Smart Built4EU
The European Smart Buildings Community

# Opening and agenda

Alain ZARLI, ECTP Secretary General, Project Coordinator

*This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 956936.*

# Agenda

| | | |
|---|---|---|
| 9:10-10:15 | Opening session | *Moderation* |
| 9:10-9:15 | Opening + Agenda – Alain Zarli, Secretary General, European Construction Technology Platform (ECTP), project coordinator | Alain Zarli, (Secretary General, ECTP) |
| 9:15-9:25 | Welcome – Aneta Willems, CINEA Head of Department for Natural resources, climate, sustainable blue economy and clean energy | |
| 9:25-10:15 | Presentations: Smart buildings - policy framework, institutional support and overarching initiatives:<br>• The EU energy efficiency and buildings policy framework & The EU Action Plan on digitalising the energy system – Karsten Krause (team leader, EC DG ENER.B5)<br>• The LIFE Clean Energy Transition programme – Ulrike Nuscheler (senior project adviser, CINEA)<br>• Horizon Europe Cluster 5 Destination 4 – Stavros Stamatoukos (project adviser, CINEA) | Pierre-Antoine Vernon (project adviser, CINEA) |
| 10:15-10:30 | Coffee break | |

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|---|---|---|---|
| 10:30-12:10 | Plenary session I - Supporting smart buildings policy | | |
| 10:30-10:40 | SmartBuilt4EU highlights – Nerea Gomez, Project Officer, European Construction Technology Platform (ECTP) | | |
| 10:40-11:40 | Project pitches and panel session: *Smartness upgrades and the Smart Readiness Indicator*<br>• COLLECTiEF – Vahid Nik (Lund University)<br>• PHOENIX – Alfonso Ramallo (UMU)<br>• SATO – Pedro M. Ferreira (FCIENCIAS.ID)<br>• Auto-DAN – Celina Solari (RINA)<br><br>Moderation: Regis Decorme (Managing partner & co-founder, R2M Solutions France) | Project pitches and panel session: *Supporting the implementation of the Smart Readiness Indicator*<br>• EasySRI – Dimos Ioannidis (CERTH/ITI)<br>• SRI2MARKET – Filippos Anagnostopoulos (IEECP)<br>• SRI-ENACT – Laura Junasová (Euroheat & Power)<br>• Smart² – Andrei Vladimir Litiu (REHVA)<br><br>Karine Lafont (Senior Consultant & Associate Partner, DOWEL innovation) | |
| 11:40-12:10 | Focus on smart buildings clusters:<br>Smart Buildings in Use – Ruben Delvaeye (Buildwise)<br>The Built4People R&I Partnership – Nerea Gomez, European Construction Technology Platform (ECTP),<br>& the Nebula project and New European Bauhaus – Anastasiya Yurchyshyna, European Construction Technology Platform (ECTP) | | Alain Zarli, (Secretary General, ECTP) |
| *12:10-13:20* | *Lunch* | | |

| | | | |
|---|---|---|---|
| 13:20-14:30 | Plenary Session II - Innovation for smarter buildings | | |
| 13:20-14:30 | Breakout room: *Focus on buildings lifecycle data*<br>• OpenDBL – Soumya Kanti (Digiotouch)<br>• Digital Building Logbook Study – Michael Flickenschild (Ecorys)<br>• BuiltHub – Federico Garzia (EURAC)<br><br>Moderation: Federico Garzia (EURAC) | Project pitches and panel session: *Smart buildings & data*<br>• MATRYCS – Roman Mendle (ICLEI)<br>• D^2EPC – Stavros Koltsios (CERTH/ITI)<br>• DigiBUILD – John Kapetanakis (Euroheat & Power)<br>• Interconnect – Laura Daniele (TNO)<br>• SMART2B – Nuno Mateus EDP)<br><br>Clementine Coujard (Senior Consultant & Associate Partner, DOWEL Innovation) | |
| *14:30-15:00* | *Coffee break* | | |
| 15:00-15:50 | Plenary Session III | | |
| 15:00-15:40 | Presentations & debate with audience: future perspectives for smart buildings in Europe<br>• SmartBuilt4EU final recommendations for policy and innovation – Maarten De Groote (senior expert, VITO)<br>• What's next? Future of the SmartBuilt4EU Smart Buildings Innovation Community & future Smart Buildings activities – Regis Decorme (Managing partner & co-founder, R2M Solutions France) | | Ulrike Nuscheler (senior project adviser, CINEA) |
| 15:40-15:50 | Concluding remarks:<br>• Sylvain Robert, Project Advisor, CINEA<br>• Alain Zarli, Secretary general, ECTP, project coordinator | | |

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# Welcome

**Aneta WILLEMS, CINEA Head of Department for Natural resources, climate, sustainable blue economy and clean energy**

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Smart Built4EU
The European Smart Buildings Community

# Smart buildings - policy framework, institutional support and overarching initiatives

**Pierre-Antoine VERNON, Project adviser, CINEA**

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European Commission

# EU Action Plan for the Digitalisation of the Energy System


**Dr. Karsten Krause**
Head of Sector
Innovation, Research, Digitalisation, Competitiveness (B.5)
DG Energy, European Commission

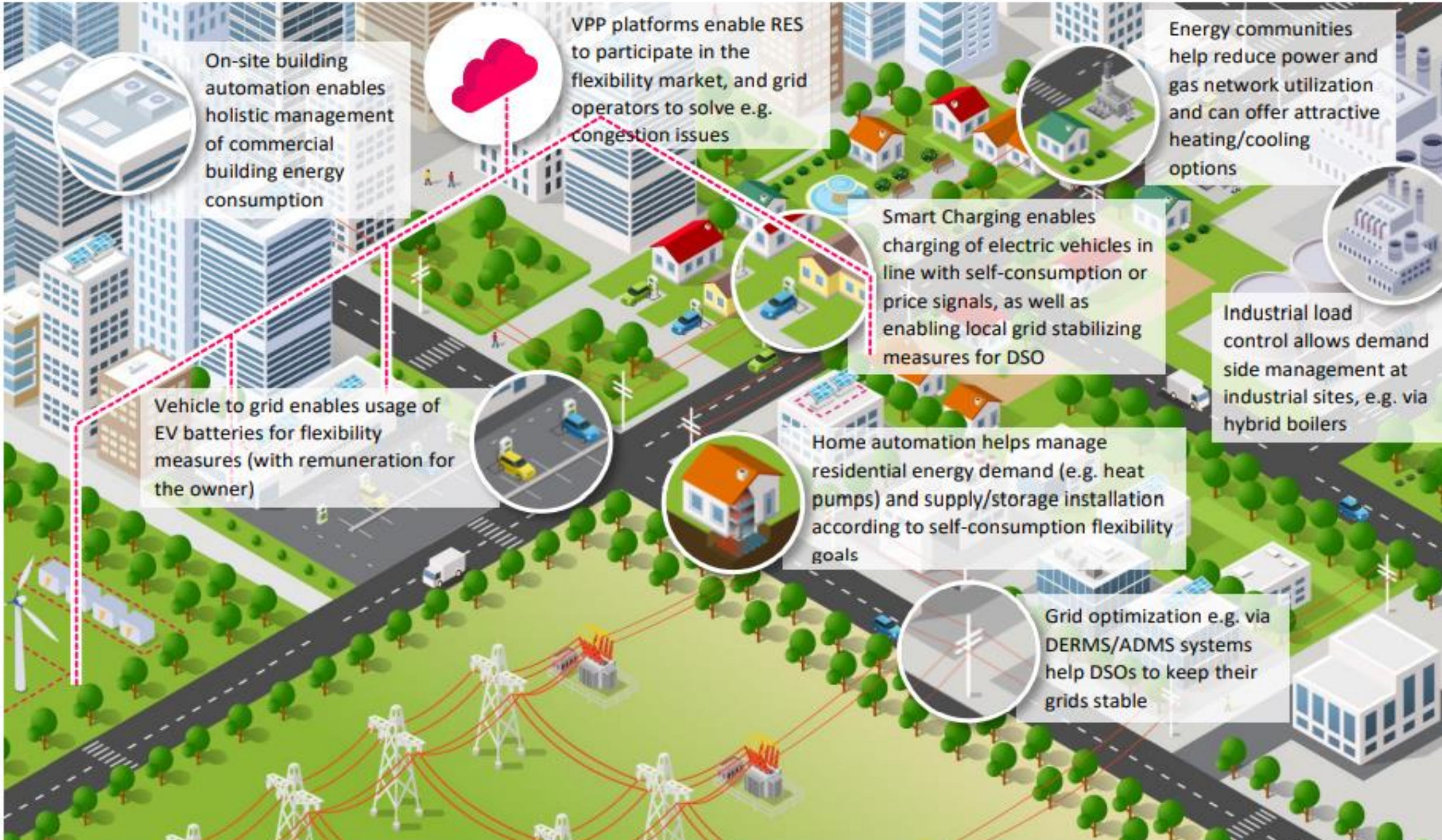
# Twin Energy and Digital Transition

European Green Deal

Europe fit for the Digital Age

a better-functioning, smart, integrated and interconnected energy system, where new business models can easily emerge in a fast-changing market.

European Commission


On-site building automation enables holistic management of commercial building energy consumption
VPP platforms enable RES to participate in the flexibility market, and grid operators to solve e.g. congestion issues
Energy communities help reduce power and gas network utilization and can offer attractive heating/cooling options
Smart Charging enables charging of electric vehicles in line with self-consumption or price signals, as well as enabling local grid stabilizing measures for DSO
Industrial load control allows demand side management at industrial sites, e.g. via hybrid boilers
Vehicle to grid enables usage of EV batteries for flexibility measures (with remuneration for the owner)
Home automation helps manage residential energy demand (e.g. heat pumps) and supply/storage installation according to self-consumption flexibility goals
Grid optimization e.g. via DERMS/ADMS systems help DSOs to keep their grids stable

# Main areas of the Digitalisation Action Plan

# A European framework for sharing data to support innovative energy services

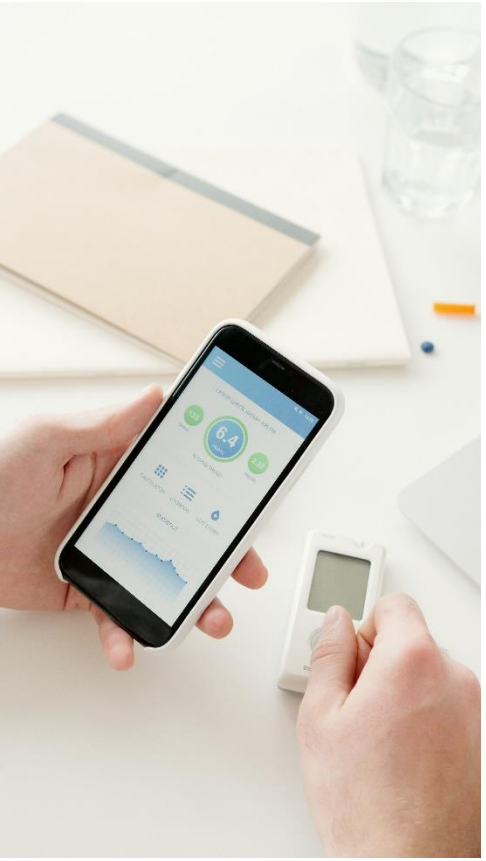
- Priority **high-level use cases**: (a) flexibility services, (b) smart charging of electric vehicles, and (c) buildings
- Developing a **Common European Energy Data Space** (interoperable framework of common standards and practices)
- Building on the energy and digital regulatory framework, including the Implementing Acts under preparation
- Creating an EU **Smart Energy Expert Group** with a ‘Data for Energy’ working group

European Commission

# Promoting investments in digital electricity infrastructure


- Creating a **digital twin** of the electricity grid with ENTSO-E and EU DSO Entity
- Supporting National Regulatory Authorities and ACER in defining common **smart grid indicators and objectives**
- Urging Member States to accelerate the rollout of **smart meters** and revisit their costs-benefits analysis when necessary

# Benefitting citizens



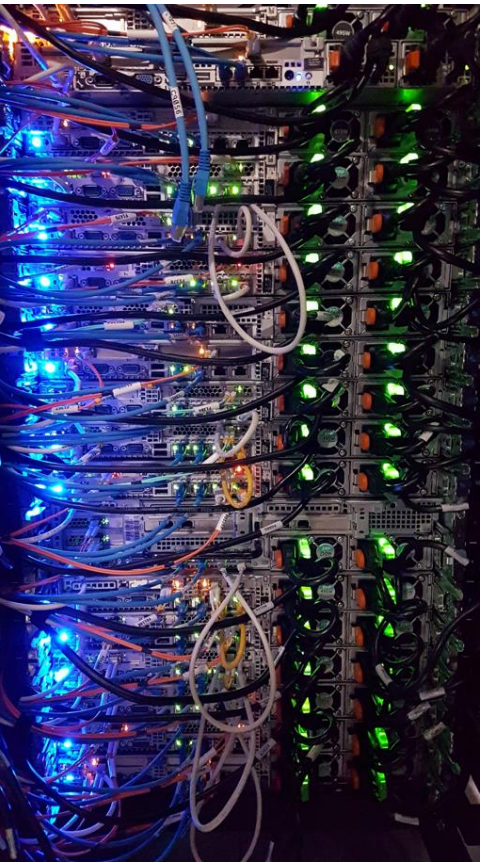
- Strategies & tools to engage consumers to have an active role in the crisis
- **common reference framework for an app** helping consumers reduce their energy use, especially during peak hours
- Fitness Check of EU **consumer law on digital fairness**
- Large-scale partnership on the digitalisation of the energy value chain as part of the **EU's Pact for Skills**

# Ensuring cybersecurity and resilience

- Security and cybersecurity are paramount in the digitalised energy system: (1) the amount of exchanged data, the complexity of interactions between the actors increases (2) "the risk surface" of the energy system increases with devices and appliances connected to the traditional distribution networks.
- Actions complement **cross-sector legislation such as** the **Directive on measures for high common level of cybersecurity across the Union/ the NIS 2**, the EC proposal on the Cyber-Resilience Act (2022/454) of 15.9.22
- A **network code for cybersecurity aspects of cross-border electricity flows (under the Electricity Regulation)**
- a possible **delegated act on the cybersecurity of gas and hydrogen networks** (as part of the legislative package of December 2021)
- the announced **Council Recommendation** (2022/551) on coordinated approach by the Union to strenghten the resilience of the critical infrastructure

European Commission

# Energy consumption of the ICT sector



- **Eco-design and energy labelling of products**
  *e.g. energy-label for computers*
- Measures targeting **communication networks**
  *e.g. EU code of conduct for their sustainability*
- Measures targeting **Data Centres**
  *e.g. environmental labelling scheme*
- Measures targeting **crypto-assets**
  *e.g. energy-efficiency label for blockchains*

# An EU-wide coordinated approach

- Increasing investments in digital solutions through **National Energy and Climate Plans, Digital Decade roadmaps, and Recovery and Resilience Plans.**
- **EU funding** to accelerate the **development and deployment** of innovative digital energy solutions.
- Structured **high-level dialogue** on digitalisation of energy.
- **Platform for cooperation** between digital and energy innovators.
- Reinforcing **international collaboration.**

# Thank you

*Stay informed: DG ENER work on Digitalisation of the energy sector: https://energy.ec.europa.eu/topics/energy-system-integration/digitalisation-energy-sector_en*

European Commission

# Smart Buildings

## LIFE-CET – Turning Policy into Action

EU energy efficiency policies & the LIFE Clean Energy Transition programme

CINEA – LIFE Climate & Energy Unit

Ulrike Nuscheler, Senior Project Officer

SmartBuilt4EU, Final Event, 23 March 2023

European Climate, Infrastructure and Environment Executive Agency

# Policy context - Overview

- **European Green Deal** - EU to be climate neutral by 2050 + cut GHG emissions by at least 55% by 2030implementation

- **Fit for 55 package** - Delivering the Green Deal; i.a. revision of key legislation EED, RED, EPBD

- **REPowerEU** - call on co-legislators to make "Fit for 55" package more ambitious + speed up adoption and implementation


European Commission

# Recast of the Energy Efficiency Directive - timeline

- Political **provisional agreement on 10 March 2023** with European Parliament and Council

  Next steps:

  - finalisation at technical level and validation (Coreper),
  - adoption by European Parliament and Council (target September 2023), publication Official Journal of the Union,
  - transposition period of 2 years

# Recast of the Energy Efficiency Directive – Main provisions

- Energy Efficiency remains long-term response to the crisis and climate objectives – **new binding EU energy efficiency target** & indicative national contributions : **11.7% for 2030**
- **Energy Efficiency First' Principle,** making it an integral part of policy and investment decisions – new article 3
- Strengthened **energy savings obligation in end-use** to reach **1.9% by 2030** (average 1.49% for 2024-2030)

# Recast of the Energy Efficiency Directive – Main provisions (cont.)

- **Energy management systems** and **energy audits**
- Stronger **exemplary role of public sector** including on buildings renovation (min. 3%/y of total floor area of buildings owned by **public administration**) and on annual energy consumption reduction (1.9%)
- **New definition of efficient** district heating and cooling to promote RES and introduce local heating and cooling plans for municipalities
- Measures to **alleviate energy poverty**, boost consumer empowerment
- Reinforces obligations on Member States and provisions on financing to **leverage further private investments**

# European Performance of Buildings Directive (EPBD) – the recast proposal in a nutshell

**4 key areas to deliver on 2030/2050 objectives:**

| | | | |
|---|---|---|---|
| Renovation at the core of the EPBD | Decarbonisation & requirements for new buildings | Financing | Modernisation& system integration |

**Timeline:**

- **EPBD proposal adopted** on 15 December 2021
- Council agrees on **General approach** in October 2022; on14 March 2023, **EP plenary adopts its position** and grants mandate to ITRE for trilogues

European Commission

# EPBD Recast Proposal: Main provisions

- Minimum Energy Performance Standards to phase out worst performing buildings
- Strengthening role and quality of Energy Performance Certificates
- Renovation passports for individual buildings
- National Building Renovation Plans replacing the long-term renovation strategies
- Definition of „deep renovation“
- Zero-emission buildings become level to be attained by a deep renovation as of 2030 and vision for building stock in 2050
- Stronger provisions on the removal of obstacles and barriers to renovation (right to renovate)
- The life-cycle Global Warming Potential (GWP) of new buildings to be calculated as of 2030
- Member States must not subsidise fossil-fuel boilers as of 2027

# Main provisions on buildings data, modernisation & system integration

- Reinforcement of the **Smart Readiness Indicator (SRI)**: **mandatory application to large buildings** (Delegated Act by 2025)
- New provisions to **ensure access to buildings data, databases of EPCs** and **data interoperability**
- **Strengthened requirements for recharging of e-vehicles** in case of major renovation

**SRI provisions from the co-legislators**

**Council:** Mandatory application to large buildings (adoption of a Delegated Act by 31 Dec 2026), conditional to a positive evaluation of the SRI test phases in Member States

**EP:** extension of the requirement from large to medium non-residential buildings (adoption of a Delegated Act by 31 Dec 2025)

# LIFE sub-programme Clean Energy Transition


## Key EU programme for clean energy transition

focusing on **policy implementation & market up-take** of technologies and products

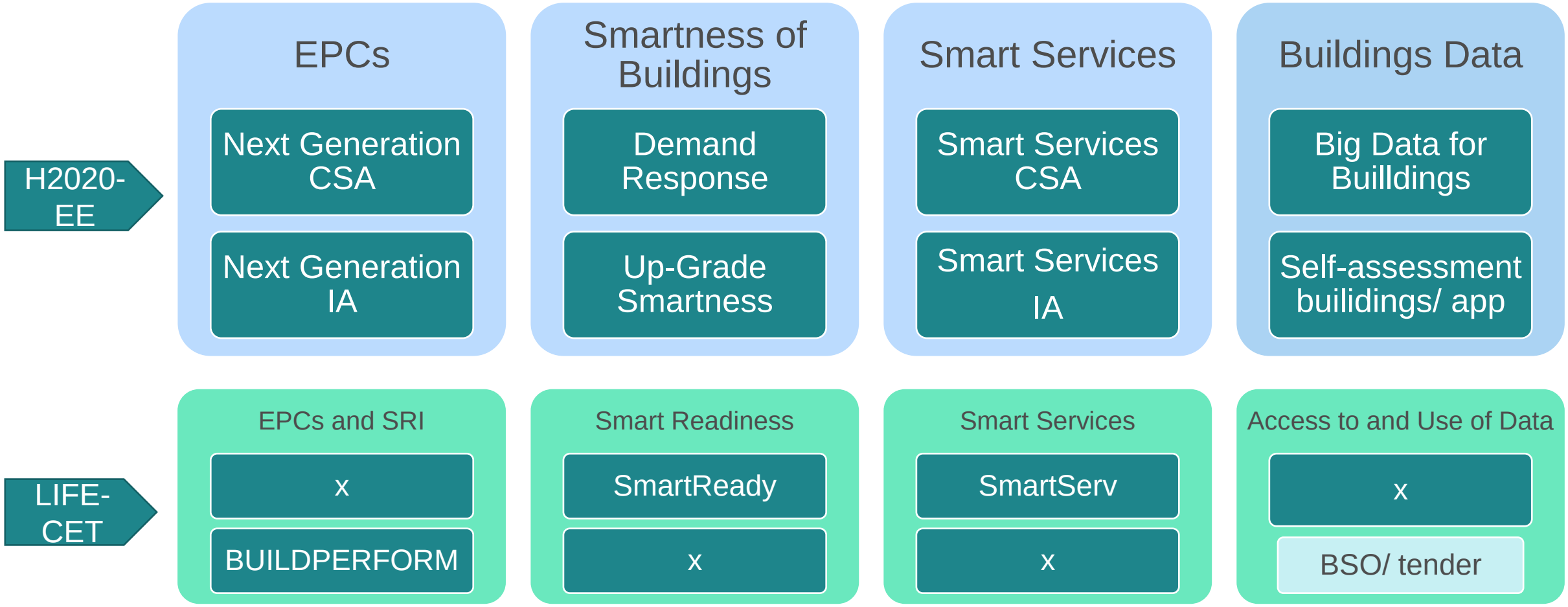
➡ Creating favourable regulatory and market conditions; mobilising investments; building capacity; empowering consumers

- Builds on **Horizon 2020 Energy Efficiency** (2014-2020)
- 2021-2027 budget of almost €1 bn

Clean Energy Transition

European Commission

# From Horizon 2020 to LIFE-CET




Policy: EPBD-implementation

European Commission

# Outcome of the LIFE CET 2021 Call

Attracting private finance

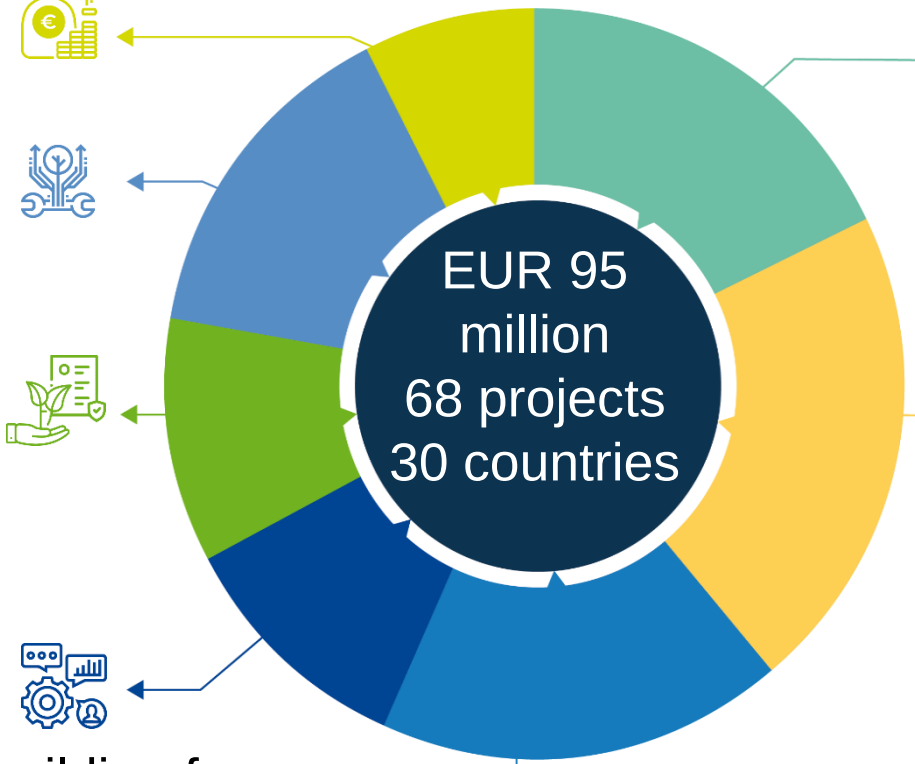
4 projects / € 7m

Skills/capacity of industry & services

19 projects / € 14m

Supporting EU energy policy framework

6 projects / € 10m




Capacity building for cities & regions

6 projects / € 10m

Local & regional investment projects

12 projects / € 17m

Citizens in the clean energy transition

11 projects / € 17m

Clean & smart energy in buildings

10 projects / € 20m

European Commission

# Outcome of LIFE CET 2022 Call*

Attracting private finance

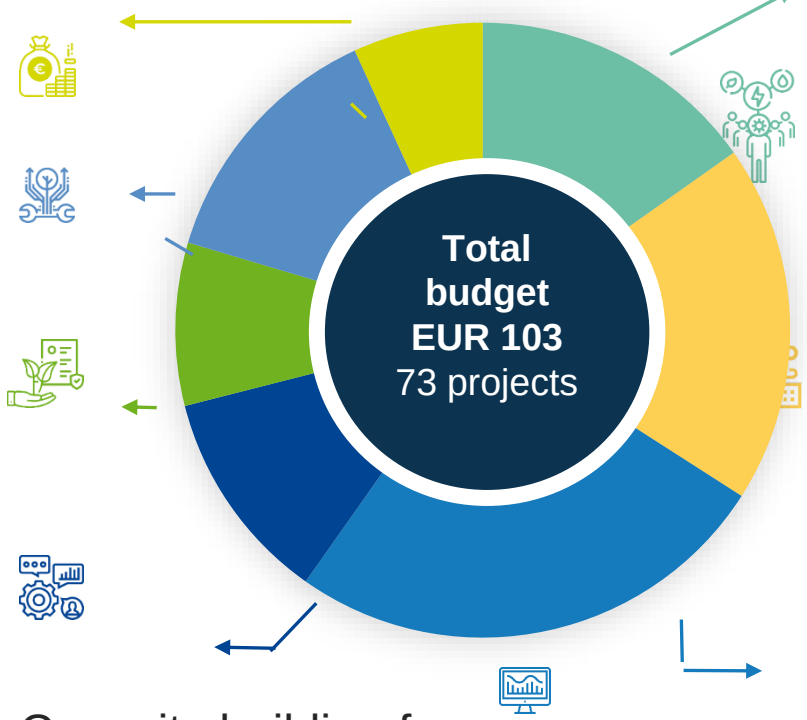
8 projects
€ 7m

Skills/capacity of industry & services

12 projects
€ 14m

Supporting EU energy policy framework

5 projects
€ 9m




Capacity building for cities & regions

8 projects
€ 12m

Citizens in the clean energy transition

10 projects
€ 16m

Clean & smart energy in buildings

11 projects
€ 20m

Local & regional investment projects

19 projects
€ 27m

*Subject to successful signature of grant agreements

European Commission

# Energy Performance and Smartness of Buildings under LIFE-CET

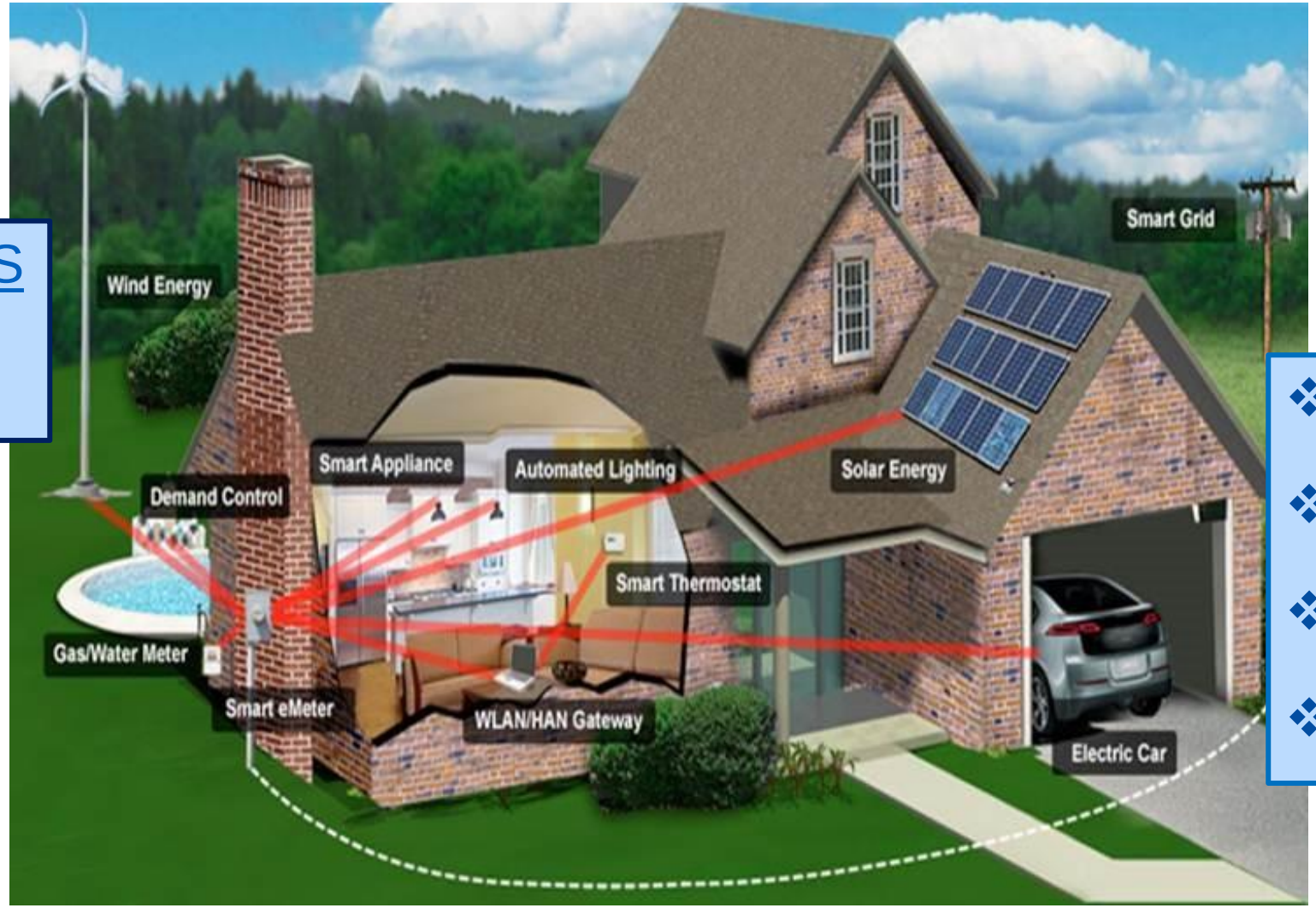
**Actions providing support for a more effective:**

- market up-take of business models for **Smart Services** in and provided by buildings (“SmartServ” – Call 2021) – 2 projects
- policy implementation and market up-take of the **Smart Readiness Indicator/ SRI** (“SmartReady” - Call 2021) – 4 projects
- policy implementation, market up-take and integration of key instruments for buildings, i.e. **Energy Performance Certificates and SRI** (“Buildperform” - Call 2022) – 3 successful proposals
- policy implementation of key provisions of the **Energy Performance of Buildings Directive** (“Policy” - Call 2022) – 1 successful proposal
- **Call 2023?**

European Commission

# LIFE-CET Smart Services + SRI-projects

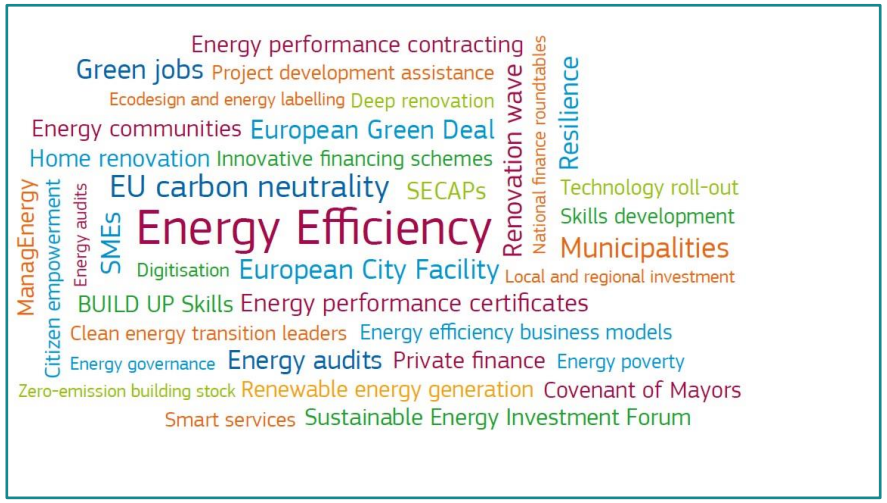
- BungEES
- InEEXs




- SRI ENACT
- SRI2Market
- SmartSquare
- easySRI

European Commission

# LIFE-CET Call 2023




- Opening mid-May 2023
- Deadline mid-November 2023
- Ca. EUR 100m available for grants
- 95% co-funding rate (no infrastructure cost, mostly labour)
- Policy and market needs-driven funding topics, technologies as enablers
- Most topics: Minimum of 3 (eligible) entities from 3 different eligible countries
- Application through Funding & Tender opportunities portal

European Commission

# Relaunch of the BSO

EU Building Stock Observatory (BSO) – the European Repository for Data and Information on the EU Building Stock

- will offer key data and indicators, infographics, data mapper, country reports
- revamped Digital platform (preliminary version) foreseen to be launched in April 2023
- EPBD-recast might include obligation for MS to transfer buildings data to BSO

# More information

- Any questions on LIFE Clean Energy Transition  call topics? Email us on: CINEA-LIFE-CET@ec.europa.eu
- All Calls for proposals are published on the Funding & Tender portal https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/programmes/life2027
- Recordings of detailed 2022 LIFE CET Info Sessions available here:
- LIFE webpages https://cinea.ec.europa.eu/programmes/life/life-calls-proposals_en
- Call Document Clean Energy Transition 2022 https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/life/wp-call/2021-2024/call-fiche_life-2022-cet_en.pdf
- How to write an excellent proposal https://cinea.ec.europa.eu/programmes/life/life-calls-proposals_en
- Recordings and presentation slides on each CET topic available on CINEA (coming soon)
- eGrants Online Manual: https://webgate.ec.europa.eu/funding-tenders-opportunities/display/OM/Online+Manual

European Commission

# Keep in touch with us

Any questions on LIFE Clean Energy Transition call topics? Email us on:
**CINEA-LIFE-CET@ec.europa.eu**

https://cinea.ec.europa.eu/life_en

LIFE Programme

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LIFE Programme

LIFE Programme

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LIFE Newsletter
Clean Energy Newsletter

30 years of bringing green ideas to LIFE

European Commission

# European Climate, Infrastructure and Environment Executive Agency


Stavros STAMATOUKOS

Project Adviser – Horizon Europe Energy

# How smart are our buildings?

**FREQUENTLY ASKED QUESTIONS – CINEA Building temperature**

**Q:** How does the heating system work in our building?
**A:** Building heating is complex and different from how we heat at home. Our building uses the "ejecto-convector system". Air is sucked in the building, filtered, heated and extracted. You can see a detailed description via this link: How heating works in Commission buildings in Brussels (europa.eu)

**Q**: Why is office temperature set at 19C°?
**A**: The Commission wanted to reduce gas consumption by 15% during the 2022/2023 winter (see communication to all staff of 28 September 2022). For that reason, the Commission decided that one of the measures to attain this objective is to set temperature to 19°C in Commission office buildings, which represents saving up to 1650 MWh per winter month. CINEA, as other EAs, followed this approach.

**Q**: What is done to ensure that temperature is not lower than 19C°?
**A**: The Logistics team regularly monitors office temperature and contacts the building management to contact their sub-contracted maintenance company when necessary. The maintenance company regularly checks and performs scheduled maintenances.

**Q:** Why sometimes temperature drops below 19C°?
**A:** It is indeed true, that sometimes the heating system malfunctions and temperature drops below 19C°. The Logistics team follows-up immediately with the building management. In these cases, it may take several hours for the building to reheat before it reaches 19C°.

**Q:** Why sometimes on Monday mornings it is cold in the offices?
**A:** Sometimes the heating system breaks down during the weekend and is repaired on Monday morning and it takes some time to reach the temperature of 19C°.

**Q:** At what time is the heating system raised to ensure 19C° on Monday morning?
**A:** The heating system is raised from 14C° to 19C° at 4 a.m. on Monday morning. This should guarantee 19C° as of 7 a.m. on Monday (unless there was a malfunctioning during the weekend).

**Q:** Is the thermostat in my office accurate?

9 March 2023

**A:** The temperature displayed on the thermostat is not accurate and should not be used to check the temperature in your office. They have been installed in the wrong place in the offices (under the windows) where temperature is always lower.

**Q:** How can I measure the temperature in my office?
**A:** You can check it by borrowing a thermometer available on each floor in the following Secretariat's offices: 1/026, 2/017, 3/005, 4/160 and 5/295. Avoid using other thermometers since not all thermometers are accurate.

**Q:** What should I do if the temperature is lower than 19C° after I measured it using the Agency's thermometer?
**A:** Open a ticket with Logistics and specify the measured temperature. Logistics will contact the building management to send a technician from the maintenance company to check the system and make adjustments when necessary.

**Q:** Why temperature sometimes varies between blocs A, B and C?
**A:** Each bloc has its own heating system and therefore it is not always possible to have the same temperature in each bloc. Blocs A and C are occupied by other tenants who decided to set the temperature at 20C°.

**Q:** Why sometimes temperature varies between different floors and areas of the same bloc?
**A:** The part of the building exposed to the south, is generally a little warmer than the rest of the building. The floors in the middle are generally warmer. Unfortunately, technically it is not possible to ensure the same exact temperature in a 10.000 m² building with separate heating systems per bloc and with offices exposed to south and north.

**Q:** Can I bring an electric heater to the office?
**A:** Electric heaters are not allowed for safety and energy efficiency reasons, as they consume much electricity so then savings would not be attained as required.

9 March 2023

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# Smart buildings - key to decarbonisation

Smartness in buildings is an essential element in a decarbonised, renewable-intensive and more dynamic energy system in Europe

Smart buildings:

1. Achieve high energy efficiency by optimal operation
2. Ensure that the building user's comfort is covered
3. Strengthen the role of demand side flexibility

# Outline

1. Smart buildings in policy
2. Smart buildings in research & innovation

# Smart buildings in policy I

- Art.11 – Technical building systems
  - “new buildings to be equipped with self-regulating devices for the separate regulation of the temperature in each room…”
  - “installation of measuring and control devices for the monitoring and regulation of environmental quality at relevant unit level…”
  - “non-residential buildings are equipped with building automation and control systems…”
  - new residential buildings (>70KW) are equipped with continuous monitoring of TBS, effective control and balancing functionalities to ensure optimum generation, distribution, storage and demand side flexibility”
  - “Non-residential buildings are equipped with automatic lighting controls”

# Smart buildings in policy II

- Article 14: Data exchange
  - MS to ensure that building owners, tenants and managers can have direct access to their building systems' data
  - At their request, the access or data shall be made available to a third party
  - MS to use international standards and management formats for data exchange and facilitate the full interoperability of services and of data exchange within the Union
  - No additional costs shall be charged to the building owner, tenant or manager for access to their data or for a request to make their data available to a third party.
  - MS to be responsible for setting the relevant charges for access to data by other eligible parties such as financial institutions, aggregators, energy suppliers, energy services providers and National Statistical Institutes or other national authorities
  - Aggregated and anonymised building systems data shall be made publicly available.

# Smart buildings in policy III

- Article 19: Databases for energy performance of buildings
  - Each MS to set up a national database for energy performance of buildings which allows data to be gathered on the energy performance of the buildings and on the overall energy performance of the national building stock.
  - The database shall allow data to be gathered related to energy performance certificates, inspections, the building renovation passport, the smart readiness indicator and the calculated or metered energy consumption of the buildings covered
  - The database shall be publicly accessible
  - MS to ensure access to the full EPC for building owners, tenants and managers, and to financial institutions as regards the buildings in their investment portfolio.
  - Database is interoperable and integrated with other administrative databases containing information on buildings, such as the national building cadastre and digital building logbooks

# Heat Pumps a facilitator for smart buildings

- The REPowerEU plan calls for doubling current deployment rates of building heat pumps total additional deployment of 10 million hydronic heat pumps in 2027 and 30 million by 2030 (compared to the current stock of 10 million units).
- Uptake of HPs = uptake of smart buildings

- Heat pumps action plan
  - A heat pump accelerator, to boost manufacturing and market deployment
  - A skills partnership to raise awareness and improve skills
  - Legislative measures (Ecodesign, EPBD, EED, RED F-gas, Energy Taxation)
  - Financing to facilitate access to EU funding programs

# Heat pumps in R&I

## Upgrade smartness of existing buildings

- Technological solutions to control the energy consuming legacy equipment already installed (e.g. TBS, appliances)
- 9 projects (+2 upcoming)

## Next generation EPCs

- Innovative energy performance calculation methods addressing relevant life-cycle performance aspects (IAQ, comfort)
- 6 projects

## Buildings data

- Enhance and standardise data collection, and develop data analytics tools to offer energy services (planning, renovation)
- 5 projects

## Demand side flexibility

- Building-to-grid integration solutions including on-site energy storage and on-site renewable energy sources
- (4 upcoming projects)

# Upgrading smartness of existing buildings

## H2020 Call 2019

### Legacy equipment (Q3 2020)

PHOENIX: Smart ways to improve the energy efficiency of existing buildings

RESCoopVPP: Smart building ecosystem for energy communities

domOS: Operating system for smart services in buildings

### Smart energy services (Q2 2020)

iBECOME: Innovative building management for energy optimization

frESCO: Energy efficiency and smartness solutions for residential buildings

## H2020 Call 2020

### Legacy equipment (Q3 2021)

SMART2B: Smartness to existing buildings

COLLECTiEF: Collective intelligence for energy flexibility

### Self-assessment of buildings (Q3 2020)

SATO: Self-assessment towards optimisation of building energy

Auto-DAN: Optimised energy consumption in buildings

# Next generation EPCs

## H2020 Call 2019

Next generation EPCs (Q3 2020)

ePANACEA: Smart European energy performance assessment and certification

D^2EPC: Next-generation dynamic digital EPCs for enhanced quality and user awareness

EPC RECAST: Energy Performance Certificate recast

E-DYCE: Energy flexible dynamic building certification

## Horizon Europe Call 2021

Advanced EPCs (Q2 2022)

SmartLivingEPC: Advanced energy performance assessment towards smart living in building and district level

CHRONICLE: Building performance digitalisation and dynamic logbooks for future value-driven services

# Buildings data

## H2020 Call 2020

Buildings portfolio level (Q4 2020)

MATRYCS: Modular big data applications for holistic energy services in buildings

BIGG: Building Information aggregation, harmonization and analytics platform

BEYOND: A reference big data platform implementation and AI analytics toolkit

## Horizon Europe Call 2021

Building stock level (Q2 2022)

DigiBUILD: High-quality data-driven services for a digital built environment towards a climate-neutral building stock

MODERATE: Marketable open data solutions for optimized building-related energy services

# Demand side flexibility

## Horizon Europe Call 2022 (1st)

Demand response in residential

- 2 projects selected
- to start Q2 2023

Smart buildings

- 2 projects selected
- to start Q2 2023

## Horizon Europe Call 2022 (2nd)

Buildings as active utility nodes

- 2 projects selected
- to start Q4 2023

# Horizon Europe Call 2023

Deadline 20 April 2023

- D4-01-03: Interoperable solutions for positive energy districts (PEDs), including a better integration of local renewables and local excess heat sources (8m€)
- D4-01-05: Innovative solutions for cost-effective decarbonisation of buildings through energy efficiency and electrification (25m€)

Deadline 5 September 2023

- D4-02-01: Innovative uses of lifecycle data for the management of buildings and buildings portfolios - Built4People Partnership (10m€)

# Horizon Europe Call 2024

Deadline 18 April 2024

- D4-01-02: Smart grid-ready buildings (10m€)

Deadline 5 September 2024

- D4-02-03: BIM-based processes and digital twins for facilitating and optimising circular energy renovation - Built4People Partnership (8m€)
- D4-02-05: Digital solutions to foster participative design, planning and management of buildings, neighbourhoods and urban districts - Built4People Partnership (10m€)

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# Thank you

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