

# Heating and Cooling Strategy Swedish Energy Agency

IEA Energy Storage : Workshop Annex 39

Emina Pasic, Swedish Energy Agency

2023-11-13



# IEA Energy Storage : Workshop Annex 39

- About Swedish Energy Agency
- Heating and Cooling Strategy
- The National Program TERMO- **Heating** and **Cooling** for the energy system of the future
- Questions

# About the Swedish Energy Agency

**Mission: We are leading society's transition to a sustainable energy system**

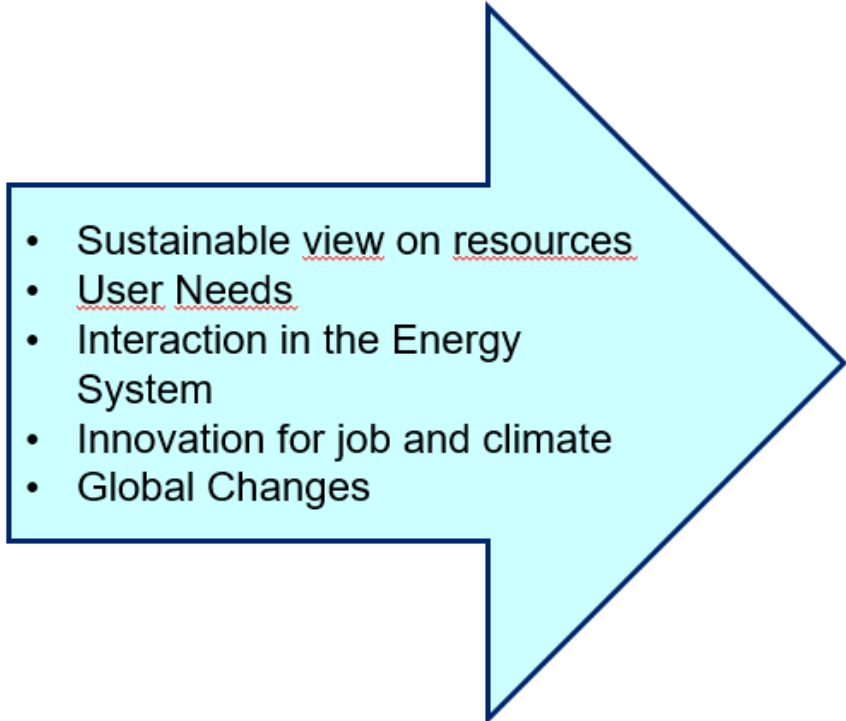
- National authority for energy policy issues & National Funding Agency
- Sorts under Ministry of Climate and Enterprise (2023-01-01)
- The Director-General is appointed by the Government
- Government funded
- Around 450 employees
- 62 percent women and 90 percent academics
- ISO 14001 (environment) and ISO 50001 (energy)



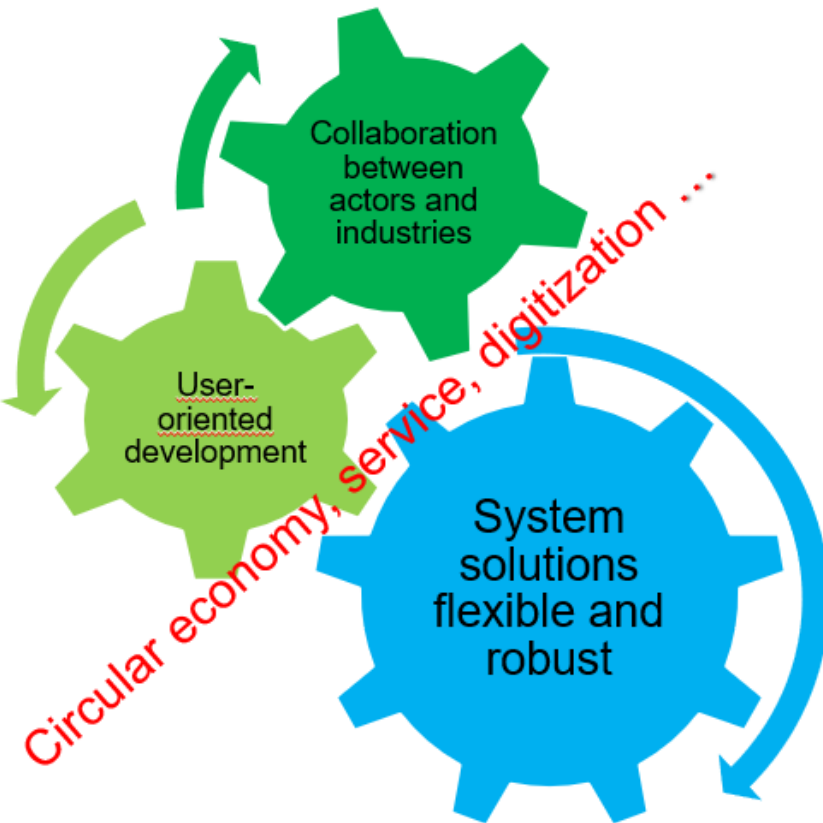
# Strategy for Heating and Cooling since 2017

## Today

- Incremental improvements in specific sectors
- Fragmented efforts on heat and cooling within different programs and initiatives
- Focus on technology development

- 
- Sustainable view on resources
  - User Needs
  - Interaction in the Energy System
  - Innovation for job and climate
  - Global Changes

## Tomorrow



# Strategy for Heating and Cooling Objectives 2030

## Vision 2050: A Sustainable Energy System (Swedish Energy Agency)

### Energy resources

*Energy for heat and cooling consists of recycled and renewable energy. Excess heat from different sectors is used and benefits society.*

### Interaction in the energy system

*Interaction between heat and cooling and other energy carriers contributes to a resource- and cost-effective energy system.*

### Resource effective use

*Heat and cooling are used in a resource-efficient manner. Users benefit from competitive prices in local markets.*

### Innovation for jobs and climate

*The business community, public actors and research actors are world-leading in heating and cooling innovations. Products, system solutions and services are competitive in a global market.*

# Strategic movements



- **A new thematic area**

- Circularity of materials as part of resource efficiency
- Nuclear heat and surplus heat from nuclear power
- Security of supply



- **More clearly included / increased focus**

- Flexibility
- Excess heat
- Business models
- Sector connections, above all to the electricity grid



- **Stay the course**

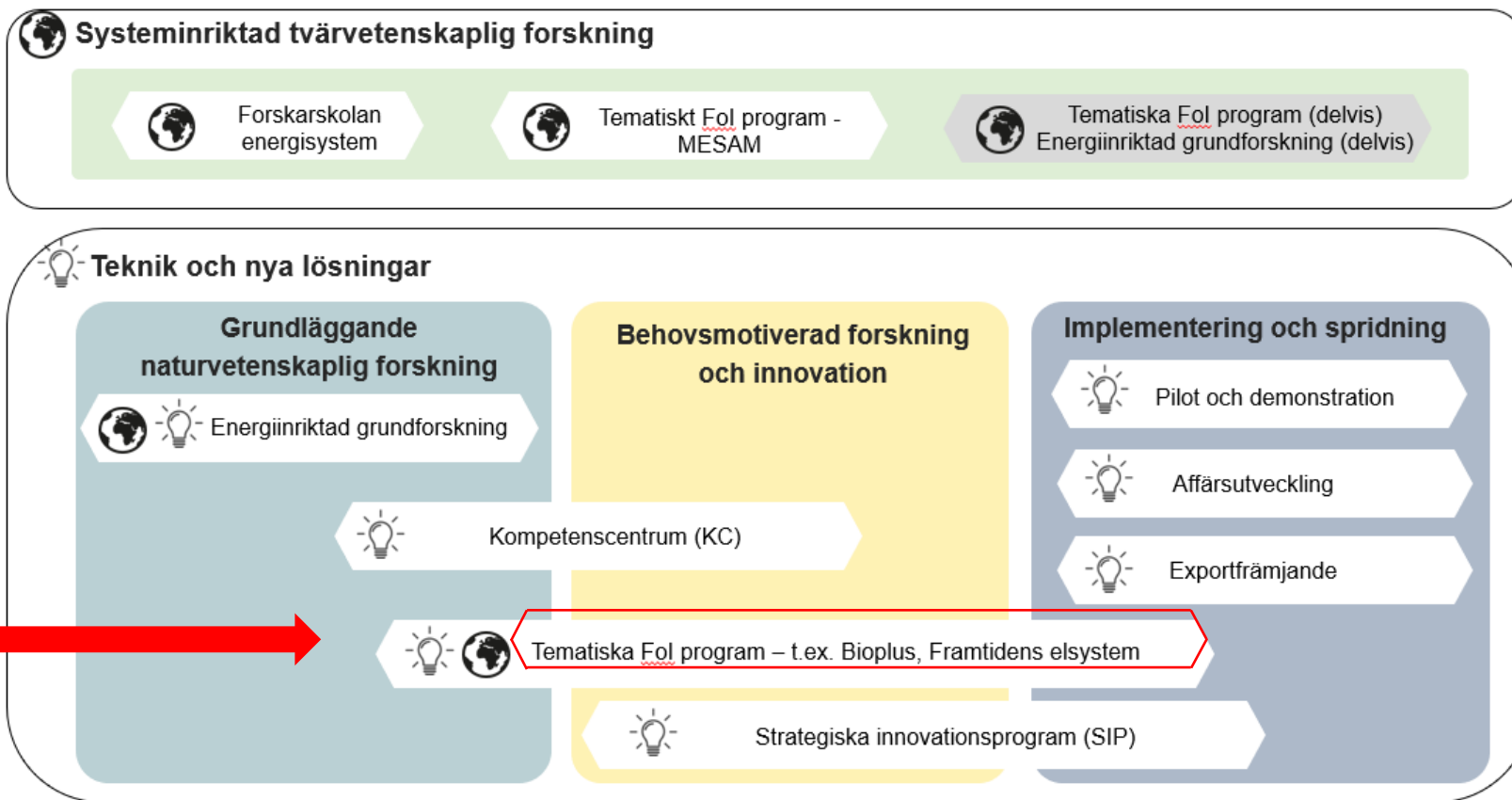
- A comprehensive approach to heating and cooling
- System solutions
- Demarcations against the Energy Authority's other programs
- Thermal energy storage



- **Reduced focus**

- Industry-specific incremental development
- Niche projects by individual actors
- Small-scale solutions with limited opportunity to contribute to the transition of the energy system

# Swedish Energy Agencies Research and Innovation Funding



TERMO



Emphasis on needs-motivated research (TRL 4 till 7)

# Termo - Heating and Cooling for the energy system of the future

- Thematic research and innovation program in heating and cooling
- The purpose of the program is to contribute to the development of heating and cooling for the energy system of the future.
  - Surplus heat from various sectors is utilized
  - Interaction between heat and cold and other energy carriers
  - Heating and cooling are used in a resource-efficient way
  - Swedish innovations, products, system solutions and services remain competitive on a global market
- Conducts around 70 projects and 4 innovation clusters
- Budget apr. 16 Meur for period 2024-2028



# The four program areas

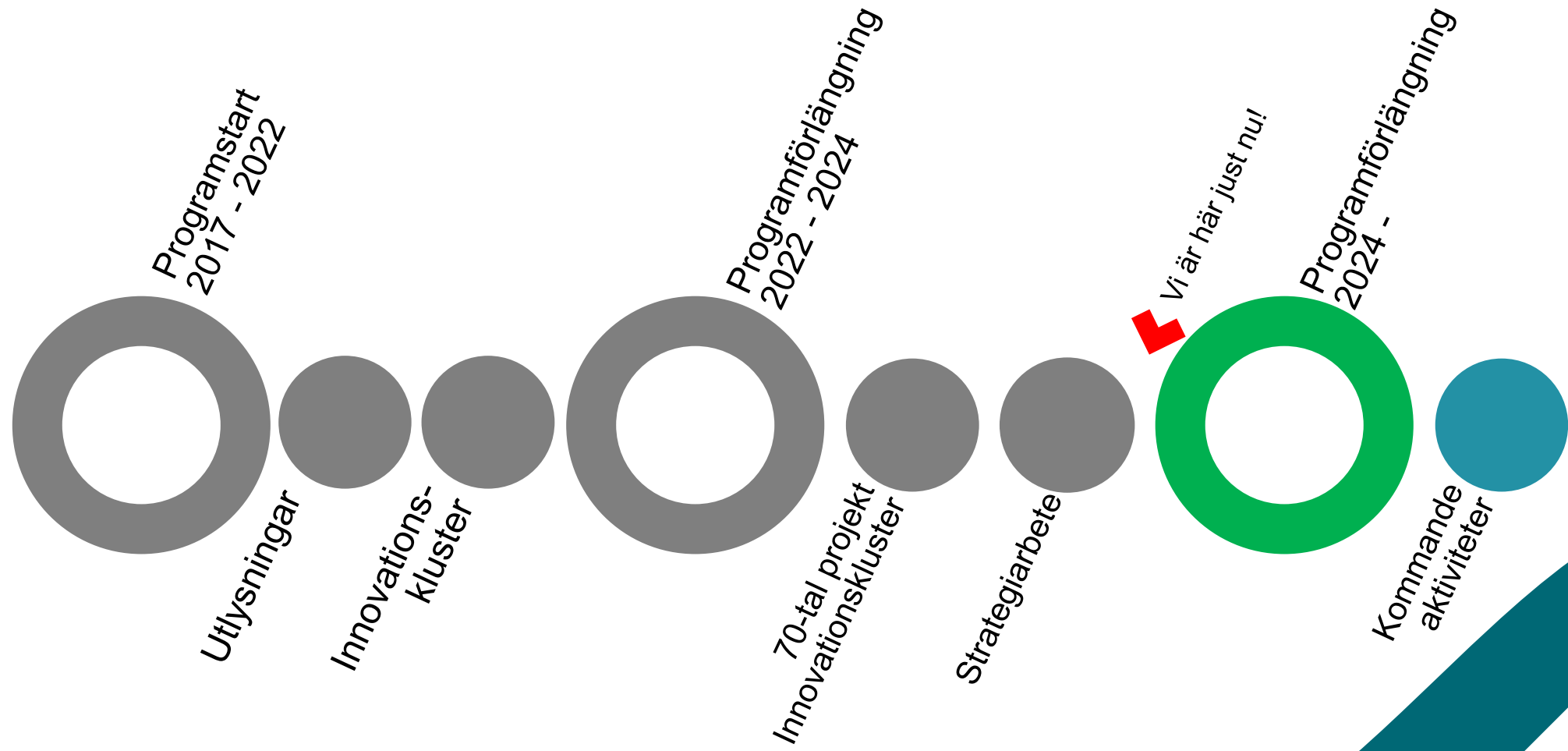
**Energimarknad,  
samverkan och  
sambandsengagemang**

**Resurseffektivitet och  
cirkulära system**

**Hållbara teknik- och  
systemlösningar**

**Försörjningstrygghet  
inom värme och kyla**

# Termoprogram's historia



# Information about TERMO Program and upcoming calls

- Termo Program: [Termoprogrammet \(energimyndigheten.se\)](https://www.energimyndigheten.se/termoprogrammet)  
[Termo | Framtidens värme och kyla \(termoinnovation.se\)](https://www.termoinnovation.se)  
[Innovationskluster inom Termo \(energimyndigheten.se\)](https://www.energimyndigheten.se/innovationskluster-inom-termo)  
SWEA Calls: [Utlysningar och stöd \(energimyndigheten.se\)](https://www.energimyndigheten.se/utlysningar-och-stod)

EU Partnerships:

- [CETPartnership](#)
  - TRI 4 -Efficient Zero Emission Heating and Cooling Solutions
- [DUTPartnership](#)
  - Positive Energy Districts (PED) TP





**Emina Pasic**

IEA Energy Storage ExCo Delegate Sweden

+46 16 544 2189

[emina.pasic@energimyndigheten.se](mailto:emina.pasic@energimyndigheten.se)

**Besök oss på**

[www.energimyndigheten.se](http://www.energimyndigheten.se)

