



Energy performance and savings in Data Centres

stream
SAVE 



 22 January, 2026
THURSDAY
 11:00 - 12:15
CEST, online

Today's agenda

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- ✦ Energy savings calculation for IT equipment and systems in data centres
Pedro Moura (ISR – Coimbra University)
- ✦ Energy savings calculation for cooling of data centres
Matevž Pušnik (Jozef Stefan Institute)
- ✦ Assessment of the energy performance and sustainability of data centres in the EU
Simon Hinterholzer (Borderstep Institute)



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streamSAVE+ platform



Heat recovery in ventilation units

The methodology described herein can be used for calculating the impact of installing or upgrading heat recovery in ventilation units on the energy demand of a building.

Installing heat recovery technology in ventilation units consists of the replacement at end-of-life or at a prior occasion of one or more existing less energy-efficient ventilation units by one or more new energy-efficient ventilation units with heat recovery technology. It can also consist of the adaptation of existing ventilation units to include heat recovery technology. In that case it must be foreseen in the design of the existing ventilation unit to enable inclusion of the respective heat recovery technology and it should be possible to adapt or replace other components for instance fans and controls to optimally fit the new configuration. It can also consist of the introduction of one or more new energy-efficient ventilation units with heat recovery technology for instance in situations where there is no ventilation system or in situations where the existing ventilation system is a natural ventilation system.

The methodology can be applied in relation to - a reduction of - the space heating final energy consumption. Indicative values are prepared for the residential and non-residential buildings. The method can be applied to renovated as well as non-renovated buildings. To account for different climate conditions, the geographical area of Europe in which the action is implemented needs to be considered. For this, different average outside temperatures during the heating season are applied for three geographical areas.

The definition of ventilation units follows the definition in the European Ecodesign Directive EU 1253/2014 (EC, 2014) and the same scope applies.

Calculation formulas
(click the image to enlarge)

Ventilation System Details

Indicative values are available for different climatic regions. Please select climate region: North, West or South, North, Czech Republic, Denmark, Estonia, Finland, Latvia, Lithuania, Poland, Slovakia, Sweden, West, Austria, Belgium, France, Germany, Iceland, Luxembourg, Netherlands, South, Bulgaria, Croatia, Cyprus, Greece, Hungary, Italy, Malta, Portugal, Romania, Slovenia, Spain. This field only applies in case the EU values calculation type is selected in the field Indicative Values.

Indicative values are available for different building types. Please choose an option for the calculation. This field only applies in case the EU values calculation type is selected in the field Indicative Values.

Indicative values are available for different technology types. This field only applies in case the EU values calculation type is selected in the field Indicative Values.

Energy Carriers

Conversion factors: Select a dataset. Select the energy carrier dataset to use for calculations.

National and Indicative Data

	National	Indicative	
$\eta_{he, before}$			Thermal efficiency of the heat recovery system before the implemented action
$\eta_{he, after}$			Thermal efficiency of the implemented heat recovery system
A		m ²	Useful floor area of the zone serviced by the ventilation system
h		m	Average height of the zone serviced by the ventilation system
ACH		m ³ /h/m ³	Hourly air change rate
ΔT		°C	Average temperature difference between indoor and outdoor environment during the heating season
t_{he}		h	Length of the heating season
η_{sh}			Thermal efficiency of the space heating system
f_{beh}			Factor to consider behavioural effects (f_{beh} is not available for non-residential buildings - currently set equal to 1 to enable calculation)

CALCULATE

➤ Website + calculation platform in one place

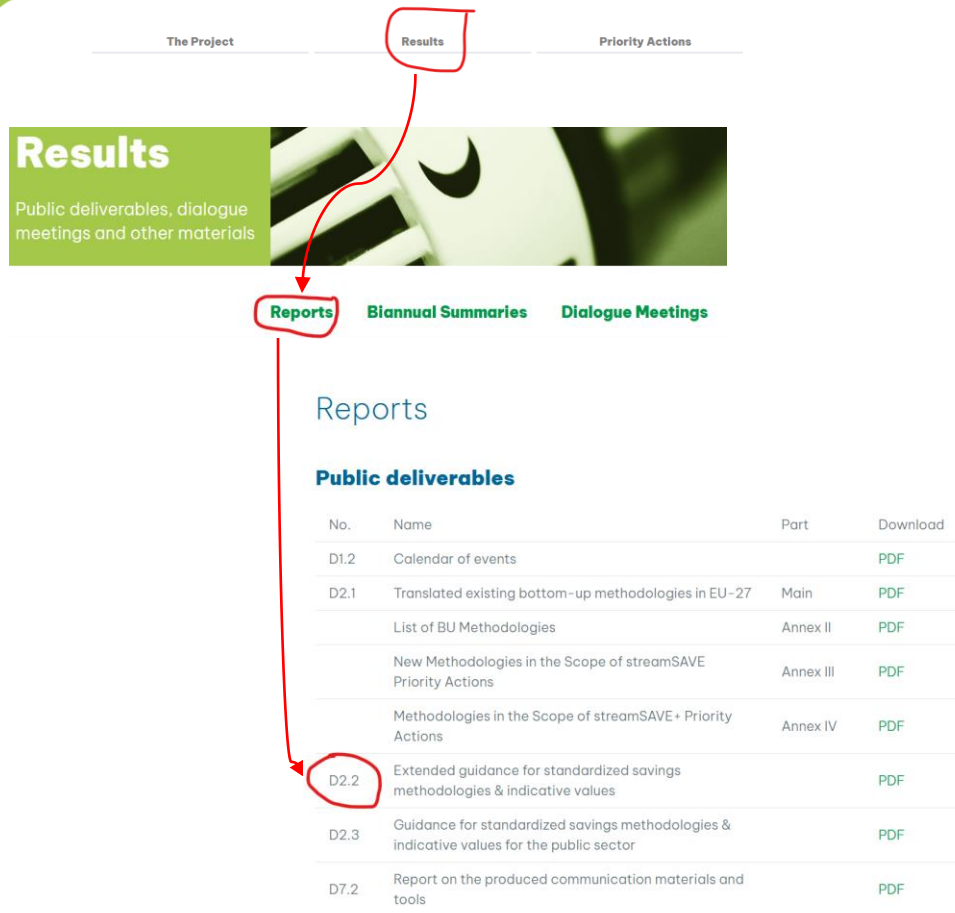
➤ Website:

- Project information
- Results including Dialogue Meetings summaries
- **Priority Actions and calculations (soon all 15)**
- **Case studies (27)** currently under preparation
- Contact Information

➤ Calculation Platform

- Registration/login page
- Original 10 StreamSAVE Priority Actions + 5 new StreamSAVE+ Priority Actions
- Developed on website including all advantages

streamSAVE+ - New Methodologies!



The Project **Results** Priority Actions

Results
Public deliverables, dialogue meetings and other materials

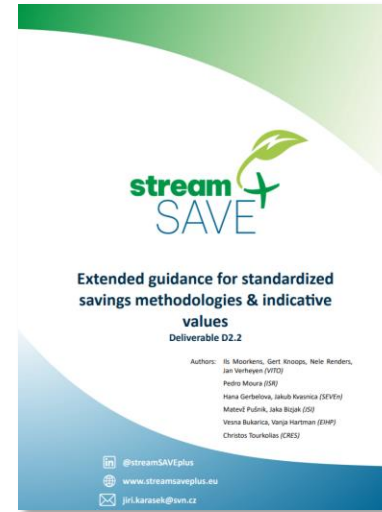
Reports Biannual Summaries Dialogue Meetings

Reports

Public deliverables

No.	Name	Part	Download
D1.2	Calendar of events		PDF
D2.1	Translated existing bottom-up methodologies in EU-27	Main	PDF
	List of BU Methodologies	Annex II	PDF
	New Methodologies in the Scope of streamSAVE Priority Actions	Annex III	PDF
	Methodologies in the Scope of streamSAVE+ Priority Actions	Annex IV	PDF
D2.2	Extended guidance for standardized savings methodologies & indicative values		PDF
D2.3	Guidance for standardized savings methodologies & indicative values for the public sector		PDF
D7.2	Report on the produced communication materials and tools		PDF

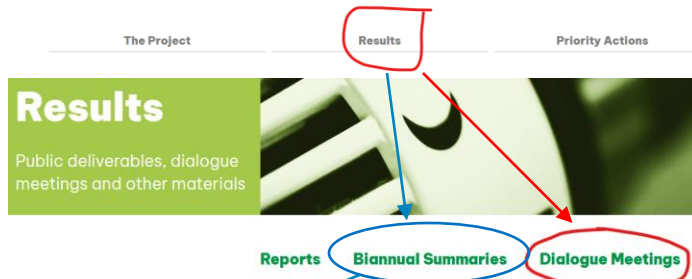
<https://streamsavenplus.eu/article/7-reports>



- ✦ Deep renovation of buildings
- ✦ **Data centres – IT equipment and systems**
- ✦ **Data centres – Cooling**
- ✦ Heat recovery in ventilation systems
- ✦ Public traffic management

- ✦ **National workshops** in 9 countries, in your language
→ you may contact your country leads to join
- ✦ Countries: SEVEn – Czechia, CRES – Greece, VITO – Belgium, ISR – Portugal, EIHP – Croatia, AEA – Austria, EnEffect – Bulgaria, JSI – Slovenia, LEA – Lithuania

streamSAVE+ - Dialogue meetings



Biannual Summaries

- Dialogue Meetings |Bi-annual Summary July 2024 to December 2024
- Dialogue Meetings |Bi-annual Summary January 2025 to June 2025
- Dialogue Meetings |Bi-annual Summary July 2025 to December 2025

Dialogue Meetings

StreamSAVE+ dialogue meetings

- Dialogue meeting 1: Assessing energy savings from deep retrofit programmes
- Dialogue meeting 2: Assessing energy savings from water conservation measures
- Dialogue meeting 3: Energy savings in companies: technology-focused vs. system approach
- Dialogue meeting 4: Local energy savings in national monitoring
- Dialogue meeting 5: Data centres & savings data: from potential to action
- Dialogue meeting 6: Energy savings from heat recovery in ventilation systems
- Dialogue meeting 7: Energy savings from public traffic management
- Dialogue meeting 8: Energy savings from deep renovations in buildings

StreamSAVE dialogue meetings

Predecessor project streamSAVE (2020–2023) received funding from the H2020 Programme under grant agreement N° 890147.



- Kick off dialogue meeting I
- Dialogue meeting II (BACS)
- Dialogue meeting III (Public Lighting)
- Dialogue meeting IV (Electric Vehicles)

<https://streamsavplus.eu/article/9-dialogue-meetings>

What's next?

Tuesday
24
February

✦ [streamSAVE+ Dialogue Workshop](#):
Data for energy savings calculations:
insights from key **databases** at EU
and national level

And more to come!



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