Tools provided	Examples of agendas and content/topics for meetings and networking events (Appendix C.1).

The core of your local SME energy collective is to motivate SMEs to improve energy efficiency and implement renewable energy projects. Motivated SMEs is essential to achieving results and reaping the benefits from a collective approach by having companies that actively contribute to sharing experience and networking. So, how can you best motivate SMEs to stay active in (or to join) your local SME energy collective? Firstly, good and relevant services and activities for the companies are the basis of preserving the interest. Secondly, the collaborative nature of collective approaches can be a source of inspiration. Thirdly, the experience and knowledge which you, Energy Service Suppliers and other stakeholders have can be used to encourage the SMEs. These three approaches will be elaborated on in the sections below.



Figure 13. Three main motivational approaches for operating a local SME energy collective.

#### C.1.1 Creating relevant services and activities

It is important that your originally planned services and activities (see Section B.3) match the continuously changing needs of the SMEs. For the services and activities to be



relevant, you should base the selection and content of the activities on your knowledge of the SMEs. The activities can be tailored to address the ambitions and business targets of the SMEs, as well as support them appropriately in their energy saving strategies. Although your services and activities are energy-related, the ambitions and targets of the SMEs will often be related to their core business and other non-energy topics. Showing the multiple benefits of your energy-related services that contribute to these non-energy ambitions can motivate SMEs further.

The best way to get insights into the ambitions and targets of individual SMEs is by [personal interaction](#) with the companies, and by continuously developing your knowledge about the SMEs involved (see also [Table 3](#)). It requires a dialogue between you and the company. At SMEs, there is often only one person who is responsible for energy related questions, which is why it can be motivating for this person if you can act as a discussion partner. Show your interest in the individual companies and their energy work. There are decisions to be made in several steps after starting a more systematic work with energy efficiency, such as adopting targets and action plans, and investing in energy measures. Ask about the process for taking such decisions in the company.

[Knowledge](#) about each individual SME also gives you a picture of the local energy collective as a whole. This can be used for dividing the collective into sub-groups with similar needs in order to address these in a more focused way. The sub-groups could consist of SMEs, which:

- are active in the same business segment;
- are of the same size, for example, micro or small or medium sized;
- use the same amount of energy;
- use energy for the same type of purposes, e.g. production processes or office services;
- are at the same level of energy maturity; and
- have similar experience of renewables.

This means that you have three levels for tailoring the services/activities and information for the SMEs:

- You can address all of them collectively.
- You can target different sub-groups of SMEs (these sub-groups can vary from time to time depending on the subject).
- You can direct your attention to the companies individually.

Before starting the organization of those activities, you could check with your target group if they are interested in the proposed activity. Depending on their response, you can adapt the target group or the activity.

To get further [insights into the interests and desires](#) of the SMEs, it is also possible to distribute a survey amongst all members. As it is important to receive honest and open



answers, a survey can only be applied to local SME energy collectives that have already been working together for some time. In such collectives, one can be more direct and ask about the preferences of the SMEs. As not all SMEs will be motivated to participate in a survey, it could help to distribute the survey during a live event and ask the SMEs to fill it out during a break or a dedicated time slot in the program. Or you could connect it to a joint action, such as the renewal of a waste contract. These activities could be combined with the activities conducted to monitor the impact of the local energy collective (see Section D.1.4).

One way to inspire even more is to [involve the SMEs in planning and performing activities](#) such as meetings and workshops around interesting themes. Here, the SMEs can act as meeting hosts on subjects that are their expertise, they can lead discussion groups or study visits can be arranged at one or several of the SMEs. Such involvements are a good way for SMEs to get familiar with the activities of the local SME energy collective, to network with other participants or other stakeholders, and to share success stories.

It is important to make sure that the SMEs develop [clear expectations](#) about the outcome from the initiative they are participating in and what is required of them in terms of allocated resources such as time or money. Misunderstandings are not motivational and should be avoided as much as possible. It is also important that the person with the right skills is chosen for the task and that the decision to participate is well anchored in the company so that performed efforts are appreciated and prioritized.

Finally, in all activities, remember the multiple-benefits approach, and as always, utilize inspirational examples relevant to the subject and preferably with a local connection.

#### Examples of activities for motivating SMEs to work with energy efficiency

SME engagement can start with the engagement of its employees. One action taken to promote this commitment within the Enterprise Network Motzener Straße (Germany) was to develop an application for smartphones and to organize a challenge so that each employee wishing to participate could enter his or her "good" actions and count his or her score. The actions to be entered concerned various themes such as food, packaging, mobility, energy, etc.

Another example was the organization of Energy Efficiency Weeks, with the possibility to do a complete check up on the SME resources.

### C.1.2 Demonstrating benefits of the collective approach

Working together with others can have many inspiring advantages that you as a Trusted Partner can reinforce and make visible. Be responsive to which advantages participating companies seem to appreciate the most. In that way, you and the SMEs create the spirit of the local energy collective together. Below, examples are given of collaborative aspects and actions that can enhance motivation.



One motivational aspect from working together is that the companies can find [support in and learn from each other](#). Make sure that there is time set aside at meetings and seminars for the participants to talk to each other and exchange experiences (see suggestions for a meeting agenda in Appendix C.1). Some of the companies might be frontrunners and are willing to show their energy strategy and measures. Note, that this might require that no direct competitors are collaborating on the same activities. Not all SMEs might be willing to cooperate to the same degree, but there should be possibilities for SMEs to cooperate to different extents.

Another important aspect when working together is to strengthen the [sense of belonging in the local SME energy collective](#). To do that:

- [Set targets for the energy collective together](#). It can be to increase the knowledge within the group on specific subjects, to increase energy efficiency by for example 15 %, to do energy audits at the SMEs, to jointly invest in solar panels, etcetera (see also Section 0 and Chapter D for more information about ambitions, goals and targets).
- [Perform regular follow-ups on results](#) for these targets and evaluate these in the collective. Encourage progress and renegotiate unfulfilled targets (see Chapter D).
- [Celebrate and communicate success](#). Make the developments in your local energy collective explicit. Successful projects give inspiration for continued actions. And experience from previous actions provides you with insight in parts of the initiative that require some more effort.
- [Spread the news](#) locally to inform the stakeholder network and to create public awareness.

There are different ways to perform collaborative activities. To utilize the motivational aspects of these, keep the following tips in mind when arranging [network meetings and events](#).

- Always plan meetings, seminars and webinars to include interactive elements.
- Utilize local experience to the extent possible.
- As mentioned above, the participating SMEs can act as meeting hosts or arrange study visits at their companies.
- Include everyone in the meeting conversations and contact the ones that are missing afterwards.
- Make time for the participants to exchange experiences (see also above).
- Decide upon common meeting rules to avoid misunderstandings.
- Provide regular meetings, information, and updates.
- Assignments between the meetings keep the activity up.

Finally, when participating in a collaborative initiative, it is important to consider both the [individual ambitions and the ambitions of the collective](#). Encourage the SMEs to





think of why this is motivational for them ('what's in it for me') and why it is motivational for them as a group (now and for other future collaborations).

### C.1.3 Involving experienced and knowledgeable stakeholders

Stakeholders involved in the local SME energy collective (see Section B.5) can contribute with knowledge, expertise, and skills. The interest of SMEs can be encouraged by [involving the partners in activities](#) and encouraging them to contribute to the local SME energy collective. Especially stakeholders with high interest in the SMEs and the energy collective can provide an enthusiastic force. The stakeholders can, for instance, share their knowledge and experience in meetings, seminars and workshops.

You also need to [keep the stakeholders engaged](#) in the local SME energy collective. You can use your knowledge of the stakeholders' interests and interrelations (see B.5.2) in your conversations, and to reflect on their desires of the local SME energy collective. You can organize networking events for SMEs and Energy Service Suppliers to meet. By bringing them together during a network event, you create and intensify the dialogue between the stakeholders and enable them to exchange views on energy issues.

In parallel to keeping the involved stakeholders engaged, you might also [include additional stakeholders](#) depending on the shifting needs of the SMEs. Try to strengthen existing stakeholder co-operations and to mitigate possible conflicts. In this way, you contribute to a sound development of the stakeholder group.

There may also be activities of the collective that can contribute to [increasing the skills of the Energy Service Suppliers](#) and to closing a potential gap between them and the SMEs. One example is enabling activities in relation to utilization of the multiple-benefits approach. Both the Energy Service Suppliers and the SMEs may benefit from Energy Service the Suppliers having a better understanding of multiple benefits and how that affects decision-making about energy efficiency in the SMEs.

And lastly, you as Trusted Partner should also consider [increasing your organizational skills](#). It is important that you stay up-to-date with knowledge on how best to organize the local collective. Contact with other Trusted Partners and other stakeholders might provide some of this knowledge as well as good examples. In addition, it might be valuable for you to participate in trainings and seminars and to keep your knowledge up to date with information from different channels (news, publications, best practices elsewhere, etc.).

## C.2 Supporting SMEs in their needs

<a href="#">Short description</a>	Activities for supporting SMEs are a core part of running the local SME energy collective. You support the SMEs in their various needs related to energy efficiency, energy
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	management and implementation of energy projects by offering relevant activities targeted at those needs.
Tools provided	Examples of agendas and content/topics for meetings (Appendix C.1)

The services and activities that you organize are all aimed at supporting SMEs to improve their energy efficiency. To improve the energy efficiency, multiple needs have been identified which the local SME energy collective could fulfill (see **Table 5** for an overview). Some of these needs relate specifically to the identification and implementation of energy efficiency measures, others are more related to generic needs that motivate SMEs to pay attention to energy efficiency. In Chapter E, all the needs are explained in more detail.

In the following sections, we discuss how a local SME energy collective can fulfill these various needs. Section C.2.1 explains how SMEs can be supported in their motivational and knowledge building needs. Sections C.2.2 and C.2.3 explain how SMEs can be supported in their needs with regards to the process of implementing energy efficiency measures. These measures can be implemented in two ways:

- As **individual** actions (Section 2.2) – this is the more traditional way of implementing energy efficiency measures and other energy projects, which means each SME operates separately in identifying and realizing the measures. As a local SME energy collective, you can support the SMEs by standardizing certain aspects or providing trustworthy information, so it saves the SMEs time and resources to go through this process.
- As **collective** projects (Section 2.3) – this entails that two or more SMEs work together in a joint effort of identifying and realizing energy projects. This way of working is often new for SMEs. As the Trusted Partner, you can guide them in this process and support them in specific ways in the process to unlock additional energy saving potential, or to make a given idea more convenient.

The SME needs are similar for both these types of energy projects. However, there are some differences in how you can support them. Therefore, they are explained in two separate sections: C.2.2 (individual implementation) and C.2.2 (collective projects).

*Table 5. Areas in which SMEs may need support related to energy efficiency improvements. (These needs and related tools that can be used are described in more detail in Chapter E).*

SME needs	Category	Further guidance
E.1 Knowledge building on energy efficiency and energy management	Motivational and knowledge building needs	C.2.1



SME needs	Category	Further guidance
E.2 Estimation of energy consumption and its impact	Identification and implementation of energy efficiency measures	C.2.2 and C.2.3
E. 3 Identification of potential solutions to reduce the energy consumption	Identification and implementation of energy efficiency measures	C.2.2 and C.2.3
E.4 Investigation of other potential benefits	Identification and implementation of energy efficiency measures	C.2.2 and C.2.3
E.5 Find the right supplier	Identification and implementation of energy efficiency measures	C.2.2 and C.2.3
E.6 Search for public support and funding	Identification and implementation of energy efficiency measures	C.2.2 and C.2.3
E.7 Search for financial options	Identification and implementation of energy efficiency measures	C.2.2 and C.2.3
E.8 Management of energy efficiency projects	Identification and implementation of energy efficiency measures	C.2.2 and C.2.3
E.9 Assistance with complying to energy regulations	Motivational and knowledge building needs	C.2.1
E.10 Spread the “energy efficiency culture” in the company	Motivational and knowledge building needs	C.2.1
E.11 Setting up a long-term energy efficiency strategy in the company	Motivational and knowledge building needs	C.2.1
E.12 Developing a systematic energy efficiency work	Motivational and knowledge building needs	C.2.1
E.13 Monitoring the energy consumption and calculate the savings	Identification and implementation of energy efficiency measures	C.2.2 and C.2.3

### C.2.1 Support with motivational and knowledge building needs

This section explains how you can support SMEs in their motivational and knowledge building needs. The needs that have been identified and that this support addresses are primarily:

- Knowledge building on energy efficiency and energy management (see Section E.1).
- Assistance with complying to energy regulations (see Section E.9).
- Spread the “energy efficiency culture” in the company (see Section E.10).
- Setting up a long-term energy strategy and systematic energy management (see Section E.11 and E.12).

The first two needs relate to the SMEs’ motivation to look into the subject of energy efficiency. The latter two relate to the integration of energy efficiency in the day-to-day business of the SMEs. Fulfilling those needs within a local SME energy collective could



encourage, SMEs to become more interested in implementing energy efficiency measures and to putting energy efficiency (high) on the agenda.

There are various activities you can undertake to support the SMEs with these motivational and long-term energy management needs. As your contacts in the supply side have substantial relevant knowledge, it is advised to actively involve them in these activities (see also Section C.1.3). These activities may be systematically supported through structured planning and implementation of **regular networking events**, which can consist of a combination of (see also [Appendix C.1](#) for suggested agendas and topics for such events):

- **Organized meetings:** You can support the SMEs by offering meetings and other arenas where they can exchange knowledge and learn from each other's experiences. Especially when it comes to knowledge building and increased adoption of energy management practices, sharing experiences and good examples with other companies has been shown to be a successful approach. For example, it can showcase multiple benefits, such as new business contacts, and better communication within the company. Base discussions on the results and outcomes of other activities in the collective (e.g. energy scans and measures, setting energy targets, or collective projects).
- **Training seminars and workshops:** You can support the SMEs to learn more about energy management, energy labels, multiple benefits, energy regulations, monitoring, financing opportunities, sustainable decision making – including how to use selected tools targeted to the SMEs. Training can be directed towards energy managers, employees or management depending on the topic. You can organize this kind of training yourself, but you could also collaborate with other Trusted Partners and the Multiplier Organization to set up (national) activities.
- **Study visits:** You can organize study visits at SMEs within the collective or at other relevant companies or sites. In this way, they can gather practical and concrete examples of how companies have implemented energy efficiency measures or other energy solutions. Company visits stimulate knowledge exchange between the SMEs and peer learning.

You can strengthen knowledge building by providing follow-up material and information after the events and visits, and through your recurring communication with the SMEs between events. As noted before, to keep the SMEs motivated and to build knowledge frequent contacts and repetition is key (see also Section 0).

In all events and regular communication with the SMEs, you can also support them in developing their knowledge further by:

- **Linking the events and communication to your activities aiming more directly at implementation of energy efficiency measures.** For instance, the results from



energy scans and energy audits of the individual SMEs are a natural starting point for discussions, planning of content and development of common goals. Linking to [energy management practices](#) can also provide a structure and lead to other benefits, such as more systematic work in other areas.

- [Factual information, good examples and useful tools](#) (e.g. through the 'Energy Efficient SME' portal): There is a lot of information on the internet. However, it is not always clear what information is correct and which tools are appropriate to fulfill a certain task. By referring to the trustworthy information on the 'Energy Efficient SME' portal, you make sure your SMEs are correctly informed.

### C.2.2 Supporting the individual implementation of energy efficiency measures

An integrated part of running an energy collective is to provide support to the individual SMEs who want to improve their energy efficiency. Many of the SME needs presented in [Table 5](#) can be linked to a standard process of identification, evaluation and implementation of energy efficiency measures (or other types of energy projects). This process, and the related SME needs, are described in the table below<sup>22</sup>.

Process step	SME need (See Chapter E)
A. Assessment of potential energy savings and measures	Estimation of energy consumption and its impact
	Identification of potential solutions to reduce the energy consumption
	Investigation of other potential benefits
B. Creation of an energy action plan	Management of energy efficiency projects
	Search for public support and funding
	Search for financial options
C. Finding a competent Energy Service Supplier	Find the right supplier
D. Signing contracts	(Not described in Chapter E.)
E. Monitor the outcome and follow up on results	Monitoring the energy consumption to calculate achieved savings

By coordinating activities related to this process among several SMEs, you and the local SME energy collective can save time and resources, since the SMEs do not have to figure out the whole process by themselves. Coordination can be to offer the same type of support, through the same channels to all SMEs. Activities to think of are providing

<sup>22</sup> This process is adapted from TNO and CCS (2018)



standardized contracts, trustworthy information on Energy Service Suppliers, arranging workshops on how to use specific tools, or even to contract the same energy auditor or energy consultant for all the SMEs.

The following points explain activities you could provide to support the SMEs in this process. (The SME needs and approaches and available tools to cater for these needs are described in detail in [Section E.](#))

#### Step A: Assessment of potential energy savings and measures.

As a first step, you, as a Trusted Partner, can play an important role by, for example, [helping SMEs fill out a simple tool](#) for mapping of their energy use, or to [find a suitable energy auditor](#) to carry out a more detailed energy audit (see also Section E.2). Next to solutions provided by energy audits or scans, you can also support the SMEs by [providing trustworthy information from databases of best practices](#), where the SMEs can get an overview of available solutions. Lastly, you can provide support to the SMEs on how they can evaluate and decide on viable energy efficiency measure(s) or renewable energy project(s).

For example, you can [provide tools](#) for economic evaluation of measures, templates for business case evaluation that provide a clear overview of benefits (and costs) of all solutions. You may also want to include the evaluation of energy efficiency measures as a topic for [workshops and network meetings](#), where you could train the SMEs in a multiple benefits approach and investment evaluation methods, and discuss selection criteria for measures (see also above and Section E.4).

#### Step B: Creation of an energy action plan.

Once the SME has decided to take action and to invest in an energy efficiency measure, an action plan is important for the SME to know what to do next. Also in this step, you can help the SMEs with [access to tools and guidance on how to use them](#). Examples can be templates for energy action plans (see e.g. Appendix E.1), checklists for presenting proposed measures to company management and simple calculation tools to support them in their planning and implementation of measures (see Section E.8). Examples of other relevant support you can provide are:

- [Basic business cases](#) for various energy efficiency measures that can be adapted to the situation of the SME,
- [Information on various financing options](#) (see Section E.7) and
- [Guidance to public funding](#) and how to apply for that (see also Section E.6).

#### Step C: Finding a competent Energy Service Supplier.

If an Energy Service Supplier is needed for implementation and/or for providing necessary equipment you can provide support in various ways, for example:





- By [creating an overview of suppliers](#) that have proven to be competent in previous projects;
- By [providing a checklist](#) for SMEs that they can use to assess the Energy Service Supplier;
- By [arranging standardized 'packages of energy efficiency measures'](#) which they can individually purchase from a selected Energy Service Supplier. See also Section E.5.

Notably, not all energy efficiency measures require the involvement of Energy Service or Equipment Suppliers. For example, measures relating to changes in routines or behaviour are typically implemented by the SMEs themselves.

#### Step D: Signing contracts.

After an Energy Service Supplier is found, an agreement needs to be reached between relevant parties, and the corresponding contracts need to be signed. You can support the SMEs, for example, by providing [Templates of standard contracts](#) and [Practical guidelines](#) on how to draft such agreements.

#### Step E: Monitor the outcome and follow up on results.

Having clear and fact-based evidence of the positive impact of energy-efficiency measures is the key to bringing SMEs to keep investing in them. But the process of effectively monitoring these benefits is not trivial. You can help the SMEs drafting a strategy for how to follow-up the results and achieved savings of implemented measures. One way to do this is to include monitoring, selection of key performance indicators and sub-metering strategies as topics for [lectures and discussions](#) in network meetings and seminars. It may also be possible to [define common key performance indices and calculation methods](#) for the collective which are useful for the individual SMEs as well as for the local SME energy collective as a whole. See also Section E.13.

### C.2.3 Supporting the implementation of collective energy projects

While you, as a Trusted Partner, can provide a wide range of support activities to the individual SMEs who participate in the energy collective, there may be a potential in also taking [collective actions](#). Collective actions are actions/projects towards energy efficiency or renewable energy where two or more SMEs work together in a joint project, which allows unlocking additional potential or benefits, or making a given idea more convenient or cost-effective to implement.

Undertaking the action together can improve the potentials and cost-effectiveness compared to working individually. A few benefits that can be mentioned are:

- “Group discounts”: bundle purchases can be cheaper than individual ones. This might be true both for products (e.g. PV panels) or services (e.g. energy audits)





- Industrial symbiosis: some advantages might only be achieved by acting collectively. An SME might have waste process heat available, while neighboring SMEs have high heating demands.
- Teamwork: Acting collectively might mean saving time and resources. Also, having someone else “checking” on the different choices might avoid common pitfalls.

#### Example: Renewable energy community in Italy

Italian legislation currently allows companies connected to the same electric MV/LV transformer to constitute a renewable energy community, and hence to share the renewable energy generated and the electric energy demand. This facilitates access to public support and a more favorable price for the renewable energy generated locally and exchanged with the grid with a net-metering approach. The Trusted Partner could map the SMEs in the collective with respect to their solar energy generation and grid connections, and approach groups of 2-4 SMEs connected to the same LV/MV transformer providing an initial economic evaluation of the project.

#### Example: Collective purchase of energy audits

In recently established energy collective it might be difficult to motivate SMEs to undertake advanced energy projects. Collective purchase of energy audits can be a low-hanging fruit: the Trusted Partner first approaches an energy auditor, and negotiates a premium price for a bundle of energy audits to be performed in the collective. The Trusted Partner then approaches the most motivated SMEs in the collective and offers them the possibility of joining together in a collective purchase.

Most of the activities required to support collective actions overlap with those suggested to support the process for individual measures. Groups of SMEs undertaking collective energy actions will need support to identify the right supplier, to find financing, to follow up the project, etc. in similar ways as for individual actions. However, organizing a collective energy project will require a few additional actions. The process for collective energy projects is described in the table below<sup>23</sup>. For each step, the following paragraphs describe how you can support SMEs. All the support described in Section C.2.2 are also relevant for collective actions, and the following paragraphs focus on the [additional support that is needed for collective actions](#).

<sup>23</sup> This process is adapted from TNO and CCS (2018)



Process step	SME need (See Chapter E)
A. Arranging an Energy Team & project leader	/
B. Assessment of potential energy savings	Estimation of energy consumption and its impact
	Identification of potential solutions to reduce the energy consumption
	Investigation of other potential benefits
C. Creation of an energy project plan	Management of energy efficiency projects
	Search for public support and funding
	Search for financial options
D. Commitment of essential SMEs	/
E. Finding a competent Energy Service Supplier	Find the right supplier
F. Signing contracts	/
G. Realization & maintenance	/

It is important to note that collective projects can be initiated in various ways. The process below describes the process where you, as the Trusted Partner, initiates the collective action. In some cases, often in energy collectives that are in an advanced stage, a group of SMEs might approach you with an idea in mind. In this case, the first few steps of the process might already be completed by the SMEs, and you can start later in the process.

**Step A: Arranging an Energy Team & project leader**

Going through the process of collective action requires time and resources. By arranging an **Energy Team** this effort can be distributed over multiple SMEs. This Energy Team can help you as the Trusted Partner in the process, or it might even function without your active support if the SMEs are very motivated. By setting up an Energy Team, you create ownership at the SMEs and get them committed to this collective action.

The Energy Team should be managed by a project leader. You, as the Trusted Partner, could take this role as you already know a large part of the entrepreneurs on the business park or industrial area and know the process of collective energy actions. By taking up the task of project leader, you can provide the SMEs with support that is specific to the organization of collective energy projects:

- **Dealing with the bureaucratic aspects of working with a collective approach:** Most actions that are done at a collective level might require additional support in



relation to bureaucracy. How do you sign contracts involving more than one company? How do you make use of state/public incentives when making collective purchases? And how is the split among the team partners? You could facilitate these processes, and thereby, help to avoid projects being stranded.

- **Team management:** Many small companies might have little experience with collaborative projects with other companies and with obstacles to teamwork. You can provide support in making the work of the team more fluid, making sure that the work is moving forward, checking regularly on individual SMEs for any sign of disengagement, and, in case, helping by organizing regular meetings to ensure the correct development of the project.
- **Conflict resolution:** Any team can get into conflicts, and this is true also for teams of SMEs dealing with collective energy projects. Many reasons can lead to a team becoming dysfunctional. This can become a threat to the correct development of the collective energy project. You could help by monitoring the state of the team, participating regularly in team meetings, and acting as an in-between when conflicts arise.

#### Step B: Assessment of potential energy savings

Similar as in the individual implementation of energy projects, this process starts with identifying potential energy savings and spotting opportunities and key points of attention. To identify the opportunities for energy savings in a collective action, two approaches can be used:

- Basing the identification of potential projects on the results of individual energy scans/audits at SMEs, in which recommendations can be compared to see if there are potential solutions for which the forces can be joined.
- Conducting an energy scan for the whole business area, such as the Energy Potential Scan<sup>24</sup>. By conducting an energy scan for the whole business area, different solutions might be possible to identify than for the case in which only individual energy scans are conducted. A heat network is an example of such a solution.

The support you provide to the Energy Team can be similar to the support provided for the individual implementation of energy efficiency measures (see Section C.2.2). In addition, you can provide information on collective solutions by including best practices of collective actions.

#### Step C: Creation of an energy project plan

After potential energy efficiency measures or renewable energy projects have been identified, an energy project plan should be developed. For each of the measures (if more

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<sup>24</sup> See e.g. the tool “Energy Potential Scan for Business Parks” in the list of tools in Appendix E.2.



than one), the plan describes how it will be realized and explains what steps will be undertaken for realization (by when) and who is responsible for these steps.

Depending on the revenue streams of the local SME energy collective (see also Section 0), the first step might be to arrange pre-financing, which can be used to cover the costs for the creation of the energy plan. For some energy collectives the pre-financing is included in the revenue streams. For others, potential investors (financial institutions, SMEs or the municipality) should be approached in order to finance the preparations of the energy project implementation.

Similar with the individual implementation, the plan should also include a business case of the energy project. Depending on the characteristics of the collective action, the energy plan might be more complex. For example, the business case of a collective action to bundle the purchases of PV panels is similar to the individual business case of the PV panel. However, investing in a heat network for the business area requires a joint investment, making the business case more complex.

The support you can offer the Energy Team is similar to the support of individual measures (see Section C.2.2). The difference is that you need to adapt the standard business cases and templates for the action plans to suit joint actions.

#### Step D: Commitment of essential SMEs

The energy project plan from the previous step can be used to explain the idea to other SMEs in the local SME energy collective and to stimulate them to join the collective action. Some collective energy projects only have a positive business case if a certain number of SMEs support the energy project. For those projects, it is essential to have commitment from enough SMEs in order to move forward to the next step.

For certain collective energy projects, it could be beneficial to conduct additional energy scans and audits at SMEs. These audits could show the benefit of implementing the energy efficiency measure at the SMEs, which could create more support for the energy plan.

As a Trusted Partner, you generally have good relationships with the SMEs in the local SME energy collective and a good view of their preferences and needs. You can support the Energy Team in finding the right communication methods and arguments (on multiple benefits) that suit the essential SMEs. You can also help the Energy Team in the promotion of the energy plan, by approaching SMEs, or organizing events where the energy plan can be presented (see also Section C.1.1)

#### Step E: Finding a competent Energy Service Supplier

If a sufficient number of SMEs supports the energy project, a competent Energy Service Supplier needs to be found to implement the energy project. Here, your role is similar as for individual measures. Once the Energy Team has selected a supplier (and possibly also



investors) for the project, it is necessary to create project and investment plans for the collective energy project on an SME specific level, as each SME needs to make a decision on joining the energy project or not., You can support the process by elaborating an offer for each participating SME in the collective energy project with the selected supplier and investor.

#### Step F: Signing contracts

To finalize the agreement, contracts need to be signed between the SMEs, the investor and supplier. The Energy Team, together with the Trusted Partner, supports the SMEs by drafting the contracts, and explaining them to the participating SMEs. There are two ways to construct the contracts:

- The local SME energy collective, as one legal entity, will sign the required contract(s) with the supplier and/or investor for the energy project. Additionally, each participating SMEs will sign a contract with the local SME energy collective. This method can only be applied if the local SME energy collective is a legal entity (see also Section B.5.4).
- Each SME will enter into a contract separately, meaning that each SME will need to sign an individual contract with the supplier and/or the investor.

#### Step G: Realization & maintenance

After the contracts are signed, the Energy Team makes sure the agreements are fulfilled and that the energy projects are realized. This involves giving orders to the suppliers, monitoring the process and providing support and explanation to the participating SMEs. Depending on the role division within the Energy Team, you could have an active role in this step as a Trusted Partner.



## D: Monitor and follow up your results

This chapter is primarily relevant for you, if you have the role of a Trusted Partner and have initiated activities for your local energy collective.

The purpose of this chapter is to provide guidance in relation to how to monitor and follow up the results from the activities of the collective. The reasons for monitoring and following up results of the collective as whole may be that:

- You have set an ambition for the collective (see Section 0), which should be monitored and reported back to the group.
- Concrete results and successful outcomes are a powerful tool that can be communicated and disseminated (within and outside the collective) to create and maintain motivation for participating SMEs and other stakeholders (see Section C.1).
- You need to show verifiable results for the funding agency to fulfill reporting obligations (if relevant).
- Monitoring and following up the results and outcomes of your efforts are essential to developing and improving your own work and the services you offer the SMEs.

The essential steps needed to monitor an energy collective are described in the process illustrated in Figure 14, where each box corresponds to one section of this chapter.

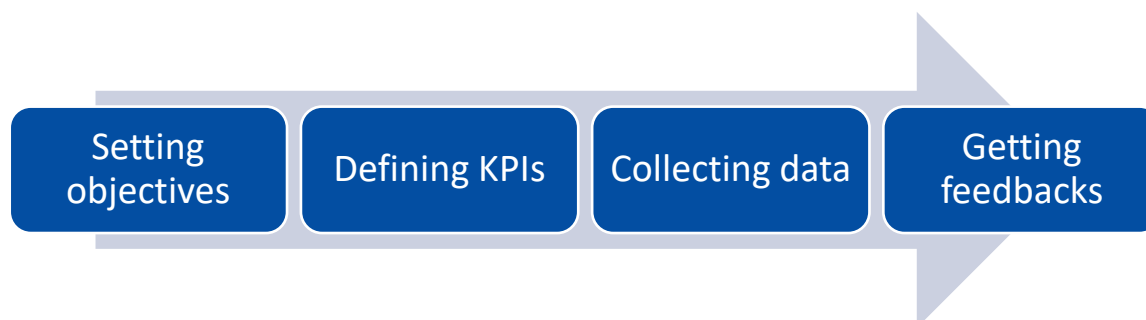


Figure 14. Process of monitoring the results.

### D.1 Steps of monitoring and follow up

Short description	You set and formulate the objectives of your local energy collective, define Key Performance Indicators to monitor those objectives and collect the data needed. The final step is to get and provide feedback on the impact of actions.
Tools provided	—

This section describes the different steps of monitoring and following up the work in the local SME energy collective.



### D.1.1 Setting objectives

To evaluate the results of the work in the local energy collective (in order to learn from experiences, use successful results for continued motivation, and fulfil reporting obligations), it is necessary to relate the progress to well-defined objectives. For these reasons, it is important to set the frame of monitoring (what, what time, where, ...) and well defined objectives already at the beginning.

As described in Section 0 (Setting your Ambition), the impact ambition of your local SME energy collective depends on the specific situation and context. It might be set independently or in cooperation with the SMEs, but should of course relate to the needs identified upstream.

The impact ambition of the energy collective can be intangible (i.e. not giving an exact value) and set to be achieved over a long period (see Section 0). Therefore, it may be necessary to break it down into several more specific objectives, which can be monitored and followed-up on a regular basis. Objectives are the specific actions and measurable steps that you need to take to achieve a certain goal, such as that defined by your impact ambition. In order to have a good basis for monitoring, it is important to state your objectives clearly. You can use the SMART-Method to do this.

S	•Specific
M	•Measurable
A	•Achievable
R	•Realistic
T	•Time-bound

*Figure 15. SMART Method to define objectives.*

Notably, the ambition or goals of the collective may not necessarily be related to energy efficiency, but intrinsically (also) related to becoming carbon neutral or improving the image of the business park. The more concrete objectives are, however, usually expressed in energy terms. Examples of objectives can be:

- Define and jointly implement energy management for at least xx% of participating SMEs by the end of the year.
- Organized xx workshops focusing on implementing an energy audit in xx% of the participating SMEs by the end of the year.
- Cover xx% of the available roof surface of the business park with photovoltaic panels by 2025.





### D.1.2 Defining KPIs (Key Performance Indicators)

Once the objectives have been defined, you should be able to define and monitor Key Performance Indicators (KPIs). Depending on the focus of your energy collective, KPIs could include, for example:

- Number of companies participating in the energy collective
- Number of collective workshops organized
- Number of networking activities and number of participants
- Number of energy audits carried out/ planned
- Number of SMEs monitoring their energy consumption
- Number of energy efficiency measures implemented since the initiative started
- Number of SME helped with finding funding
- Total energy consumption of the energy collective
- kWh final/primary energy saved per year
- t CO<sub>2</sub>-eq emissions saved per year

For many of the KPIs, you will be able to fairly simply keep track of the development yourself, for instance, by keeping a log-book of activities you have organised for/on behalf of the energy collective. For other KPIs, the data will have to be collected from the SMEs. This means that the individual SMEs will have to monitor different parameters. This is, however, only one of the reasons for individual SMEs to monitor their energy efficiency work (see Section E.13).

### D.1.3 Collecting quantitative energy data from the SMEs

Data collection should be adapted to the objectives set and the time frame and will depend on the type of data to be collected. A minimum of data collection "mid-term" is necessary to check whether you are "on track" or whether additional measures need to be taken. For example, for the objective "Carry out an energy audit for 50% of the SMEs in the collective by the end of the year": if only 10% have carried out or planned an audit in September, it will be necessary to "readjust" and investigate the reasons for the potential delay.

The amount or quality of data that you will be collecting will depend mainly on investment (in time) and maturity of SMEs in terms of energy. Preparing the companies in advance by sending them a data collection template or a process to clarify what type of data will be needed and the frequency of collection will surely simplify the approach. To collect this data, you may also need to support the companies with developing their own energy monitoring along the same principles (see also Section E.13).

### D.1.4 Getting and providing feedbacks

The monitoring can also include a more qualitative part, allowing you to evaluate the approach chosen with your SMEs, whether the included activities meet their needs, whether certain needs could still be met by an activity of the collective, whether the



proposed tools are useful and easy to use, to check which benefits the SMEs see from participating in a collective, and so on. When motivating the SMEs to participate in the collective (see Section 0), you have already collected some information about their motivation and probably their maturity towards energy efficiency. The collection of feedback can contribute to evaluating the impacts of all activities and measures taken. This type of data collection could be done either during site visits, as part of a meeting of the collective, or could take the form of a short survey sent every 6 months or on a yearly basis. The results could then be discussed collectively, possibly with a view to re-adjusting the offer for SMEs (see also Section C.1.1).

A final monitoring element will include a regular (at least annually) check-up on the development of all KPIs. Results can be used for following up on the collective's own objectives and ambition, for reporting, for providing feedback to the SMEs and for improving your own work. To be able to use the results as a basis for communication and dissemination, it is also useful to develop ways to visualize them.



## E: Areas in which SMEs may need support

This chapter is primarily meant to support the activities described in Chapter C. It is relevant for you, if you are a Trusted Partner and you organize activities for an energy collective. It is especially relevant if you do not have extensive knowledge in the areas of energy management nor the approaches used to improve energy efficiency in companies. This chapter is equally relevant whether you support SMEs on an individual basis or collectively.

This chapter should give you:

- An overview of the most relevant areas to include in the themes of the meetings/seminars of the local energy collective.
- A picture of the type and level of information that is often most relevant for SMEs.
- Enough knowledge to help and motivate the SMEs to identify areas where they need external expertise, and to support them to find and select the right Energy Service Suppliers for these areas.
- Enough knowledge and terminology to be able to search for more in-depth material, in case you find the need to dig deeper into any of the areas described.
- Knowledge about the benefits of performing an Energy Scan or a more detailed Energy Audit, and different ways to proceed with this.
- An overview of what types of tools that are available via the online 'Energy Efficient SME' portal, and for what purposes they can be used.
- An overview of important aspects to consider when you are supporting SMEs in developing a systematic way of working with energy efficiency.

The chapter may also be useful for you if you are an Energy Service Supplier, and you want to know more about how your services may address the needs of the SMEs.

The chapter focuses on the needs of SMEs related to energy and describes approaches and tools that can be used to address these, and includes the following areas<sup>25</sup>:

- Knowledge building on energy efficiency and energy management.
- Estimation of energy consumption and its impact.
- Identification of potential solutions to reduce the energy consumption.
- Investigation of other potential benefits.
- Find the right supplier.
- Search for public support and funding.
- Search for financial options.
- Management of energy efficiency projects.

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<sup>25</sup> Based on results of internal surveys and workshops in the GEAR@SME project and on scientific literature (Catarino et al., 2015; Hasanbeigi et al., 2010; Revoltella and Kalantzis, 2019; Tonn and Martin, 2000)



- Assistance with complying to energy regulations.
- Spread the “energy efficiency culture” in the company.
- Setting up a long-term energy efficiency strategy in the company.
- Develop a systematic energy efficiency work.
- Monitor the energy consumption to calculate achieved savings.

Related to all needs, there is also a need for good examples. These needs apply for individual SMEs, as well as to clusters (collectives) of SMEs. Typical tools that can be used to address the needs are described. A list of available tools is found in Appendix E.2.

Since SMEs vary widely in terms of size, business sector, financial standing, energy use, etc. which aspects are most relevant will vary, depending on the collective and the SMEs you are working with.

## E.1 Knowledge building on energy efficiency and energy management

*It is not uncommon that SMEs lack basic knowledge about energy and energy efficiency, since this is not part of their core business. Such knowledge would be beneficial for SMEs to improve their energy efficiency and competitiveness.*

Improving knowledge and understanding about energy issues is an important requirement to encourage energy-saving solutions and/or actions in SMEs. The low level of SMEs’ engagement with energy issues is often due to unawareness about the potential of energy-related actions, and the influence of effective energy management on the company’s performance.

Hence, it is vital to develop an integrated understanding of energy literacy in order to create connections between knowledge, choices of energy measures and interventions. Therefore, *knowledge* should not be underestimated as a means of improving the prospects for informed decision-making in companies.

There are many types of tools that can provide support to the Trusted Partner in meeting this need. For example:

- National Energy Efficiency Agency websites can help the Trusted Partners find general information about energy efficiency in SMEs.
- National sector studies/guidelines/online courses can help the Trusted Partner to find out more about energy efficiency in SMEs; from the reasons why energy efficiency is important in companies, to knowing and understanding the benefits of working systematically with energy management

In addition, information can be derived from already documented case studies within various countries.



## E.2 Estimation of energy consumption and its impact

*Many SMEs only have a superficial idea of how much they spend on energy, and on how deeply this can affect their financial performance. Appropriate monitoring requires time and resources, but even only focusing on the energy bills might be sufficient to have a general sense of this effect. However, often this basic financial information is not processed appropriately.*

To address this need, the Trusted Partner may give support by providing SMEs with proper information on how to estimate the current energy consumption and its impact on the total costs. An energy audit is the most efficient way for a SME to get a clear understanding of its energy consumption, its potential for improvement and promising actions to be taken. The energy audit is often performed by an expert in the field, who reviews the company's past energy bills, equipment and the way the business operates. To increase the accuracy of the assessments within the energy audit, this expert could install (or take advantage of it already being installed) a consumption monitoring system (starting with electrical utilities, which are easier and cheaper to install). Having evidence of measured data, the results within the audit will be more accurate and will provide more precise indications on what energy efficiency measures can be implemented and what energy savings can be achieved.

The output of the energy audit, properly interpreted by the auditor, will show the company where energy can be saved. In fact, an energy auditor can:

- evaluate company's energy use;
- verify where energy is being wasted;
- recommend specific improvements;
- estimate costs and savings;
- help understand energy bills; and
- map out energy efficiency projects.

Full energy audits can, however, be seen as unnecessary expenses to small SMEs, particularly if they are not yet "activated" in terms of awareness of energy efficiency. For this reason, one initial solution can be the provision of [energy scans](#) – a "simplified" version of an energy audit. This scan provides some useful information and helps the SME to get an initial understanding of the energy-related costs in the company.

Whether at individual or collective level, the current energy consumption estimation can be carried out through free tools or by an energy auditor. The tools that can support the Trusted Partner to address this need are mainly tools for Energy Scans or simplified Energy Audits. Such tools are widely available. For these tools, some input data is required (mainly information related to the consumption of energy carriers at least monthly, information related to the production sector of the company, number of



employees, extension of the building(s), etc.). The core topics covered by such tools are related to:

- Understanding the business energy bill.
- Measure and monitor energy use in the business, including equipment.
- Energy efficiency by sector.
- Reduce plant and equipment costs.

Some tools require technical skills to analyze the outputs provided by the various instruments, while others are designed to be used by "non-technical" personnel and require and provide mostly qualitative information.

### E.3 Identification of potential solutions to reduce energy consumption

*The identification of potential solutions to reduce energy consumption, even after an appropriate evaluation of the current energy demand has been performed, is a crucial task. This would be one of the main roles of an energy audit: however, energy audits are expensive, and SMEs might not be willing to invest the money required for the audit if they are not already aware of the existence, and the potential, of energy-saving measures.*

SMEs often have a significant energy savings potential, but just as often they are not aware of its size, and on how it could translate into a benefit for the company. Depending on the building and business type, small businesses could reduce their energy costs between 10 and 30 percent through competitive rates, straightforward efficiency upgrades and simple behavioral adjustments, all without sacrificing service or comfort.

**Conducting an energy audit** (or, to a smaller extent, an energy scan) results in a list of recommendations for solutions and actions to improve energy efficiency in a company. This is clearly one of the most important reasons for promoting energy audits in SMEs.

However, there are complementary ways of identifying promising measures. The Trusted Partner could, for example, help the SME by providing access to **databases of best practices**, where the SME, possibly guided by the Trusted Partner, can get an overview of the solutions that are available, and on what are resulting savings that they could expect. Some examples of best practices can be found in the table, below.

Type of action	Examples
Purchasing energy	Switch to a retail energy supplier.
	Lock-in flexible electricity and natural gas rates.
	Consider solar power.
	Take advantage of tax breaks and other incentives.
	Connect with other companies to get best offers.



Type of action	Examples
Heating, ventilation and air conditioning (HVAC)	Tune-up HVAC system.
	Change or clean HVAC filters.
	Use fans.
	Upgrade to smart thermostats.
Lighting to save energy	Install occupancy sensors.
	Change light bulbs with LED.
Office equipment	Turn off unused equipment.
	Use power management features and software.
Water conservation	Use automatic taps.
	Upgrade to a more efficient water heater.
	Set water temperature.

Such a database will be added to the online ‘Energy Efficient SME’ portal of the GEAR@SME-project. Almost in every European country, the Trusted Partner will be able to get access to documentation and/or small guides gathering the most common “tips” and macro-areas where SMEs can take inputs for understanding the wide potential of available solutions.

The identification of potential solutions requires knowledge and experience and can often not be fully supported by a simple tool. Therefore, energy efficiency experts may need to be involved. The database of best practices can, in a complementary way, help the Trusted Partner and the SMEs to understand and evaluate the most effective energy efficiency intervention.

#### E.4 Investigation of other potential benefits

*Many energy-saving measures usually have positive impacts beyond energy savings, often referred to as Multiple Benefits These can be both quantifiable in financial terms (reduced quantities of waste to be treated, reduced days of absence, reduced need for maintenance, etc.), and not (employee health and well-being benefits). Often, SMEs are not aware of these advantages, which can have a remarkable influence on the profitability and strategic value of an energy efficiency measure.*

Providing suggestions on best practices based on the analysis of the activities of a company can be, in itself, a very good starting point for motivating SMEs to take action. However, this may not be sufficient. SMEs, and companies in general, tend to move when there is a profitable reason to do so, and this is more difficult the further the initiative is from the core business of the company.





The economic performance of the suggested energy efficiency measure can be estimated in terms of [Payback time](#), [Net present value](#) and [Return on investment](#). The SMEs may be already familiar with these performance indicators, and they can make it easier to compare the project with standard activities of the company.

Many energy efficiency measures can have positive impacts that go beyond the direct energy savings and reach into the company's core business. For example, a new, automatic machinery can reduce energy consumption while improving product output and product flexibility. A new, more efficient HVAC system can improve the air quality in the common spaces, though having an effect on employees' well-being in addition to energy savings. A new electric oven can also reduce the required maintenance and fire hazards. Both quantitative and qualitative non-energy benefits of energy efficiency measures can make the difference between a successful and an unsuccessful energy project. As this type of information on the [Multiple Benefits](#) of energy efficiency measures is often not easy to find and verify, the support of the Trusted Partner in making this information accessible can be extremely helpful.

In relation to this need, there are a number of tools available, mainly Energy Audit Tools, that can be used by the Trusted Partner to estimate the benefits of an energy efficiency intervention (in economic and environmental terms). Some tools are implemented for a specific energy efficiency measure, while others can also evaluate an energy efficiency project that includes more than one measure.

Some input data are required for the evaluations to be performed (e.g. the chosen energy efficiency measure(s), pre-intervention consumption data, estimated initial investment cost, etc.).

Some of the available tools can help to understand and evaluate not only the energy benefits associated with an energy efficiency measure but also to evaluate the non-energy benefits (e.g. improved comfort in the premises, improved efficiency in the production process, increased safety level for employees).

## E.5 Find the right supplier

*The situation of SMEs may vary significantly depending on the individual case, and on the type of supplier that is needed. Some SMEs might have trusted suppliers whom they can turn to also for energy efficiency, while others do not. In some cases, specific technologies might be not sufficiently common yet. Also, finding an energy auditor or an energy consultant of trust can constitute a barrier to take action.*

The Trusted Partner is often in a privileged position, with an excellent overview of which suppliers are available on the market for different types of services useful to SMEs. In some cases, the Trusted Partner might be part of an industrial association, with several suppliers among her associates. Or the Trusted Partner might be the manager of a business park with time and resources to monitor the market.



As a consequence, the Trusted Partner is often in a position where he/she can suggest available suppliers to SMEs. The experience and skills of the Trusted Partner are at the core of the process of choosing the right supplier for the right project, nevertheless some criteria can be of particular importance:

- presenting efficiently the potential improvements related to the implementation of energy efficiency measures to SMEs decision makers;
- identifying non-energy (multiple) benefits of energy efficient technologies and estimate the financial impact;
- extending their proposition to collective projects (e.g. assessing potentials, facilitating in building collectives, collective purchasing and contracting of energy); and
- finding financial-support solutions for energy-related projects.

In each country there are already tools (e.g. lists, search engines, etc.) that can help Trusted Partners gather information and select a reliable energy service provider suitable for the SME's or collective's energy efficiency project. Mostly, databases include energy auditors (technical experts with skills to carry out energy audits and design efficiency measures). Less common are databases that collect information on installers and technology suppliers.

## E.6 Search for public support and funding

*Every country has different mechanisms for supporting energy efficiency and renewable energy measures, as well as energy audits. Subsidies can also vary depending on what is made available from local and regional authorities. Keeping up-to-date with all available mechanisms is time consuming and frustrating, as information in these regards is seldom centralized. Also, often times the bureaucratic load required to get access to such public funding can be substantial, and significantly different from the day-to-day business of SMEs.*

The Trusted Partner can support SME in these regards by acting as advisor in the process. The Trusted Partner can, for instance, help the SMEs by providing a clear overview of what public support systems exist, and how they can be used. Some local authorities, for instance, provide direct funding for performing energy audits. Others subsidize energy efficiency measures. Also local solar generation is often supported by, for instance, ensuring a minimum energy price for the energy sold to the grid.

Also, the bureaucratic effort required to access such subsidies can be substantial. The Trusted Partner can also provide support in these regards, helping the SMEs in gathering the required documentation, in guiding them through the procedures, and acting as in-between with local authorities in case of need.



## E.7 Search for financial options

There are a range of finance options that can help pay to upgrade to more energy efficient equipment or install renewable energy. Often these finance options improve short-term cashflow. The Trusted Partner should organise information to make SMEs be aware of the possible options, such as:

a) **Traditional finance:** typically provided by major banks and financiers who offer equipment finance, such as loans or leasing agreements.

- Capital lease finance: a financier buys energy efficiency equipment for the company and you pay it back over time.
- Equipment loan (chattel mortgage) finance: a financier loans the company money to buy energy efficiency equipment.
- Hire purchase finance: a financier buys energy efficiency equipment for the company to hire and use.
- Operating lease finance: a financier buys energy efficiency equipment for the company to hire and use.

b) **Innovative finance:** it often involves a third party but does o't always involve a bank or a financier. This type of financing can be more unique to a company, which often makes it more complex.

- Energy Services Agreement: a service provider installs energy efficiency equipment for the company and you pay it back over time.
- Environmental Upgrade Finance: a financier pays for environmental building upgrades. You pay it back over time through council rates.
- Power Purchase Agreement: an energy provider installs renewable energy equipment on the company's site. You then pay a predetermined rate of electricity over time.

For the financing of an energy efficiency project, three aspects are important:

- the existence of a project portfolio;
- existence of sources (both grants and banks and commercial credits); and
- to have an appropriate financial mechanism to link projects with money, because banks are reluctant in considering small projects.

Most of the information about this and Section E.6, can be found on dedicated websites (e.g. of National Energy Efficiency Agencies). In some cases, the site is also associated with a Help Desk that can be contacted for any requests for clarification or further information. The information is normally up-to-date and reliable and can be used to research and apply for energy efficiency funding or incentives.



## E.8 Management of energy efficiency projects

*The process to actually implement the chosen energy efficiency measure, and to monitor its results, requires time, resources and strategic planning. SMEs might not have the motivation or the possibility to invest any of these three elements in energy efficiency measures, and it has therefore been assessed that they will need support throughout the process.*

Once several potential energy efficiency measures are identified, the SME needs to get started. Sometimes the number of different actions required to get started with an energy project can constitute an obstacle, especially for smaller companies too busy in their day-to-day business to care about long-term projects not directly related to their main business.

In this phase, the Trusted Partner can provide support in setting up a clear, well-defined action plan that the SME can include in its standard activities and easily follow (see e.g. the templates for energy action plans in Appendix E.1). However, to reach to this point, a number of actions need to be completed that also require additional support, such as finding the supplier, finding financing, applying for funding, etc. (see also Section C.2.2).

There are a few tools that can address this need that covers many aspects. For example, there are tools that are helpful in setting up a plan of actions to be taken once the energy efficiency measures are identified. Efficient planning of the energy efficiency measure reduces the time and effort required to complete the measure. Since this specific need also covers other actions and needs to be supported, you can also find more guidance on useful tools in the other subsections of Chapter E.

## E.9 Assistance with complying to energy regulations

Regulatory requirements are not a new phenomenon. Companies face rules, standards and codes and the rigor in fulfilling regulatory responsibilities, makes the regulatory environment very complex and severe. Thus, companies are often struggling with demonstrating, documenting and reporting compliance. Evidently, companies cannot afford to haphazardly address the regulatory compliance inherent within their operations and market activities. A compliance program, in which the first step is to develop a road map, can help achieving compliance without exceeding the resource capabilities within the company itself.

**Developing a road map:** there is no-one-size fits all approach to compliance - as every enterprise follows a framework that is specific to its own internal operating environment. A predefined process of effectively achieving compliance, should address 4 core areas: planning, readiness assessment, remediation, and monitoring:

- **Scope and planning:** management commitment and readiness to compliance is essential to any compliance management program. Each company has to define



an approach for assessing the compliance and keep a check on non-routine and non-systematic actions.

- **Readiness assessment:** it gives an easy and effective way to profile the current state or 'maturity' of the company's processes as expressed by the degree to which they comply with energy regulations and standards. Each area that needs attention will then be prioritized based on the Implementation Plan.
- **Remediation:** the gaps that pose the non-compliance risk are identified and prioritized. A process that can track the progress towards addressing the deficiencies identified as for energy regulations compliance.
- **Monitoring:** ongoing monitoring helps keep track of compliance status and highlight issues that need to be addressed. The essence of monitoring is to create a sustainable structure, resulting in consistent and efficient reporting and documentation (see also Section E.13).

There are a number of tools (mostly in the Netherlands) that can be used to support the work of the Trusted Partner in this specific need. Each available tool is strongly oriented towards national legislation.

More general information, not customized to the individual company, can be found on government sites and on the sites of agencies that manage and verify the obligations of individual companies.

## E.10 Spread the “energy efficiency culture” in the company

*Many savings can only be achieved when everyone in the company thinks and acts having energy efficiency in mind. This is true both in terms of correct behavior, but also in the contribution that each employee can give in identifying where the potential for improvement is located, and suggest how to exploit it. Moreover, it is recommended that energy efficiency measures that affect a certain group of employees are taken only when that group is aware of the benefits provided by the change (e.g. a new lighting system).*

Any type of energy saving intervention cannot transform the company's internal culture towards energy efficiency unless the whole staff is aware and committed to such a goal. Saving energy requires the company's staff to take on part of the responsibility. This is why it is important to involve employees in the decision-making process before changing practices. Energy-saving measures that are difficult, inconvenient or impractical to implement are likely to be ignored or withdrawn. This will undermine any future attempts to reduce energy use. The necessity of implementing an energy efficiency culture is clearer when analyzing the important internal actions to be developed through time, such as:

- reporting any energy waste when noticed;
- ensuring equipment and machinery are well-maintained and working efficiently;
- contributing and gathering ideas for improving the way things are done;



- testing and implementing processes that are found to be more efficient; and
- communicating good practice and improvements.

To support this need there are some tools (see Appendix E.2) that can help the Trusted Partner to establish, within companies, a culture of energy efficiency. It is important to understand who will be the beneficiary of the training, in order to choose the most suitable material and trainer (it may not be the Trusted Partner himself).

### E.11 Setup a long-term energy efficiency strategy in the company

*To harness the most of the potential for energy efficiency and renewable energy generation in a company, it is necessary to move to a long-term strategy, which includes actions such as energy consumption monitoring, investment planning, etc. While part of the problem is related to the resources required for the implementation, the effort for drafting an effective strategy should not be underestimated. SMEs often require support for both.*

While implementing the most cost-effective energy efficiency measures and starting from the low-hanging fruits can be the best way to get started and motivate SMEs to invest time and resources in energy efficiency, this is just the beginning of the process. More often than not, most of the potential for energy savings lies in areas of interventions that are more difficult to achieve because of their complexity (it might take a full energy audit rather than a simple scan to identify the potential) or because of their higher investment cost (most energy efficiency measures with a low payback time are also the ones with the lowest energy efficiency benefits).

The Trusted Partner can have a pivotal role in helping the SME drafting a clear, long-term action plan and energy strategy. The Trusted Partner can do this on its own, or with the support of an external auditor. The strategy should include a clear time plan with ambitions for a reduction in energy use and carbon emissions, and with details on when future measures and initiatives will be put into action, and on how this will impact the performance of the company financially.

To support this need, there are a number of assessment/self-assessment tools that can help the Trusted Partner define the company's level of awareness and maturity (see e.g. Appendix B.1) and implement, in relation to this, a strategy for working systematically with energy efficiency over the long term (see also Section E.12).

### E.12 Develop a systematic energy efficiency work

*To maintain the focus on energy efficiency over time and avoid making energy efficiency a one-time effort, the work with energy needs to be integrated in regular routines and activities of companies.*





Systematic energy efficiency work is about finding a structured approach to consciously and regularly plan, implement and follow up measures for improving energy efficiency. Working according to the principles of plan, implement, follow-up, and improve (PLAN-DO-CHECK-ACT) is an established approach for developing organizations and activities. Many SMEs have experience of working this way in other areas, such as quality and environmental management.

The structured approach clarifies responsibilities and important activities to reach energy efficiency improvements. The systematic approach aims at continuous improvements and concrete results in terms of more efficient energy use, reduced environmental impact, and lowered costs. The concept of systematic energy management practices relates to several of the aspects discussed in Chapter E (mainly E.2, E.3, E.4, E.8, E.10, E.11 and E.13).

To systematically develop an organization, six general aspects need to be catered for, which are described from the perspective of energy efficiency (or sustainability), below:

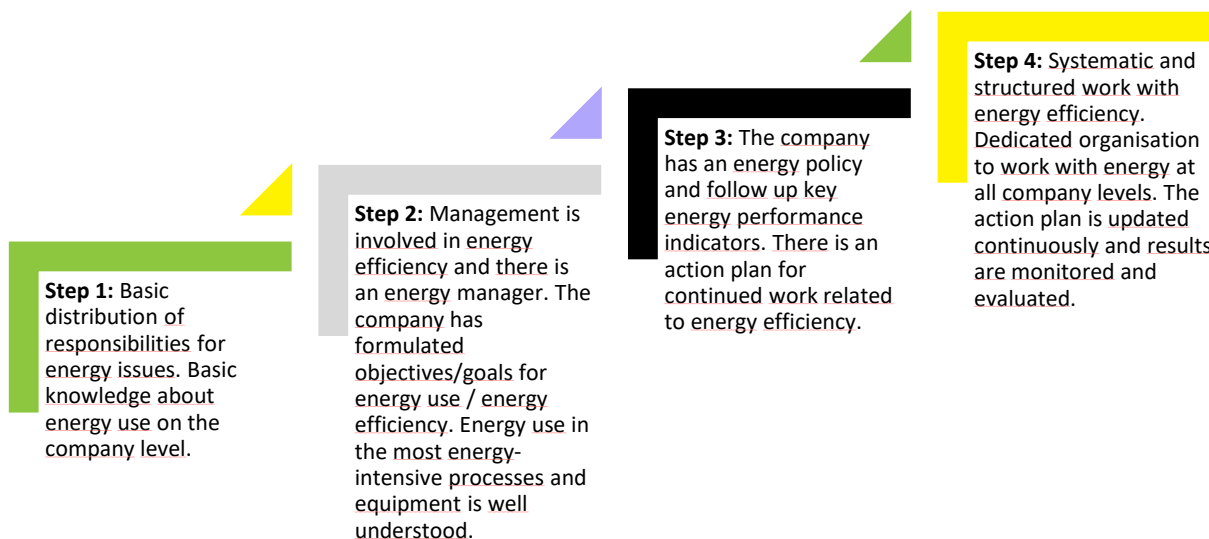
1. **Responsibility** - Someone needs to have the appointed responsibility for energy issues in the company (often called energy manager).
2. **Support** - The one responsible needs also support from top management and appropriate resources (time and budget) to be able to take that responsibility.
3. **Documentation** - The person responsible needs to have a structured system to keep track of knowledge, what has been done, what is planned, who should do what when etc. In short, one needs to document what is going on.
4. **Direction** - Management needs to determine what are the main goals and targets for energy use and energy efficiency in the company.
5. **Knowledge** - Basic knowledge and awareness about energy efficiency is needed at all levels of the company. Continuously keeping track of energy use, increasing knowledge through energy scans or audits, monitoring development and follow up of measures are important parts of developing knowledge.  
In addition, results need to be communicated among employees as well as management. Employees play an important role in changing behavior and inefficient practices, reporting waste and implementing energy efficiency projects, while management needs knowledge to support these efforts.
6. **Continuous improvement** - By follow-up of implemented measures, new ideas and potential improvements are often found. Successful projects provide inspiration, which is important for further reductions in energy use. The continuous improvement is a central aspect in all management practices.

This does not mean that a small SME should be encouraged to implement a complex energy management system. Implementing basic energy management practices focusing on increased awareness is often a good starting point. And by focusing on setting targets, planning measures, and follow-up to identify potential improvements,





the systematic work itself can be improved and developed over time. The figure below shows how a systematic work with energy aspects can be gradually developed as the company's energy maturity is increased.



*Figure 16. Step-wise development of a systematic and structured energy efficiency work in companies.*

However, SMEs need support to identify at which step of this energy maturity ladder it currently is, and what would be the suggested actions to move on to the next step. It can be difficult to know what targets and strategies are appropriate, what is realistic to achieve, and how management practices can be integrated in the daily operations of the company.

There are tools that can help develop the structure, for example, checklists for energy policies, templates for action plans (see examples in Appendix E.1), or checklists for self-evaluation (see for example Appendix B.1).

It can also be noted that Energy Service Suppliers are generally not a part of this development process in the SMEs. This gives them a lack of knowledge about at which stage the SME is, and thereby about what type of support and services the SME needs (if they need an audit, more detailed analysis of specific measures, improved measurements or help with finding financial solutions) or how the service can be communicated to be understood by the SME. This is where a Trusted Partner can play a key role, and help matching Energy Service Suppliers to the right level of support.

### E.13 Monitor the energy consumption to calculate achieved savings

*A challenge for any entity deciding to embark on energy savings is the post measurement of these savings. The implementation of an appropriate monitoring and metering strategy at the individual level will allow a reliable level of data collection.*



If SMEs are aware of their energy consumption, it is often on the basis of the bills they receive. Most of the time, these do not allow regular monitoring of consumption. The implementation of a monitoring system, together with the appointment of a person in charge of the energy monitoring of the company, is the basis for carrying out energy efficiency actions. Monitoring allows the establishment of the baseline situation, as well as a regular follow-up of consumption and "events" that may have a link on this consumption. Indeed, if the initial consumption is not known, it will not be possible to see whether the actions implemented have actually been successful.

At an individual level, Trusted Partners can help SMEs to implement this monitoring. For some items, a sub-metering strategy can be developed (per building or for specific processes). Although it must be defined individually, the implementation of sub-meters for the local energy collective can also be envisaged. The calculation methods for establishing energy savings can be defined for the collective.



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## Appendices

- Appendix A.1: A future energy collective initiative – Trusted Partner bilateral discussions guideline
- Appendix B.1: Checklist for energy maturity
- Appendix B.2: Guidelines for collecting SME energy profile
- Appendix B.3: Guidelines for collecting information about energy and environmental consciousness in SMEs
- Appendix B.4: Examples of legal forms for a local SME energy collective
- Appendix C.1: Examples of agendas and content/topics for meetings
- Appendix E.1: Templates for energy efficiency action plans
- Appendix E.2: Promising tools to address the needs of SMEs



## APPENDIX A.1: A future energy collective initiative – Trusted Partner bilateral discussions guideline

The following material should be used by the Multiplier Organization to realistically assess their Trusted Partner, where it is necessary. There is a general concern among the Multiplier Organization regarding the level of Trusted Partner implication during the activities induced by **future energy collective initiative** consortium. Moreover, it is not clear yet the amount of resources the Trusted Partner is willing to allocate and what are their expectations during the project lifetime. It is important to mention that this template/guideline should be fulfilled with the conclusions following the bilateral meetings between the Trusted Partner and Multiplier Organization. *It is not a questionnaire!*

Main topics to be addressed:

	Objective to identify	Status
1	The organizational model of the Trusted Partner	
2	Projection of future energy collective initiative through the eyes of the Trusted Partner	
3	Realistic quantification of the Trusted Partner expectations regarding the future energy collective initiative	
4	The level of effort the Trusted Partner is willing to dedicate to future energy collective initiative induced activities	
5	Description of the energy efficiency „foundation” at the level of Trusted Partner	

### I. Short description of each proposed topic:

1. The organizational model of the Trusted Partner with respect of energy efficiency matter

The Multiplier Organization will gather basic information regarding the organizational structure of their Trusted Partner. The briefing will contain the following information:

- Private/Public institution;
- If they have an internal energy efficiency office;





- If the answer is affirmative at the previous point: if they sold energy services (consultancy etc) to subordinate SMEs;
  - If the answer is negative at the previous point: if are they willing to create an energy efficiency office;
  - If there is a full-time job energy manager hired If the answer is positive please briefly describe his tasks within the industrial park;
  - If the answer is negative at the previous point: if are they willing to hire an energy efficiency manager and in what conditions;
  - If they have collaboration protocols with energy suppliers (electricity, natural gas, etc).
  - If they are engaged in collective organizations (energy, stakeholders, etc.)
2. Projection of future energy collective initiative through the eyes of the Trusted Partner (where applicable)

During the discussion with Trusted Partner each Multiplier Organization will identify the concept of the GEAR@SME concept through the eyes of the Trusted Partner. The Multiplier Organization should be able to gather the information describing the opinion of the Trusted Partner regarding GEAR@SME project:

- How they foresee the implementation of the project within their industrial park (project applicability through Trusted Partner eyes);
- How they see their role as Trusted Partner during the project lifetime;
- How they see their role with respect to taking energy efficiency (EE) and renewable energy (RE) measures in a collective or individual way during the project lifetime;

In their opinion, what should be the first steps towards a local energy collective;

- Based on what they know already about the SMEs involved in the project and on previous experiences, which types of activities were successful in the park? (seminars, workshops, etc)

3. Realistic quantification of the Trusted Partner expectations regarding the future energy collective initiative

Each Multiplier Organization will realistically quantify the expectations of the Trusted Partner during the project lifetime. Based on the information gathered the Multiplier Organization should be able to clearly describe the following topics:



- What benefits does Trusted Partner expect from the GEAR@SME project? Brief description (this information should be useful also for the Handbook);

#### 4. The level of effort the Trusted Partner is willing to dedicate to the future energy collective induced activities

The level of the activation of Trusted Partners from the use cases greatly differs from one country to another. Moreover, in order to play an active role during GEAR@SME project an important amount of resources should be invested by the Trusted Partner:

- human resource;
- time disponibility;
- financial resource;

Are they willing to allocate the necessary resources? Which of the above resources represents a challenge for the Trusted Partner? It is important to assess the Trusted Partner from the resource availability point of view.

#### 5. Description of the energy efficiency „foundation” at the level of Trusted Partner

The main purpose of the current topic is to identify the suitable Trusted Partner approaching technique regarding the future energy collective in order to create a realistic baseline: from where certain Multiplier Organization should begin the Trusted Partner activation towards engaging an energy collective approach within their industrial park (where applicable). The Multiplier Organization should be able to adress the following topics:

- If they have an approach or strategy for energy efficiency and renewable energy? Is it in a certain sense incorporated in the way of working?
- If they have personal contact with organizations in their local area about measures regarding energy efficiency (EE) and renewable energy (RE)?
- To what extent were they satisfied with the services of the Energy Service Supplier(s)?
- If they are aware of initiatives in their local area to stimulate cooperation among SMEs, or between SMEs and Energy Service Suppliers, in taking measures regarding EE and RE?
- Are there any local or regional targets regarding EE and RES which are influencing future plans and strategies? For example SECAP (Sustainable Energy



and Climate Action Plan), GCAP (Green City Action Plan) or any other similar plan/strategy?

- If they are involved in any other type of (business) network(s), perhaps on a national or even international scale, in which EE and RE are discussion topics?
- What are the plans of Trusted Partner for the near future regarding energy efficiency? Possible integration in GEAR@SME project.



II. Observations and special mentions (if necessary) / Conclusions on strengths & areas in need of support

Strengths of the Trusted Partner

Areas in which the Trusted Partner may need additional support/development

III. Meeting attendance:



## APPENDIX B.1: Checklist for energy maturity

This tool is meant to function as a starting point for a small company’s journey to a more structured and systematic way of working with energy efficiency. It can be used as a self-assessment tool, or as a support tool for Trusted Partners who want to understand the level of maturity for the SMEs in the local energy collective.

\*\*\*\*\*  
\*\*\*\*\*

### Level 1

Question	Comment	Check
Do you know the size of the company’s energy use?	For all different energy carriers such as electricity, oil, district heating, etc (in kWh or m <sup>3</sup> ). Check energy bills.	
Are you doing anything to save energy?	For example, routines aimed to reduce energy use, e.g. care and maintenance of machinery, and switching off lights.	
Is responsibility for energy issues distributed within company?	For example, that someone handles energy bills and follow up the energy use	
Are you aware of what energy-related regulations and requirements that affect your organization?	What applies in your specific country	

### Level 2

Question	Comment	Check
Do you have access to statistics and data of the company’s energy use?	Check energy bills and/or customer pages at your energy supplier’s website. Compare one year to another, or season to season. Customer pages may also show hourly values. This can be used to identify idling load.	
Do you know what in your operations uses most energy?	Audit or scan your energy use and identify the major energy users	
Is management involved in the work with energy?	Management should make sure that energy-related issues are handled and provide enough resources for the work.	



Have you selected a person for the overall responsibility for energy issues?	Someone has an overview of all parts, e.g. energy bills and production	
Do you have energy goals/targets?	Possibly together with environmental targets, SMART objectives.	

### Level 3

Question	Comment	Check
Do you have an energy policy or an environmental policy describing energy issues?	Describes the direction of the work with energy. Connect policy to energy targets and objectives.	
Have you developed an action plan for energy efficiency?	Write down what has been done, what should be done, and plans to achieve this.	
Do you consider energy / energy efficiency when making investments?	Energy performance, compare life cycle costs for investments.	
Are you using energy related KPIs?	Could this be a possibility for your business? Energy use per product, per euro or something else.	

### Level 4

Question	Comment	Check
Do you follow up your action plan and the result from implemented energy efficiency measures?	Update the action plan, its measures and calculate costs and savings.	
Is there a possibility for employees to contribute with ideas to the work of reducing the company's energy use?	E.g., in coffee breaks, workplace meetings.	
Are energy related routines updated regularly?	Internal revision, e.g., once a year.	



## APPENDIX B.2: Guidelines for describing the SME energy profile

In order to collect relevant information about the energy profile of an individual SME, the following questions can be used to guide and support communication between the Trusted Partner and the SME (e.g. to be discussed during calls or company visits).<sup>26</sup>

### COMPANY IDENTIFIER

Country: \_\_\_\_\_

1. What is your organization's NACE Code? \_\_\_\_\_

2. How many employees does your company have?

- |   |  |
|---|--|
| <input type="checkbox"/> Less than 9;       | <input type="checkbox"/> Between 50 and 249; |
| <input type="checkbox"/> Between 10 and 49; | <input type="checkbox"/> Over 250.           |

3. Annual turnover:

- |  |   |
|--|---|
| <input type="checkbox"/> Less than 2 million euro;                   | <input type="checkbox"/> Between 10 million euro and 50 million euro; |
| <input type="checkbox"/> Between 2 million euro and 10 million euro; | <input type="checkbox"/> Over 50 million euro.                        |

4. Usable area of the building(s):

- |  |  |
|--|--|
| <input type="checkbox"/> Less than ... m <sup>2</sup> ;                      | <input type="checkbox"/> Between ... m <sup>2</sup> and ... m <sup>2</sup> ; |
| <input type="checkbox"/> Between ... m <sup>2</sup> and ... m <sup>2</sup> ; | <input type="checkbox"/> Over ... m <sup>2</sup> .                           |

### ENERGY PROFILE OF THE COMPANY

5. What is your company's annual global energy consumption? (100TOE = 1.16 GWh)

- |   |  |
|---|--|
| <input type="checkbox"/> Less than 1 GWh;     | <input type="checkbox"/> Between 5 and 10 GWh; |
| <input type="checkbox"/> Between 1 and 5 GWh; | <input type="checkbox"/> Over 10 GWh           |

6. What is the share of energy costs in the company's turnover?

- Low (<2%);
- Moderate (2-10%);
- High (> 10%).

7. What is the structure of energy consumption (% in total consumption)?

TYPE OF ENERGY	0%-30%	30% - 60%	60%-90%
Electricity			
Natural gases			
Liquid fuel (gasoline, diesel, Light liquid fuel, etc.)			
Purchased thermal energy (steam, hot water)			
Energy from renewable sources (biomass, solar, others)			

<sup>26</sup> Guidelines developed by Servelect and Technical University of Cluj-Napoca.





8. How do you monitor energy consumption within the company?

ENERGY CONSUMPTION MONITORING SYSTEM	<i>Fuels</i>		<i>Electricity</i>		<i>Thermal energy</i>	
	Yes	No	Yes	No	Yes	No
There are energy cost centres monitored by the administrative institution						
There are separate counters on the main production sections, installations, machinery and equipment						
There is only a general counter						
Building management system considers						
The energy management system considers						

9. When was the last energy audit carried out within the company?

- Less than 1 year ago;
- More than 1 year ago, but less than 5 years ago;
- More than 5 years ago, but less than 10 years ago;
- More than 10 years ago;
- We did not carry out an energy audit.

10. Is there an energy efficiency strategy within the company for the next 2 years?

- Yes;
- No;
- I do not know.

11. Is there a budget approved for investments in reducing energy consumption or switching to renewable energy in the company?

- Yes;
- No;
- I do not know.

12. What is the policy of your company regarding investments in energy efficiency? (multiple choices)

- Energy efficiency investments have priority;
- For investments in energy efficiency the same criteria are used as for all investments;
- Investments in energy efficiency are proposed only if they have a short pay-back period;
- Investments in energy efficiency are proposed only if they are considered low costs measures;
- There are other investments with a higher priority than investments in energy efficiency.

13. In your opinion, which are the main barriers to adopt renewable energy? (multiple choices)

- High initial capital cost
- Lack of financing mechanism
- Inefficient technology
- Need for backup or storage device
- Unavailability of solar radiation data
- Lack of awareness of technology
- Less efficiency
- Lack of trained people and training institutes
- Lack of local infrastructure
- Lack of national infrastructure
- Scarcity of natural and renewable resources
- Unable to meet electricity power demand alone
- Lack of political commitment
- Lack of public interest litigations
- Ecological issues



## APPENDIX B.3: Guidelines for collecting information about energy and environmental consciousness in SMEs

The following questions can be used as a guideline or checklist for a discussion about energy culture and environmental consciousness within the group of SMEs or with all the employees of one SME.<sup>27</sup>

An individual's acceptance of a technology, although not strictly a psycho-sociological term, can be regarded as an intention to adopt or use the technology, or to consent or actively support its development. It is well known that methodological approaches to measuring attitudes, behavior and intended behavior in environmental psychology include quantitative (attitudinal surveys) and qualitative methods (e.g., semi-structured interviews, focus groups). Moreover, energy-efficiency practices of an employee, regardless the position in the SME, are influenced by knowledge, experience, and other factors.<sup>28</sup>

1. In your opinion, climate change affects:
  - Breathable air
  - Safe drinking water
  - The planet earth fauna
  - Secure shelter due to extreme weather and natural calamities
  - Public Health
  - Agriculture
  
2. In your opinion, which are the main factors contributing to climate change?
  - Heavy industry
  - Textile industry
  - Fossil fuels-based mobility (car, train, bus, plain)
  - Fossil fuels-based electricity
  - Waste
  
3. In your opinion, which are the solutions to overcome the effects of climate change?
  - Forego fossil fuels
  - Infrastructure Upgrade
  - Consume less and more efficient (food, energy, daily consume goods)
  - Stop cutting down trees
  - Use alternative fuels and energy sources
  - Mobility electrification
  
4. Which are renewable energy sources that you are aware of? (multiple choices)

---

<sup>27</sup> Guidelines developed by Servelect and Technical University of Cluj-Napoca.

<sup>28</sup> References: [1] Stephenson, J., Barton, B., Carrington, G., Gnoth, D., Lawson, R., Thorsnes, P. (2010). Energy cultures: A framework for understanding energy behaviours. *Energy Policy* 38(10):6120-6129. [2] Roche, M.Y., Mourato, S., Fishedick, M., Pietzner, K., Viebahn, P. (2020). Public attitudes towards and demand for hydrogen and fuel cell vehicles: A review of the evidence and methodological implications. *Energy Policy* 38(10):5301-5310. [3] Miroso M., Gnoth, D., Lawson R., Stephenson, J. (2010). Characteristics of Household Energy Behaviours. University of Otago New Zealand. [4] <https://climate.nasa.gov/>.



- |   |  |
|---|--|
| <input type="checkbox"/> Solar photovoltaic   | <input type="checkbox"/> Marine                    |
| <input type="checkbox"/> Wind                 | <input type="checkbox"/> Mixed hydro plants        |
| <input type="checkbox"/> Biogas               | <input type="checkbox"/> Renewable municipal waste |
| <input type="checkbox"/> Liquid biofuels      | <input type="checkbox"/> Solar thermal             |
| <input type="checkbox"/> Renewable hydropower | <input type="checkbox"/> Solid biofuel             |
| <input type="checkbox"/> Geothermal           |  |

5. Which are the main sources of information regarding renewable energy technologies?

- Public authorities reports
- Professional bodies
- News and reports
- Research projects
- Scientific papers
- Social media
- Other (please specify): \_\_\_\_\_

6. In your opinion, the main advantages of renewable energy are:

- They will never run out
- Increasing of the comfort level
- Reduction of utilities bills
- They are low-maintenance energy sources
- Renewable energy saves money long term
- The environmental benefits
- Less reliance on imported energy = stronger economy
- Improving public health
- Building stronger communities
- More jobs
- Other (please specify): \_\_\_\_\_

7. In your opinion, the main disadvantages of renewable energy are:

- Unreliable weather can affect energy supply
- It's hard to produce the same amounts as non-renewable sources.
- Higher upfront cost
- Storage capabilities
- Geographic limitations
- Other (please specify): \_\_\_\_\_



8. In your opinion, which are the main barriers to adopt renewable energy? (multiple choices)

- Inefficient technology
- Lack of consumer awareness to technology
- Need for backup or storage device
- Lack of information technology resources
- Lack of awareness of technology across general public
- Lack of research and development work
- Lack of trained people and training institutes
- Lack of local infrastructure
- Lack of national infrastructure
- Scarcity of natural and renewable resources
- Geographic conditions
- Lack of political commitment



## APPENDIX B.4: Examples of legal forms for a local SME energy collective

Form	Explanation
Association	<ul style="list-style-type: none"> <li>- The objective of an association is to use the profit to achieve the objectives of the association</li> <li>- The members have control through a general meeting of members (GMM) and appoint the board of the association who implements the decisions of the GMM</li> <li>- 2 types associations: an association with full legal capacity and an association with limited jurisdiction. Directors of an association with full legal capacity are not personal liable for the obligations of an association.</li> </ul>
Cooperative	<ul style="list-style-type: none"> <li>- It is an association that enters into an agreements with and for its members; “an association with a company”</li> <li>- The members have control and appoint the board of the cooperative</li> <li>- All members share in the profit of the cooperative</li> <li>- Different types of cooperatives, such as a business cooperative (buying, selling and supplying by the members), the consumer cooperative (collectively buying and selling) and the employee cooperative (whereby members provide services / products in the service of the cooperative).</li> <li>- The cooperative can also be established with exclusion of liability. With the exclusion, the members are never liable for any losses.</li> </ul>
Foundation	<ul style="list-style-type: none"> <li>- Non-profit; the proceeds (profits) must be used for the realization of its objectives (similar as association).</li> <li>- A foundation does not have members (difference with association).</li> <li>- Authority in a foundation rests with the board.</li> </ul>
Private company	<ul style="list-style-type: none"> <li>- Control rests with the general meeting of its shareholders</li> <li>- The (registered) capital of the legal entity is divided into shares, these shares are not freely negotiable or transferable as it happens on a stock exchange, hence the term private company.</li> <li>- A private company can also be combined with a cooperative, in which the cooperative has full ownership of the private company.</li> </ul>



## APPENDIX C.1: Examples of agendas and content/topics for meetings and networking events

### General meeting agenda

*Below is an example agenda for a full-day meeting hosted by one of the SMEs in the collective. Most meetings will probably not be full-day meetings. For shorter meetings you would choose to focus on one theme or a more limited aspect. However, try to always include both informational (e.g. presentation by energy expert) and networking (e.g. discussion, exchange of experience) elements. Preferably, they can both relate to a common theme.*

*Locating the meeting at one of the participating companies that host the meeting and provide a study visit makes the discussions more concrete, increase interaction and the direct involvement of the SMEs. However, in many cases this is not possible – due to the type and size of SMEs involved and their willingness to do this. Then an option is to still include company presentations or concrete examples from participating companies in the agenda.*

*For digital meetings, the same overall structure is recommended. However, in these cases it takes even more dedication and planning to create interactivity during the meeting.*

- Introduction
- Presentation of host company
- At least one networking element, such as a structured discussion for exchange of experiences within a specific area or related to a specific issue (see topic list below)
- One or two informational or training elements (e.g. related to a technology area, or methodology – see theme list below) with lecture/presentation and questions/discussions – e.g. one in the morning and one in the afternoon
- Study visit to see the operations and activities of the host company (ca 1 hour)
- Ample time for lunch and coffee breaks (to create good conditions for further networking)

*To further involve SMEs and keep up their motivation, it can be a good idea to include specific points for each SME to report tasks or status updates in the meeting agenda. E.g: - SME A: status, needs, - SME B: status, needs etc. By doing that all the SMEs in the network know that they will be asked to contribute to the meeting.*

### Meeting invitations

- Information about place and time – possibly with directions



- Agenda and potential background material on specific content
- Information about the theme of the meeting and clarification if the meeting is relevant to attend for someone other than the main contact person at the SME (persons responsible for energy management, finances, or ventilation system)
- Information about when and how to confirm participation – if needed.

### Example content for first meeting(s)

*The first meeting(s) for the SMEs in the collective serve to introduce the initiative to the SMEs and to further motivate them to participate. Therefore, the content will need to be adapted to specific goals and conditions.*

*The list presents a number of possible topics that may be more or less relevant depending on the impact ambition and value proposition of your own local SME energy collective. Let it serve as inspiration and select those most relevant.*

- Presentations of participating SMEs
- Introduction of the initiative, e.g.
  - its impact ambition and value proposition (depending on how far these have been developed)
  - the core principles of the collective approach you will be taking and your own role (as Trusted Partner) – by relating more or less explicitly to the GEAR@SME methodology, depending on situation.
- Good, inspiring examples of energy efficiency and its multiple benefits in SMEs
- Available services/activities/support, e.g.
  - Available support for financing energy audits
  - How the Trusted Partner can support applying for subsidies, performing simplified energy scans, and/or purchasing audits/contracting auditors
- Discussion activity on needs and expectations of participating in the local SME energy collective
- Potential surveys – explanations and time for filling these out

### Examples of informational themes for one or several meetings (a non-exhaustive list)

*For presentations or training sessions on these informational themes, you can involve representatives in your network. An energy advisor, energy auditor, equipment provider, the energy company or someone from a university can be invited to hold a presentation.*

- Energy audits – purpose, ambition levels, procedures, concrete examples
- Common energy efficiency measures and their (multiple) benefits – best practices
- Setting energy targets for energy efficiency and creating an action plan for implementation of measures
- Evaluating and prioritizing energy efficiency measures based on their multiple benefits and estimated profitability





- Energy monitoring – synergies with energy audits, follow-up and evaluation of implemented measures
- Specific technology areas – e.g. compressed air systems, heat recovery, ventilation systems, lighting, electric motors (pumps and compressors), cooling systems, transport and logistics
- Energy efficiency through changed behaviour, routines and engaged employees
- Working systematically with energy efficiency – Basic principles of energy management
- Financing possibilities for energy audits and energy measures
- Policy developments relevant to the energy area and to the SMEs of the collective

#### Examples of discussion topics for meetings (a non-exhaustive list)

- Potentials and ambitions – to agree on a common target for the collective (when possible, based on results from energy scans and audits of the companies)
- Drivers and values of the SMEs – why they are participating in the collective and what they benefits they expect to achieve
- Discussions of the SMEs own experience from any of the informational themes listed above.
- Focus areas and common challenges – to guide the services and activities that should be included in the collective and the content of coming meetings
- Results from energy efficiency measures taken and from overall monitoring of the result of the energy collective



## APPENDIX E.1: Templates for energy efficiency action plans

There are two version of templates for an energy efficiency action plan. Both should be approved by management, with clear responsibilities and timeframes.

**Compact:** This template focuses on the plan as being a plan of action. It is focused on the implementation. What should be done, by whom, and when? And how will the measure be evaluated to see if it gave the expected result? If this version of the template is used, the analysis that led to a measure being prioritized and put on the action plan also needs to be documented. Such, more detailed information about individual measures, like energy savings and profitability can then be presented separately. A proposal for how the individual measures can be documented is provided after the two action plan templates.

**Detailed:** This template contains all information from the compact version, but here you also have a possibility to add information about energy savings, emission reductions, costs and multiple benefits. This means that this template collects a lot of information in the same place. To get room to enter all information, it is probably necessary to copy the template to a spreadsheet, where the columns can be wider.



Action plan for energy efficiency  
(compact)

Updated  
date:

#	Description of measure	Persons(s) responsible	Status	Target date	Method for follow-up
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

Action plan approved by:

\_\_\_\_\_

Signature

\_\_\_\_\_

Date

\_\_\_\_\_



Action plan for energy efficiency (detailed)

Updated date:

#	Energy target addressed	Area/ Equipment	Description of measure	Type of measure	Person(s) responsible	Status	Target date	Expected energy saving (kWh/yr)	Reduced CO2 emissions (kg/yr)	Net cost savings (euro/yr)	Investment cost (euros)	Non-energy benefits / Other consequences	Method for follow-up	Result of follow-up	Comment
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															

Action plan approved by: \_\_\_\_\_

Signatur \_\_\_\_\_

Datum \_\_\_\_\_



Measure:	
Area / Equipment:	
Description:	
Energy saving (MWh/yr)	
Cost saving (euro/yr)	
Investment cost (euros)	
Life cycle cost saving (euros)	
Payback time (yr)	
Reduced emissions of fossil CO <sub>2</sub> (kg/yr)	
Method for follow-up (key performance indicators, measurements/monitoring ...):	
Other consequences of implementing the measure (multiple benefits, other costs, how the measure affects or is affected by implementation of other measures ...):	



## APPENDIX E.2: Promising tools to address the needs of SMEs

This appendix lists the tools available and identified at the European level to support the Trusted Partner in addressing the identified needs for SMEs.

For each need identified in Chapter E, it lists the most promising tools to address that need, the language in which they are available, the type of tool<sup>29</sup>, and a brief description of the tool's main objective.

### Knowledge building on energy efficiency and energy management

Tool	Language	Type of tool	Brief Description
Guidelines for energy audits in SMEs	Italian	Training Tool	The tool is intended to provide help and support to companies who want to undergo an energy audit, so as to help with the interaction with the energy auditor
ENEA - Agenzia Nazionale Efficienza Energetica	Italian	Support Channel	Italian Association providing support on energy efficiency measures and incentives, energy management and training
SME Energy CheckUp	Dutch, Italian	Energy Audit Tool	The SME Energy Checkup is a free online scan that provides advice into and information to SMEs on energy saving measures for buildings, gains insight in energy usage and efficiency measures to improve and helps SMEs to find installers or consultants to assist them in taking the next steps
ENGINE Training	English, Swedish, Italian, German	Training Tool	Materials (power point slides) aimed at those who can influence energy use in small and medium-sized businesses. The training ranges from why to work with energy efficiency to evaluating various possible interventions to implement within the company.
Monitoring & Targeting	Romanian, English, German Italian.	Training Tool	Monitoring & Targeting Tool (M&T) is a management technique that can be utilized to monitor utility costs and to drive energy costs downwards, using energy analytics. The tool will be used by the trainees of the Education&Training programme within the SMEmPower project

<sup>29</sup> ENERGY AUDIT TOOLS: essential throughout the process of energy efficiency; - TRAINING TOOLS: for both demand and supply side actors; - SUPPORT CHANNELS: play a key role as "helpdesk" by supporting SMEs in improving energy efficiency; - OTHER: any other tool that does not refer to the above categories.



Tool	Language	Type of tool	Brief Description
Measurement & Verification	Romanian, English, German Italian.	Training Tool	Measurement and Verification (M&V) tool aims to quantify energy consumption both before and after an energy conservation measure package is implemented, to verify the level of savings.
Energy Analytics	Romanian	Energy Audit Tool	The tool is used to data processing which is needed for energy audit. The data processing consists of electricity, fossil fuel data introduction, with suggestive graphs representation. Also, Hourly power load can be introduced and calculate monthly data, comparing with the billed amount.

### Estimation of energy consumption and its impact

Tool	Language	Type of tool	Brief Description
Template for monitoring and follow-up of key performance indicators for company energy use	Swedish	Energy Audit Tool	Support companies in monitoring and following up their own energy use
SME Energy CheckUp	Dutch, Italian	Energy Audit Tool	The SME Energy Checkup is a free online scan that provides advice into and information to SMEs on energy saving measures for buildings, gains insight in energy usage and efficiency measures to improve and helps SMEs to find installers or consultants to assist them in taking the next steps
Energy Potential Scan for Business Parks (EPS)	Dutch	Energy Audit Tool	<p>Giving quick insight in energy use and (business) potential for energy measures for all enterprises on a business park. Raises awareness and interest in energy measures. The EPS gives a first order estimate for the business case for sustainable energy measures on business parks, for individual companies and for the business park as a whole. It has been developed in practice and successfully applied for several business parks in the Netherlands. It does not require</p> <p>company-specific data for a first estimate, as it uses geographical and other data which is open or commercially available on a national scale. Therefore, it is a relatively quick and cost-</p>





Tool	Language	Type of tool	Brief Description
			effective scan. The results are presented at the building-level and can be visualized using GIS software.
Energybook E-Tool	German	Energy Audit Tool	It helps managers of SMEs to evaluate energy consumption data. With a minimum of work, it is possible to obtain a good overview of all relevant operating data: recording of energy costs, examination of machines and vehicle fleet, evaluation of CO <sub>2</sub> emissions.
PINE AUDIT	English	Energy Audit Tool	The objective of the PINE is to increase energy efficiency in industrial SMEs. It contains simplified energy auditing schemes. As an Input Data 3 sheets needs to be filled: basic data electricity, basic data heat, overview electricity, overview heat.
Measurement & Verification	Romanian, English, German Italian.	Training Tool	Measurement and Verification (M&V) tool aims to quantify energy consumption both before and after an energy conservation measure package is implemented, to verify the level of savings.
Energy Analytics	Romanian	Energy Audit Tool	The tool is used to data processing which is needed for energy audit. The data processing consists of electricity, fossil fuel data introduction, with suggestive graphs representation. Also, Hourly power load can be introduced and calculate monthly data, comparing with the billed amount.

### Identification of potential solutions to reduce energy consumption

Tool	Language	Type of tool	Brief Description
Energy Potential Scan for Business Parks (EPS)	Dutch	Energy Audit Tool	Giving quick insight in energy use and (business) potential for energy measures for all enterprises on a business park. Raises awareness and interest in energy measures. The EPS gives a first order estimate for the business case for sustainable energy measures on business parks, for individual companies and for the business park as a whole. It has been developed in practice and successfully applied for several business parks in the Netherlands. It does not require company-specific data for a first estimate, as it



			uses geographical and other data which is open or commercially available on a national scale. Therefore, it is a relatively quick and cost-effective scan. The results are presented at the building-level and can be visualized using GIS software.
--	--	--	--

### Investigation of other potential benefits

Tool	Language	Type of tool	Brief Description
PV Generation	Romanian	Energy Audit Tool	SMEs can see the potential for installing PV on their sites and self-consuming the electricity generated.
CHP (Combined heat and power)	Romanian	Energy Audit Tool	The SMEs can see the potential for CHP installation in their sites and self-consuming the electricity generated.
A tool for added values from energy efficiency	Swedish	Other	Show the added value that can follow from energy efficiency, such as increased public health or reduced greenhouse gas emission. Targeted for organizations in the public sector, but can be used by other types of organizations to some extent.
Life cycle cost calculation tool	Swedish	Energy Audit Tool	Calculate life cycle costs of energy efficiency measures.
Added value (of energy efficiency measures)	German	Energy Audit Tool	Profitability calculations/ comparison of energy saving measures. Decision template for investment decisions Responsible persons.
Profitability LEG - Tool	German	Energy Audit Tool	Profitability calculations/ comparison of energy saving measures. Decision template for investment decisions Responsible persons.
Energy Potential Scan for Business Parks (EPS)	Dutch	Energy Audit Tool	<p>Giving quick insight in energy use and (business) potential for energy measures for all enterprises on a business park. Raises awareness and interest in energy measures. The EPS gives a first order estimate for the business case for sustainable energy measures on business parks, for individual companies and for the business park as a whole. It has been developed in practice and successfully applied for several business parks in the Netherlands. It does not require</p> <p>company-specific data for a first estimate, as it uses geographical and other data which is open or commercially available on a national scale. Therefore, it is a relatively quick and cost-effective scan. The results are presented at the</p>



Tool	Language	Type of tool	Brief Description
			building-level and can be visualized using GIS software.
Energy System Simulator (ESSIM)	Dutch	Energy Audit Tool	Providing support in designing sustainable local energy systems, which are in balance throughout the year
/Flex Scan	Dutch	Energy Audit Tool	Gives insight in possible energy flexibility providers and accompanying costs & benefits of unlocking these.
WKO - Tool	Dutch	Energy Audit Tool	The WKO tool is a website from the Dutch ministry of Economics, and provides information on whether a location is suitable for heat and cold storage.



## Find the right supplier

Tool	Language	Type of tool	Brief Description
List of Energy Auditor	German	Support Channel	Provides a list of accredited auditors, who need to have certain qualifications.
Collective Financing Esco Tool	Dutch	Training Tool	Give insight in collective financing options using ESCo constructions. The goal of the tool is to develop collective financing models that allow for the collective implementation of energy projects on business parks.
Supplier Selection Tool	Dutch	Other	Enable park managers to efficiently select suppliers which have the interest of the collective project at hearth.
Example Tender Document	Dutch	Other	Complete Tender.

## Search for public support and funding; Search for financial options

Tool	Language	Type of tool	Brief Description
RVO	Dutch	Support Channel	This is a tool for finding subsidy for SME's for the use of energy saving measures and production.
Quickguide for collective sustainability measures on business parks	Dutch	Training Tool	Enable park managers to execute collective energy projects in their business park by providing insight into the entire process. Guide that serves as a roadmap, with examples, practical tips, tools and various sources.

## Management of and energy efficiency project

Tool	Language	Type of tool	Brief Description
Measurement & Verification	Romanian, English, German Italian.	Training Tool	Measurement and Verification (M&V) tool aims to quantify energy consumption both before and after an energy conservation measure package is implemented, to verify the level of savings.
Templates for action plan	Swedish	Other	Templates for setting up a company's action plan for implementation of EE measures.



Tool	Language	Type of tool	Brief Description
Guidebooks for Energy Efficiency in SMEs	Swedish	Training Tool	Support for energy management, information about BAT and good and relevant guides to implementation of energy efficiency measures. (Also provides knowledge of regulatory requirements related to energy efficiency in Sweden.)

### Assistance with complying to energy regulations

Tool	Language	Type of tool	Brief Description
Filter Erkende Maatregelen Energiebesparing (FEM-tool)	Dutch	Energy Audit Tool	The FEM tool helps SMEs in selecting relevant energy saving measures for their building(s). Through various steps, the tool makes a rapport (and/or action list) with the best measures for energy saving. The aim is for SMEs to find out which of the mandatory energy efficiency measures is applicable to their company.
Milieubeheer programma	Dutch	Energy Audit Tool	It is an online planning tool, that provides SMEs with insights into mandatory measures for different industries and ways to implement these. The aim is to provide SMEs with the capability to inform themselves concerning the mandatory energy efficiency measures, to find out about the practical implementations and costs and to plan them.
Lawcheck Energy Savings	Dutch	Energy Audit Tool	Providing insight in legal obligations concerning energy saving measures. Makes an SME think about options it has for energy saving. Through a list of questions one can check which legal obligations apply to an SME and how to meet these.

### Spread the “energy efficiency culture” in the company

Tool	Language	Type of tool	Brief Description
Self-Assessment Tool for Energy Management	Swedish	Other	The guidebook "Företagets energitrappa" aims to support companies to work in a structured and systematic way with energy efficiency. The tool can be used for a self-assessment of the level of energy management practices in the company, and guides the user to where to start reading the guidebook.



Tool	Language	Type of tool	Brief Description
Guidebooks for Energy Efficiency in SMEs	Swedish	Training Tool	Support for energy management, information about BAT and good and relevant guides to implementation of energy efficiency measures. (Also provides knowledge of regulatory requirements related to energy efficiency in Sweden.)
ENGINE Training	English, Swedish, Italian, German	Training Tool	Materials (power point slides) aimed at those who can influence energy use in small and medium-sized businesses. The training ranges from why to work with energy efficiency to evaluating various possible interventions to implement within the company.

### Set up a long-term energy efficiency strategy in the company

Tool	Language	Type of tool	Brief Description
PV Generation	Romanian	Energy Audit Tool	SMEs can see the potential for installing PV on their sites and self-consuming the electricity generated.
CHP (Combined heat and power)	Romanian	Energy Audit Tool	The SMEs can see the potential for CHP installation in their sites and self-consuming the electricity generated.
Self-Assessment Tool for Energy Management	Swedish	Other	The guidebook "Företagets energitrappa" aims to support companies to work in a structured and systematic way with energy efficiency. The tool can be used for a self-assessment of the level of energy management practices in the company, and guides the user to where to start reading the guidebook.
Guidebooks for Energy Efficiency in SMEs	Swedish	Training Tool	Support for energy management, information about BAT and good and relevant guides to implementation of energy efficiency measures. (Also provides knowledge of regulatory requirements related to energy efficiency in Sweden.)
EENet internal collaboration site	Swedish	Other	Process Tool and project internal support channel.