EPATEE

Report on the interviews to the key stakeholders and the first EPATEE survey

Synthesis Report

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Preface

This report summarises the outcomes of the first activities produced by the EPATEE consortium in terms of stakeholders' engagement:

- an interview with a group of key stakeholders identified at EU level, used to get a qualitative feedback and identify the first needs and priorities for the project activities;
- a survey among a larger group of stakeholders, aimed at collecting a more quantitative feedback, better understanding the needs of the EPATEE stakeholders and ranking the priorities identified in the interviews.

The stakeholders selected for the interviews have been chosen considering their role in policy evaluation, either as ministries or agencies involved in such process, or as experts in this field. The interviews were also a good opportunity to illustrate the project to them and to involve them since the beginning in the EPATEE activities. The survey has been promoted mainly among evaluators, evaluation customers (i.e. people who commission evaluation activities), and evaluation users (i.e. people who use the results of evaluation, for example for lobbying, research purposes, etc.).

The outcomes of the two actions have been used to better understand how evaluation of energy efficiency policies is implemented over EU Member States and what the main barriers are. Through them it has been possible to identify what aspects of policy evaluation the EPATEE team should focus on, and how the project can support the stakeholders through meetings, webinars, workshops and conferences, web platform, guidelines, etc.

The results and conclusions from the interviews and the survey are not meant to be exhaustive nor representative of the evaluation practices of all Member States. The objective was to get the views of the key target groups for the project (policy makers, evaluation customers, evaluators, evaluation users), in order to ensure that the EPATEE consortium has a good understanding of their needs and expectations.

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1 | Interviews to key stakeholders

1.1 Methodology

One of the first steps in the EPATEE project was the implementation of a series of interviews with a group of stakeholders considered key to the achievement of the project goals, such as policy makers, ministry officers, representatives of agencies involved in policy evaluation or renowned experts in this field. The aim of this action was to clearly identify how different Member States deal with policy evaluation and which the main issues in policy evaluation are, in order to feed the other project actions with a set of priorities, on which to build the project first activities.

The interviews were conduct on the basis of a questionnaire created by FIRE and finalised with the contribution of all partners. The questions asked to the key stakeholders are the following ones:

1. *What do you think of policy evaluation practices? According to you, what should be the role of evaluation in the policy cycle? Do evaluation practices contribute to create more efficient energy policies or improve existing ones?*
2. *Do you carry out impact evaluations for all your energy efficiency policies? If not, how do you prioritize evaluation efforts?*
3. *Can you give us some examples of successful energy efficiency policies in your country as assessed by the existing evaluation practices and explain why you think they have been successful?*
4. *Based on your experience, what are the main aspects and issues regarding evaluation practices related to energy efficiency policies?*
5. *What difficulties you may need to overcome in future evaluations and what kind of targeted support (information, training, web tools, etc.) could be useful to you?*
6. *Are there specific experiences with policy impact evaluation you are interested in? If so, why?*
7. *Would you be interested in joining meetings and/or webinars with other EU stakeholders and experts to share your experiences or learn about other Member States' best practices on evaluation? If not, why (lack of time, no needs for experience sharing, you have other priorities, etc.)?*
8. *Could you suggest other public or private officers that could benefit from the involvement in the EPATEE project actions?*

The interviews were carried out mainly as face to face meetings, with some exceptions, especially when the selected stakeholders were too costly to be met by the project partners (in such cases web conferences or telephone calls were used). Each partner should have contacted two stakeholders, but many preferred to add other contribution(s) as well, to obtain a better view.

1.2 Outcomes

Overall 26 interviews were done with 30 persons (one interview could include several persons of the same organisation), from 16 different EU Member-States. They were from ministries (12), implementing agencies or authorities (12), experts/researchers/evaluators (3), local authorities (2), energy companies (1).

Below the main aspects emerged from the questions are summarised, illustrated with anonymised quotes from the interviews.

1.2.1 The importance of evaluation

The general concept is that evaluation has to be done on all the phases of a policy lifecycle: ex-ante, during the effective life of the policy and ex-post. The ex-post evaluations are important both to evaluate the effectiveness of the policy itself and for planning the new policies (or policy revisions/updates).

> "*Unless evaluations are done, it is not possible to know the effects of the policy instruments, and therefore to take decisions based on evidences. Decision makers need to know the effects of the policy instruments that they invest in*".

> "*The necessity* [of evaluation] *is out of question. It is imperative to know if a measure worked in order to continue using it*".

> "*Through evaluation we can address several issues in the policy cycle, such as how a policy has been implemented, who, how and why has it been affected, if savings have been achieved and determine where it needs to be adapted, continued or ended*".

> "*Evaluation is equally important for creating new policies and adapting existing ones*".

Some interviewees also see in evaluation a tool to optimize policy portfolio or to prioritize policy efforts.

> "*Policy evaluation practices are welcome, especially if the results appoint to the fact that certain energy efficiency measures have more lasting power and achieve greater savings in the long-term than others*".

> "*It is also important for a given policy not to be evaluated as a single measure, but to be considered in the overall framework of energy efficiency policies, which present a well-articulated framework*".

Experience feedback from interviewees points that integrating evaluation in the policy design was a good practice: results from previous ex-post evaluations and/or ex-ante evaluations of policies under consideration can inform the design process. Then thinking about evaluation from the start (i.e. when designing a policy) helps ensuring the feasibility of future ex-post evaluations, particularly by optimizing data collection.

> "*Before choosing and designing a policy, evaluation results from existing policies in other areas/countries should be used to make decisions on the policy design*".

> "*Evaluation should follow the whole policy cycle and be used in the planning as well as in the controlling (results) of the policy. Systems that incorporate this comprehensive approach seem to be more successful*".

> "*Evaluations are very important and interesting as we learn what the contribution of the respective policy measure to our energy savings is and what other effects it has. We have to learn what we can improve regarding the design of the policy measure*".

> "*During the design of a policy, an evaluation advisor should be present to ensure a good ex-post evaluation (e.g. if the data collection is not well designed it is very difficult to evaluate the policy or at a large cost - which is somehow the reason for a lack of evaluation), the design should be «evaluation-friendly»*".

The interviewees also emphasize the importance to specify the meaning of evaluation and differentiate it from monitoring, especially in the field of energy efficiency, which is considered a very challenging field due to some inherent complexity, such as the measurement of the energy savings,

the strong correlation with the existing buildings and facilities, the vastness of the non-energy effects associated with most energy efficiency projects.

Experience feedback also provides concrete examples where evaluation brings a better understanding of the effects of a policy, particularly about longer term effects, beyond short term results registered by monitoring and verification (M&V).

> *"The important aspects is to carry out distinct analysis for the "shallow" and the "deep" measures in sectors. For instance, in shallow measures there are the heat insulation and the lighting for the industrial side, but the evaluation can show how these measures can act both as trigger for further investments but also as examples to other market parties to implement them"*.

It is important to distinguish measurement, reporting and verification (MRV) and evaluation processes. MRV provides data and feedback on a regular basis for managing policy schemes. Evaluation provides an in-depth and possibly independent analysis of the schemes and their impacts, in order to verify the cost-effectiveness of policies, identify the effects on the market, draw recommendations for enhancing current policies and establish new ones, etc.

The survey was therefore used to explore further the different aspects that are usually included in MRV and evaluation practices.

As suggested by some interviewees, another way to understand the role of evaluation is to think about what happens when no evaluation is done: in such case, it becomes impossible to say if the money spent was used in a profitable way and produced the desired effects. This highlights why evaluation is a valuable resource for policy makers, especially in times of scarce resources.

An effective approach to policy evaluation allows to understand the real impact of a policy measure, not only in terms of achieved energy savings and costs, but also as additional effects (e.g. enterprise competitiveness, fuel poverty contrast, occupational, environmental and social benefits, rebound and free riders' effects, etc.). This aspect was also further explored by the survey.

1.2.2 When setting up evaluation actions and prioritization

Almost all interviewees reported that some type of policy evaluation was done in their country, especially ex-post. Many interviewees agree that policy evaluation should be implemented at each stage, including ex-ante, but the allocated resources don't allow to do it with the same accuracy for every policy measures.

The extent and depth of the analysis depend on the dimension of the policy and on the set priorities. In many cases priority is given to the policies for which an impact evaluation is required by law (as it is the case with many EU directives) or when the targets related to a policy are ambitious. Nevertheless, there are some exceptions.

The amount of resources needed to implement the evaluation process is also an important element. According to most of the interviewees, the higher the involvement of economic resources in the policy, the more important, and therefore required, a continuous evaluation process is. Criteria to prioritize evaluation efforts include as well the "evaluability" of the policy measures: priority is usually given to evaluate policy measures designed to have direct impacts (e.g. financial incentives to install energy efficiency solutions). Supporting measures (e.g. awareness raising, training activities) are often perceived more difficult to evaluate in terms of energy savings impacts (and/or to create

risk of double counting) and thus are usually evaluated in a different way than classical impact evaluations.

> "*Depending on how large and important the policy instrument is, the evaluation may remain qualitative or have a quantitative focus*".

> "*The priority is associated to the weight of the economic resources associated to the policies*".

> "*The prioritization of the evaluation is carried out in the order that first measures to be evaluated are those that can be directly measured*".

> "*Evaluations are prioritized upon some criteria such as the volume of the expected savings, regulatory impact, potentials for business development, costs and also for those policies that are not functioning based on the initial planning*".

> "*For some EU obligations an impact evaluation is a must. No need to question whether we should do it*".

How many policies are evaluated and how also depends on the laws and regulation existing in each Member State. Several interviewees reported that procedures about the legislative process in their country require an impact assessment or other forms of ex-ante evaluations and/or ex-post evaluations to be done. Other interviewees reported that the lack of standard procedures for evaluation in their country was a barrier to effective evaluation practices.

Another aspect raised by interviewees about when to evaluate was that the timing and duration set for the evaluations may impact their quality.

> "*Many evaluations are made in short delays that prevent from doing deep analyses especially when topics are complex: it may lead to recommendations based on weak evidence*."

Evaluation practices reported by interviewees show that policy evaluation should be considered in every phase of policy design (ex-ante) and management (ex-post). Depending on the size and typology of policy scheme, different approaches and depths of analysis can be chosen, but it is important to dedicate resources (human, economic, time, etc.) for each stage of the policy.

Ex-ante evaluation: aims at evaluating the costs and effects (energy, economic, market, etc.) of a policy under draft by using models and previous experiences in similar fields.

Ex-post evaluation: aims at evaluating the real effects of a policy based on data and information collected during and/or after its implementation. Evaluation done while the policy is on-going (also named *in itinere* evaluation) is considered ex-post, even if sometimes it can contain also some ex-ante analysis.

1.2.3 Examples of successful energy efficiency policies

Some examples of successful policies, according to the interviewees (they may have mentioned policies in another country):

- The Energy Savings in Households program - Greece
- KfW - Programme for buildings, energy efficiency networks for companies, energy efficiency fund – Germany
- The energy renovation of apartment buildings and family homes - Croatia
- Voluntary EE agreements, energy audits and building codes - Finland

- The White Certificates mechanism - Italy
- The Bulgarian energy efficiency obligation scheme under Directive 2006/32/EC - Bulgaria
- The federal programme "Aid (to industry) for environmental protection measures" - Austria
- The Better Energy Home and Warmer Home schemes - Ireland
- Technology procurement groups (now named innovation clusters - Sweden
- Network of municipal energy advisors - Sweden
- Energy Efficiency Obligation scheme - Denmark
- Tax credit scheme - France

For all interviewees, the role of evaluation was crucial to the success of the mentioned policy.

Policy evaluation allows to introduce functional changes to the policy in order to adapt it to the needs of policy makers. Only a thorough evaluation process can establish if and how a policy has been successful. Ex-ante and ex-post evaluation are both important, especially for policies with large targets.

It is also interesting to learn from experiences where things did not turn out as planned. Unforeseen challenges or difficulties are often valuable sources of experience feedback.

Sometimes evaluation allows to highlight underestimated or not foreseen effects related to the implementation of policies. For example, in France an econometric analysis of the first months of the bonus/malus scheme for new cars revealed some effects that were not expected when designing the scheme, in Croatia the installation of meters in multifamily buildings showed costs higher than the savings, in Amsterdam the actual energy savings related to grants given on the basis of the building's energy labels improvements were lower than expected based on the modelled differences in energy consumption between energy labels.

Even when extensive evaluation is in place, there is place for improvements. In particular common indicators at the national level will facilitate the comparison among policies and give a better view on the effectiveness of a given policy measure. But some interviewees also emphasized that evaluation methods need to be adapted to the specific context of the policy evaluated (objectives, data availability, etc.). And therefore, standardizing evaluation practices would be a very challenging task and could even be counterproductive.

Experience feedbacks from past evaluations have shown how the results and conclusions from these evaluations can help decision making about continuing and/or adapting policies, as well as to better understand the impacts of the policies.

Assessing the success of a policy may be controversial when clear indicators were not defined from the start. Predefined common indicators can provide a basis for this purpose. But evaluation methods and indicators often need to be tailored to the context of the policy evaluated.

1.2.4 Difficulties and barriers to the evaluation of energy efficiency policies

Interviewees highlighted organisational barriers that may need to be overcome to avoid pitfalls and unforeseen difficulties, such as the lack of specifications about the involvement of the different stakeholders in the evaluation process and/or how to ensure good cooperation.

> *"Coordination mechanisms between different administrative and implementation bodies must be clear, in order to avoid misunderstandings of responsibility between ministries, national bodies and local and regional self-governing units"*.

Some interviewees pointed among the barriers the lack of standard tools or methodologies to promote good evaluation practices, and for example transparency in the evaluation results. But other interviewees reminded the importance to consider the differences in the context and experience of the Member States.

> *"It would be good to have harmonised approaches in a country as regards evaluations in order to be able to really compare policy instruments"*.

> *"The most critical aspect is probably linked to the lack of a standard methodology for project evaluation. It is an internationally widespread problem, and without a standard each government body is evaluating its policies with its own methods, considering the aspects that are most of its interest. This way it is difficult to make comparisons among different states. We need guidelines"*.

> *"The main difficulties are the common evaluation indicators that can be used among the various stakeholders in each program. Under the Article 7 umbrella measures, there are needs for common methodologies for calculations on indicators (including lifetime saving issues, final energy, bottom up rules)"*.

> *"Another challenge is to have figures that could be compared between different evaluations, comparing policy instruments but also comparing results from different countries. The objective is not use totally identical evaluation methods, as each policy instrument has its specificities and it is important that evaluation be designed to take this into account. However, it should be possible somehow to use the same general principles and to be sure that we all talk about the same things. Ensuring we share a common language would be very useful"*.

> *"Standardisation can be useful. After the evaluation, the question often arises of how to handle it then. There should be some basic elements, possibly Europe-wide, that have to be part of every evaluation. However, there have to be some degrees of freedom, so it is about a base concept"*.

> *"It is not possible to fully transfer the monitoring/evaluation procedures developed in one country over years and decades. It is important to understand the methods used in other countries and to understand why they are like they are instead of trying to impose them on others"*.

> *"It is waste of resources trying to harmonize practices and tools at the European level. National systems have been developed taking into account national circumstances. There is a high level of know-how in many countries with a long tradition. This should be fully recognized and sustained. Even within one country there can be multiple models which give somewhat different results and harmonizing them is too resource intensive. Monitoring and evaluation should always be adapted to national circumstances and operation culture"*.

Even if standards and tools (e.g., guidebooks) can help to develop a more effective approach to policy evaluation, the quality of the data remains an important issue, especially where the needed data are not measured, but collected by means of questionnaires and surveys.

> *"First the data, second the data: with no data, no good evaluation is possible"*.

> *"The most important aspect is the quality of the data for evaluations and especially for policies that deal with market actors with less capacity (such as the municipal programs)"*.

> "*Another issue that appeared difficult to handle is the verification of the situation before the implementation of the action. M&V is mostly used to verify the actions ex-post. However, it is often not possible to check the "before" situation once the action is implemented"*.
>
> "*Often surveys among the beneficiaries do not help either because there are incentives to answer dishonestly to the question whether you would have made the investment also without the financial benefit"*.
>
> "*No harmonized method exists for reporting the savings per technology and per measure (since the IPMVP and other protocols are useful but there is a lack of coherence in the reporting). At this stage, the emphasis is on the accuracy of the data, rather than the quality of the savings"*.

Data issues are not limited to the data about the actions implemented and involved in energy savings calculations. Information about the policy background and understanding the context is equally important.

> "*A challenge remains as regards information flows between the policy instrument and evaluators. In order to be able to evaluate a policy instrument the evaluator has to know the instrument very well (not just data), i.e. also all underlying reasons that led to certain policy design decisions. Making this information available to evaluators remains one of the biggest challenges in policy evaluation"*.
>
> "*External evaluators need really a lot of data or there is a significant risk of misinterpretations. The evaluator should also understand the technicalities and the background/history of the policy under evaluation"*.

One of the barriers to policy evaluation is the number of effects that can/should be considered when addressing the impact of the policy. Whereas on issues like energy savings, costs and investments many examples are available, for other effects (e.g. enterprise competitiveness, fuel poverty contrast, occupational, environmental and social benefits, rebound and free riders' effects, etc.) it is not so clear how to produce robust and reliable analysis. Similarly, short effects are easier to identify and monitor, but many policies aim at producing long term effects.

> "*Of course, there are many other aspects that should be taken into account to define the degree of success and the effectiveness of a given policy. For example, the employment improvements granted by its application, or the effects on the energy efficiency market, or the capability to ensure the best return for the money spent. Unfortunately, such effects are usually difficult to measure, but we are trying to find solutions to produce more robust evaluation reports"*.
>
> "*We observe differing short- and long-term effects of fiscal and informative instruments and we do not know at what time and to what degree the long-term effects are present. This aspect should be taken into account in evaluations"*.

More generally, one barrier common to the evaluation of any type of policy is the difficulty to separate its effects from effects of other factors or other policies (e.g. to assess net impacts). This may indeed be very challenging for the case of energy efficiency policies.

> "*Often the intention of the policy instrument is not clearly defined. Mostly not only one, but several policy instruments (a package of instruments) is used in energy policies to influence a target group. Also external factors (like energy prices on global markets) influence the effect of a policy instrument. To measure the effect of policies you want to know what would have happened if the policy had not been there. Sometimes that situation is not there in reality. Sometimes you have a natural experiment, where some part of the target group was influenced by the policy instrument and another part wasn't. A difficulty is the time aspect: often the*

whole effect of the policy instrument needs more time than is available in the evaluation. In that case using models can be helpful, to get some empirical evidence if the country (or other entity) is 'on track' for the objectives that are still several years or even decades ahead".

"*There is a bundle of different instruments all affecting energy efficiency. Thus, there are interactions, which makes it difficult to identify the contributions of single policies (problem of double counting)"*.

"*One of the main issues is related to the understanding of the relationships among the different causes"*.

"*A key evaluation issue remains how to assess the net impacts of a policy. This is very challenging. Our experience is that surveys of participants or other stakeholders are not a robust method to assess these net impacts. These surveys can provide useful insights, but include many risks of bias when looking at additionality for example. Analyses of trends in energy consumption and market data could be a better way to assess net impacts"*.

Another key barrier to evaluation pointed by some interviewees is the lack of trust that stakeholders may have in evaluation results. This is indeed essential for policy makers and other stakeholders to take them into account. Trust may depend on how stakeholders perceive the quality of evaluation, if they were involved in the evaluation process, if the results are transparent.

"*Poor quality of evaluation raises mistrust to evaluation results. It is absolutely essential that the evaluations are impartial and are carried out without prejudice but, in practice, there are examples of tendentious and biased evaluations*".

"*Another challenge is transparency. It is important that calculation templates or similar tools be made public so that evaluators have to take care not to appear suspicious to partiality"*.

"[Evaluations] *must also be seen critically because of a lack in transparency of the evaluation method. Evaluators will not publish all details of their developed model since this is their intellectual property. So, after all, it is always necessary to have belief in the evaluations without knowing everything that lies behind it"*.

The lack of evaluation culture among stakeholders was only mentioned by one interviewee. However, this can be a major barrier to evaluation, and particularly to the integration of evaluation into the policy cycle. Likewise, only one interviewee raised the issue that policy makers may be afraid of the conclusions that an evaluation could draw, therefore preferring not to commission evaluations or to keep evaluation results confidential. This can also be a major barrier to evaluation and evaluation use.

"*There are also cases where the political ambition might not be supportive to the outcomes of an evaluation"*.

Surprisingly the lack of resources was mentioned among barriers to evaluation only by a few interviewees. This may be related to the fact that many stakeholders mentioned for the previous question the scarcity of public budget to explain the need to prioritize evaluation efforts. When raising the resource issue, interviewees highlighted that it was not only a matter of budget, but also of time.

"*Evaluation resources are limited. The relative cost of evaluation is higher in a small country with smaller scale measures. There is a total budget available and one must think where the money is best spent"*.

"The most important difficulties are the resources and time to carry out the evaluations. (…) it is expected to deliver policies quickly enough and there is not substantial time for evaluations (due to lack of staff and time in the responsible departments)".

Barriers and difficulties can be grouped in the following categories (in view of the survey to see how these barriers can be ranked according to stakeholders' feedback):

- Data issues;
- Resources for evaluation;
- Barriers related to the management of evaluation (e.g. lack of evaluation procedures/standards or related regulated framework, lack of clear indicators, difficulties with cooperation among institutions);
- Barriers related to the awareness and perception of evaluation (e.g. lack of evaluation culture, lack of trust in evaluation results).

These categories were then refined taking into account the feedback from the interviews and EPATEE consortium's own experience about evaluation issues and barriers.

Many aspects should be taken into account to define the degree of success and the effectiveness of a given policy. It is not just savings and costs. Each policy will produce effects on the energy efficiency market, such as growth of technology producers and energy service providers, energy efficiency products' prices trends, acceleration of the use of efficient solutions, rebound effects, free riders, speculative and opportunistic actions, etc. Many of these effects are difficult to measure and to estimate and do not have standardised procedures to rely upon.

Nine interviewees highlighted that standardised methodologies, procedures, indicators and/or guidelines would be useful, or even needed, both to improve the evaluation practices and to ensure a larger comparability among different policies and countries. But two of these interviewees and two among the others also raised a concern that evaluation needs to be tailored to the policy analysed, taking into account its objectives, as well as the national background (including national evaluation culture or practices).

1.2.5 Expectations and how to overcome the difficulties

Almost unanimously training of persons involved in policy evaluations (evaluators, more than policy makers, who prefer peer meetings, workshops and evaluation guidelines) is considered very useful, together with the possibility to exchange views and experiences among policy makers and evaluators. The level of technical knowledge and skills is sometimes not considered adequate to the challenges imposed by the 2020 and 2030 environmental and energy targets. But available resource and policy makers attitudes play an important role.

The expectations from the EPATEE project are:

- To facilitate the sharing of experiences through focused meetings and events.
- To produce general guidelines that clarify how policy evaluations should be made by comparing the different methodologies that have been developed over the years in different sectors. It is important to understand the methods of evaluation used in other countries and adapt them to the different contexts.
- To define policy evaluation indicators.
- To implement a tool for helping to design "evaluation friendly" policies.

- To suggest the most suitable data needed to carry out effective evaluations, including non-energy effects. Energy efficiency is a complex system so the data should consider the cost-effectiveness of the policy and also the social impact, the environmental impact, the market development, the qualification of operators, etc.

The survey was then used to explore further how these various expectations could be prioritized, in order to focus the efforts of the project where it is needed the most.

As can be seen the contrasted feedback shown in the previous section, how to put together standardisation or harmonization with the existing approaches and traditions will be one of the challenges.

Since evaluation needs data, one aspect that should be dealt with in the design of the policy is how to ensure that the beneficiaries make the information requested by the evaluation action available. If such aspect is neglected, there is the risk that the data needed for the evaluation are not delivered.

> *"The main issue is to include evaluation from the planning phase of the policy instrument, so that it can be evaluated. Planning the implementation and the evaluation of a policy instrument should be done together. Our main recommendation based on our experience feedback is that one should avoid to think about evaluation only afterwards. The second most important issue is connected to the first one: integrating evaluation from the start of the policy process makes possible to get more reliable results, in particular in terms of quantitative results. Evaluating energy savings is always difficult, and you never know what the exact figures would be. But planning evaluation in advance creates the conditions to get more reliable results".*
>
> "*The data needed for evaluation should be collected in a timely manner to the measures implemented. This reduces the resources needed for data collection"*.
>
> "*In case of evaluation of a subsidy scheme you must secure the co-operation of one that receives the subsidy that is needed to measure the effect of the scheme"*.

Information technologies and web media are also considered an opportunity to improve data collection and processing.

> "*Evaluation is easier when data are collected on a regular basis along the implementation of the scheme. This may be seen as a burden. But this is essential to make possible monitoring and evaluation. The use of ICT (Information and Communication Technologies) should facilitate the development or improvement of data collection*".
>
> "*Online calculators are definitely important, mainly showing how to use common data, common equations and data collection procedures (this effort was carried out for instance under the multEE Monitoring and Verification Platform). There are in fact too many tools in the market, even under the CoM* [Convenant of Mayors] *and SEAPs* [Sustainable Energy Action Plans]*, and it would be wise to integrate these tools"*.

One interviewee reported a complementary way to optimize efforts for data collection, by using as much as possible data already available (for other reasons).

> "*There needs to be a view to the cost and cost-efficiency of evaluation efforts. As a starting point, doing evaluation should not lead to the establishment of new processes and much additional work including new information collection systems. Instead, existing information sources should be used. Overall feasibility and possibilities for practical implementation should be taken into account"*.

Another issue is how to overcome double counting of effects. This requires the elaboration of some tools or approaches how to handle interactions among policy instruments.

> "*Developing a kind of tool to overcome double counting of effects is difficult, but best practice examples might help approaching this challenge"*.

On a more general level, according to some interviewees, ex-post evaluation should be done by independent organizations, to ensure a more trustworthy analysis.

> "*In ex-post evaluation it is important that evaluation is done by (independent) external organisations and not those who are involved in administering the scheme*."

However, this may also create some practical difficulties, as independent evaluators may have more difficulties to access data, and/or may not have a good knowledge about the policy background.

Tools and guidelines to help finding out proven ways to make effective evaluations can be of much use for policy makers. Even if it is difficult to imagine a unique standardised approach at EU level, it could be possible to propose standardised procedures – both at EU and national level – that could be freely used by stakeholders looking for concrete support. Facilitating experience sharing could also help to develop a shared culture on evaluation.

1.2.6 Specific experiences to share and EPATEE role

The interviewees show strong interest in the experiences of other countries, in particular:

- Examples on different approaches to policy evaluation;
- The way in which comparable schemes are evaluated;
- Evaluation of differences and elements that characterise more and less effective policies;
- Examples on how to consider the interactions between energy policies and the potential drawbacks;
- Policy evaluation on the transport sector which is going to be a priority in the next policy cycle;
- Methods for identifying the impact of information and training campaigns on measurement and billing, energy transformation, transmission and distribution.

All the interviewees show interest in joining events and webinars compatible with timing and economic resources.

2 | Survey

2.1 Methodology

The results of the interviews to the key stakeholders have been the keys to develop the first questionnaire to be submitted to the entire list of EPATEE stakeholders: a larger group of stakeholders that includes policy officers, policy implementers and managers, policy evaluators, private companies, NGOs, associations, etc.

The questionnaire aims at understanding how policy evaluation is working among the EU countries, what the main barriers are, how the EPATEE project can develop tools and actions tailored to answer the needs of the stakeholders involved in policy evaluation and how the EPATEE consortium can support the stakeholders in dealing with them through meetings, webinars, workshops and conferences, web platform, guidelines, etc.

The survey has been developed and implemented in three steps:

- Design of the questionnaire by FIRE, improvements by the EPATEE partners, and implementation on web platform;
- Promotion of the questionnaire among all the stakeholders identified by the partners;
- Analysis of the collected data.

2.1.1 Questionnaire design and web platform

The first draft of the questionnaire was developed by FIRE and sent to partners on July 14th, 2017 for comments and suggestions to improve both structure and content.

After having received all the comments from the partners FIRE implemented the survey on the web platform LimeSurvey. It was decided to use a web platform since it offers substantial benefits. First, the survey can be done without the help of interviewers, cutting costs and allowing to easily reach stakeholders anywhere in the world. Additionally, the export of the results is facilitated by the platform functionalities.

The questions are of three types:

- closed, with one answer available among a set of options;
- multiple response, which allows to select more than one option;
- open, to allow for free contribution.

The questions refer to energy efficiency policies and focus on policy evaluations, on the barriers to policy evaluations and on the aspects that the stakeholder would like to deepen through the EPATEE project. Other questions are aimed at understanding what type of actions from the EPATEE side (e.g. workshops, webinars, guidelines, etc.) would be considered useful by the stakeholders.

In the Annex, it is possible to consult the whole questionnaire in word format.

2.1.2 Submission of the questionnaire

On July 31st, FIRE opened the survey and sent to the partners the link through which to access the questionnaire with a letter of invitation to be sent to national stakeholders. The closing date of the questionnaire was set for September 15th.

A webpage on the EPATEE website was created to promote the survey and direct the stakeholders to the web platform on which the survey was implemented.

The promotion of the survey was done via e-mail. Each partner has done more than one mailing to the stakeholders reported in the Stakeholder Engagement List (176 contacts overall).

2.1.3 Answer rate and profile of the respondents

Data collected through the platform has been analysed by FIRE using Excel. The results are summarised in the next chapter.

The total answers received are 36, of which 27 complete and 9 incomplete (the filling in of the survey was interrupted before the completion). In the analysis of the results it was decided to consider also these incomplete answers, as they are still significant. So this makes overall an answer rate of about 20%, which can be considered as a good result taking into account the length of the survey and that the survey had to be made during the summer period.

It should be noted that only 3 respondents have also been involved in the interviews reported in Chapter 1. So, the survey results bring a complementary feedback to the one from the interviews.

Figure 1 shows that there is a good geographical coverage, since many EU countries have at least one people who participated in the survey and there is also a respondent from the USA.

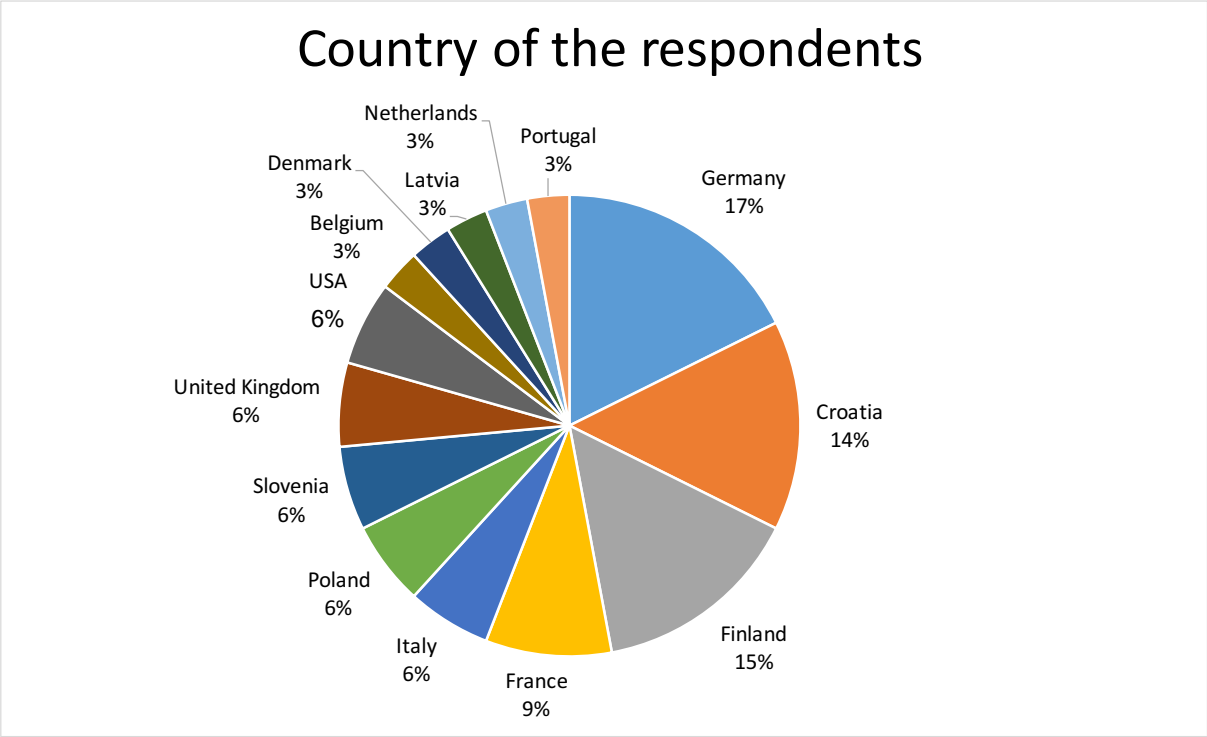

Figure 1. Geographical coverage.

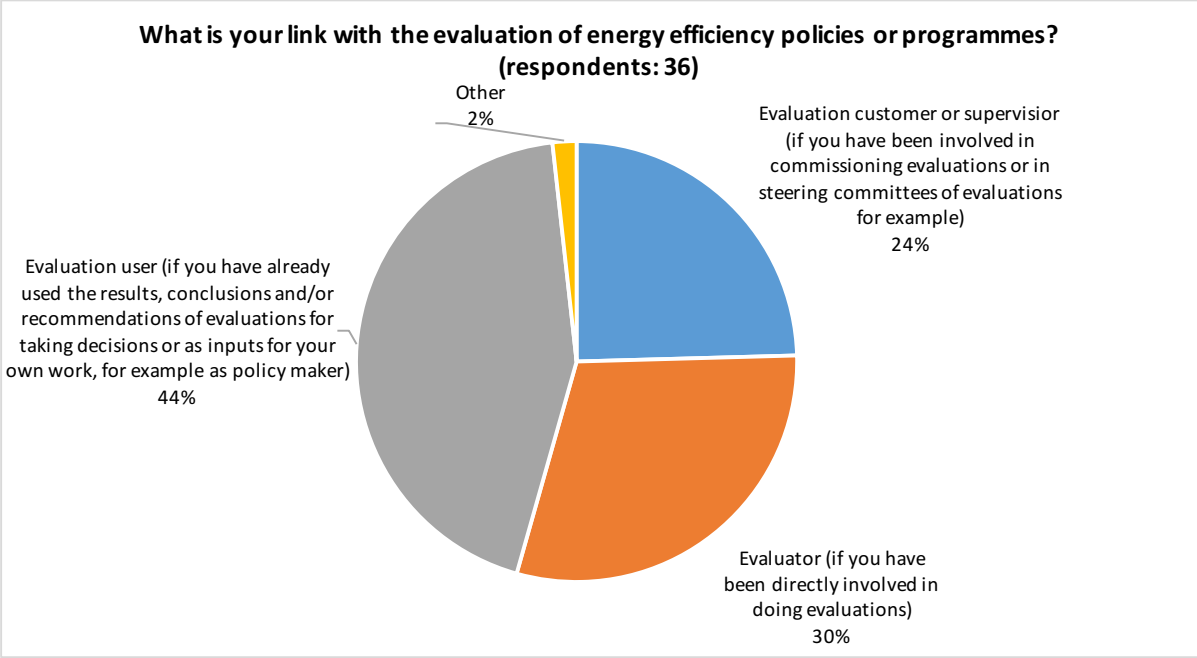

Figure 2: Q1. What is your link with the evaluation of energy efficiency policies or programs?

The profiles of the respondents correspond to the main target groups of the EPATEE project. Among the respondents, the group of "evaluation users" is more represented than the two others (evaluation customers and evaluators). Altogether evaluation users and evaluation customers represent 68% of the respondents vs. 30% for evaluators. This means that the answers collected may reflect more the views of stakeholders from the demand-side of evaluation, than of stakeholders of the supply-side of evaluation. This is in line with the objective of EPATEE, which firstly aims at providing support to policy makers for an effective use of evaluation.

2.2 Outcomes

Below the graphs that summarize the answers to the various questions are available.

Comments to open questions are integrally reported in tables, in order to maintain all the information collected through the survey.

It should be noted that this survey did not aim at providing a representative or exhaustive picture of the evaluation practices in Europe. The objective was to get a feedback from the target groups of the EPATEE project in order to better know how project's efforts should be prioritized.

The analyses below intend to cross as much as possible the feedback from the interviews (see chapter 1) and from the survey. To make the distinction clear between them, participants to the interviews are named "interviewees" and participants to the survey "respondents" in this report.

2.2.1 The role of evaluation in the policy cycle

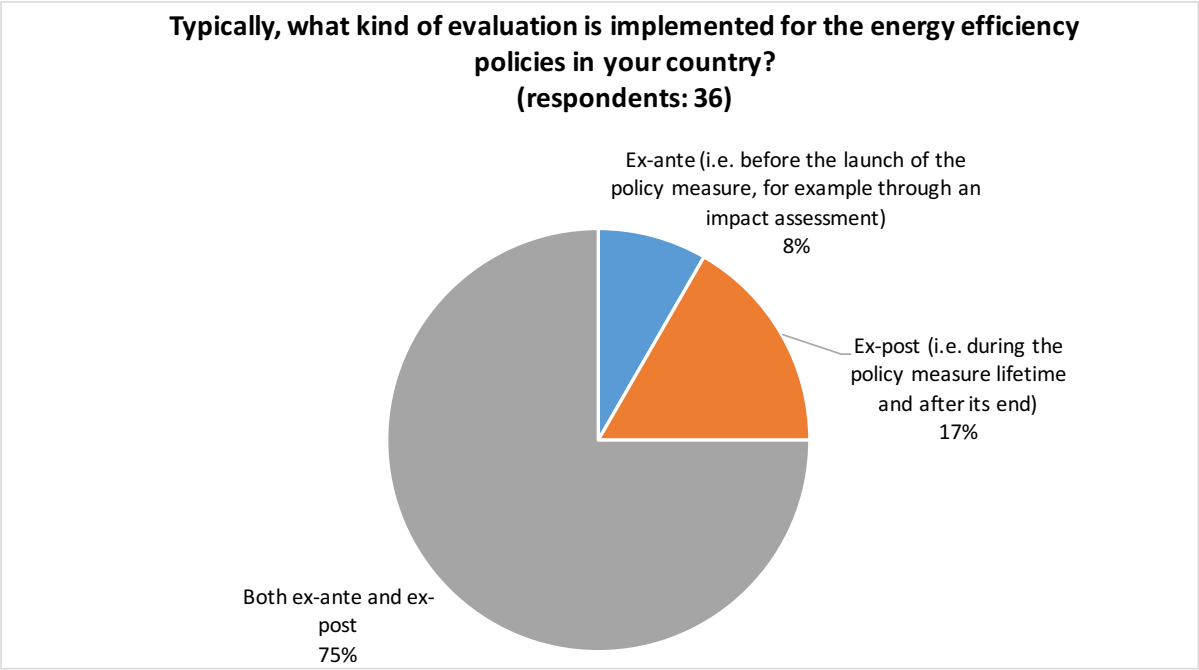

Figure 3: Q2. Typically, what kind of evaluation is implemented for the energy efficiency policies in your country?

Answers to Q2 show that there would be no particular priority given to ex-ante or ex-post evaluations. This confirms the feedback from the interviews pointing that **ex-ante and ex-post evaluations are equally important**.

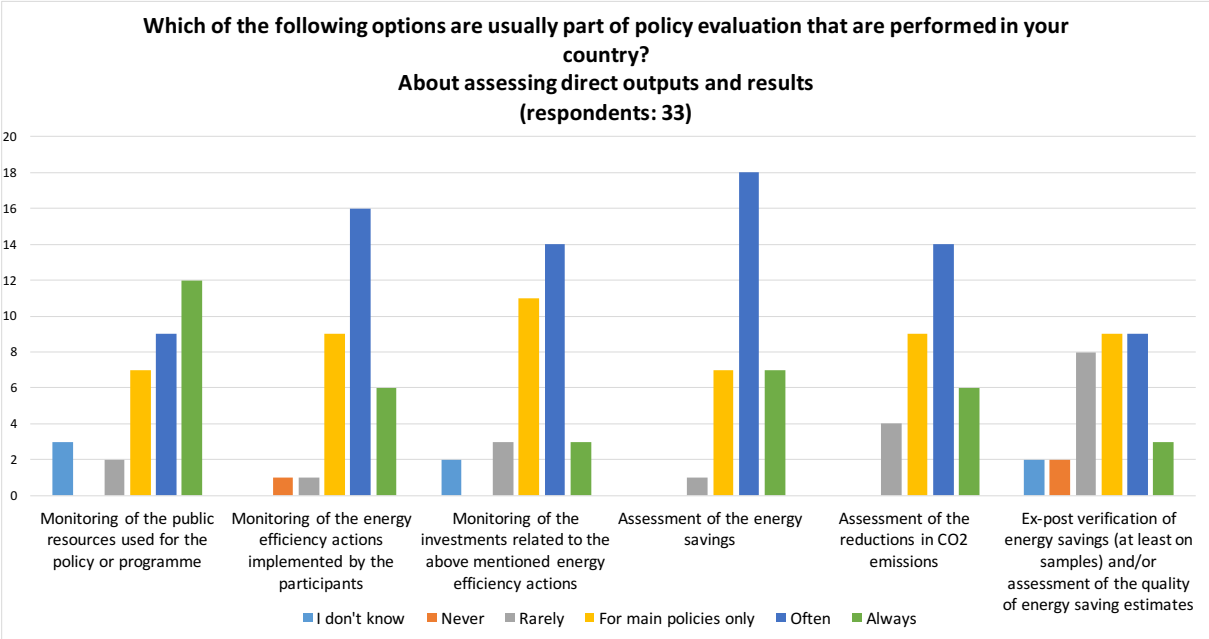

Figure 4: Q3a. Which of the following options are usually part of policy evaluation that are performed in your country? About assessing direct outputs and results.

Answers to Q3a are in line with the feedback from the interviews that showed that frequency of evaluation may vary from one country to the other, for example due to differences in resources available and/or ways to prioritize evaluation efforts. It is interesting to see in the answers above that these differences may also exist about M&V practices. These answers tend also to confirm one of the rationales for the EPATEE project: the fact that **ex-post verification of energy savings would be one of the least frequent practices among evaluation practices**.

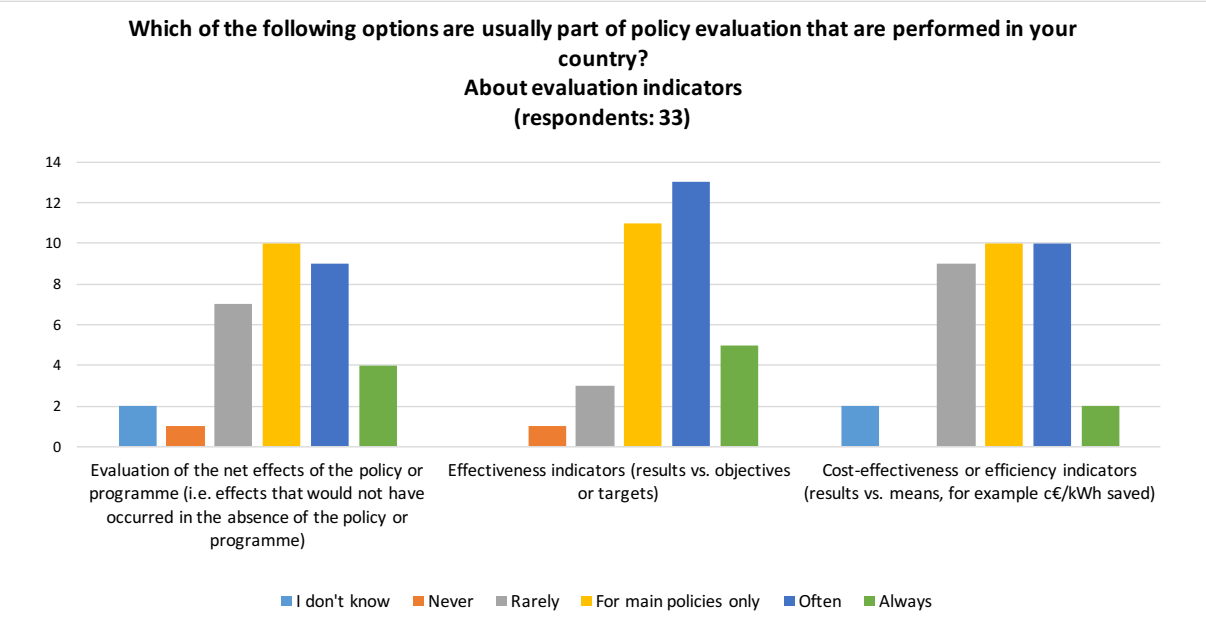

Figure 5: Q3b. Which of the following options are usually part of policy evaluation that are performed in your country? About evaluation indicators

Answers to Q3b show that the three types of evaluation indicators (net effects, effectiveness, cost-effectiveness/efficiency) would be commonly used. But they also show that the use of effectiveness indicators would be more frequent than net effects of cost-effectiveness/efficiency that have very similar levels, which is consistent as both are strongly connected. This is in line with the fact that many interviewees pointed out that it is very challenging to assess net effects and cost-effectiveness.

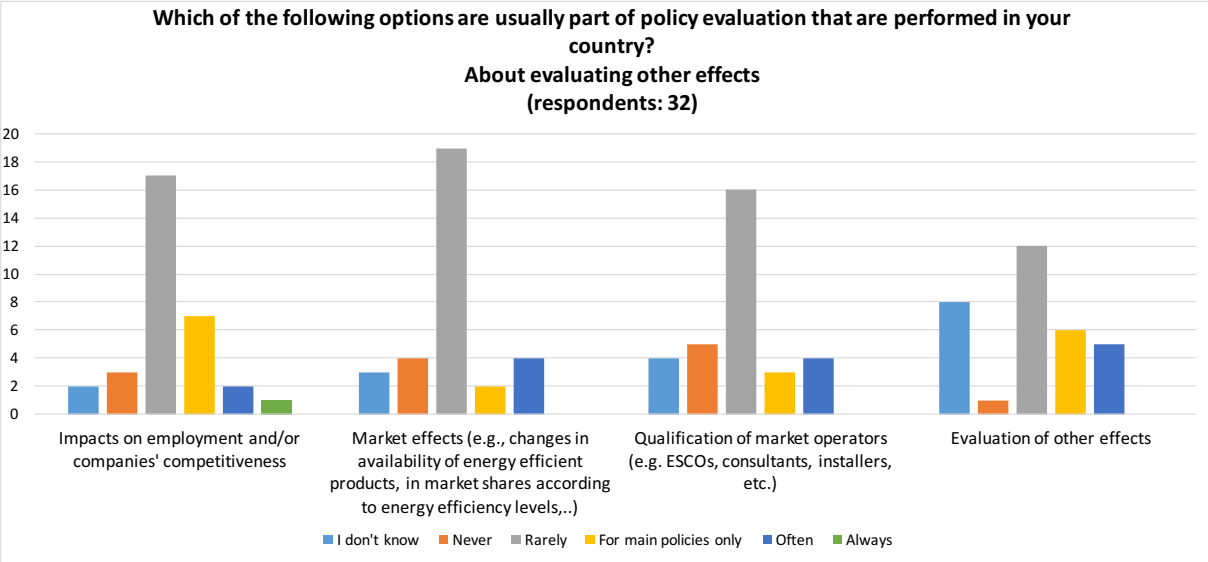

Figure 6: Q3c. Which of the following options are usually part of policy evaluation that are performed in your country? About evaluating other effects

Answers to Q3c indicate that **if compared to effects directly linked to energy efficiency policies (energy and CO2 savings), other effects would be much less frequently evaluated**. Based on the interviews, this could be explained by the lack of data and/or methodologies to assess these other effects.

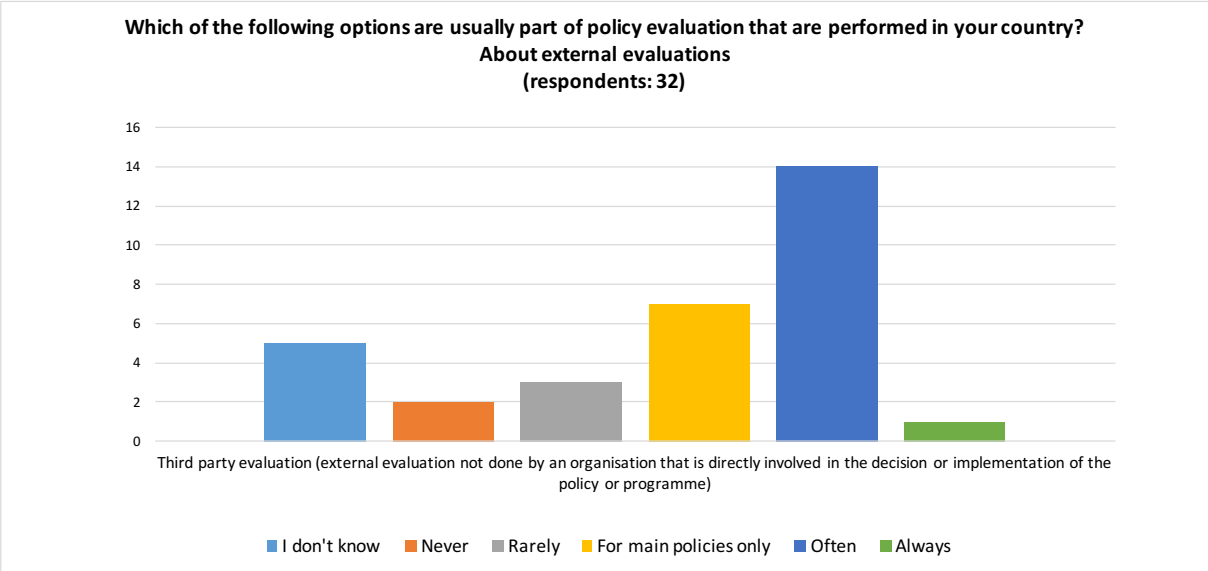

Figure 7: Q3d. Which of the following options are usually part of policy evaluation that are performed in your country? About external evaluations

Answers to Q3d show that external evaluations seem to be a common practice. Some interviewees indeed mentioned that this may be sometimes mandatory.

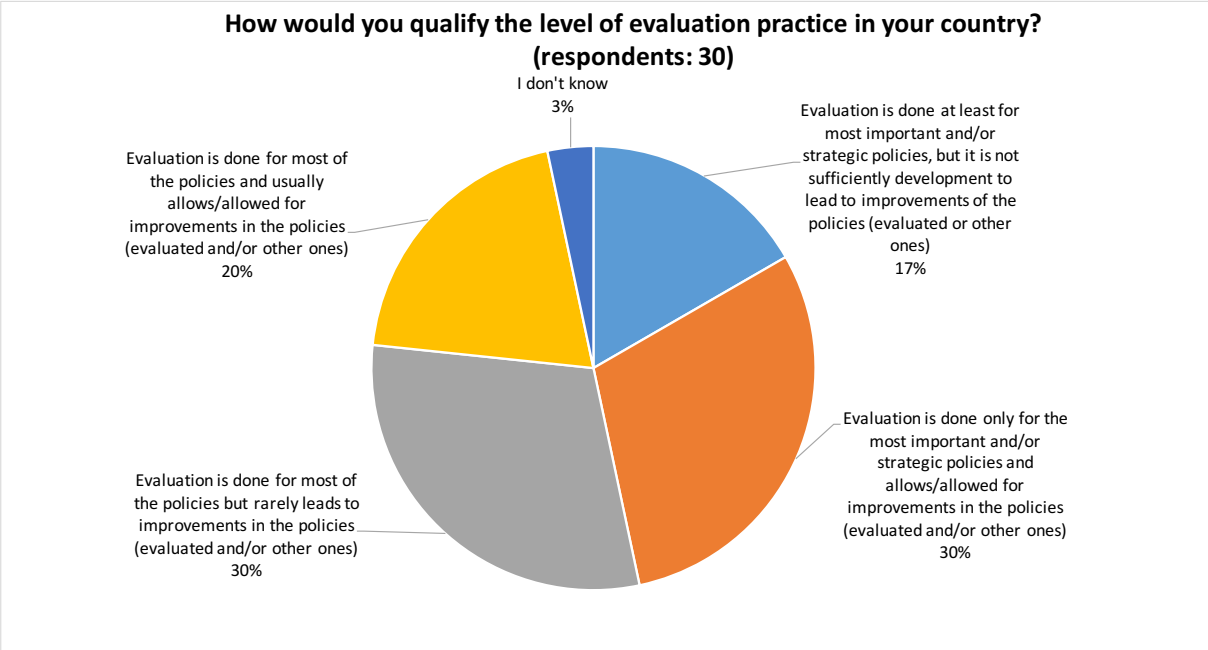

Figure 8: Q4. How would you qualify the level of evaluation practice in your country?

Answers to Q4 show that in addition to the differences in the frequency of evaluation, there are also **differences among countries about the extent to which evaluation allows to improve policies**. About half (50%) of the respondents told that evaluation – which can be done only for the most important policies or for most of the policies, depending on the country – would allow improvements in the policies. This confirms one of the key assumptions of EPATEE: **there should be experience feedback available about good evaluation practices, but there should also be room for improvements in other cases**. These conditions justify the interest to facilitate experience sharing.

2.2.2 Barriers to policy evaluation

This part of the survey is dedicated to the analysis of the barriers perceived by the stakeholders in relation to the evaluation of energy efficiency policies.

An open question, summarised in table 2, preceded the closed ones, to have the possibility to collect the stakeholders' opinions without biases.

Q5. According to you, what are the main barriers to the evaluation of energy efficiency policies in your country?
Politicians are mainly interested in new policies, not in evaluation of existing ones.
Often no baseline situation assessment, because there is pressure to start the scheme quickly.
The still heavy public, both national and local, administration's bureaucracy.
Lack of awareness of the need to do more in the energy efficiency policy sector: we recurrently hear in our meetings with ministries the argument Our-country-is-already-doing-well-and-we-do-not-need-to-do-more.
The evaluation concept is still far from many public officials' policy culture, i.e. funding available for evaluation is still limited.
Evaluation is not sufficiently developed because of lack of monitoring and reliable database.
Evaluations are a long-term effort and much of the focus is short term.
No harmonised and standardised methodology on how to calculate impacts (e.g. energy savings, CO2 reductions, employment Impacts) of policies.
Policy evaluation techniques and procedures are not sufficiently known, key stakeholders do not have confidence in the evaluation methods and/or evaluation results, lack of evaluation procedures/standards and/or of a regulatory framework clarifying the role of evaluation in policy management, insufficient human resources available for policy evaluation and lack of reliable data about energy consumption.
Investment in evaluation following programme completion for improvements in following policies. No mandated non-government requirement for evaluations within implementing agents.
Challenges in modelling, including diversity in real-life actions, available model. Lack of up-to-date input data. Changing and heterogeneous reporting demands. Unclear guidance.
Lack of awareness, capacity and financial resources.
Evaluation is embedded into the policy making process and is generally well funded. It's always possible to improve and the main barrier is that policy owners are very pressed for time and find it hard to devote sufficient time and attention to evaluation. There are always challenges in terms of data availability but good progress has been made in collating data and linking between datasets.
Lack of measurements for baseline period and lack of available measurement on reporting period.
Reluctance of bank to include consumption monitoring in their residential EE programme.
Limited importance given to energy efficiency compared to other objectives.
Lack of understanding about suitable methods and data requirements.
Lack of common methodology. The framework for overall impact assessment of policies is just started to be implemented by State Chancellery.
Measurement of real savings of energy/emissions excluding Windfall gain effect.
Evaluations so far lack a harmonized approach and are thus not comparable.
In many cases, specific and measurable targets are missing for policies and evaluation can thus not assess whether targets have been/can be reached.
Many policy initiatives include soft measures (e.g. information and campaigns) which are challenging to evaluate in terms of impacts (on GHG emissions, energy consumption). Broad and elaborate surveys would be needed which most often are not part of evaluation projects (probably because of their high costs).
Expected financial benefits are not sufficient, policy is not stabile, only short-term activities are interesting for the potential implementation.
Insufficient financial resources, lack of data and human resources.
Data and money.
I don´t see that there would be main barriers. In a small Member State the programmes tend to be small and small programmes can´t bear heavy evaluation processes.

Q5. According to you, what are the main barriers to the evaluation of energy efficiency policies in your country?

I believe that one main barrier is not the conduct of the actual evaluation in itself, but its dissemination and use. To connect evaluators and evaluation customers with policy makers and decision makers, conveying knowledge and lessons learned from previous evaluations, and not only regarding the very instrument under scrutiny.

Table 1: Q5. According to you, what are the main barriers to the evaluation of energy efficiency policies in your country?

Q5 was asked to respondents before they could see questions Q6 where they could grade predefined categories of barriers, so that they could answer the open question without being influenced by the predefined categorised. It is interesting to see that answers to Q5 overall match with these predefined categories that were defined based on the feedback from the interviews. Thus, these categories seem robust and to provide a good picture of most of the existing barriers to evaluation.

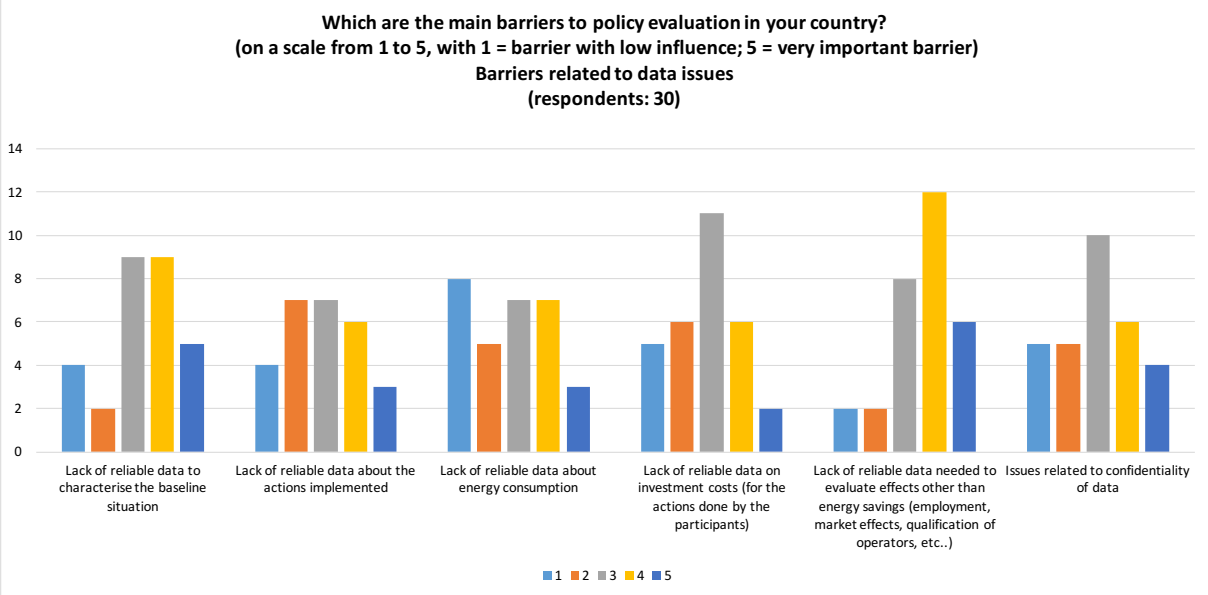

Figure 9: Q6a. Which are the main barriers to policy evaluation in your country? Barriers related to data issues

Answers to Q6a show that **among the problems encountered with data, the most difficult or frequent ones would be related to effects other than energy savings, and to the baseline situation**. This confirms that the lack of data would be one of the main reasons why evaluation of effects other than energy savings is rarely done (see Q3c). Specific difficulties related to the baseline situation were also reported by several interviewees.

It is also interesting to note that issues related to confidentiality data are not considered as a major barrier to evaluation by the respondents.

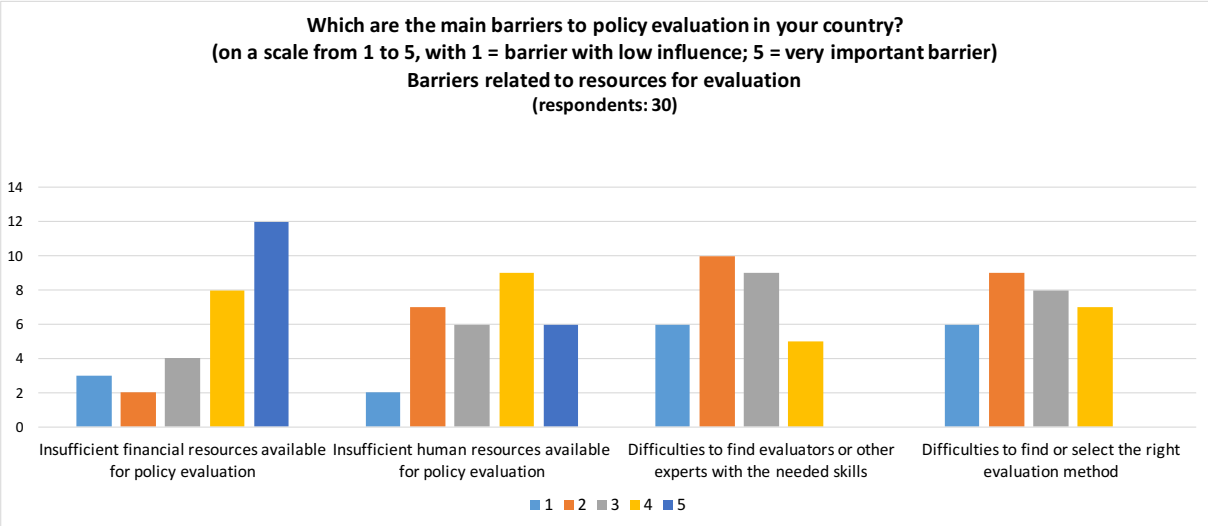

Figure 10: Q6b. Which are the main barriers to policy evaluation in your country? Barriers related to resources for evaluation

Lack of financial resources clearly stand out as a top barrier. The barrier about staff/time availability comes next. The barriers related to other resources would be of second order. **This would mean that providing support for evaluation practices should not be limited to develop tools and guidance for evaluation. It should also help to show to top decision makers that evaluation is important and brings a clear added value, so that enough money and time resources are dedicated to it**.

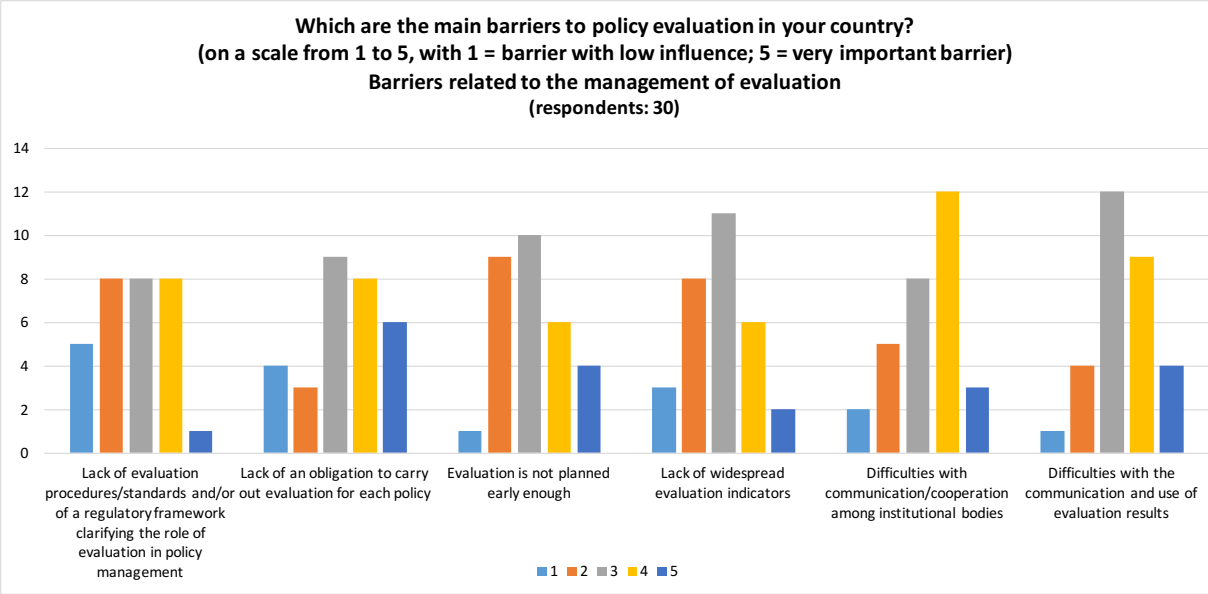

Figure 11: Q6c. Which are the main barriers to policy evaluation in your country? Barriers related to the management of evaluation

Answers to Q6c show that in terms of barriers related to evaluation management, the most important would be the one about difficulties with communication/cooperation among institutional bodies. This barrier was only mentioned by a few interviewees. The results from the survey show that nevertheless it should not be neglected.

The second organisational barrier would be the lack of an obligation to perform evaluations, which was also pointed as important by several interviewees. This can indeed be a way to overcome the fact that evaluation would not be on the agenda due to other priorities, or to the perception that it would not be useful or could highlight lower results than expected (as pointed in the answers to Q5).

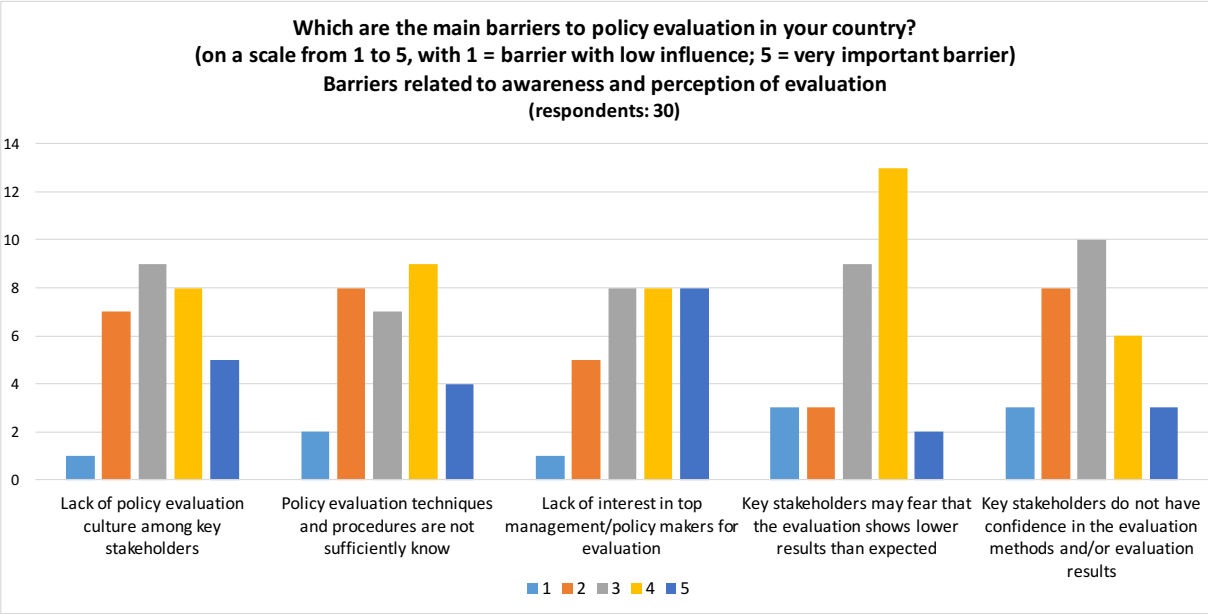

Figure 12: Q6d. Which are the main barriers to policy evaluation in your country? Barriers related to awareness and perception of evaluation

The two barriers getting the highest grades in Q6d are consistent with the results to Q6b and Q6c: **the lack of interest in evaluation shown by the top management and the fear to see lower results than expected can both explain the lack of priority/resources dedicated to evaluation**. This may also explain why respondents consider that the lack of an obligation to perform evaluation is a major barrier. On the other hand, if there would be a strong support from the top management to do evaluations, there would be no need to push for an obligation to evaluate.

Q7. Are there any evaluation of particular policies and/or type of evaluation methods or tools you would like to know more about?
All major EU energy efficiency policies, including those being discussed with regard to the new post-Paris Agreement 2030 targets.
Methods used in other countries for understanding where and how policies are evaluated. Evaluation of multiple benefits and effects (employment and energy cost) and effort to develop, implement and communicate energy efficiency policies.
Overcoming evaluation challenges for soft measures (information, advice, training, education, campaigns) with particular related to impacts on energy consumption and GHG emissions.
Operationalization and evaluation of soft indicators (such as motivation increase, behavioural change, awareness rising, involvement, transferability of actions etc.).
Knowledge about any wide used methodology or standard that may be adopted to different evaluation requirements (i. e. specific for different sectors). Know more about evaluating policy mixes, or how to deal with synergies from other policy instruments, when doing a single-policy evaluation.

Table 2: Q7. Are there any evaluation of particular policies and/or type of evaluation methods or tools you would like to know more about?

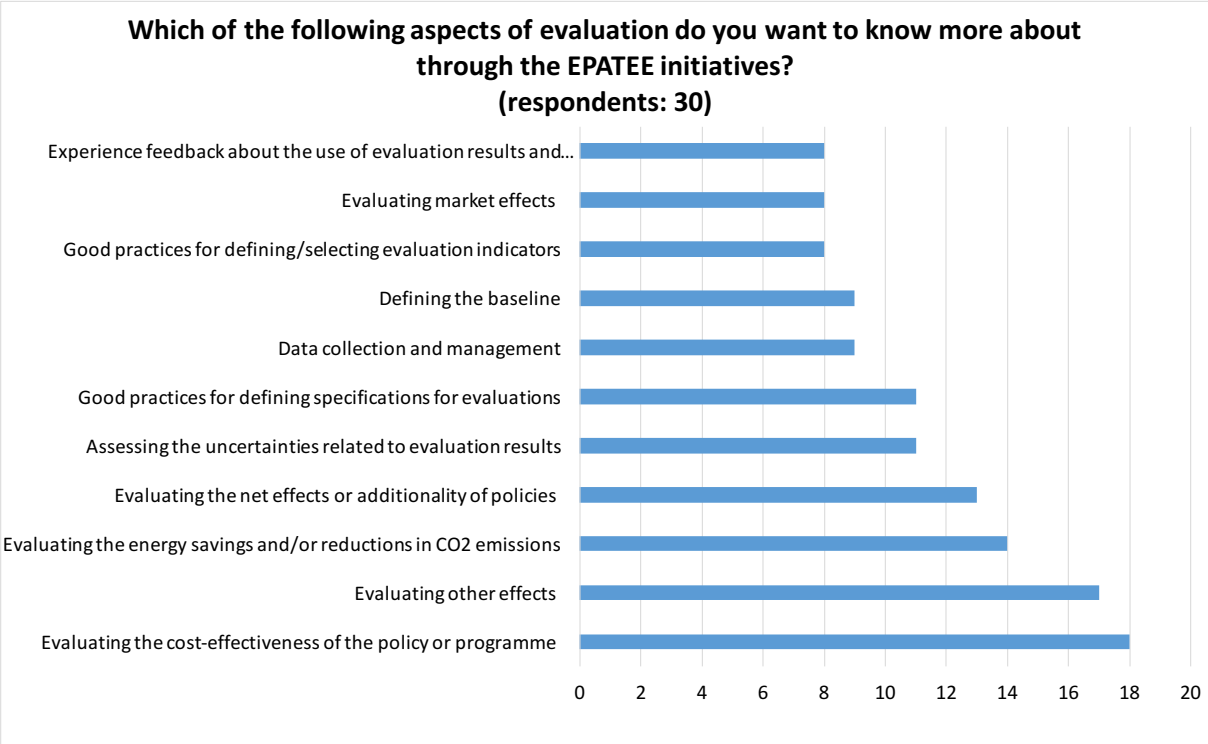

Figure 13: Q8. Which of the following aspects of evaluation do you want to know more about through the EPATEE initiatives?

The fact that the two aspects the most frequently selected by respondents are evaluating cost-effectiveness and other effects (than energy savings) is consistent with the answers to Q3b and Q3c, as these two indicators were reported to be less frequently evaluated. Crossing the questions would confirm that if these indicators are less often evaluated, this is not because they would not be important, but because they are difficult to assess. And therefore, support about these issues is welcome.

At the opposite, it is surprising to see that “experience feedback about the use of evaluation results and conclusions” would be less of interest for the respondents. This could indeed be a way to show in concrete terms why evaluation brings an added value, and therefore help to convince top-management to dedicate more resources to evaluation (issue that is among the top barriers).

Q9. Please, let us know if there are particular issues you would like the EPATEE project to deepen into
The ex-ante evaluation of the various scenarios currently discussed at the EU level for the new 2030 energy efficiency target, including their possible legally binding nature.
It would be great if a booklet with best-practice indicators for the different types of energy efficiency policies and other advice on policy evaluation could be prepared as a guidance document for policy officers in Member States.
Developing guidance on evaluation framing applicable to a range of project types.
Developing relevant guidance for evaluating energy efficiency within different EU jurisdictions.
Guidance to analyse evaluation results.
Sharing international best practice - regarding evaluation but also very successful programs and policies.
Learning more about harmonized and consistent approaches to assessing the effects of soft measures. In particular, questions like: how many of the people that attended a workshop on for example energy efficiency in daily life are likely to: • change their behaviour, • in what way and • for how long (until they fall back into their usual routines)? Is there any way to derive default values for different kinds of measures, e.g. effectiveness of campaigns in terms of changed behaviour versus effectiveness of specific advice at for example energy advice agency or effectiveness of visits at home?
Correlation of energy performance and implementation of smart grid (with clear specification of smart grid parameters.
Bring together real life practices and those theoretical views where friction and gravity do not set limits.

Table 3: Q9. Please, let us know if there are particular issues you would like the EPATEE project to deepen into

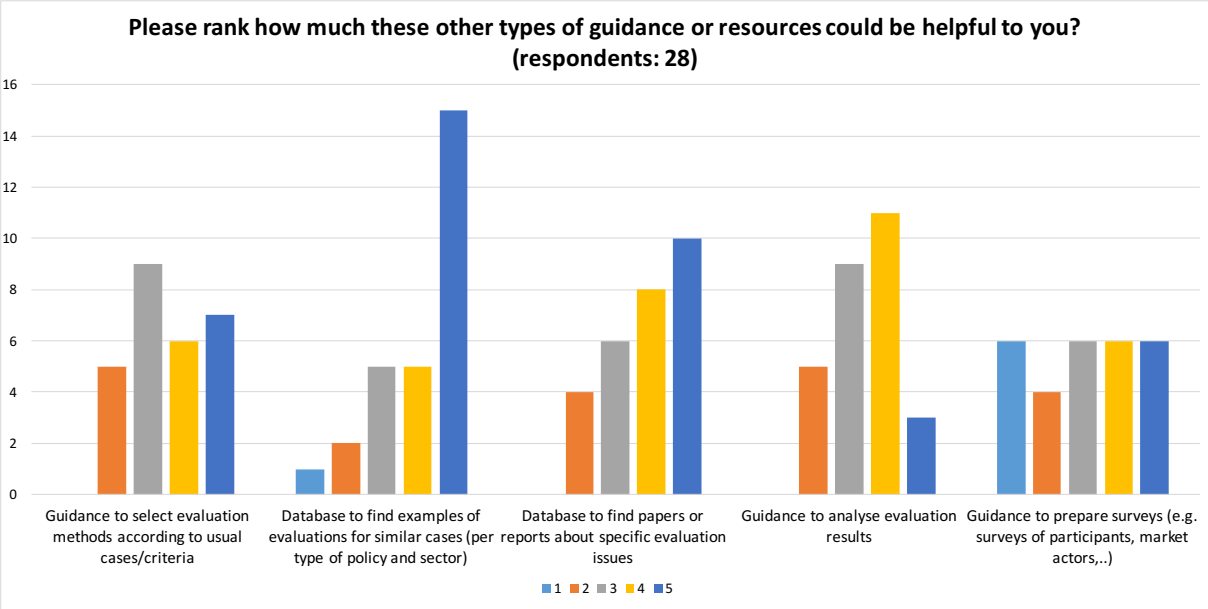

Figure 14: Q10. Please rank how much these other types of guidance or resources could be helpful to you?

Among the type of tools under consideration in EPATEE, databases to find examples of evaluations or papers/reports about specific evaluation issues are the ones getting the highest scores from the respondents (in terms of expectations). This means that it was relevant to assign most of the EPATEE resources (for tool development) on a) building a Knowledge Base on case studies, and b) making these resources easy to use through an online tool box.

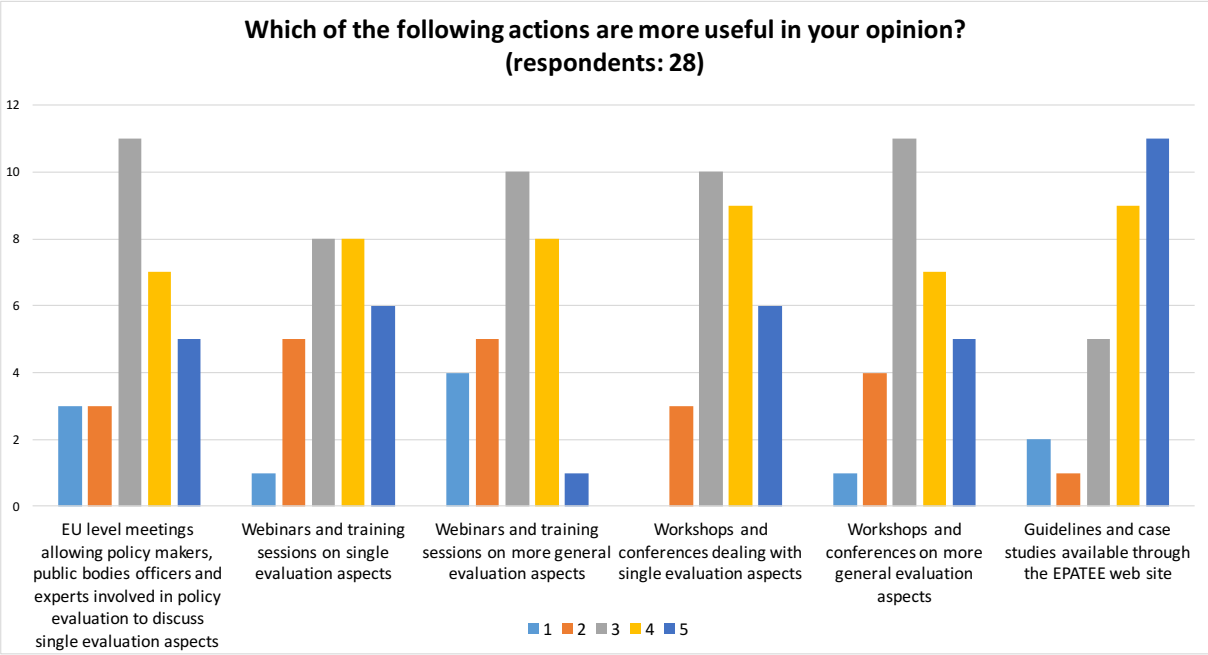

Figure 15: Q11. Which of the following actions are more useful in your opinion?

Answers to Q11 show that respondents have a preference for experience sharing activities focused on specific evaluation issues.

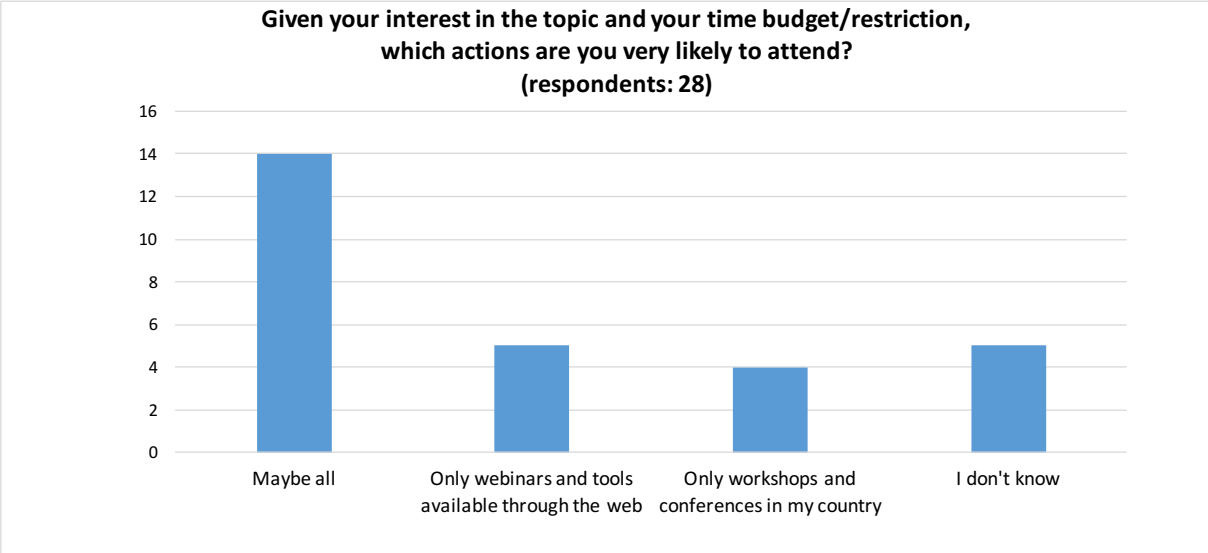

Figure 16: Q12. Given your interest in the topic and your time budget/restriction, which actions are you very likely to attend?

Answers to Q12 show that respondents are generally available both for on-line and on-site events. A mix of such events seems then to be a good answer to the stakeholders' needs.

Q13. Could you suggest references of evaluation reports or studies done in your country?
105 buone pratiche di efficienza energetica made in Italy (105 energy efficiency best practices made in Italy) - the book Kyoto Club published in 2016 within Edizioni Ambiente's Kyoto Books series.
https://ec.europa.eu/energy/sites/ener/files/documents/hr_neeap_2017_hr.pdf.
ČETVRTI NACIONALNI AKCIJSKI PLAN ENERGETSKE UČINKOVITOSTI ZA RAZDOBLJE 2017. - 2019. – unofficial version (in national language).
(Fourth National Action Plan for Energy Efficiency)..
DECC, Ipsos MORI, CAG Consultants, UCL Energy Institute, EST. Evaluation of the Carbon Emissions Reduction Target and Community Energy Saving Programme. 2014.
DECC. Process Evaluation of the Warm Front Scheme. London, UK: Department of Energy and Climate Change; 2014.
Shipworth D, Ross D, Raw G, Anderson T, Hamilton IG. Smart Meters Evaluation Data Framework (Consumer Impacts) - Final report. London, UK: Department of Energy and Climate Change; 2012.
Hamilton I, Agnolucci P, Oreszczyn T. Don't be late! Findings from reported perceptions and complaints of energy efficiency retrofits in low-income housing in England. Proc. Int. Energy Policies Program. Eval. Conf., Amsterdam, The Netherlands: IEPEC; 2016.
Hamilton IG, Agnolucci P, Oreszczyn T. Goodbye Warm Front: Evaluating the Delivery of Energy Efficiency Retrofits in Low-income Homes in England from 2005 to 2012. Int. Energy Program. Eval. Conf., Long Beach, California: IEPEC; 2015.
Evaluation of the National Climate Initiative in Germany (Katja Schumacher, Maria Rosaria Di Nucci, Benjamin Görlach, Max Grünig, Christina Heldwein, Julia Repenning, Sarah Rieseberg, Kerstin Tews, Christine Wörlen & Hans-Joachim Ziesing (2014). "Evaluation as a Cornerstone of Policies and Measures for the Energiewende", in: Im Hürdenlauf zur Energiewende – von Transformationen, Reformen und Innovationen by A. Brunnengräber and M. DiNucci (eds.); Springer Verlag, Wiesbaden 2014).
This covers the UK government approach reasonably well https://www.gov.uk/government/publications/2010-to-2015-government-policy-energy-and-climate-change-evidence-and-analysis/2010-to-2015-government-policy-energy-and-climate-change-evidence-and-analysis.
Project report (in Finnish), available at http://www.syke.fi/en-US/Research__Development/Research_and_development_projects/Projects/Environmental_impact_assessment_of_nearly_zero_energy_building.
Evaluation of the German Funds for energy Efficiency done by Fraunhofer Isi (parts of it should be available for EPATEE already).
Suomen ympäristökeskuksen raportteja, ISSN 1796-1726; 26ISBN 978-952-11-4576-6 (pdf).
Modelling of Finnish building sector energy consumption and greenhouse gas emissions - specification of POLIREM policy scenario model.

Table 4: Q13. Could you suggest references of evaluation reports or studies done in your country?

Q14. Do you have any other comment or suggestion for the EPATEE team?
A booklet with guidance/recommendations/case studies might be useful in addition to the publication on the EPATEE website.
US Evaluation, Measurement and Verification processes that have been put in place for evaluating energy efficiency projects. These methods, expounded by ACEEE, US DOE and implemented by the public utilities across the US for evaluating programs when using public funding.
Considering other fields that undertake evaluations in real world settings. Chief among them would be the health research field, where there are quite a few relevant protocols and processes available for evaluations.

Table 5: Q14. Do you have any other comment or suggestion for the EPATEE team?

3 | Conclusion

3.1 Interviews

All the interviewed key stakeholders agree that evaluation can contribute to improve energy policies (both for the design of new ones or the revision of existing ones). Some of the interviewees suggested that the importance of evaluation becomes obvious if one thinks about what would happen if evaluation is not done: effects of the policies would not be known, and the efficiency of the use of public budget could not be assessed. And many interviewees could provide concrete examples showing how evaluation was useful to improve policies.

Nevertheless, the type of analysis and the extent of the monitored and studied effects vary a lot depending on the type and size of the policy, on the priorities of policy makers, and on other conditions related to different member states. The time, human, and money resources dedicated to evaluation are not always sufficient to cover all the evaluation needs and to ensure a complete and reliable analysis. This explains why some of the interviewees suggested that evaluation should be made mandatory for all the major policies and resources should be allocated to evaluation since the design phase of policies.

In practice, different criteria may be used to prioritize evaluation efforts. But it seems that the more important the public budget committed, the higher the priority for evaluation. This is indeed consistent with the fact that evaluation has often an accountability role.

Another related issue is the need to explain the distinction between M&V and evaluation, and more specifically to show what added value evaluation brings compared to M&V. This could be important to get more resources dedicated to evaluation.

The theme is of great interest to the stakeholders. Some of them would like to have standardized tools (guidelines, web based information systems, etc.) in order to be able to carry out evaluation more easily (both ex-ante and ex-post), but also to make it easier to compare evaluation results. This can be useful for decision makers who want to optimize policy portfolios and/or to prioritize policy efforts. On the other hand, some other interviewees warned about that too much standardization could be counterproductive: evaluation often needs to be tailored to the objectives and context of the policy, and evaluation practices that prove effective in one country are not necessarily to be transferred to another one, since they can result less successful or even not appropriate. Combining these views means that it could be useful to provide standard concrete guidelines for evaluation, but that choosing if and how to use such guidelines should remain up to each stakeholder.

This discussion could be further explored in the project in relation to another issue pointed by some interviewees: the need for transparency in evaluation results so that stakeholders can trust them. This would indeed argue in favour of promoting standard guidelines to report evaluation results, which is a different level of standardization than standard guidelines for evaluation itself.

As expected, interviewees pointed out data issues as one of the main difficulties encountered when doing evaluations. Their feedback shows that these issues can take various forms, and are not limited to the data related to energy or energy efficiency actions. Qualitative information about the policy background is also essential, and may be neglected or difficult to access by external evaluators. This may lead to misinterpretations of the results.

Several interviews reported that ICT can help improvements and cost reductions in data collection and processing.

Another common recommendation is about planning evaluation early enough to ensure the feasibility of ex-post evaluations. But some interviewees reported that it is always useful to remind, since even if this basic rule is well-known, it is not necessarily put into practice.

In parallel to data issues, another issue that is frequently reported as very challenging is the evaluation of net effects, i.e. how to separate the effects of a policy from other effects (of other policies or external factors). This is a challenge for the evaluation of any type of policy, but can be particularly difficult for energy efficiency policies.

Many aspects of the evaluation process require support and tools, according to the respondents, such as:

- MRV methods;
- Indicators to verify the cost-effectiveness of policy;
- Data and approaches needed to analyse non-energy effects of the policies (e.g. enterprise competitiveness, fuel poverty contrast, occupational, environmental and social benefits, rebound and free riders' effects, etc.);
- Opportunity to check if some form of harmonization or of standardised procedures could be introduced to facilitate the evaluation action and to allow a meaningful comparison among different policies and countries;
- Means to ensure that evaluation is an independent process and/or is not biased, so that stakeholders can trust evaluation results;
- How to determine the resources to allocate in order to put in place an effective evaluation.

The EPATEE project will implement a set of tools to answer some of these needs, and of actions (e.g. workshops and webinars) to facilitate the sharing of information and experiences among policy makers, evaluators, experts and the other stakeholders involved in policy evaluation.

An improved evaluation will help Member States to implement more effective policies and to get more from the scarce available resource. Moreover, it will facilitate the monitoring of the achieved results with respect to the EU targets, offering enhanced tools both to the Member States and the EC.

3.2 Survey

The collected answers give a good overview on energy efficiency policy evaluation across Europe, both in terms of methods and approaches used at national level, and in terms of barriers. There is a good geographical coverage and almost all the respondents are directly involved in evaluation, either as policy makers, evaluation customers, or evaluators. Having obtained 27 complete answers to the survey on a basis of 176 EPATEE stakeholders, there has been a satisfactory participation, also considering the adoption of a moderately complex questionnaire. However, it should be reminded that the results of the survey are not meant to be representative of evaluation practices in Europe. The objective was to collect a feedback from stakeholders in order to prioritize EPATEE's efforts. For this reason, the survey was focused on the EPATEE target groups.

With respect to how evaluation is carried on, figure 17 summarises the use of the different elements that are included in the evaluation practices[1]. It appears that evaluation of energy savings, monitoring of energy efficiency actions, use of public resources, CO_2 assessment, and evaluation of results against targets are much more frequent than evaluation of effects on the market, employment, or qualification of market operators. When crossing this result with the feedback from the interviews and the questions of the survey about barriers, it comes out that this could be explained by difficulties in having the relevant data and lack of available methodology about evaluation of non-energy effects. This suggests that some work needs to be done to introduce the evaluation of such equally important issues in the evaluation cycle.

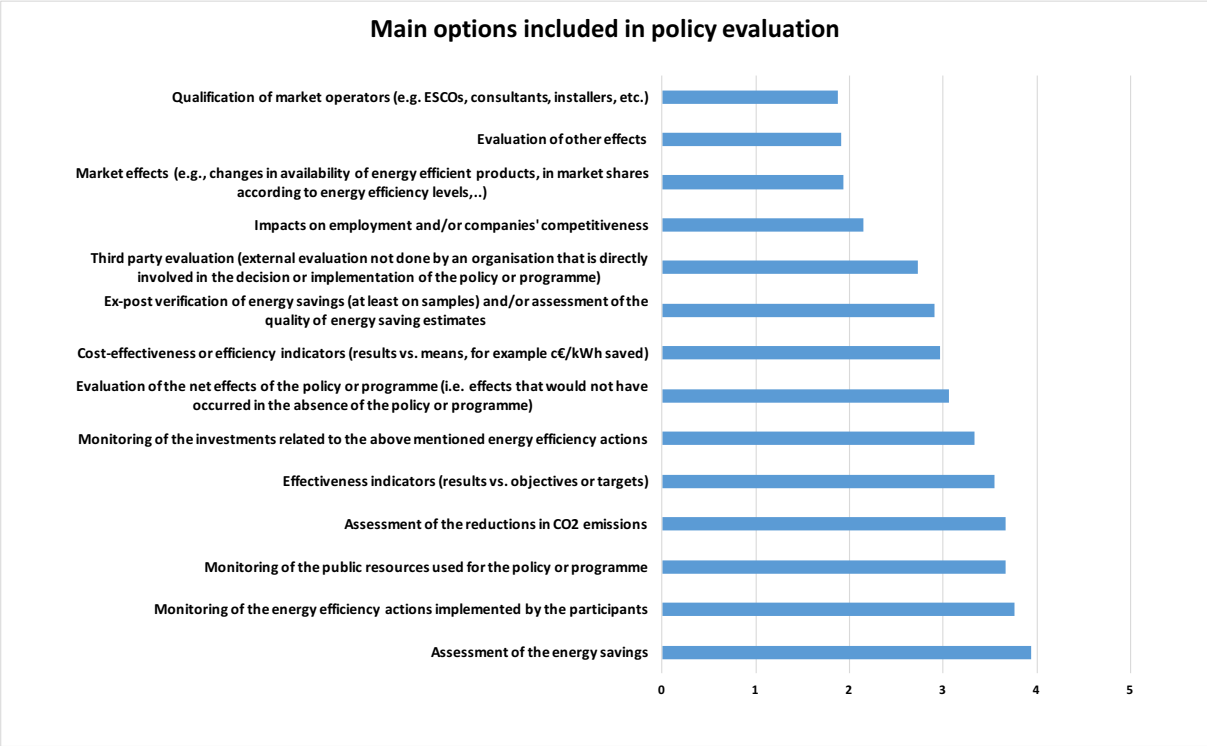

Figure 17. Synthesis of the answers about the options included in policy evaluation.

In addition to figure 17, results to Q2 show that ex-ante and ex-post evaluations would be equally important in stakeholders' evaluation practices. This also confirms the qualitative feedback from the interviews.

The barriers perceived by the stakeholders are summarised in figure 18. It is interesting to notice that the first and the second ones are not technical but organisational and are indeed connected:

- insufficient financial resources (i.e. when policies are designed a higher amount of resources in terms of percentage of the available budget should be dedicated to evaluation purposes);
- lack of interest from policy makers and public managers (i.e. a cultural barrier that exposes Member States and local governments to an ineffective use of the available resources and reduces the possibility to learn by doing);
- lack of reliable data to evaluate non-energy effects (i.e. important aspects and impacts of policies are not covered by the evaluation process, as already mentioned with respect to figure 17).

[1] The charts in this chapter has been derived from the 1-5 options graphs reported in chapter 3 by weighing the number of answers with their score (1-5), in order to have a more synthetic view of the result and to give a better perception of their relative weight.

Therefore, the scope of the EPATEE project should be not only to cover technical aspects related to evaluation, but also to promote the right culture about evaluation and its positive effects, a comprehension that should naturally increase the resources spent on evaluation.

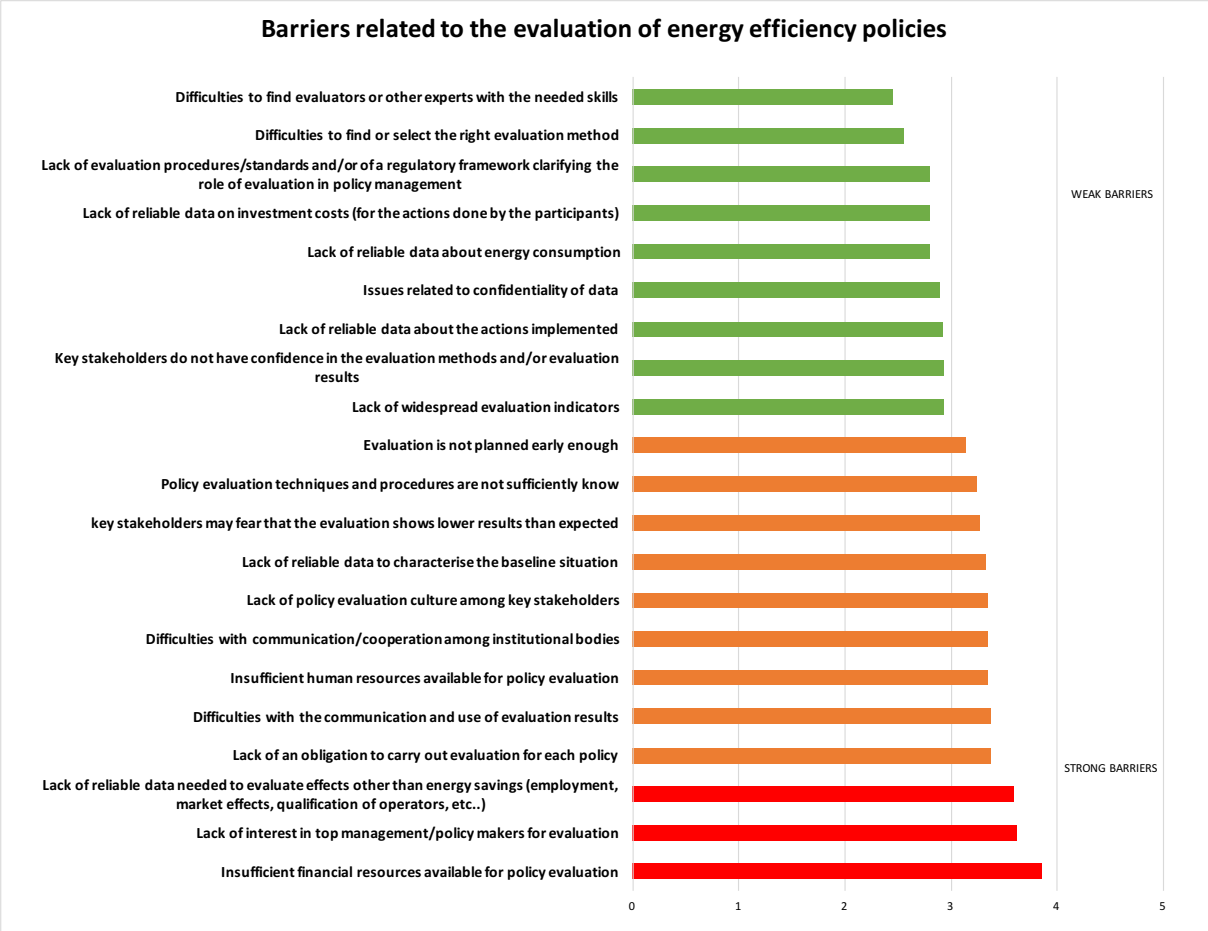

Figure 18. Barriers related to the evaluation of energy efficiency policies.

With respect to the role of the EPATEE project and the tools aimed at the stakeholders, they express a strong interest in the availability of databases to find examples of evaluation practices and reports and papers on energy efficiency policy evaluation, as illustrated by figure 19 and figure 20. The current developments of a Knowledge Base and case studies are thus fully in line with stakeholders' expectations.

Also, workshops, webinars, and meetings are considered valuable tools, with a preference for activities focused on specific issues.

All stakeholders agree on the need to go into details of policy evaluation, an aspect that the EPATEE consortium recognises as a priority and that characterised its design since the beginning.

The results of this first EPATEE survey will be used to design the next project's activities, both in terms of support and analysis.

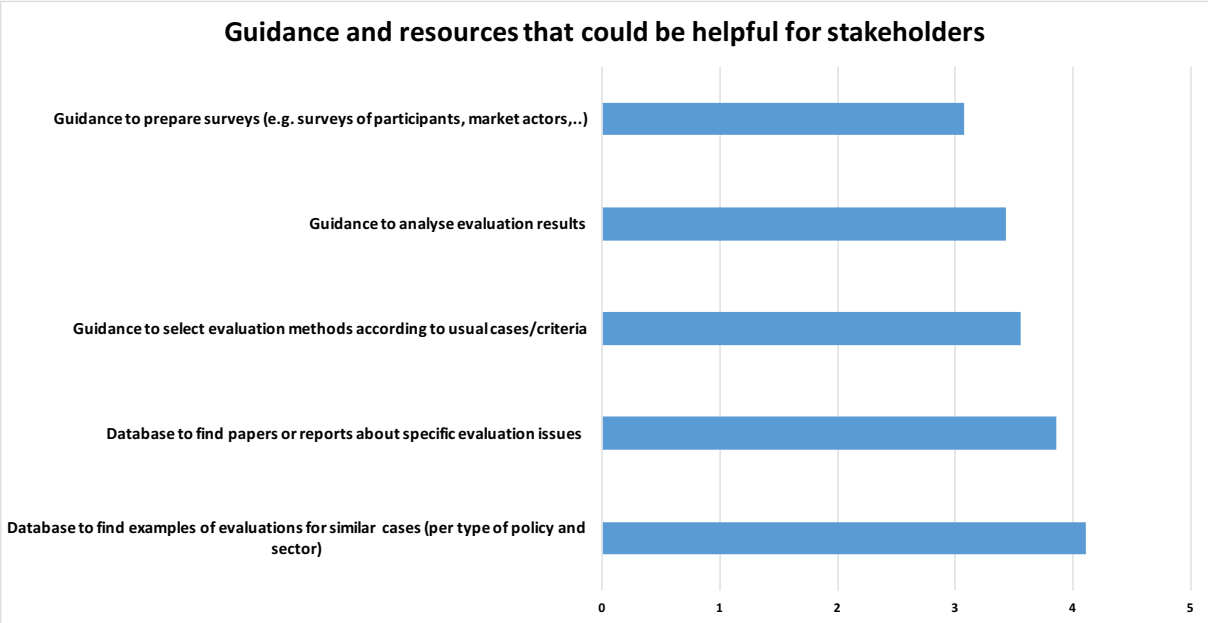

Figure 19. Guidance and resources considered useful by stakeholders.

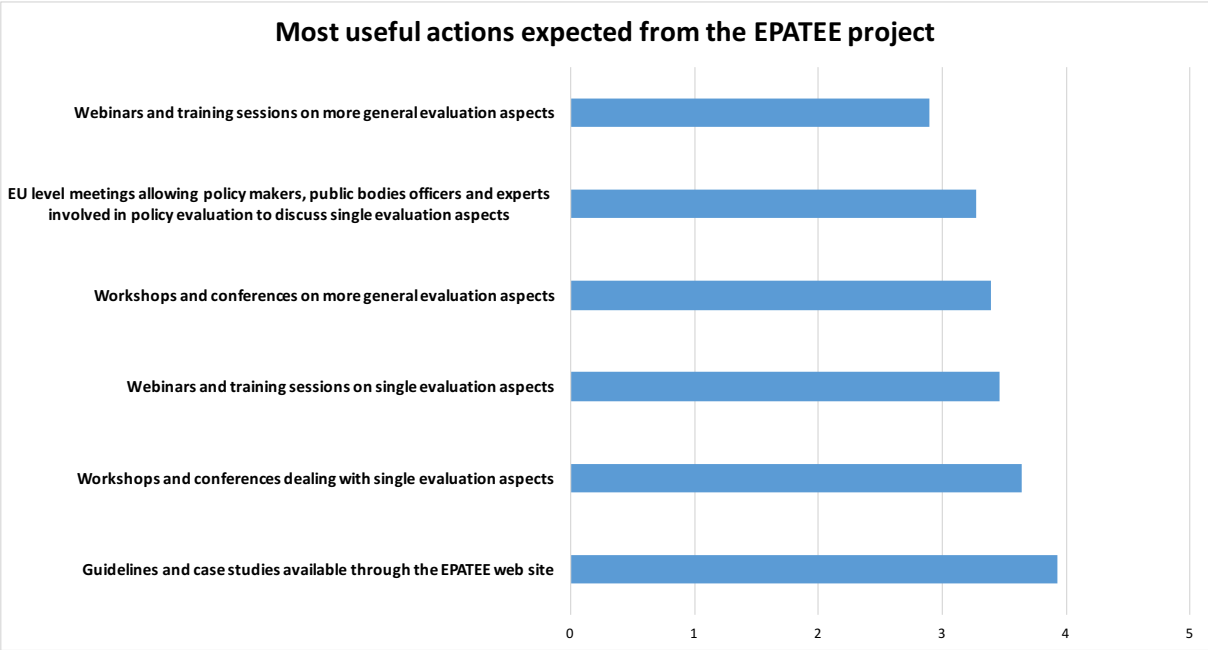

Figure 20. Actions expected from the EPATEE project to support the stakeholders.

Annex I - Survey's questionnaire

Q1: What is your link with the evaluation of energy efficiency policies or programmes (multiple answers possible):

- Evaluation customer or supervisor (if you have been involved in commissioning evaluations or in steering committees of evaluations for example)
- Evaluator (if you have been directly involved in doing evaluations)
- Evaluation user (if you have already used the results, conclusions and/or recommendations of evaluations for taking decisions or as inputs for your own work, for example as policy maker)
- Other (please specify)

Q2: Typically, what kind of evaluation is implemented for the energy efficiency policies in your country:

- Ex-ante (i.e. before the launch of the policy measure, for example through an impact assessment)
- Ex-post (i.e. during the policy measure lifetime and after its end)
- Both ex-ante and ex-post
- None

Q3: Which of the following options are usually part of policy evaluation that are performed in your country:

	Never	Rarely	For main policies only	Often	Always
About assessing direct outputs and results					
Monitoring of the public resources used for the policy or programme					
Monitoring of the energy efficiency actions[2] implemented by the participants					
Monitoring of the investments related to the above mentioned energy efficiency actions					
Assessment of the energy savings					
Assessment of the reductions in CO2 emissions					

[2] For example: wall insulation, energy efficient product (boiler, car, motor, appliance, ...), eco-driving, implementation of an energy management system, ...

Ex-post verification of energy savings (at least on samples) and/or assessment of the quality of energy savings estimates					
About evaluation indicators					
Evaluation of the net effects of the policy or programme (i.e. effects that would not have occurred in the absence of the policy or programme)					
Effectiveness indicators (results vs. objectives or targets)					
Cost-effectiveness or efficiency indicators (results vs. means, for example c€/kWh saved)					
About evaluating other effects					
Impacts on employment and/or companies' competitiveness					
Market effects (e.g., changes in availability of energy efficient products, in market shares according to energy efficiency levels, …)					
Qualification of market operators (e.g. ESCOs, consultants, installers, etc.)					
Evaluation of other effects					
About external evaluations					
Third party evaluation (external evaluation not done by an organisation that is direclty involved in the decision or implementation of the policy or programme)					

Q4: How would you qualify the level of evaluation practice in your country?

- No evaluation of energy efficiency policy or programme has been done in the last 10 years, or evaluations remain very rare.
- Evaluation is done at least for the most important and/or strategic policies, but it is not sufficiently developed to lead to improvements of the policies (evaluated or other ones)
- Evaluation is done only for the most important and/or strategic policies and allows/allowed for improvements in the policies (evaluated and/or other ones)
- Evaluation is done for most of the policies but rarely leads to improvements in the policies (evaluated and/or other ones)
- Evaluation is done for most of the policies and usually allows/allowed for improvements in the policies (evaluated and/or other ones)
- I don't know

Q5: According to you, what are the main barriers to the evaluation of energy efficiency policies in your country?

- Please indicate

Q6: Which are the main barriers to policy evaluation in your country (on a scale from 1 to 5, with 1 = barrier with low influence; 5 = very important barrier):

	1	2	3	4	5
Barriers related to data issues					
Lack of reliable data to characterise the baseline situation					
Lack of reliable data about the actions implemented					
Lack of reliable data about energy consumption					
Lack of reliable data on investment costs (for the actions done by the participants)					
Lack of reliable data needed to evaluate effects other than energy savings (employment, market effects, qualification of operators, etc.)					
Issues related to confidentiality of data					
Barriers related to resources for evaluation					
Insufficient financial resources available for policy evaluation					
Insufficient human resources available for policy evaluation					
Difficulties to find evaluators or other experts with the needed skills					
Difficulties to find or select the right evaluation method					
Barriers related to the management of evaluation					
Lack of evaluation procedures/standards and/or of a regulatory framework clarifying the role of evaluation in policy management					
Lack of an obligation to carry out evaluation for each policy					
Evaluation is not planned early enough					
Lack of widespread evaluation indicators					
Difficulties with communication/cooperation among institutional bodies					
Difficulties with the communication and use of evaluation results					
Barriers related to awareness and perception of evaluation					
Lack of policy evaluation culture among key stakeholders					
Policy evaluation techniques and procedures are not sufficiently known					
Lack of interest in top management/policy makers for evaluation					
Key stakeholders may fear that the evaluation shows lower results than expected					

Key stakeholders do not have confidence in the evaluation methods and/or evaluation results					

Q7: Are there any evaluation of particular policies and/or type of evaluation methods or tools you would like to know more about? (this question will be used to prioritize the experience sharing activities of EPATEE, e.g. meetings, webinars, training, web platform, etc.)?

- Please indicate

Q8: Which of the following aspects of evaluation do you want to know more about through the EPATEE initiatives (please rank with 1= the less important - 5= the most important for you):

	1	2	3	4	5
Evaluation objectives					
Evaluating the energy savings and/or reductions in CO2 emissions					
Evaluating peak savings (reduction in peak demands) and/or other load management effects					
Evaluating the cost-effectiveness of the policy or programme (and/or doing cost-benefit analysis)					
Evaluating market effects (e.g. changes in availability of energy efficient products, in market shares according to energy efficiency levels, etc.)					
Evaluating other effects (e.g. employment, public budget, health, etc.)					
Evaluation management					
Good practices for defining specifications for evaluations					
Good practices for defining/selecting evaluation indicators					
Experience feedback about resources needed for evaluations					
Experience feedback about how to plan evaluation early enough					
Experience feedback about the use of evaluation results and conclusions					
Templates to document energy savings in a transparent way					
General evaluation issues					
Data collection and management					
Defining the baseline					
Evaluating the net effects or additionality of policies (i.e. effects that would not have occurred in the absence of the policy)					
Assessing the uncertainties related to evaluation results					
Specific evaluation issues					

Evaluation of prebound and direct rebound effect[3]					
Evaluation of performance gaps[4]					
Handling double counting					
Avoiding bias in sampling					
Avoiding bias in questionnaires used to collect data for evaluation					

Q9: Please, let us know if there are particular issues you would like the EPATEE project to deepen into:

- Please indicate

Q10: Please rank how much these other types of guidance or resources could be helpful to you (with 5=the most helpful)

	1	2	3	4	5
Guidance to select evaluation methods according to usual cases/criteria					
Database to find examples of evaluations for similar cases (per type of policy and sector)					
Database to find papers or reports about specific evaluation issues					
Guidance to analyse evaluation results					
Guidance to prepare surveys (e.g., surveys of participants, market actors, ...)					

Q11: Which of the following actions are more useful in your opinion (please rank the different action types with 4=the most useful):

	1	2	3	4
EU level meetings allowing policy makers, public bodies officers and experts involved in policy evaluation to discuss single evaluation aspects (with participation limited to selected people, in order to facilitate the discussion and exchange of experiences)				
Webinars and training sessions focussed on particular evaluation aspects				
Webinars and training sessions on more general evaluation aspects				

[3] Prebound effect: cases where, before implementing an energy efficiency action, end-users tend to consume less energy than estimated by engineering models (e.g., due to restriction on heating to avoid too high energy bills); Direct rebound effect: cases where the energy efficiency improvements are partly or totally used to an increased use of the energy service (e.g., increased indoor temperature after replacing a boiler).

[4] Cases where the observed energy performance of the energy efficiency action installed is lower than the expected energy performance, for example due to differences in operating conditions or due to quality issues like defects when installing the action.

Workshops and conferences focussed on particular evaluation aspects				
Workshops and conferences on more general evaluation aspects				
Guidelines and case studies available through the EPATEE web site				

Q12: Given your interest in the topic and your time budget/restriction, which actions are you very likely to attend? (e.g. meetings, webinars, training, workshops and conferences, web platform, etc.)?

- Maybe all
- Only webinars and tools available through the web
- Only workshops and conferences in my country
- I'm not interested to participate
- I don't know

Q13: Could you suggest references of evaluation reports or studies done in your country (available in English or in national language)? (these references could be entered in the knowledge base developed within the project and/or to identify additional case studies)

- Please indicate

Q14: Do you have any other comment or suggestion for the EPATEE team?

- Please indicate