Streamlining Energy Savings Calculations in the EU Member States + (streamSAVE+)

The recast **Energy Efficiency Directive (EU/2023/1791)** demands far greater energy savings from Member States and robust proof of them. **streamSAVE+ helps countries design, calculate and report savings under Articles 4, 5 and 8 with harmonised bottom-up methodologies**, EU-wide indicative values and calculation tools.

Project partners

SEVEn, vito, IEECP Institute for European Energy and Climate Policy, Austrian Energy Agency, Lithuanian Energy Agency, КАПЕ CRES, ISR, EIHP Energy Institute Hrvoje Požar, EnEffect, Jožef Stefan Institute

Key outputs of the project include:

- An expanded and **improved online platform offering tools, case studies, and methodologies** for streamlined energy savings calculations.
- **Capacity-building support for public authorities**, including workshops and peer-to-peer dialogues.
- **Policy recommendations** tailored to help Member States improve their energy efficiency reporting and compliance with EED obligations.

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ENERGY SAVINGS FROM DEEP RENOVATION OF BUILDINGS

Buildings account for approximately 40% of the EU's energy consumption and 36% of energy-related greenhouse gas emissions.

The **streamSAVE+** methodology **estimates savings by comparing** final energy consumption **before** and **after renovation** while accounting for building systems, climate conditions and behavioural effects.

KEY ASPECTS	ACTIONS	BENEFITS
✓ Extensive energy performance improvement ✓ Whole building approach ✓ Long-term impact ✓ Reduction of carbon footprint	✓ Building envelope ✓ HVAC systems ✓ Electrical systems ✓ RES integration	✓ Cost reduction ✓ GHG emission reduction ✓ Indoor comfort and health ✓ Property value ✓ Job creation (local)

Benefits of the methodology

- ✓ Assesses combined renovation measures consistently.
- ✓ Prevents double counting of energy savings across multiple renovation measures.
- ✓ Helps prioritise renovation projects based on their long-term energy-saving potential.

Explore the full methodology

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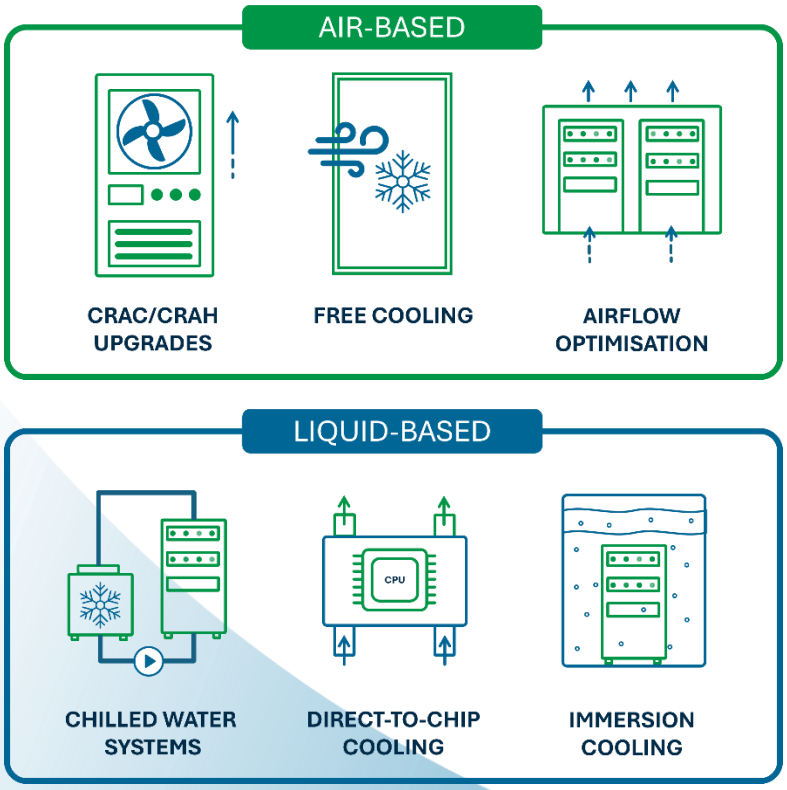
ENERGY SAVINGS FROM COOLING IMPROVEMENTS IN DATA CENTRES

Cooling accounts for 30–40% of a typical data centre's electricity consumption, making it one of the greatest opportunities for energy savings.

The **streamSAVE+** methodology provides a **transparent and scalable** approach for **quantifying energy savings** from cooling efficiency improvements using **PUE (Power Usage Effectiveness).**

Define Baseline → Classify Facility → Select Intervention → Calculate Savings → Validate & Report

Addressed Efficiency Interventions



Benefits of the methodology

- ✓ Covers CRAC/CRAH upgrades, free cooling and airflow optimisation.
- ✓ Covers chilled-water, direct-to-chip and immersion cooling.
- ✓ Enables standardised calculations and consistent benchmarking across facilities.

Explore the full methodology

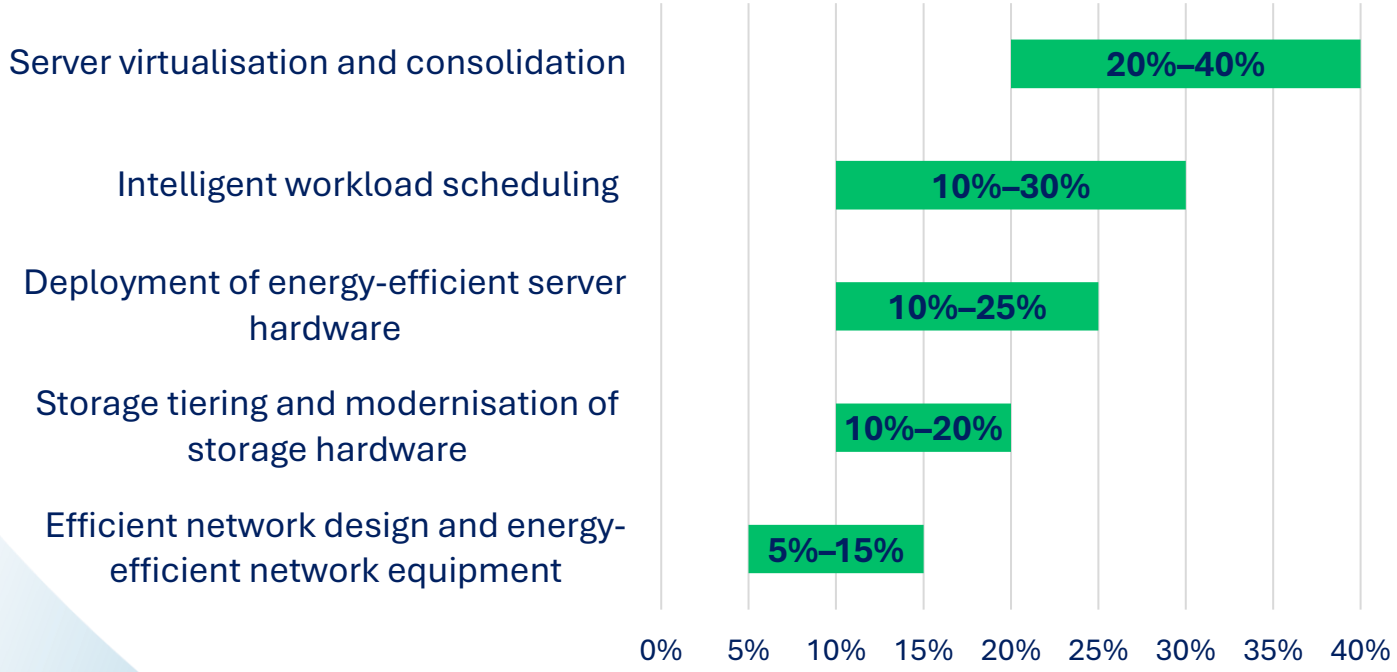
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ENERGY SAVINGS FROM IT EQUIPMENT AND SYSTEMS EFFICIENCY

EU data centre electricity use projected at ~98 TWh by 2030 (≈3.2% of EU demand). ICT equipment (servers, storage, networks) represents the core electricity demand (about 60%) of data centres.

The streamSAVE+ methodology calculates final energy savings by applying a measure-specific saving factor to the energy share of each ICT load: **servers (60–70%)**, **storage (10–15%)** and **networking (10–15%)**.

Typical efficiency measures and indicative savings:



Benefits of the methodology

- ✓ Assesses ICT efficiency measures consistently.
- ✓ Provides comparable results across servers, storage and networks.
- ✓ Prevents double counting when several measures affect the same component.

Explore the full methodology

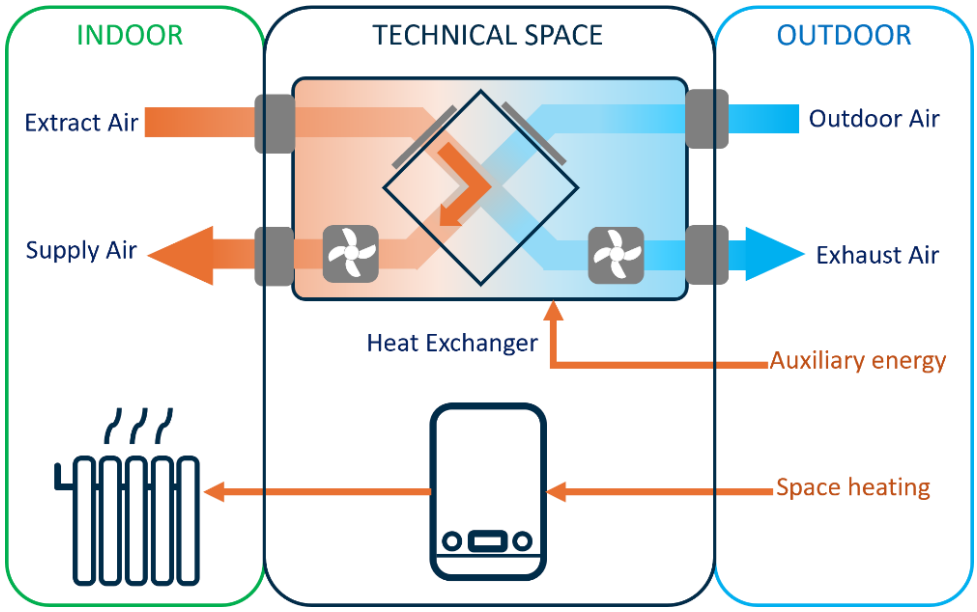
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ENERGY SAVINGS FROM HEAT RECOVERY IN VENTILATION UNITS

Heat recovery systems can recover around 70% of the heat from exhaust air, reducing space-heating demand.

The **streamSAVE+** methodology quantifies **space-heating energy savings** from heat-recovery ventilation using EU-wide default values and accounting for building type, climate zone and auxiliary electricity use.

Schematic representation of the energy balance
(winter mode)



Benefits of the methodology

- ✓ Uses a deemed-savings approach with EU-wide values.
- ✓ Covers residential and non-residential buildings, retrofitted and non-retrofitted, across three EU climate zones (North, West, South).
- ✓ Accounts for auxiliary energy used by fans, controls and defrosting.

Explore the full methodology

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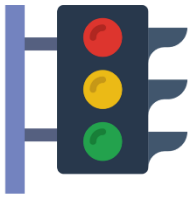
ENERGY SAVINGS FROM PUBLIC TRAFFIC MANAGEMENT

Smoother traffic flow reduces stop-and go driving and idling, lowering fuel consumption and energy use.

The **streamSAVE+** methodology provides a harmonised approach for quantifying energy savings from smart traffic control, travel demand and parking management, and traffic calming measures that improve traffic flow, influence travel choices and reduce vehicle speeds and congestion.

FOUR FAMILIES OF MEASURES

ACTIVE **TRAFFIC** MANAGEMENT



ACTIVE **DEMAND** MANAGEMENT



ACTIVE **PARKING** MANAGEMENT



TRAFFIC **CALMING** MEASURES



Benefits of the methodology

- ✓ Provides reference values for vehicle energy consumption and annual travel distances.
- ✓ Simplifies baseline calculations using Member State-specific reference data.
- ✓ Enables consistent energy savings calculations based on actual national energy consumption data.

Explore the full methodology

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OTHER PRIORITY ACTIONS FOR ENERGY SAVINGS CALCULATIONS

The remaining priority actions provide standardised methodologies for calculating energy savings across various sectors.



Refrigeration systems



Building Automation & Control Systems



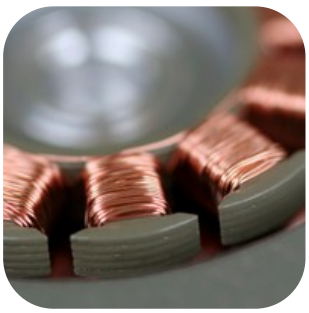
Electric Vehicles



Lighting Systems



Heat Recovery



Motor Replacement



Behavioural Changes



Freight Transport: modal shift



Small-scale Renewable Heating Technologies



Energy Poverty

Easy-to-use calculation tools are available through the streamSAVE+ platform

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STREAMSAVEPLUS PLATFORM

The **streamSAVE+ platform** brings all priority actions together in one place – open calculation tools, methodologies, indicative values and case studies for public authorities, policy makers and practitioners across the EU.

- ✓ Standardised energy savings calculations for every priority action
- ✓ EU-wide indicative values, adaptable to national or site-specific data
- ✓ Downloadable guidance and project deliverables
- ✓ Capacity building: workshops and peer-to-peer policy dialogues

- **Explore the platform: https://streamsaveplus.eu**
- **Priority actions: https://streamsaveplus.eu/priority-actions**

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