



Coordination and Support Action
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The content of this deliverable reflects only the author's view. The report summarizes the recommendations of the individual members of the Advisory Boards, as they shared during the streamSAVE's Advisory Board activities; and is therefore not reflecting a common advice from all members.

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Abbreviations and acronyms

Acronym	Description
AB	Advisory Board
BACS	Building Automation and Control Systems
CSF	Capacity Support Facility
EED	Energy Efficiency Directive
EEO	Energy Efficiency Obligation
EV	Electric vehicles
GHG	Greenhouse gas
MS	Member State
PA	Priority Action
RES	Renewable energy sources
WP	Work Package





Summary

streamSAVE is driven by demand and hence as close as possible to the needs regarding energy savings calculations of its stakeholders, namely public authorities, technology experts and market actors. This diversity of stakeholders is reflected in the Advisory Board to ensure that the needs of key stakeholders are met. The role of the Advisory Board is to advise and give feedback on the project's activities and outputs to increase streamSAVE's impact on energy efficiency actions taken in Member States.

This final report summarizes the recommendations from the Advisory Board on the following streamSAVE activities that ran during the second half of the project (March 2022-August 2023):

- Development of streamlined calculation methodologies for Priority Actions: Guidance
- streamSAVE's support: Capacity Support Facility and Replication Countries
- Valorisation strategy

These recommendations are based on the three Advisory Board Meetings that have been organized in 2022 and 2023. In general, streamSAVE's activities and outputs were considered interesting and of big support for Member States' implementation of Article 3 and Article 7 of the EED. The main point of attention consisted of ensuring the resources of the project are implemented: to not only disseminate outcomes but facilitate their use by public authorities, market actors and technology providers as much as possible.



Keywords

Advisory Board; energy savings calculations; Priority Actions; standardized savings methodologies; Training Module; Dialogues





Introduction

About streamSAVE

Energy efficiency is one of the five key dimensions of the Energy Union, and consequently of the Member States' National Energy and Climate Plans. The Energy Efficiency Directive sets the 2020 and 2030 energy efficiency targets and defines a series of measures that contribute to their achievement within the Union. The streamSAVE project streamlines energy savings calculations and provides the support needed to increase Member States' chances of successfully and consistently meeting their energy efficiency targets. The streamSAVE project specifically focuses on Article 3 and 7 of the EED (articles 4 and 8 in the recast of 2023) which are devoted to energy efficiency targets and national energy savings obligations, respectively.

Given the importance of deemed savings approaches in Member States' EED reporting streamSAVE focuses on streamlining bottom-up calculation methodologies of standardized technical actions. streamSAVE offers these savings methodologies in a transparent and streamlined way, not only to improve the comparability of savings and related costs between Member States (MS), but also between both EED articles. The savings actions are targeted to those measures with high energy saving potential and considered as priority issues by Member States, the so-called *Priority Actions*. Two rounds of Priority Actions (PA) are running during streamSAVE: the first round (September 2020 – February 2022) covers five actions, namely: Heat recovery; Building Automation and Control Systems (BACS); Commercial and Industrial Refrigeration Systems; Electric Vehicles; and Public Lighting Systems. From March 2022 onwards, a second set of actions was discussed, namely: Small-scale Renewable Heating Technologies, Accelerated Motor Replacement, Modal Shift (Freight Transport), Behavioural Measures Changes and Energy Efficiency Actions Alleviating Energy Poverty.

In short, the project aims at fostering transnational knowledge and dialogue between public authorities, technology experts, and market actors. The key stakeholders will improve their energy savings calculation skills and ensure thus the sustainability and replicability of the streamSAVE results towards all European Union Member States.

Role and composition of the Advisory Board

streamSAVE is driven by demand and hence as close as possible to the needs of its stakeholders, namely public authorities, technology experts and market actors. Hereto, the diversity of stakeholders is reflected in the Advisory Board, as indicated in the table below. The role of the Advisory Board (AB) is to advise and give feedback on the project's work and outputs to increase its impact on energy efficiency actions taken in Member States, and to ensure that needs of key stakeholders are met. Another objective is to share experiences and expertise with the project, and lastly, support the project outcomes towards the stakeholders, and linking these to ongoing initiatives or projects.

During the second half of the project, three Advisory Board meetings have been organized (remote), namely in *May* and *November 2022* and the final meeting in *March 2023*. In January 2023, the board members were able to share their feedback on the activities organized and potential opportunities for valorisation (online survey). The Advisory Board





also contributed to streamSAVE's final event organized in Brussels on 6th of June 2023 (speakers to the event)¹.

Table 1. Composition of the Advisory Board (alphabetical order).

Organization	Name		Type of stakeholder within streamSAVE
eu.bac (European Building Automation and Controls Association)	Bonnie	Brook	Technology & market expert BACS; Chair of the eu.bac EPBD BACS Compliance Verification Task Force, Chair CEN TC 247
Energy institute Hrvoje Požar , Croatia	Vesna	Bukarica	Research monitoring, verification and evaluation of energy efficiency policies in Western Balkan countries
SEAI (Sustainable Energy Authority Ireland)	Joe	Durkan	Public authority, EEOS Programme Manager
EHP (Euroheat & Power)	Torben	Funder-Kristensen	Technology & market expert cooling & waste heat recovery
SIEA (Slovak Innovation and Energy Agency)	Jan	Magyar	Public authority, Monitoring & Evaluation EED
EDF (Electricité de France)	Dominique	Osso	Research energy efficiency evaluation & French Energy efficiency Obligation scheme
CENSE – NOVA School of Science and Technology University Lisbon	João	Pedro Gouveia	Expert Energy Poverty; Coordination Team of the European Energy Poverty Advisory Hub
CTI (Comitato Termotecnico Italiano)	Ettore	Piantoni	Certified Energy Management; CEN CENELEC JTC 14 Chairman “Energy management and energy efficiency in the framework of energy transition” – Sector Forum Energy Management Vice chair
EHPA – European Heat Pump Association	Elena	Ricci	Technology and market expert heat pumps - EU Projects Officer
EHPA – European Heat Pump Association	Dan	Stefanica	Technology and market expert heat pumps - Head of EU Projects
Motiva , Finland	Ulla	Suomi	Assisting the responsible Ministry and Energy Authority in Monitoring & Evaluation EED
AVERE (European Electric Road Vehicle Association)	Philippe	Vangeel	Technology & market expert electric vehicles; Secretary General at AVERE
TPA Adviseurs	Maarten	van Werkhoven	Expert electric motors in industry & buildings

Scope of the report

This report summarizes the recommendations from the Advisory Board on the streamSAVE activities and outcomes to increase the impact on energy efficiency actions taken in Member States, and to ensure that needs of key stakeholders are met. In this report, the

¹ Agenda and presentations of the final event, can be found on the website: <https://streamsave.eu/2023/06/09/the-streamsave-final-event/>





feedback on the following activities, that ran during the second half of the project (March 2022-August 2023), is described:

- Development of streamlined calculation methodologies for Priority Actions: Guidance & Training Module
- streamSAVE's support: Capacity Support Facility and Replication Countries
- Valorisation strategy

These recommendations are based on the three Advisory Board Meetings that have been organized in 2022 and 2023, complemented with results gathered during the feedback survey.



Chapter 1 Development of streamlined calculation methodologies for the second round of Priority Actions: Guidance & Training Module

1.1 Third Advisory Board Meeting

With the start of the second round of five new Priority Actions, new methodologies and indicative calculation values for these PA's will be developed, starting from June 2022. The structure of the template will remain the same as for the previous PA's and will comprise elements as: (1) identification of the calculation methodology; (2) description of the application area and possible restrictions; (3) a calculation formula with EU-wide indicative calculation values; (4) guidance for cost effectiveness assessment; (5) estimation of related CO₂ savings; and, (6) sources that were used for preparing these methodologies. streamSAVE is aiming at comprising a set of EU-wide indicative calculation values taking into account differences between EU regions (e.g., climate), together with a guidance on how those values were defined. Preferably, Member States define specific calculation values based on national datasets.

During the third Advisory Board Meeting, the second round of PA were introduced. An initial overview of existing bottom-up methodologies in EU-27 and UK was also presented, next to the scope & relevant data sources for the calculation methodologies that will be developed. The questions in relation to the methodologies that were discussed during the third AB meeting, were:

- What should be covered in the baselines of these PA's?
- What could be good sources for indicative values for these PA's?
- Are there other methods that should be considered?

1.2 Fourth Advisory Board Meeting

By November 2022, the calculation methodologies for the five new Priority Actions were prepared. The result of this exercise is the intermediate Deliverable D2.2 "*Guidance on standardized saving methodologies*", in which general aspects of energy savings estimations (covering Art. 3 and Art. 7, definition of a baseline, approaches for cumulating energy savings under Art. 7 and a correction factor for behavioural effects), estimation of relevant costs connected to those energy savings and greenhouse gas savings were elaborated. Eight methodologies have been developed covering the five PA:

1. Anticipated motor replacement
2. Feedback and tailored advice in the residential sector
3. Thermally improved building envelope of refurbished buildings of energy poor households
4. Small-scale renewable energy systems in buildings for energy poor households
5. Behaviour measures addressing energy poor households
6. Modal shift in freight transport
7. Heat pumps for heating and domestic hot water
8. Biomass boilers for heating and domestic hot water





For each methodology a calculation is included for the total final energy savings (Art. 7) and for the impact on energy consumption (Art. 3). An overview of the costs related to the action is provided, in addition to a calculation methodology for greenhouse gas savings. The calculation methodologies have also been uploaded into the Training Module that exists on the streamSAVE platform. Policy officers in the 10 partner countries tested and validated the Training Module during the Capacity Support Facility (October-December 2022). The resulting feedback is used to finalise the Module for the second round of PA, and the related Guidance by February 2023. The Advisory Board could test the Training Module as well.

The Advisory Board gave their feedback on the developed methodology and assumptions, for each Priority Action during the meeting. Afterwards, written feedback was shared on the intermediate D2.2.

1.3 Recommendations and related actions

Given the changes in European legislation in frame of the fit-for-55, methodologies should be prepared with these changes in mind, namely recast EED (PA energy poverty) and recast EPBD (PA small-scale RES heating). Caution is warranted as both Directives are still in the negotiation phase. This is particularly applicable for the PA of energy poverty, as the EED recast increasingly emphasizes the definition of energy poverty and energy savings towards energy poor households. Member States find this a difficult exercise and hence streamSAVE could be of particular value to them. Other documents and principles to take into account comprise EU Taxonomy, Ecodesign and the Energy Efficiency First Principle.

Concerning the scoping of the Priority Action on accelerated motor replacement, the merit of having a methodology for fixed speed motors can be debated, as the most common change implemented within Member States is the variable speed drive. The lack of accurate data sources however hampers the development of a methodology for variable speed drives.

✓ *Action: In the intermediate Deliverable “D2.2 Guidance on Standardized saving methodologies” and related Training Module, most of these recommendations were reflected in the methodologies and indicative values for the second round of PA.*

The evaluation of multiple benefits of energy efficiency measures could be considered as well, next to energy savings. Work of national standardization bodies can be relevant in this regard.

✓ *Action: In the Deliverable “D2.2 Guidance on Standardized saving methodologies” and related Training Module, secondary benefits are described for the action on Energy Poverty.*

For each PA, questions and remarks were discussed with regard to the methodology and indicative values as presented in the intermediate Deliverable D2.2. For example, for the behavioural measures, the double counting factor was discussed, next to the importance of randomized controlled trial RCT and the role of ICT (e.g., smart meters, EMS) to measure the actual savings in practice. For Energy Poverty, recent sources were suggested for updating the rebound and rebound factors; the differences between theoretical savings and actual energy consumption should be emphasized strongly in the guidance, as well as the importance of secondary benefits (instead of energy savings). The Advisory Board shared their written feedback on the intermediate Guidance D2.2.

✓ *Action: Deliverable “D2.2 Guidance on Standardized saving methodologies” has been updated and finalized, based on the AB recommendations (by February 2023).*





Chapter 2 streamSAVE's support: Capacity Support Facility and Replication Countries

2.1 Third Advisory Board meeting

The Capacity Support Facility (CSF) focused on technical issues of the energy savings actions providing the capability to each country to apply the savings methodologies for concrete policies or measures, as well as to test Training Module of the streamSAVE platform for the selected Priority Actions in order to improve the implementation and reporting on energy efficiency policy measures under Article 3 and Article 7 of the EED. Meetings in various formats (in-country workshops, online or telephone workshops, email support, desk research by the consortium, peer-to-peer exchange of experience between countries, etc.) were held between September 2021 and January 2022. For the support on the first round of PA, 24 exchanges were in total organised, involving 30 policy officers, resulting in impacting potentially 18 energy efficiency policies.

Lessons learned were identified and in addition to those that are specific to the Priority Actions, also horizontal issues were discussed:

- The methodologies can improve the coordination of required MRV procedures, by streamlining cooperation of the different bodies responsible for monitoring;
- The development of a bottom-up methodologies and related, indicative values, will contribute to improvements on:
 - o Determination of the national calculation values
 - o Data collection
 - o Monitoring & Verification procedures and compliance with quality requirements
 - o EED reporting obligations
- The potential integration of the developed bottom-up methodologies will motivate both the obligated parties and the responsible authorities of alternative measures to design and implement energy efficiency measures.

The conducted activities as well as the lessons learned are described in Deliverable D4.3 CSF Activity Report.

2.2 Fourth Advisory Board meeting

During the fourth advisory board meeting, it was discussed how streamSAVE's support could be effectively replicated to other countries. In the streamSAVE partner countries (10), support is provided so the methods can be applied to specific policy cases (e.g., extension of catalogue with BACS methodology). Here, the countries are well assisted by streamSAVE partners and our PA expertise. In upcoming months, it will be tested how streamSAVE can be replicated to other (non-streamSAVE) countries (3).

Main question raised to the AB was: what elements are crucial to successfully apply our methods & values from the guidance to other countries? And this in relation to:

- Type of stakeholders to be involved?
- Monitoring of data?





- Role of sharing of experiences? Good country examples?

2.3 Recommendations and related actions

The Capacity Support is a valuable and useful approach to improve savings estimations in EU Member States. Therefore, it was recommended to continue this support, also for the second round of PA.

The main recommendation is to share and distribute the material that streamSAVE is producing (methodologies, calculation values, support, ...) with policy officers across the EU, i.e., to broaden the scope beyond the 10 partner countries. It would also be valuable to gain insight into countries' experiences with the actual implementation. A possibility to address this is through the dialogues workshops that have been scheduled winter 2022-2023. These could act as a platform where the focus could be on the actual practices in the MS and discussing these experiences among countries. The replication to the 3 other (non-streamSAVE) countries will also facilitate this recommendation.

- ✓ *Action: Extended experience sharing during the dialogue workshops in winter 2022-2023 have been organized, where country practices were presented.*
- ✓ *Action: The replication to other Member States has been tested in three countries (Slovakia, Italy and Cyprus) during spring 2023. Results are summarized in the Deliverable D4.6 Replication Guidance.*

A comparison of the streamSAVE methods/values versus actual country numbers during implementation, can give interesting insights to share. The comparative analysis of indicative values was carried out only for the Priority Action of Electric Vehicles and will be reflected in the Deliverable D4.3 CSF Activity Report.

- ✓ *Action: The results of the comparative analysis (streamSAVE indicative values versus national values) have been qualitatively described in the Deliverable D4.3 CSF Activity Report.*



Chapter 3 Valorisation Strategy

3.1 Fifth Advisory Board Meeting

Based on feedback from stakeholders and from the partners in the project, a valorisation strategy is being developed to provide an answer to the question “What happens after the project ends?”. The strategy comprises ways forward for the calculation methodologies, the platform and the community. The draft strategy is presented to the AB for their feedback and questions discussed comprised:

- Communication & Dissemination of outputs: where to store the outputs of the project so they can be easily found by stakeholders?
- Stakeholder Community: Which projects, networks or initiatives could be interested in further dissemination, creating useful synergies?
- How could the platform be transferred? Hosting by third party?

This input is taken into account to finalize the Valorisation Strategy as described in Deliverable D5.6.

3.2 Recommendations and related actions

With regards to the methodologies, they are deemed a very valuable output. What is hence of importance is not only promoting their dissemination but ensuring their use by mainly public authorities involved in implementing & monitoring policies or programs, but also by - though to a smaller extent - industry associations and financial institutions. Various paths were suggested here:

- Concerted Action EED
- National energy efficiency associations, such as ATEE (France), FIRE (Italy), DENEFF (Germany)
- Promotion by CINEA and DG ENER, Reference to streamSAVE methodologies in guidelines for Member States in frame of the EED Recast
- Publication of research paper on the deemed savings methodologies
- Events and workshops to liaise with stakeholder groups like the Coalition for Energy Savings and the European Alliance to Save Energy, EU Energy Efficiency Day (12 October 2023)
- Linking to existing platforms, such as publication on Zenodo, Odyssee-MURE, DEEP platform, E3P (JRC) platform, to enhance visibility and accessibility of the methodologies.



Action: The recommendations of the AB are implemented, when finalising the Deliverable D 5.6 Valorisation Strategy.

Another recommendation was the potential of turning the project's work into a European standard, given the multiple benefits of having a common standard across Europe. However, it was acknowledged that it is unlikely that the project's methods can be directly lead to standards, knowing multiple attempts in the past and the diversity of methodologies applied by countries.





Action: The results will be presented to CEN CENELEC JTC 14 “Energy management and energy efficiency in the framework of energy transition” for the evaluation of potential new standard(s) development.

The overview of existing methodologies in EU-27 Member States is considered as a very valuable output. Quick updates would be appreciated, also after the project’s end, but won’t be possible given the need for resources.

The balance between resources, difficulty to harmonize methodologies across Europe versus helpful, indicative methodologies to support countries, is when developing technical working groups at the European level.



Conclusion

streamSAVE is driven by demand and hence as close as possible to the needs of its stakeholders, namely public authorities, technology experts and market actors. This diversity of stakeholders is reflected in the Advisory Board to ensure that the needs of key stakeholders are met. The role of the Advisory Board is to advise and give feedback on the project's work and outputs to increase streamSAVE's impact on energy efficiency actions taken in Member States. Three Advisory Board meetings have been organized over the course of 2022 and 2023, where a variety of recommendations was shared.

In general, streamSAVE's activities and outputs were considered interesting and of big support for Member States' implementation of Article 3 and Article 7 of the EED. Some points of attention were highlighted, comprising:

- Implementation - Impact: recommendation to promote and facilitate the use of methodologies as much as possible. Share the support and practical lessons learned as much as possible to policy officers from other Member States as well.
- Education - Impact: Recommendation to make the material easily available and keep it available after the project's end. Hereto connection to existing initiatives, events and networks is key, such as Concerted Action EED, Odyssee-MURE, industry associations, financial institutions.

The recommendations specific to the Priority Actions have been mostly taken into account in the final version of "*D2.2 Guidance on Standardized saving methodologies*". The recommendations concerning continuous support, also after the project's end, are mainly taken into account in the "*D5.6 Valorisation Strategy*".



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