

celsius

 Summit

December 9



— **Mission Possible** —

Funding for the Urban Heat Transition

Today's programme

9:30	Opening session Moderator: Miljenko Sedlar , REGEA Welcome - Julije Domac, Director of REGEA - Katrina Folland, Coordinator of the Celsius Initiative State of play & how to advance DHC in South Eastern Europe - The Croatian ITI experience: Tatjana Čorlija, Head of EU Affairs Unit, HEP - The Serbian experience: Radmilo Savic, Executive Manager for Professional and Technical Support, JKP Beogradske Elektrotrane - The first solar DH in Croatia: Kristijan Lovrenščak, Managing Director of Tehnoston Vukovar - Looking at future possibilities: Kristina Lygnerud, IVL Discussion / Q & A EU Green Deal and the Post-Covid Recovery – what is in it for the Celsius Cities? - EU Green deal & Renovation wave: Karlis Goldstein, Energy Efficiency Adviser to Energy Commissioner Kadri Simson, DG Energy - Zagreb's perspective: Ivan Ivanković, Head of Energy and Climate at the City of Zagreb - Madrid's perspective: Luis Tejero Encinas, Head of Energy and Climate Change at the City of Madrid - Strasbourg's perspective: Jacqui Cullen, Project Manager District Heating and Cooling, Eurometropolis of Strasbourg - Göteborg's perspective: Lars Holmquist, Public Affairs at Göteborg Energi Discussion / Q & A
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11:00	Coffee Break			
11:10	Funding possibilities - pitches Moderator: Sofia Lettenbichler , Policy & Projects Manager at Euroheat & Power Heating & Cooling in Member States' Transnational Joint Programming Initiatives - Michael Huebner , Senior Policy Officer, Austrian Federal Ministry for Climate Action, coordinator of Joint Programming Platform ERA-Net Smart Energy System European City Facility - Julien Joubert , Project Manager at Energy Cities European Innovation Fund - Sebastian Marx , EU Advocacy & Project Development Consultant EBRD - Bojan Bogdanovic , Principal Fund Manager, Renewable District Energy, EBRD			
11:40	Funding possibilities – Breakout Room Discussions			
	CETP & ERA-NET Expert: Michael Huebner Moderator: Alessandro Provaggi , Euroheat & Power	European City Facility Expert: Julien Joubert Moderator: Katrina Folland	European Innovation fund Expert: Sebastian Marx Moderator: Tomislav Novosel	EBRD Expert: Bojan Bogdanovic Moderator: Miljenko Sedlar
12:15	Funding possibilities – Conclusions Summary of discussion sessions - Group moderators Next step: investing in DHC – getting skin in the game - Magnus Andersson , Partner at IMCG Outlook for the next day - Sofia Lettenbichler , Policy and Project Manager at Euroheat & Power			
12:45	Networking opportunity!			



State of play & how to advance DHC in South Eastern Europe



Moderator:

Miljenko Sedlar

Assistant Managing Director
REGEA



Tatjana Čorlija

Head of EU Affairs Unit
HEP



Radmilo Savic

Executive Manager for
Professional and Technical Support
JKP Beogradske Elektrane



Kristijan Lovrenscak

Managing Director
Tehnostan Vukovar



Kristina Lygnerud

Head of the Energy Department
IVL



Tatjana Čorlija
Head of EU Affairs Unit
HEP

The Croatian ITI experience





CROATIAN ITI EXPERIANCE

Celsius summit – Mission possible!
December 9, 2020

Tatjana Čorlija,
Hrvatska elektroprivreda d.d., Croatia

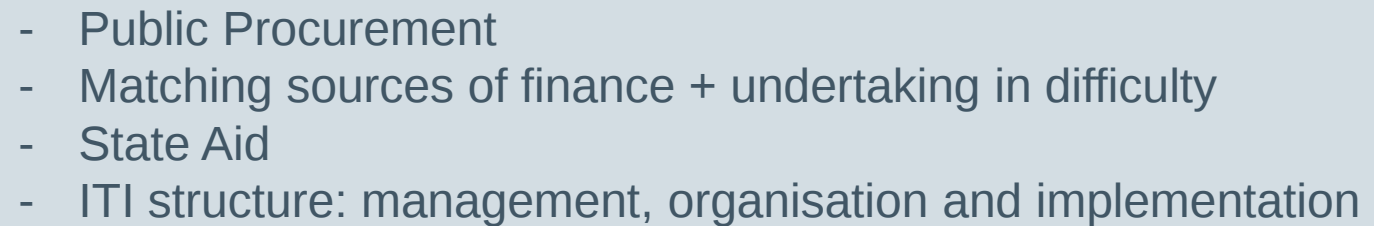
ITI MECHANISM – District Heating projects

Urban area	Zagreb	Osijek
Project	Revitalisation of an energy efficient district heating system in the city of Zagreb	Increased dimension of the connecting hot-water pipeline CHP – Osijek Operative area
Intervention size	68,5 km	4,5 km
Total Investment	93,5 mil € (major project)	10 mil €
ITI allocation	57 mil €	6 mil €



[illegible]

-



Thank you for your attention !

Tatjana Čorlija, Head of EU Affairs Unit
Hrvatska elektroprivreda d.d.
Mail: tatjana.corlija@hep.hr



Radmilo Savic

Executive Manager for
Professional and Technical Support
JKP Beogradske Elektrane

The Serbian experience





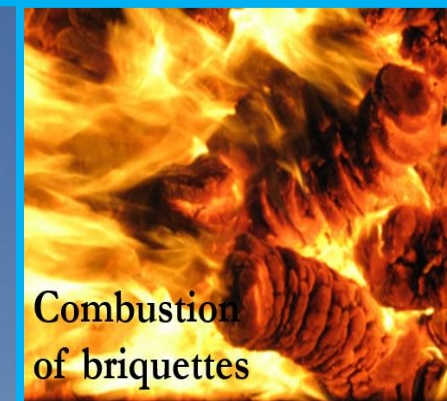
БЕОГРАД – BEOGRAD – BELGRADE





About PUC “Beogradske elektrane”

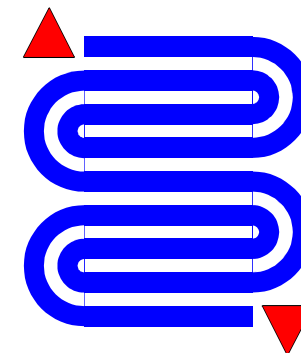
- Established 03. jun 1965. with 315 MW installed capacity at location of Novom Beogradu (CHP)
- No of heating source 14 + 22
- Capacity 3.000 MW
- Pipeline trace 800 km
- Thermal substation 8900
- No of connected flats 320.000
- Bussiness consumers 8.300 objects
- Total heating area 22.500.000 m²
- Employes 2100
- Average growth 1% / annum
- Average fuel consumption during heating season:
natural gas 92%, HFO 7%, solid fuels 1%



Combustion
of briquettes



pelletes



www.beoelektrane.rs



Kristijan Lovrenscak

Managing Director
Tehnoston Vukovar

The first solar DH in Croatia



SOLAR DISTRICT HEATING SYSTEM IN VUKOVAR

Tehnostan d.o.o.
Kristijan Lovrenščak
27.11.2020.

Tehnostan d.o.o. Vukovar today



120kW PV fields

520kW solar thermal power

FIRST SDH IN CROATIA



- new fence with automatic door
- underground preinsulated steel pipes (first 3 steps)
- lightning protection (all steps)
- Tehnoston workforce utilisation – yearly bonus

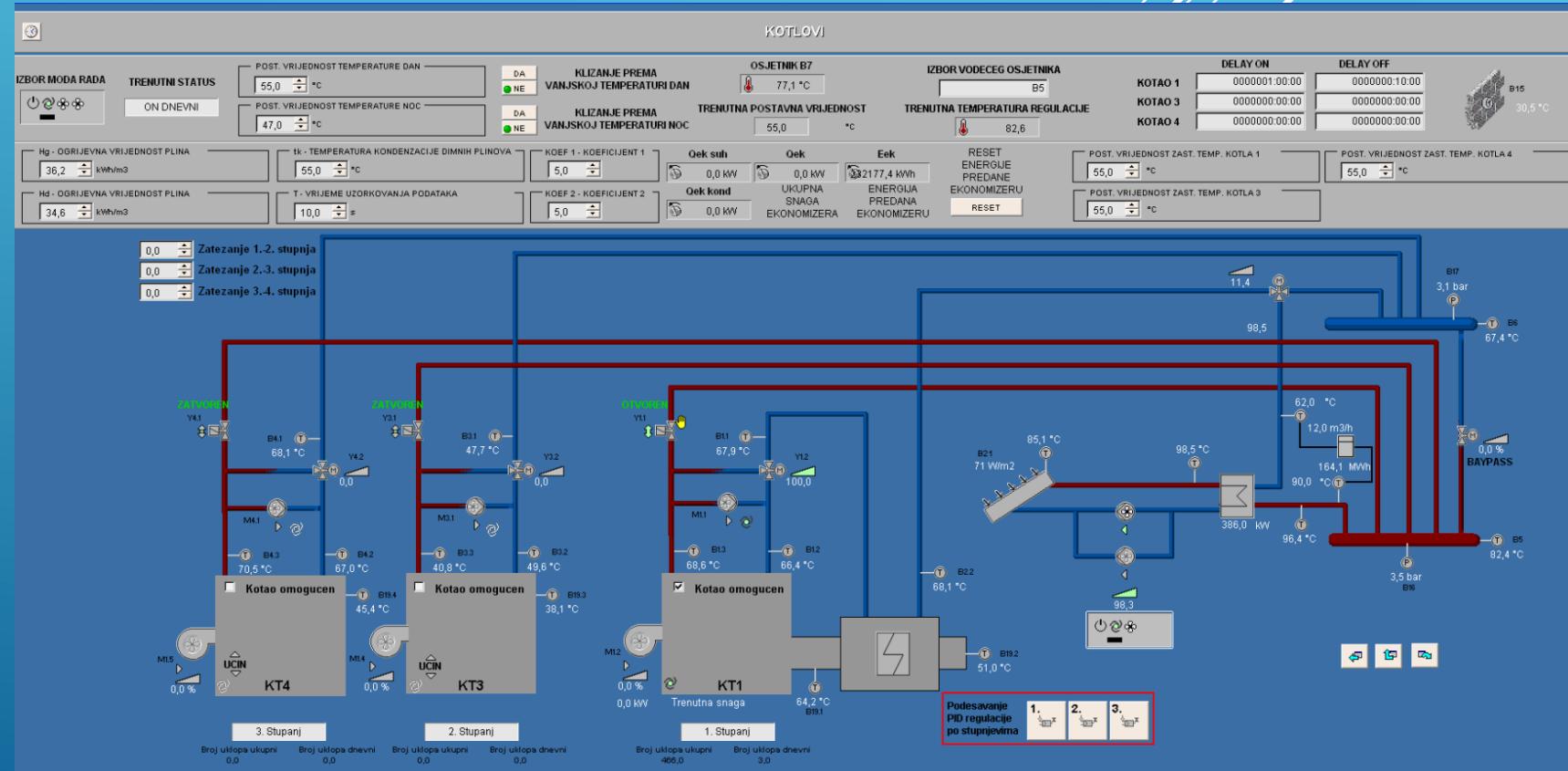


June 2019. – 1st step

heat exchanger

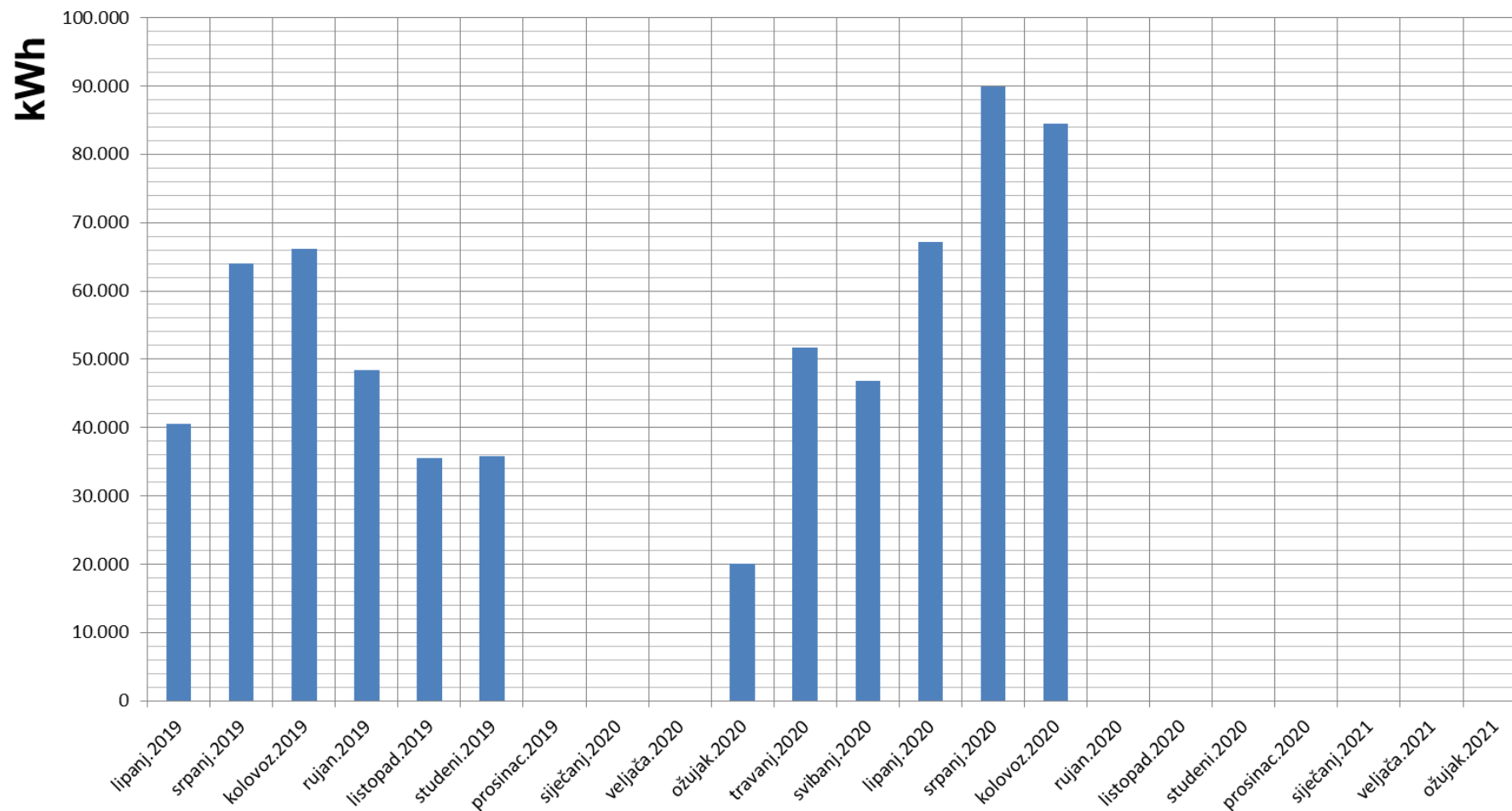


SCADA operating system



July 2020. – 2nd step

Proizvedena energija solarnog polja Borovo Naselje



PLANED PROJECTS FOR 2021.

- 3rd step of solar thermal field installation (80 plates)
- upgrade to hybrid PV systems using a modular batteries
- expansion of PV field for 200kW
- preparing a project for DH heat pump
- additional electrical vehicle
- two additional charger stations for electric cars



Growatt US2000 modular battery provide you more flexible choices of battery capacity, max parallel number up to 8, the simple parallel design will minimize your installation time and cost.

Leading-edge Technology

- ▶ Modular design for flexible capacity extend
- ▶ Maintenance free and easy installation
- ▶ Safety performance with LFP (Lithium iron phosphate) technology
- ▶ Intelligent protections with high performance BMS
- ▶ Peak power up to 5kW with single module

***„We Do Not Inherit the
Earth from Our Ancestors;
We Borrow It from Our
Children”***

Thank for your attention!

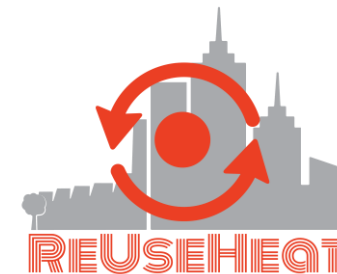
Tehnostan d.o.o.
Kristijan Lovrenščak
27.11.2020.



Kristina Lygnerud

Head of the Energy Department
IVL

Looking at future possibilities



Celcius Summit

- the future is to not waste it

December 9, webinar, Celcius Summit

Contact: kristina.lygnerud@ivl.se

In 2050.....

- Co2 taxation
- Circular economy
- Biomass/ residual products in high demand



This Photo was taken from the APUEA Magazine, No7, 2020

...what can be used for heating in 2050?

- Solar
- Geothermal
- Wind
- Industrial waste heat (high temperature)
- Urban waste heat (low temperature)



This Photo by Unknown Author is licensed under CC BY-NC-ND

Waste heat necessitates changes...

- Local & many heat sources
- Distribution versus centralized production
- New dependencies (key partnerships)
- New boundary conditions

...new business logic for DHC is needed



This Photo by Unknown Author is licensed under CC BY-SA

Change takes time

- Work needed on several aspects

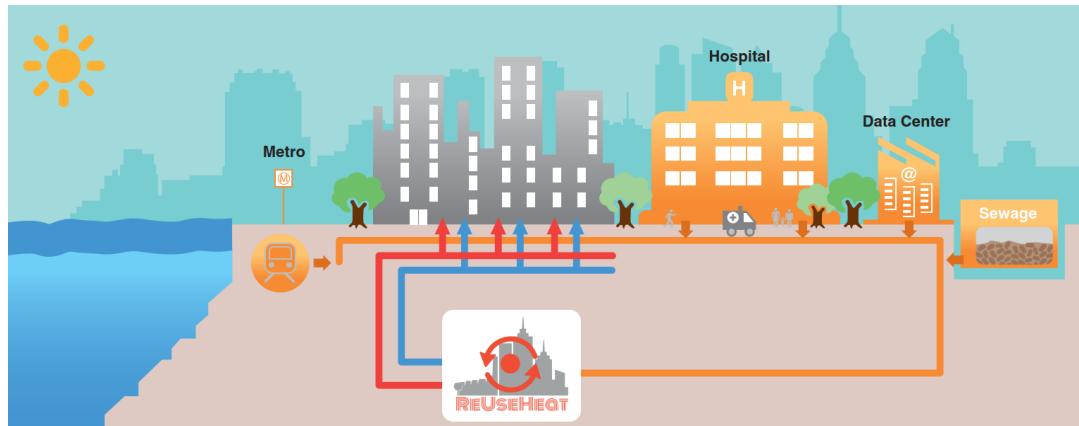


Industrial waste heat recovery (high temp)
- decision making support



IEA DHC/CHP

Low temperature
technology implementation
(guidebook 2021)



Urban waste heat recovery (low temp)

- Demonstration
- Contracts, investment, business modelling
- Policy



Low temperature
installations

- Demonstration
- Energy as a service
- Social Acceptance

@ReUseHeat



Main conclusion...

Its not about technical innovation- it is about new system boundaries and new combinations of stakeholders



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EU Green Deal and the Post-Covid Recovery



Moderator:

Miljenko Sedlar

Assistant Managing Director
REGEA



Ivan Ivankovic

Head of Energy and Climate
City of Zagreb



Jacqui Cullen

Project Manager for DHC
Eurometropolis of Strasbourg



Karlis Goldstein

Energy Efficiency Adviser to
Energy Commissioner Kadri Simson
DG ENERGY



Luis Tejero Encinas

Energy and Climate Change
City of Madrid



Lars Holmquist

Public Affairs
Göteborg Energi



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DG ENERGY

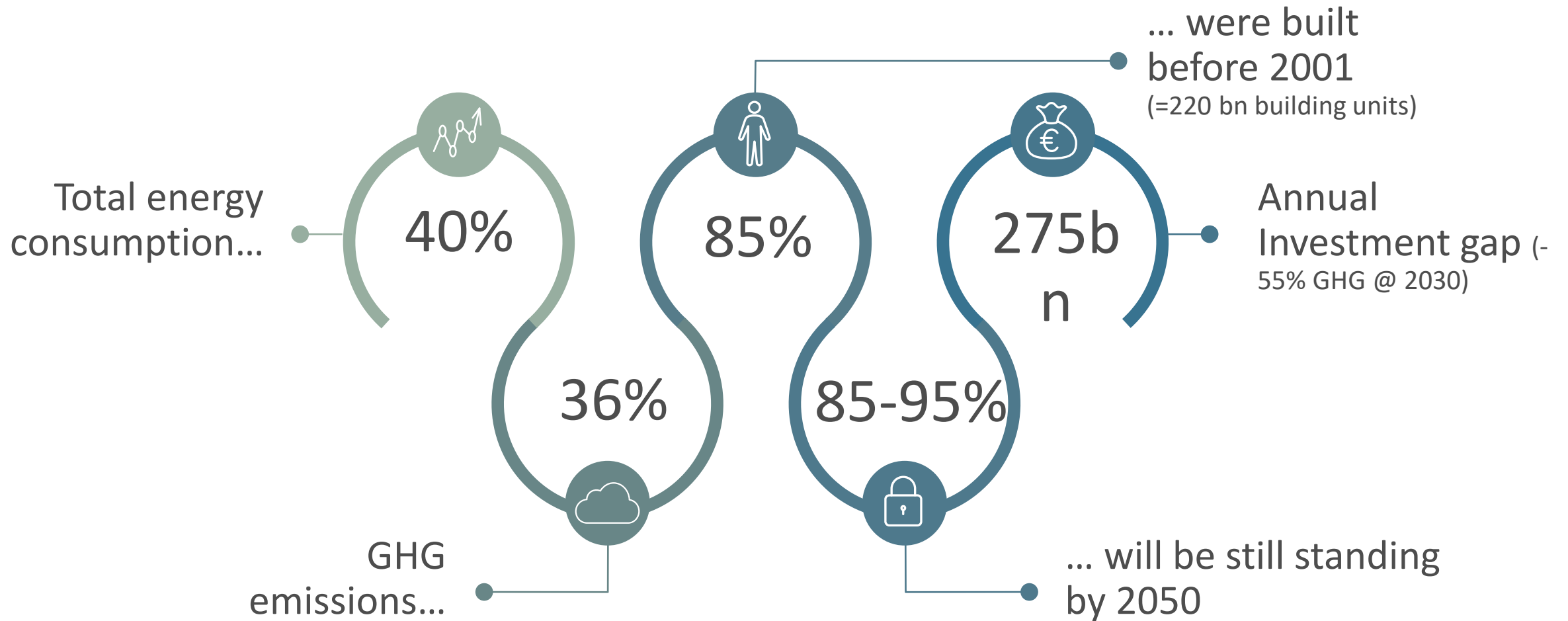
The EU Green Deal and the Renovation Wave





Renovation Wave for climate neutrality and recovery

Buildings in numbers

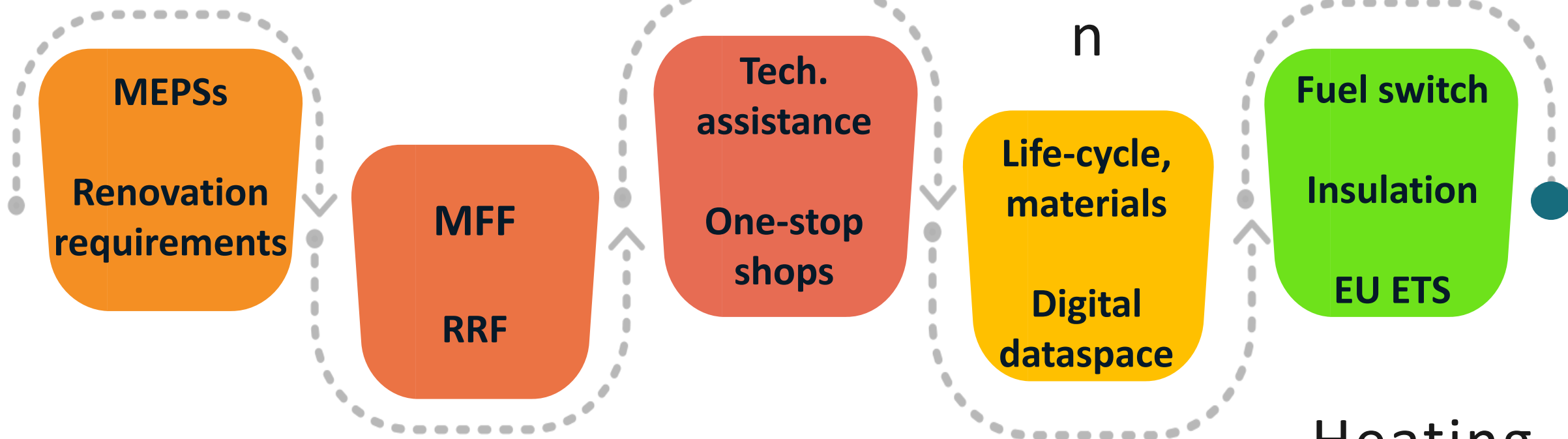


Remedies

Funding

Sustainable
construction

n



Information

Capacity

Heating
Cooling

Proposed financing

All figures are in billion EUR 2018 prices	Climate coefficient in the legal basis	Total Climate contribution
Horizon Europe (research)	35%	28 315
ITER (International Thermonuclear Experimental Reactor)	100%	5 000
InvestEU Fund	30%	2 520
Connecting Europe Facility	60%	11 038
ERDF (European Regional Development Fund)	30%	60 108
Cohesion Fund	37%	15 746
REACT EU (Recovery assistance for cohesion and the territories)	25%	11 875
Recovery and Resilience Facility	37%	248 825
CAP (Common Agricultural Policy) 2021 - 2022	26%	26 468
CAP 2023 - 2027	40%	96 857
EMFF (European Maritime and Fisheries Fund)	30%	1 629
LIFE (environmental projects)	61%	2 935
Just Transition Mechanism	100%	19 000
NDICI (Neighbourhood, Development and International Cooperation Instrument)	25%	17 700
OCT (Overseas Countries and Territories)	25%	111
Pre-Accession Assistance	16%	2 010
Total		550 137

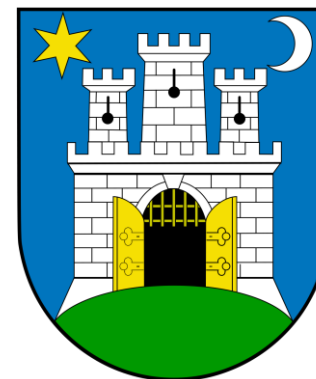
Thank you



Ivan Ivankovic

Head of Energy and Climate
City of Zagreb

Zabreb's Perspective





Celsius Summit 2020 – Mission Possible!

- EU Green Deal and the Post-Covid Recovery
- ~~The Croatian~~ Zagreb's Perspective ☺

Ivan Ivanković, M.Eng.

Head of Energy & Climate @ City of Zagreb

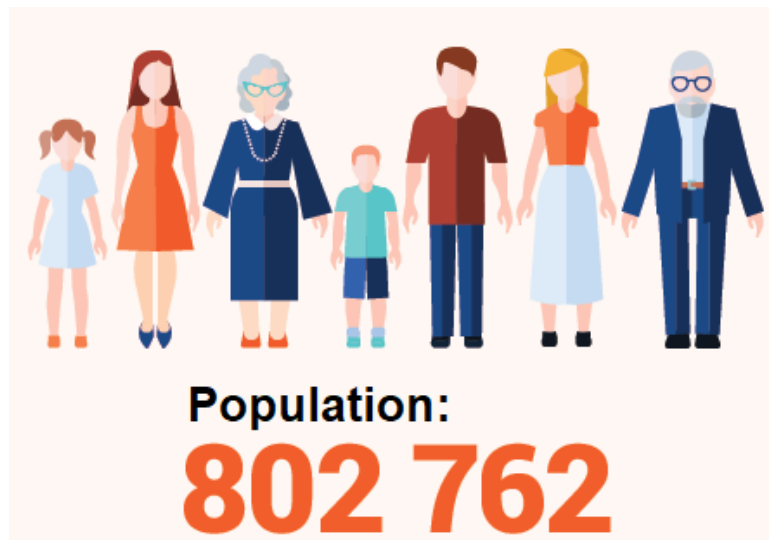
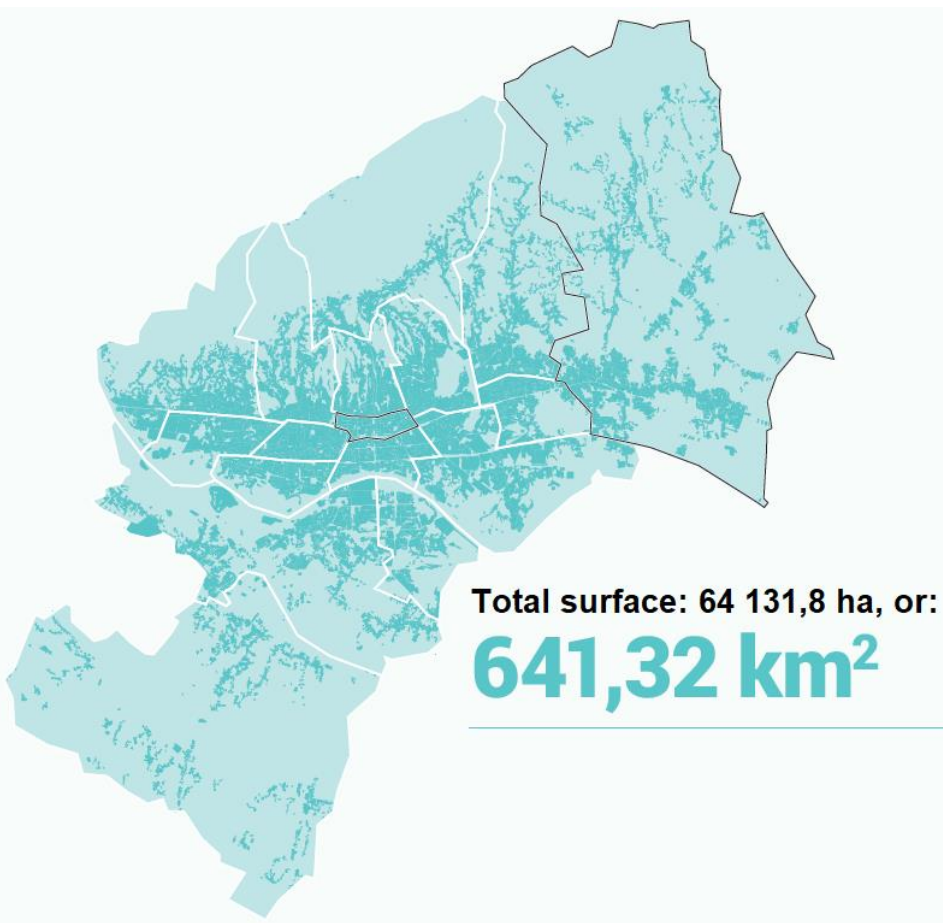
ivan.ivankovic@zagreb.hr



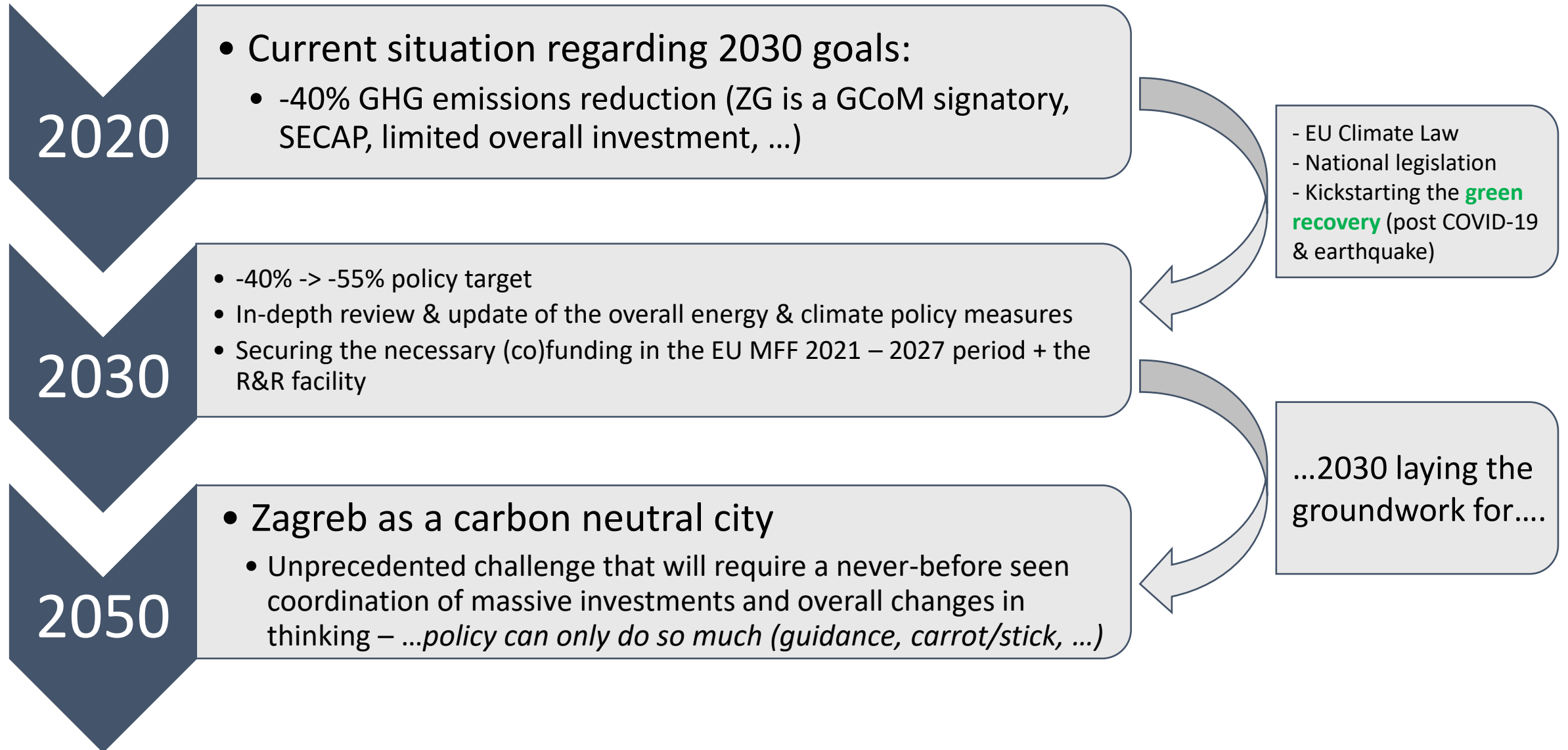
City of Zagreb

**City Office for Economy, Energy and
Environment Protection**

09.12.2020.



2030/2050 Energy & Climate policy pathway





Celsius Summit 2020 – Mission Possible!

- EU Green Deal and the Post-Covid Recovery
- ~~The Croatian~~ Zagreb's Perspective 😊

Thank you!

Ivan Ivanković, M.Eng.

Head of Energy & Climate @ City of Zagreb

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09.12.2020.



City of Zagreb

**City Office for Economy, Energy and
Environment Protection**



Luis Tejero Encinas

Energy and Climate Change
City of Madrid

Madrid's Perspective



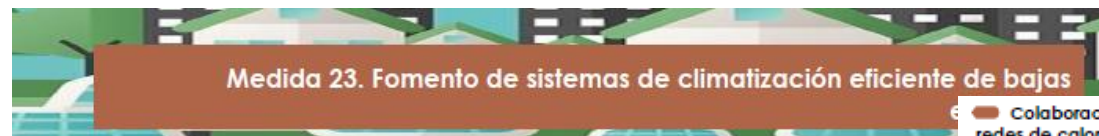
MADRID Climate, Air Quality and Energy Plans

Plan A. Air quality and Climate Change Plan

September 2017

Sustainability Strategy of Madrid

October 2019

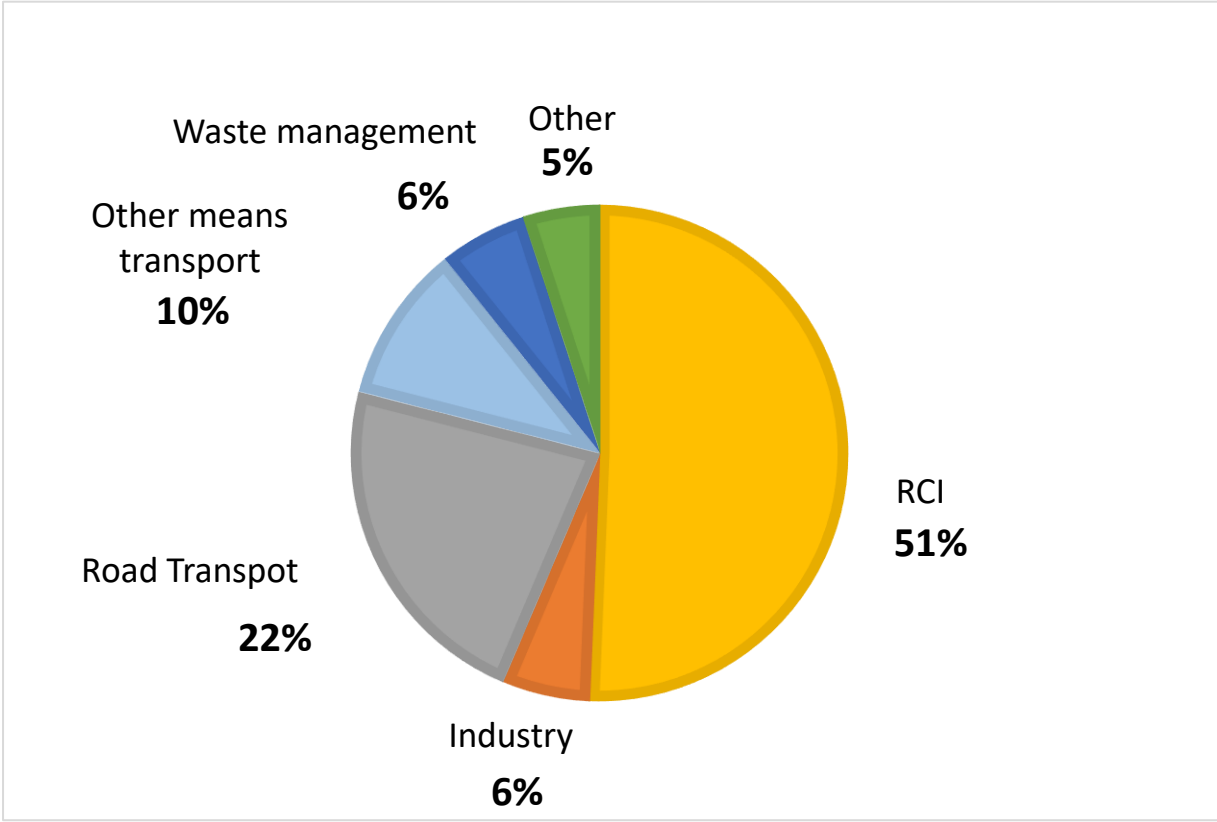


Colaboración en proyectos de despliegue de redes de calor y frío de alta eficiencia. El apoyo a estos sistemas se puede concretar en la colaboración administrativa para el impulso de este tipo de proyectos, su difusión y, en su caso, la previsión de los mismos en la planificación de la ordenación del suelo. En cualquier caso, la idoneidad de un determinado proyecto de este

Promote energy efficiency.
District heating and cooling

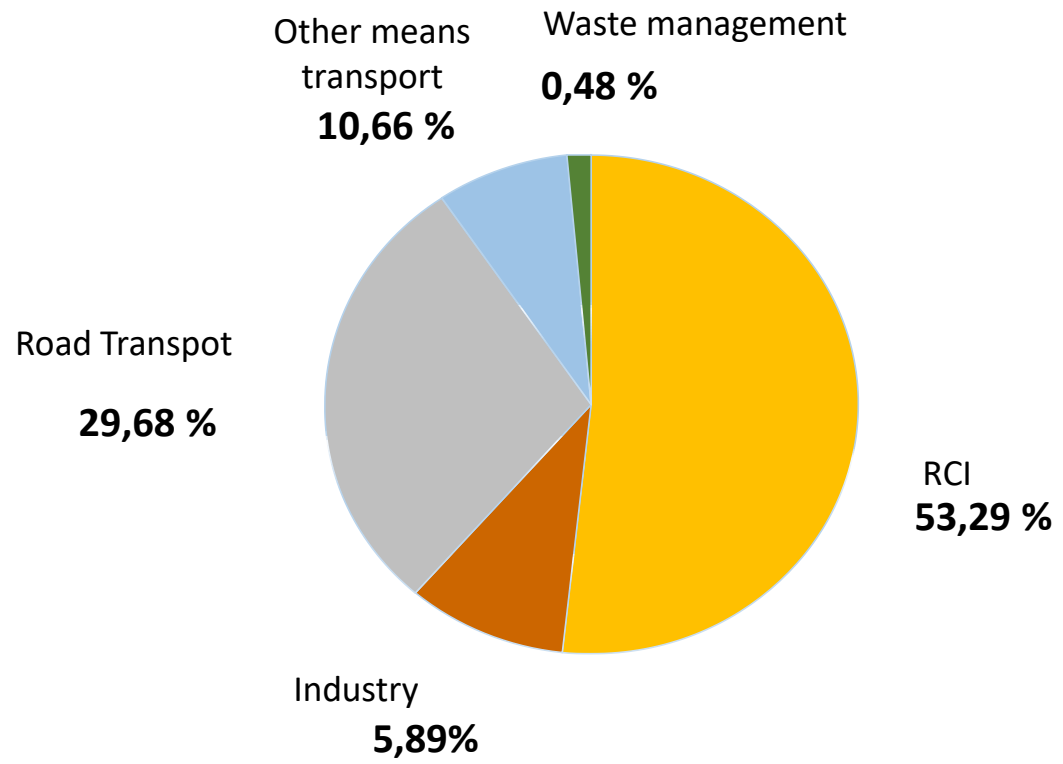
GHG Emissions inventory

Contribution of GHG by sector. 2017



Energy Balance

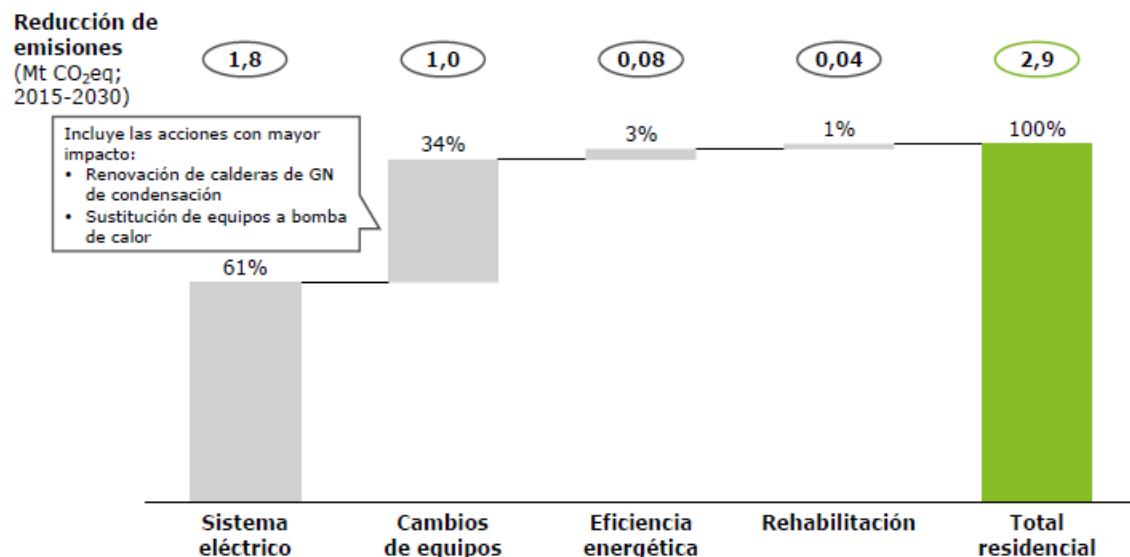
Energy consumption by sector. 2017



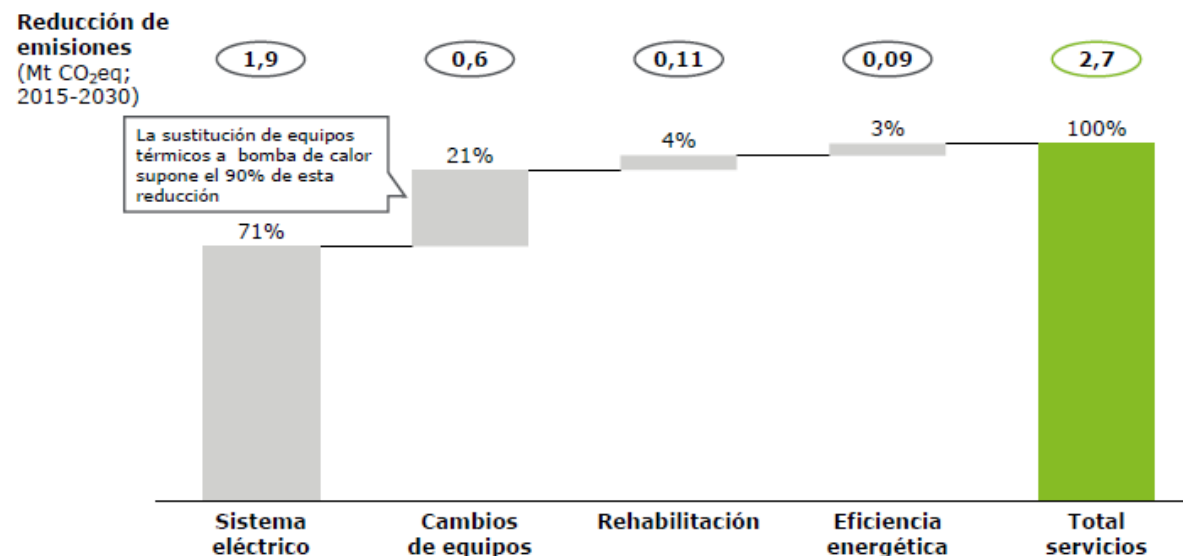
MADRID towards a Climate Neutral City

CO₂ EMISSIONS REDUCTION BY LEVER. RESIDENTIAL AND SERVICES SECTORS

Reducción de emisiones por palanca de descarbonización en el sector residencial bajo el escenario *Sostenible* (%; 2015-2030)



Reducción de emisiones por palanca de descarbonización en el sector servicios bajo el escenario *Sostenible* (%; 2015-2030)





EIT Climate-KIC is supported by the EIT, a body of the European Union



NEWS

INSIGHTS

IN YOUR COUNTRY

CONTACT US



Who We Are

Our Community

Areas of Focus

Programmes

Get Involved

Regulatory Sandbox

PROGRAMMES

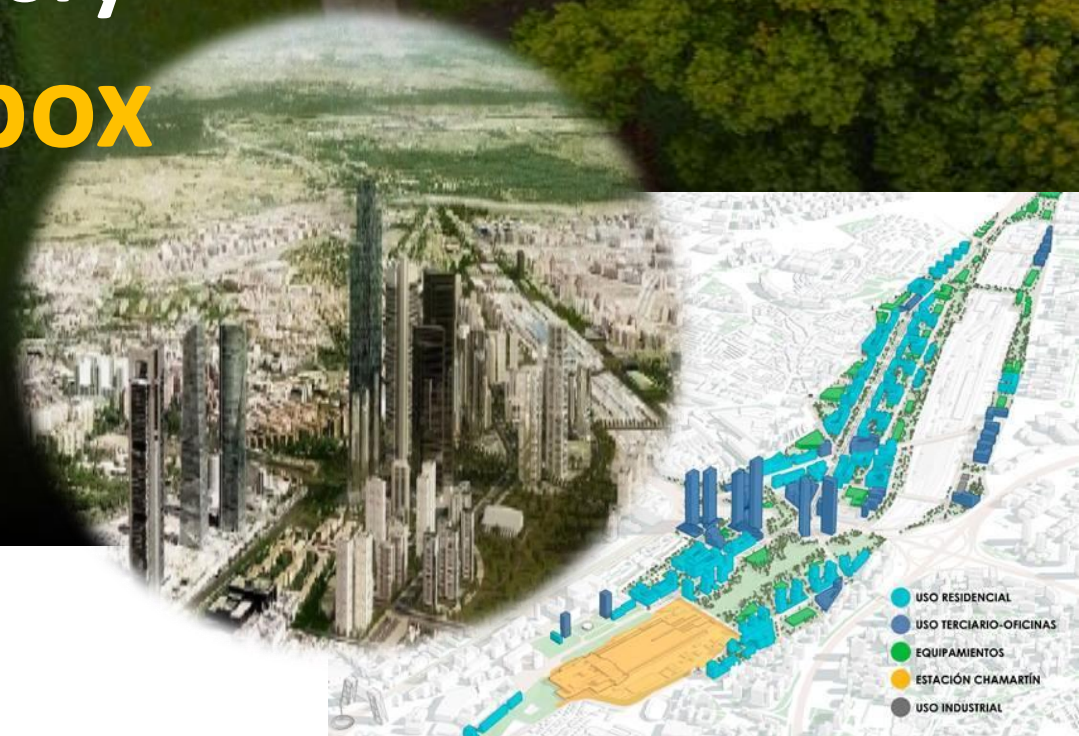
Deep Demonstrations

Luis Tejero

Energy and Climate Change Department

Ayuntamiento de Madrid

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- USO RESIDENCIAL
- USO TERCIARIO-OFICINAS
- EQUIPAMIENTOS
- ESTACIÓN CHAMARTÍN
- USO INDUSTRIAL



Jacquie Cullen

Project Manager for DHC
Eurometropolis of Strasbourg

Strasbourg's Vision



Celsius Summit 2020 – Mission Possible!

EU Green Deal and the Post-Covid Recovery – what is in it for the Celsius Cities?

9/12/2020



Jacqui CULLEN
Project Manager District Heating and Cooling
jacqui.cullen@strasbourg.eu



Oceanic/Semi-continental climate

Heating Degree Days
(base 17°C) : 2330

New temperature record reached in June 2019 : 38,8°C

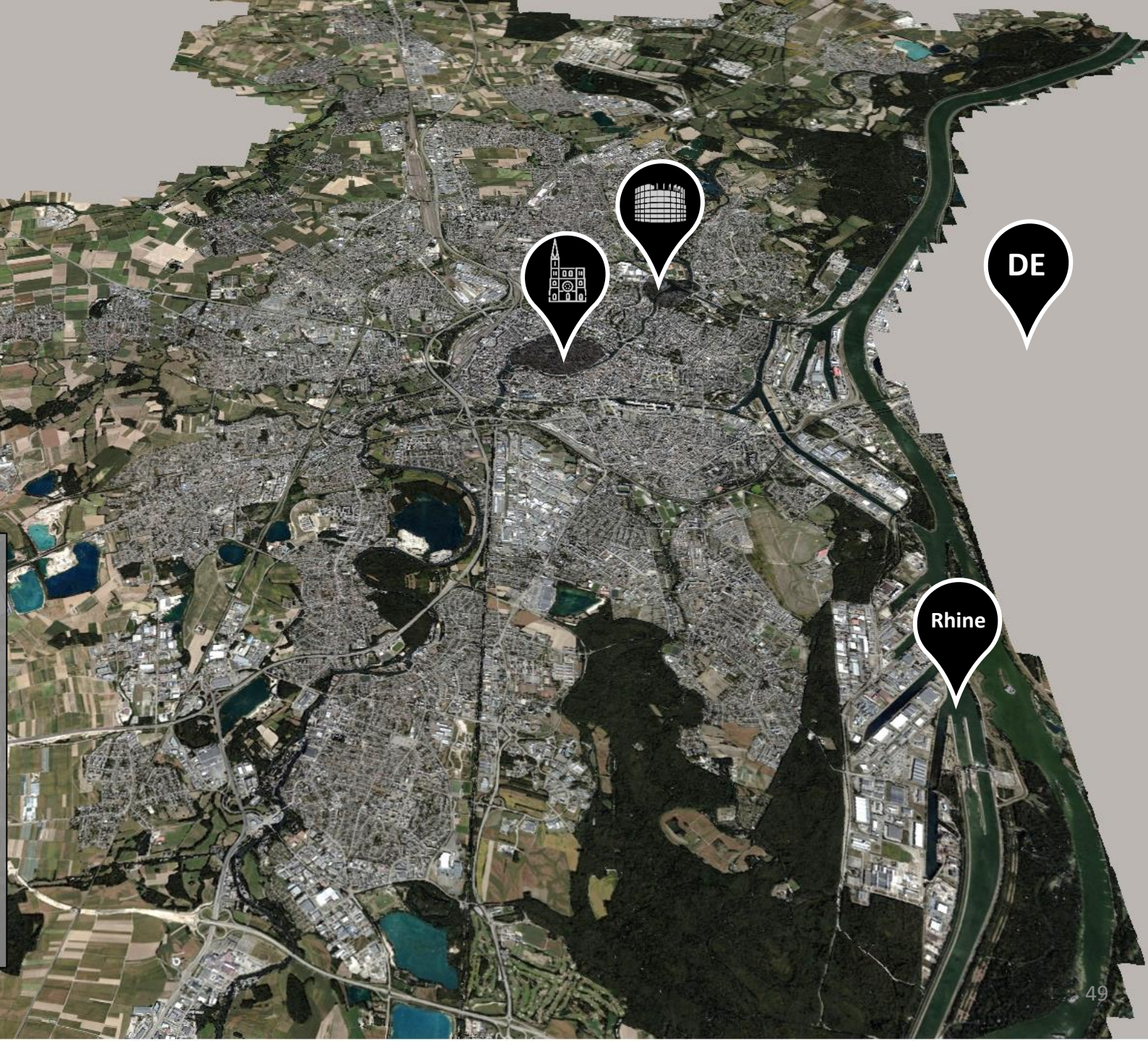
City population : 280 000
Eurométropole pop. : 488 000

2017

Energy demand : 12,5 TWh/year

Heat demand : 4,3 TWh/year

Cooling demand : 0,2 TWh/year



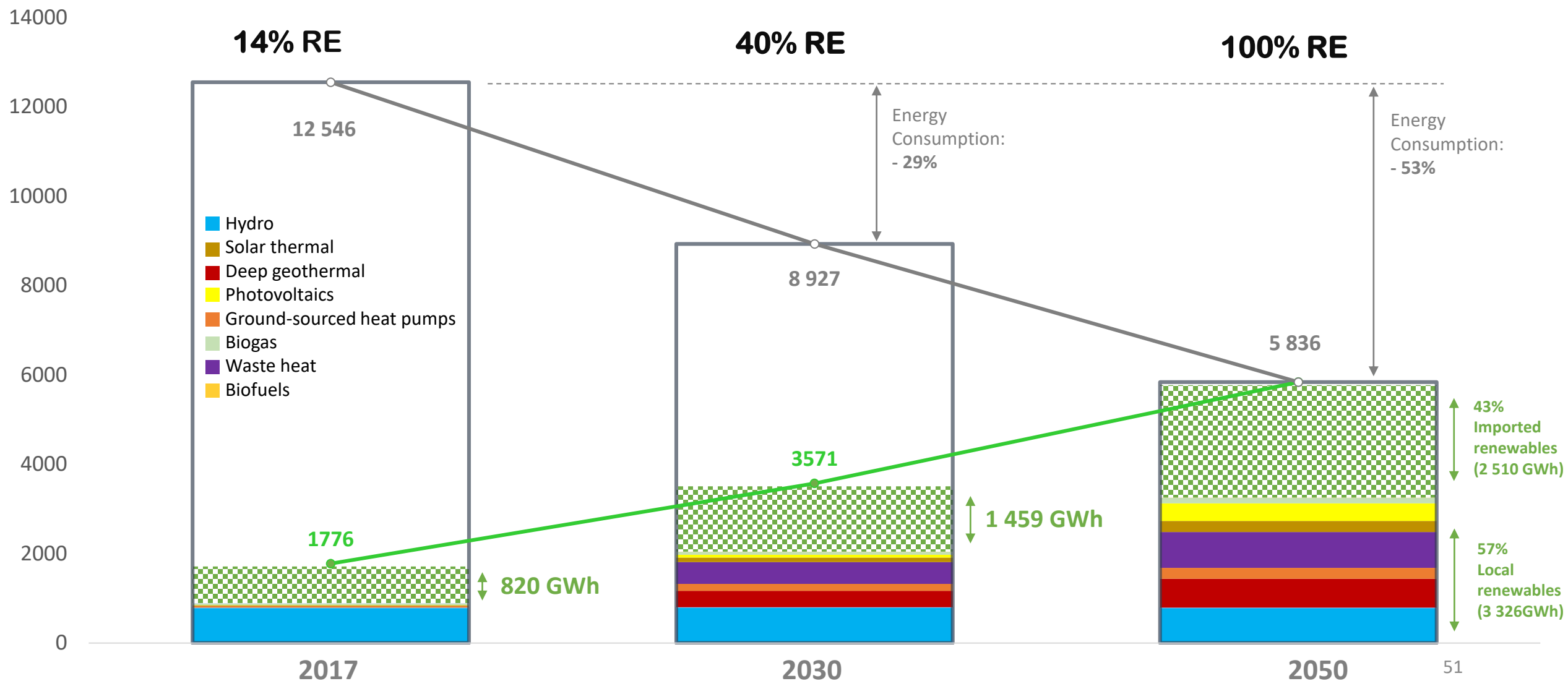
SECAP 2030 40% renewable energy



Energy Masterplan 2050 100% renewable energy

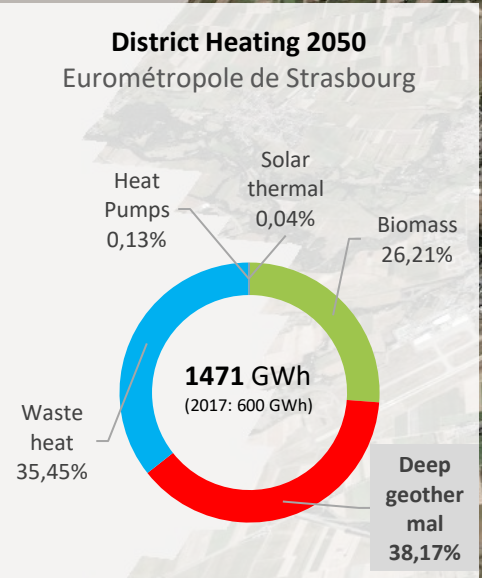
With a **strong political commitment**: in October 2017, objective approved by an unanimous vote by Eurometropole's Council

charte aménagement durable
Orientations d'Aménagement et de Programmation
géothermie feuille de route mobilité décarbonnée
différents scénarii Plan Climat
hydraulique transition énergétique diagnostic
nouveau modèle urbain expérimentation collectivité exemplaire fixer les étapes
Caisse des dépôts baisse des consommations avenir durable
efficacité stratégie air énergie climat sobriété
réseaux de distribution territoire à énergie positive mobilisation
intracasting efficacité innovation solaire biomasse
Schéma Directeur des Energies
solidarité urban-rural énergies de récupération horizon volontariste
100 % renouvelables en 2050
économie verte projections 2025-2030-2050 stratégique
rénovation politiques volontaristes Cit'ergie
transversale participation citoyenne Adeus
maîtrise des besoins énergies renouvelables Plan Local d'Urbanisme
planification vision globale
objectifs partagés et clarifiés outil prospectif Ademe
performance climatique mix énergétique
autonomie énergétique





- Existing DH
- Future DH and study zones (non-exhaustive)
- Future feeder



Sustainable Heating & Cooling

The challenge :

Put in to action the local roadmap to achieve the ambitious goals set by local government

The issues :

Investment?

Governance?

Stakeholders?

Conflicting goals and priorities?

R&D resources?



Lars Holmquist

Public Affairs
Göteborg Energi

Gothenburg's Perspective



The Green Deal, Taxonomy, Renovation wave, Sector integration, Recovery Plan etc. The Swedish Perspective

Lars Holmquist
Göteborg Energi

2020-12-09

Unsustainability management

The main challenge

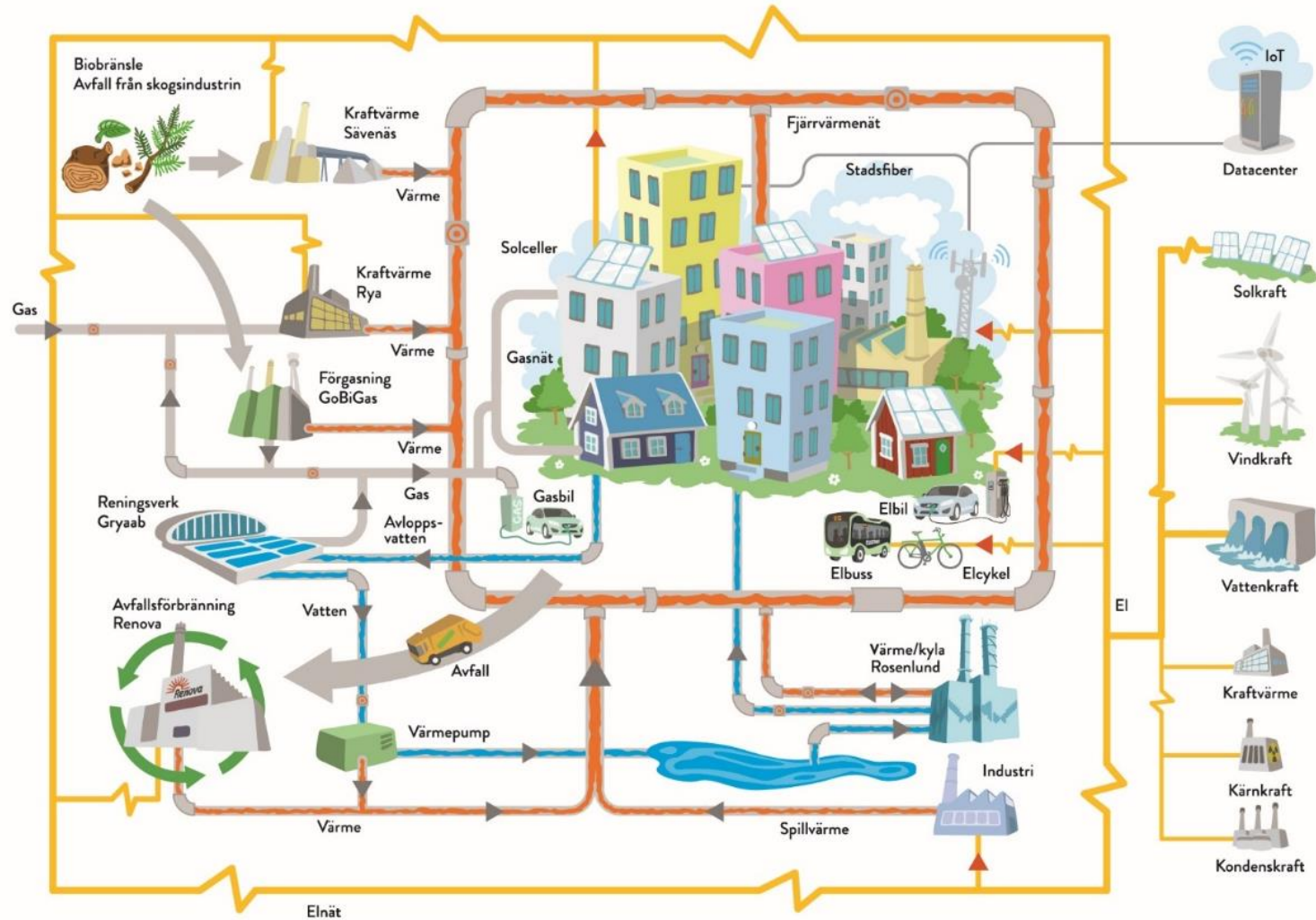


District heating
1500 MW

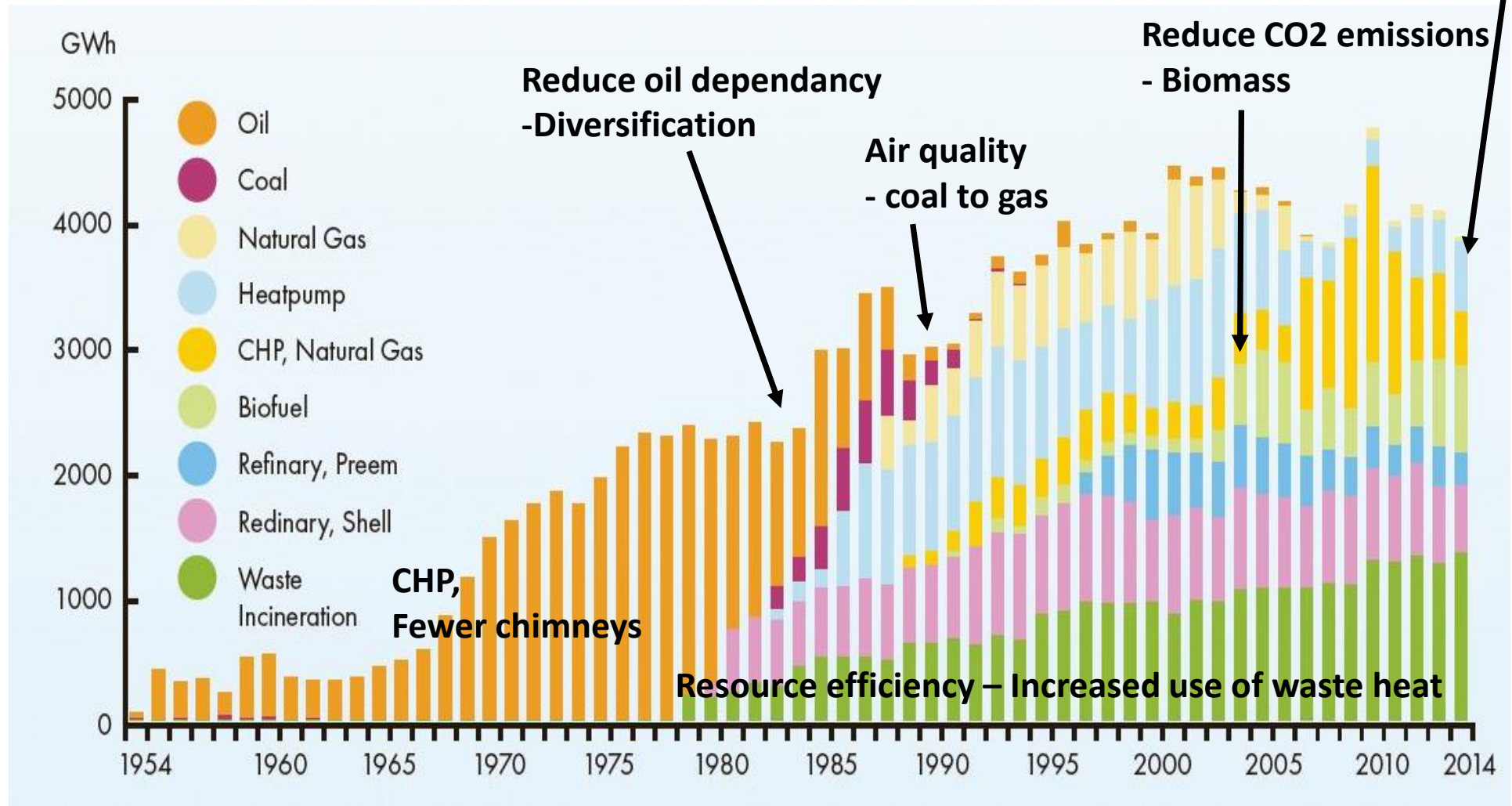
Gas
1 100 MW

Electricity
850 MW

District cooling
100 MW



District heating is flexible and can address many challenges



Future challenges and possibilities

- Make district heating climate positive through bio-CCS
- Reduce urban metabolism
- Make more electricity available where it's needed

The Green Deal – What's in it for us?

- Support major investments in hydrogen and CCS infrastructure
- Secure a long term high (enough) carbon price
- Help reduce waste generation – especially plastics

The Green Deal – What could go wrong?

- Goal conflicts
 - Circularity vs electrification
 - New things are more interesting than already working solutions
- One size does not always fit all
 - The Taxonomy looks set to be an administrative monster
 - Bioenergy in Scandinavia must be better understood by EU legislators

Funding possibilities



Pitches



Moderator:

Sofia Lettenbichler

Policy & Projects Manager at
Euroheat & Power



Michael Huebner

Senior Policy Officer
Austrian Federal Ministry for Climate Action, Environment,
Energy, Mobility, Innovation & Technology



Julien Joubert

Project Manager at
Energy Cities



Sebastian Marx

EU Advocacy & Project Development
Consultant



Bojan Bogdanovic

Principal Fund Manager,
Renewable District Energy
EBRD



Michael Huebner

Senior Policy Officer, Austrian Federal Ministry for
Climate Action, Environment, Energy, Mobility,
Innovation & Technology

Heating & Cooling in Member States' Transnational Joint Programming Initiatives

- ≡ Federal Ministry
Republic of Austria
Climate Action, Environment,
Energy, Mobility,
Innovation and Technology





Smart
Energy
Systems
ERA-Net

Heating & Cooling in member states' transnational joint programming initiatives

Michael Hübner, Senior Policy Officer, Austrian Federal Ministry for
Climate Action, coordinator of Joint Programming Platform ERA-Net
Smart Energy System

ERA-Net Smart Energy Systems

Joint Programming for Flourishing Innovation from Local and Regional Trials towards a Transnational Knowledge Community

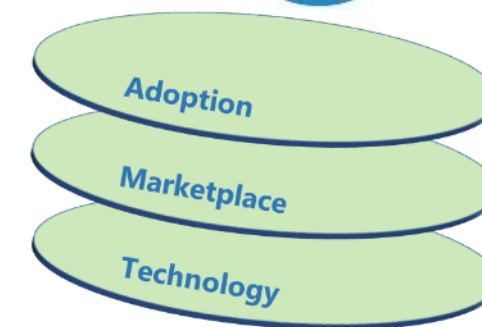
Goal

Organize the learning to enable the right technologies, market designs and customer adoption to achieve the smart energy system vision & goals of Europe

32

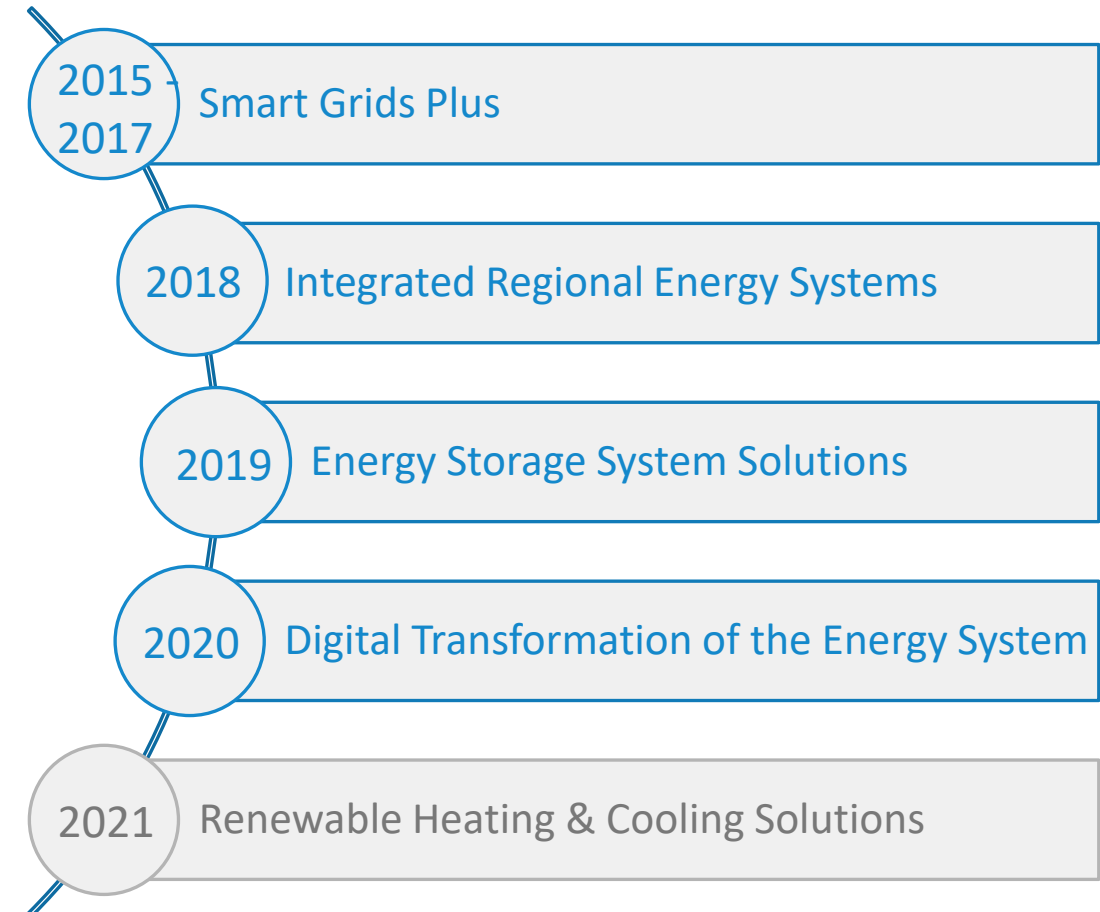
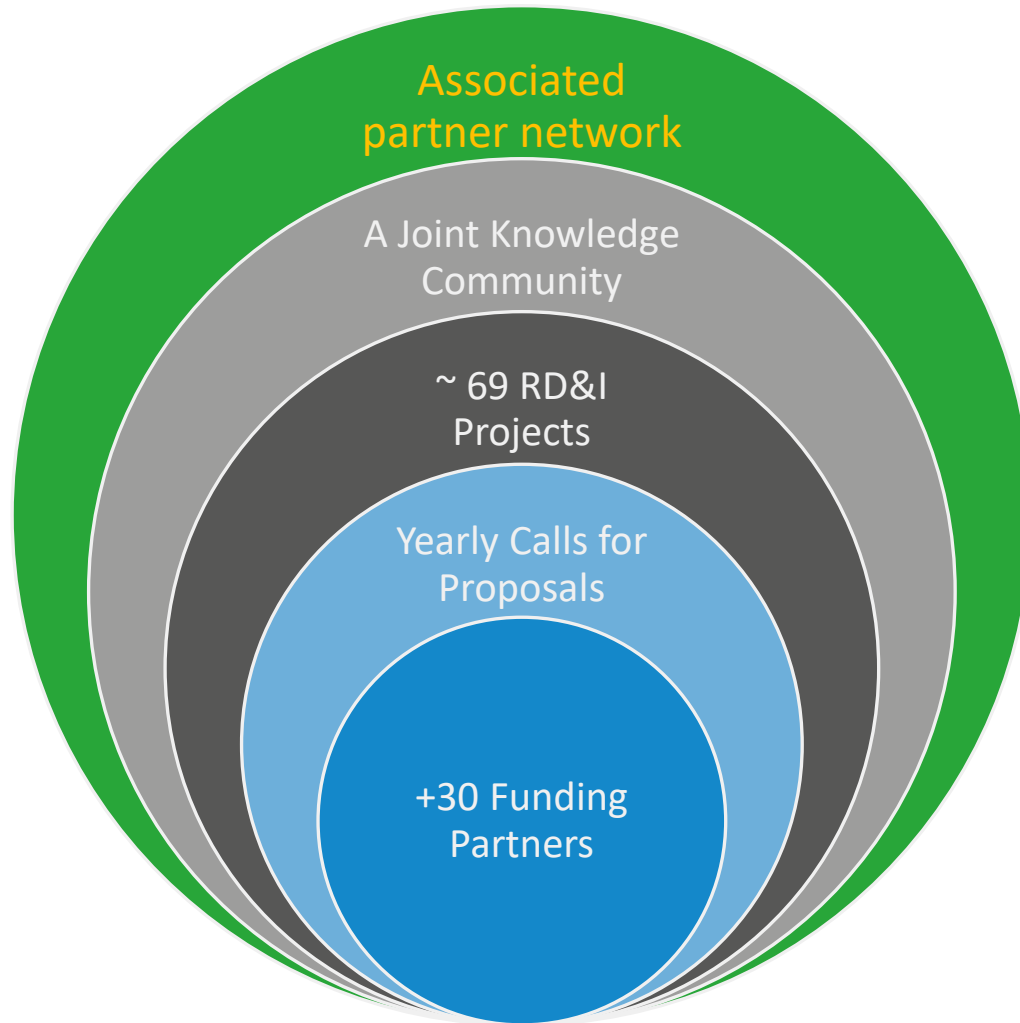
funding partners from
29 countries and regions

www.eranet-smartenergysystems.eu

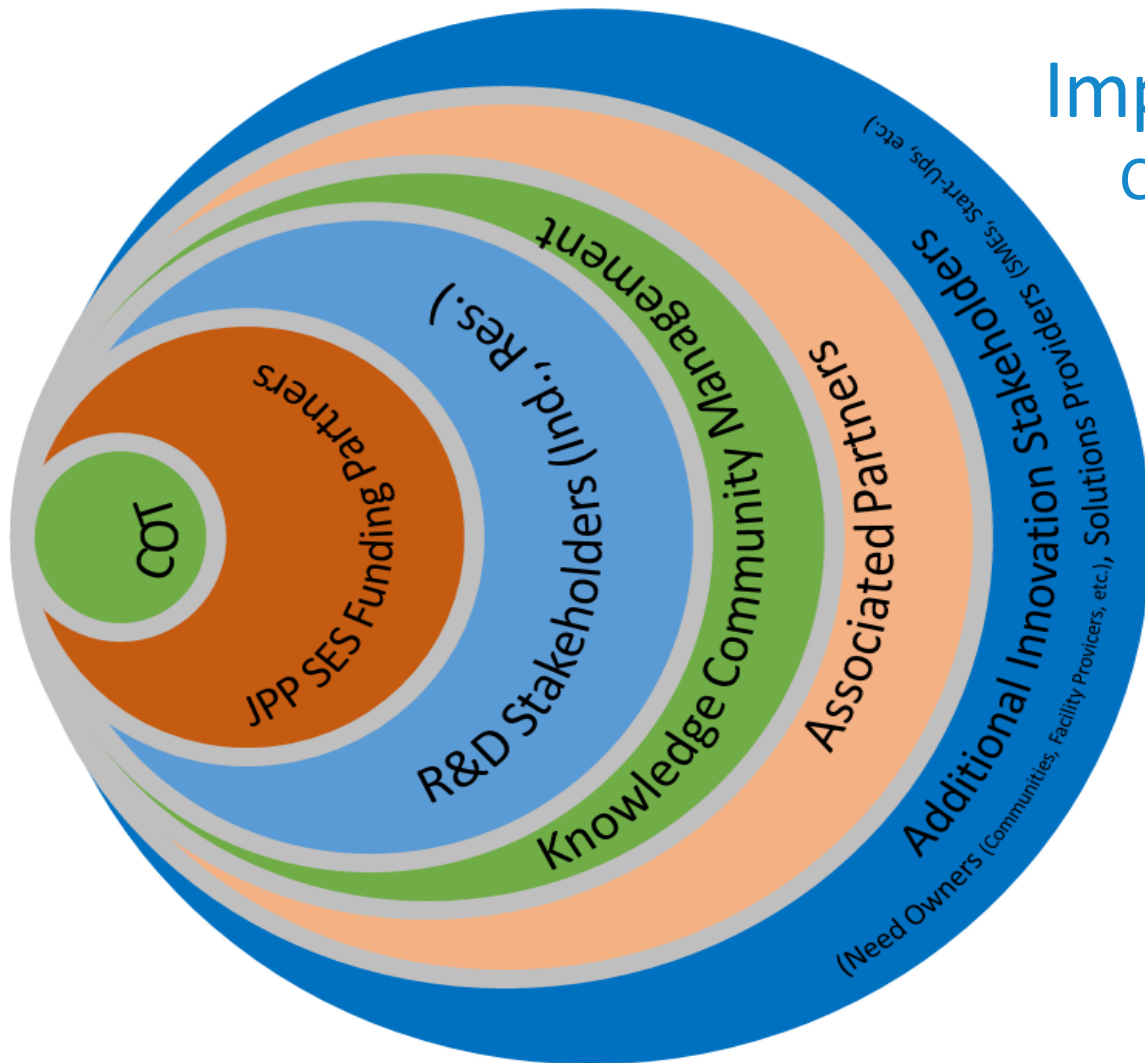


ERA-Net Smart Energy Systems has received funding from the European Union's Horizon2020 research and innovation programme under grant agreement No 646039 and No. 775970.

JPP SES - Enhancing Innovation on Smart Energy Systems



Innovation Ecosystem with Network Communication



Impact Network Approach

Co-Create on program level in order to stimulate co-creation on project level

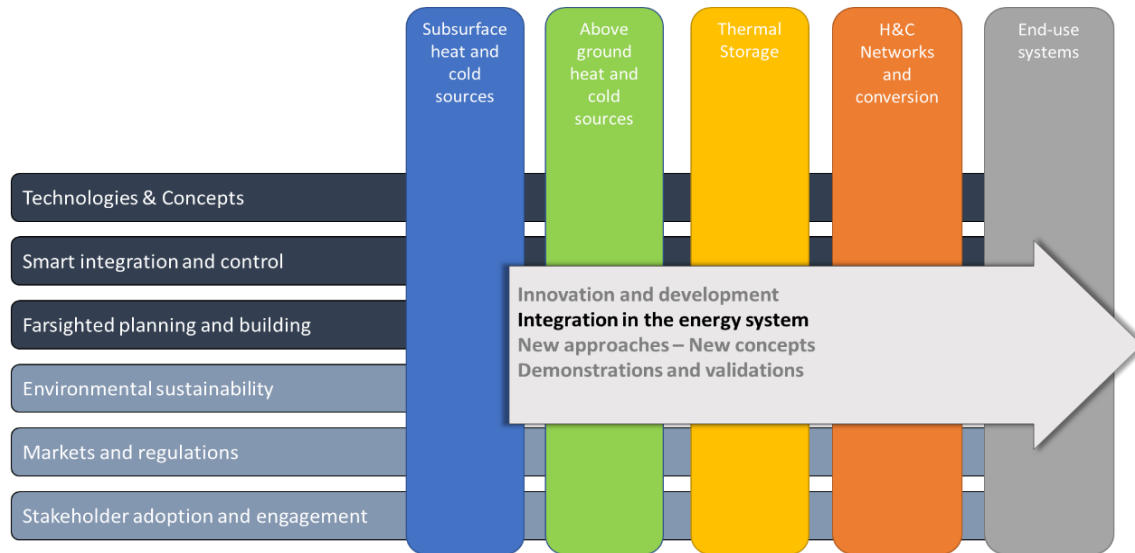
Linking intermediates to

- need owners, potential buyers
- regional and local decision makers
- regional innovation ecosystems
- follow-up financiers and supporters
- global start-up networks

New Elements:

- Validation Network with Living Labs
- Network of Digital Platform Providers
- Lab Network (with ERIGrid)

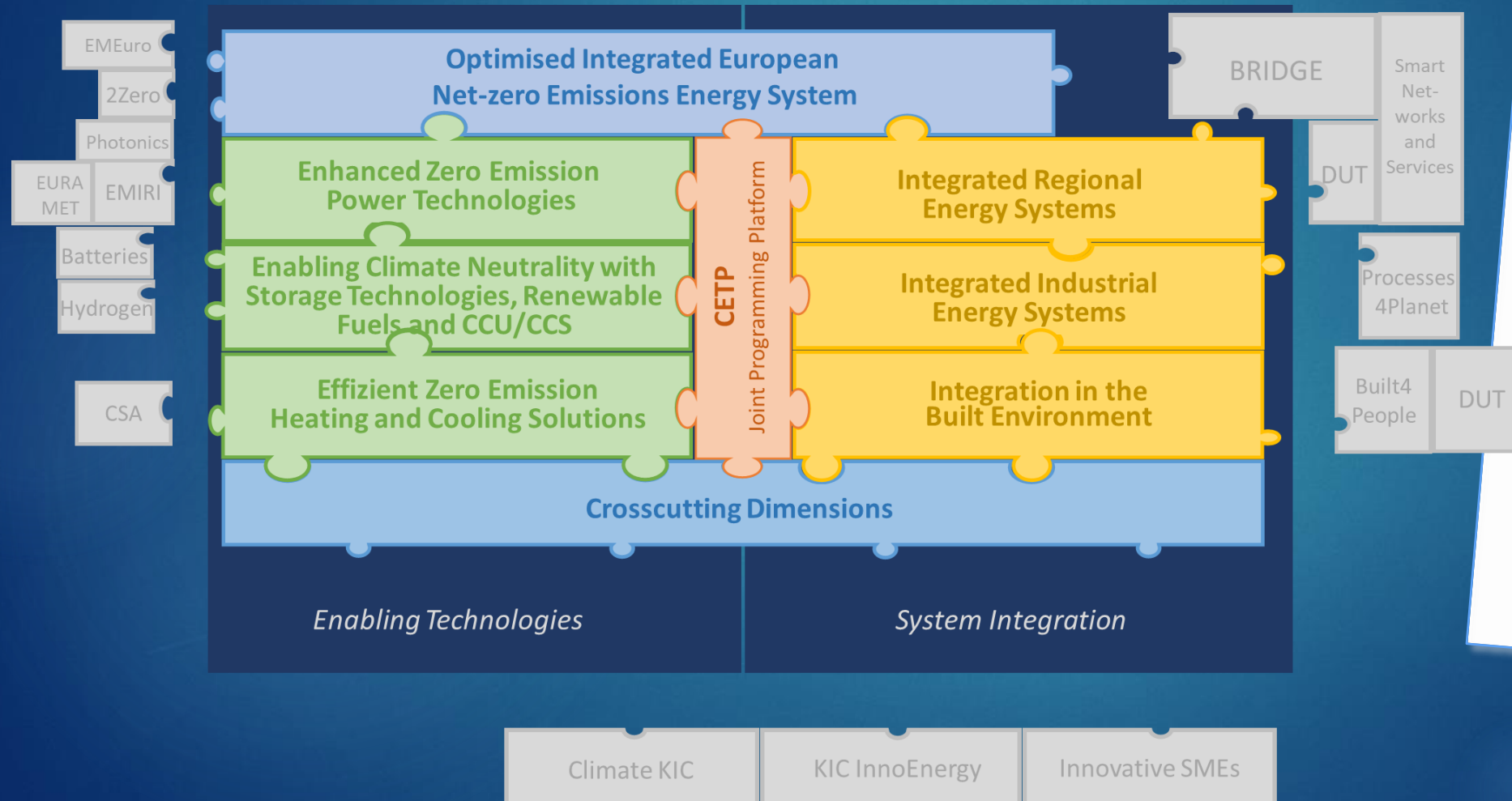
Joint Call 2021: Integrated systems; Heating & cooling; etc.



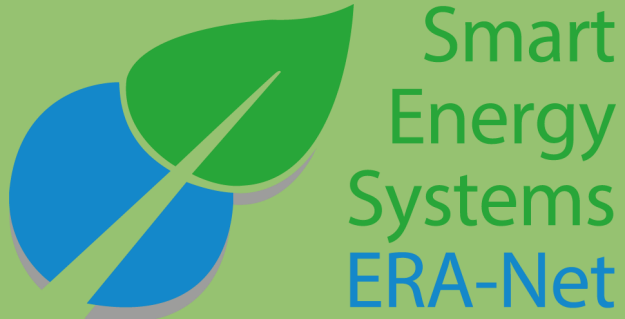
- Climate neutral resources for heating and cooling, including subsurface (shallow and deep geothermal), solar thermal, and other sources of renewable heating and cooling as well as utilization of local and regional excess resources
- A resource efficient and sustainable distribution, storage and utilisation of heating and cooling. This includes short time and seasonal thermal storage options as well as innovations for heating and cooling networks and conversion technologies such as heat pumps to distribute the heating and cooling and adjust the temperature level where needed
- Integration of heating and cooling in the local and regional energy systems, including aspects of sector coupling, smart integration and control tools which shall leverage synergies and utilize flexibilities in locally and regionally available energy sources, the local and regional infrastructures as well as the user and consumer structures from different sectors (including e.g. communities, industry facilities, or the transportation system) and related consumption patterns.

CETP Strategic Research and Innovation Agenda

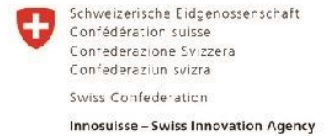
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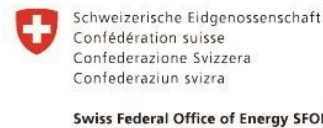
Funding Partners



This initiative has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreements no. 646039 and no. 775970.



MINISTERUL EDUCAȚIEI ȘI CERCETĂRII





Julien Joubert

Project Manager at Energy Cities

European City Facility



Covenant of Mayors
for Climate & Energy
EUROPE



ENERGYCITIES



EUCF
European City Facility



EUCF
European City Facility

European City Facility

Julien Joubert, Energy Cities



ENERGYCITIES

This project has received funding from the
European Union's Horizon 2020 research and
innovation programme under grant agreement
No 864212



EUCF: Aims and objectives



Provide financial and technical expertise to cities

Deliver more than 200 investment concepts



Build capacity of more than 400 municipal staff

Facilitate access to private & EU finance and advisory services



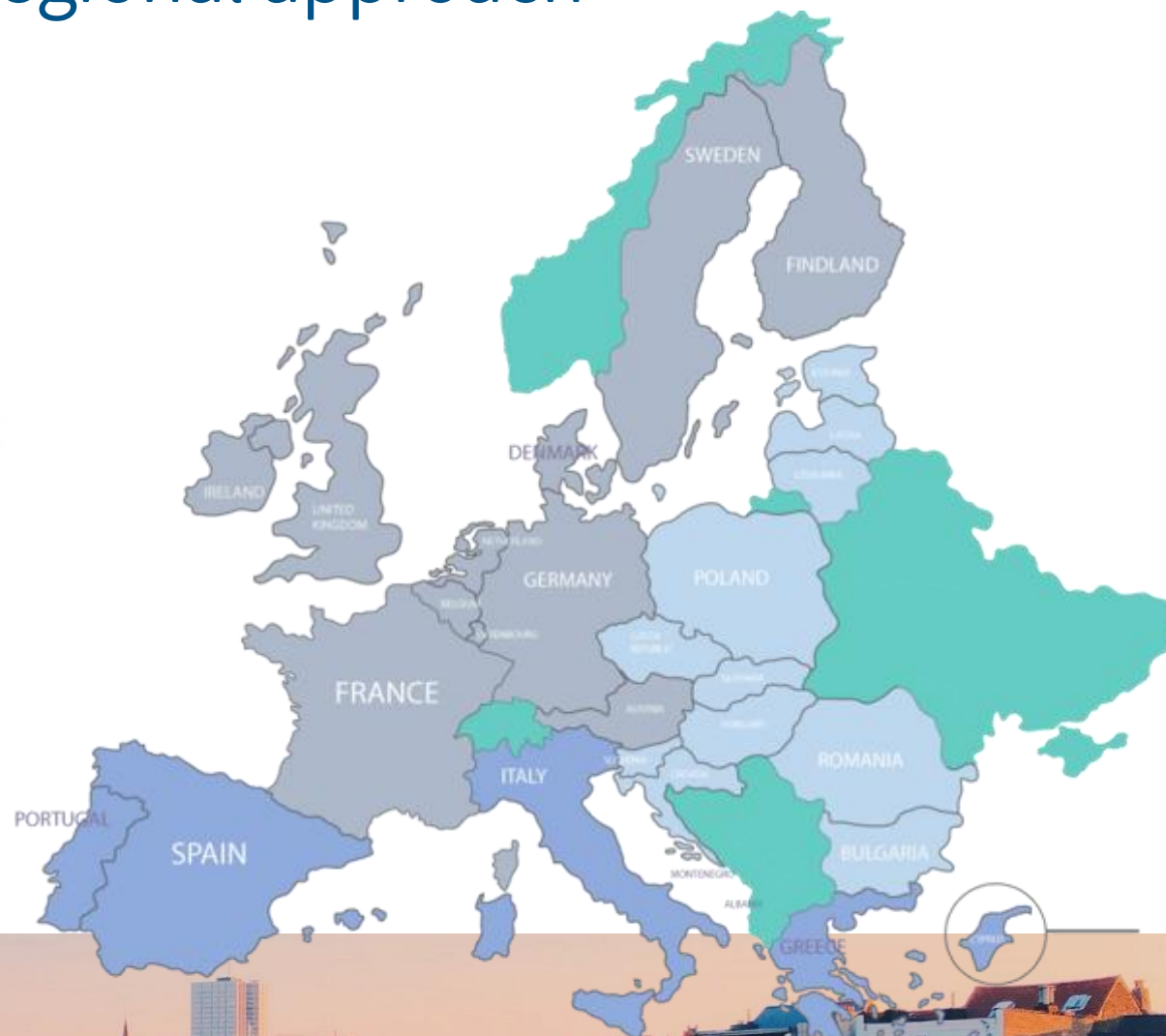
Reach out more than 10.000 cities encouraging replication



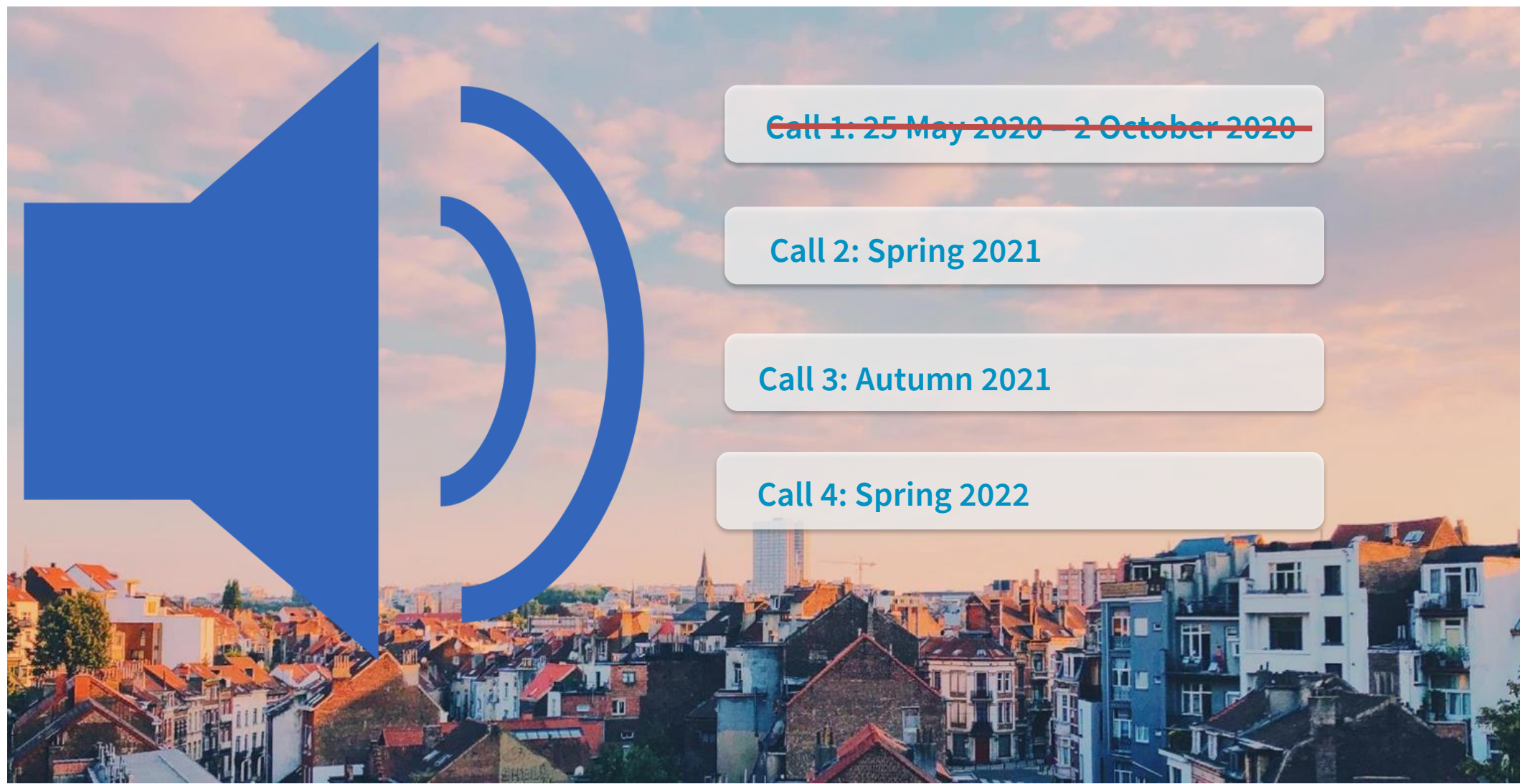
EUCF: Regional approach

EUCF Regional Calls for Applications

- Central and Eastern Europe
- Nordic countries & Western Europe
- Southern Europe



EUCF: Calls for applications





Sebastian Marx

EU Advocacy & Project
Development Consultant

The European Innovation Fund

SEBASTIAN **MARX**

EU Advocacy & Project Development

Celsius Summit 2020 – Mission Possible!

FUNDING POSSIBILITIES – PITCHES

December 9, 2020

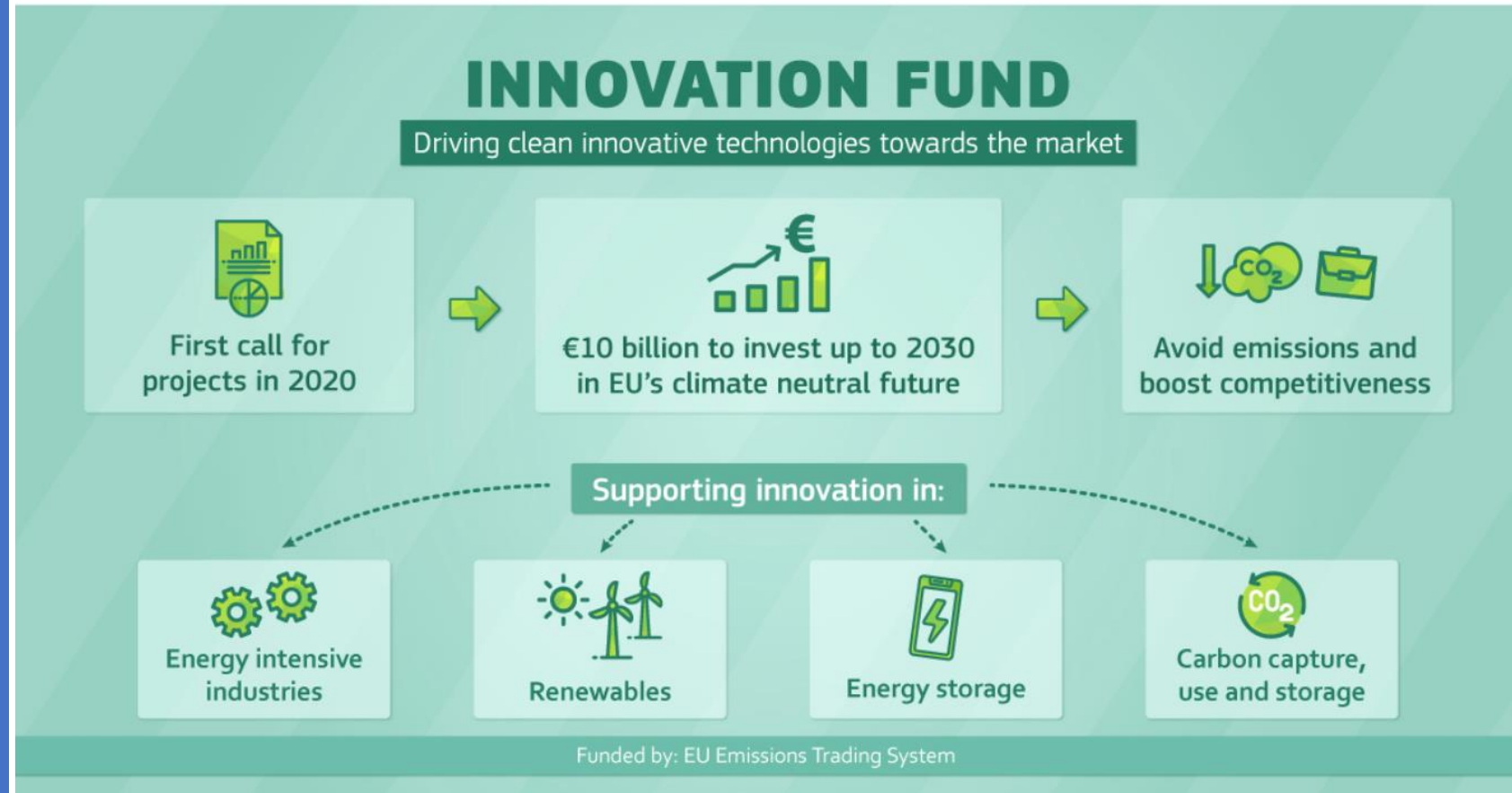
EU Innovation
Fund



SEBASTIAN MARX

EU Advocacy & Project Development

Objectives

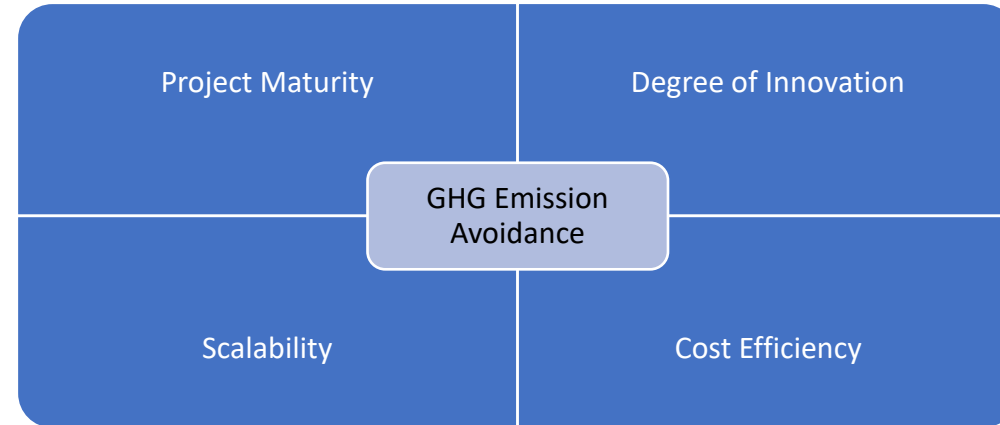


Large Scale Projects

Award criteria

Small Scale Projects

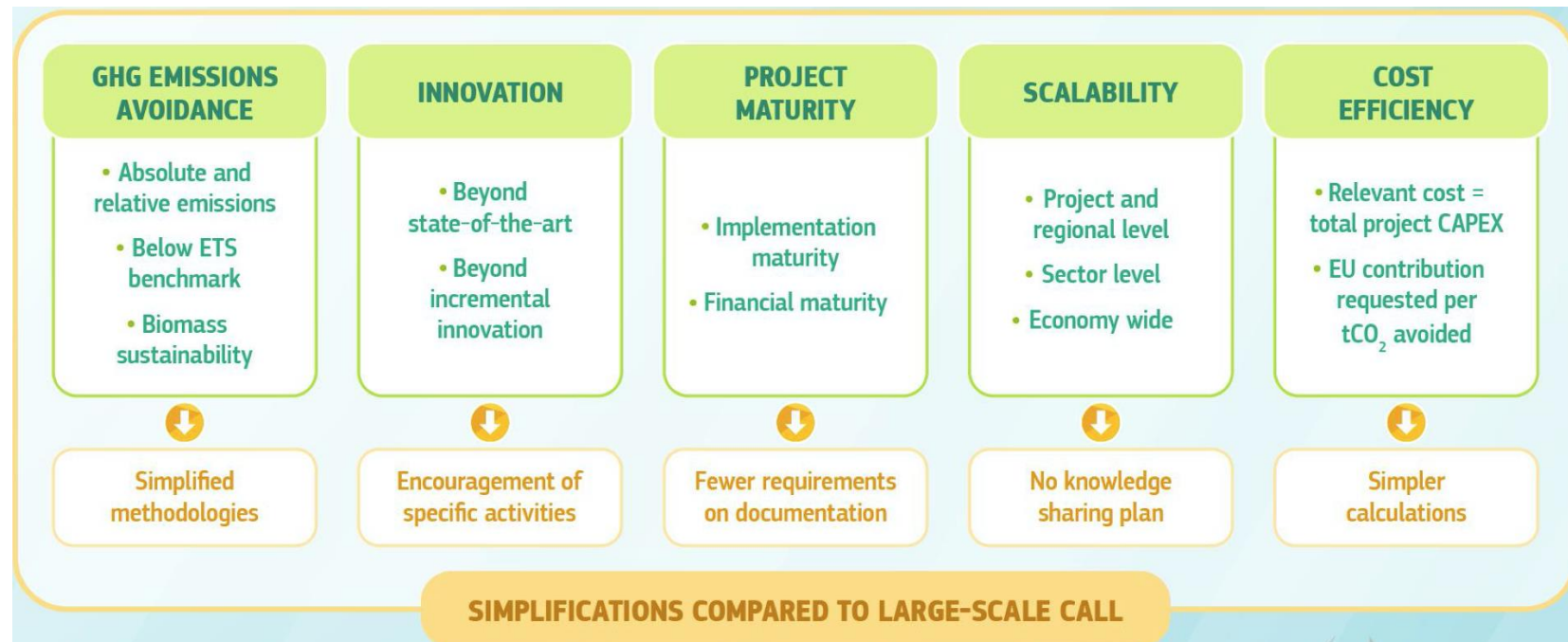
- The EIF supports large scale projects with over 7,5 Mio EURO CAPEX.
- First Call is ongoing (First Call closed 29 October 2020).
- Yearly calls will follow (Next call Sep 2021?).
- Grant covering up to 60% of **relevant** costs.
- 2 Stage procedure



- Yearly calls planned for small scale projects (CAPEX below 7,5 mio Euro).
- First Call open since December 1
- Relevant costs for Small Scale Projects = CAPEX
- 1 Stage procedure

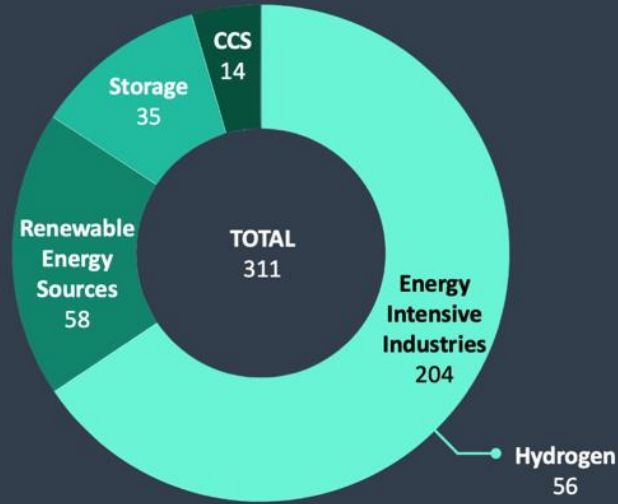
Small Scale Projects

Event	Timing
Launch of small-scale call	1 December 2020
Deadline for submission of applications	10 March 2021
Information on evaluation results and invitation for grant preparation	August 2021 (indicative)
Award of the grants	As of Q4 2021 (indicative)



First Call for Applications

Applications to first Innovation Fund call



APPLICATIONS PER ACTIVITY
of which some are cross-sectoral applications



Join the breakout session for a discussion on how the Innovation Fund can support your project!

Thank you for your attention!

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Bojan Bogdanovic

Principal Fund Manager,
Renewable District Energy
EBRD

EBRD



European Bank
for Reconstruction and Development



European Bank
for Reconstruction and Development

The background of the slide is a close-up photograph of numerous colorful flags hanging vertically. The flags are in various colors including blue, red, green, yellow, and white, and some have patterns. A semi-transparent dark blue rectangle is overlaid on the center of the image, containing the text.

Celsius Summit 2020

December 2020

Electrical power system (EPS)

Installed power: 7.3 GW

Energy generated: 36,000 GWh/year

Renewable energy share: >40%

District heating system

Installed power: 6 GW

Energy generated: 7,000 GWh

Renewable energy share : 0.04%

Extension of District heating systems and renewable and waste energy share:

- Decreases excessive electricity consumption and peak power generated by the consumers who use electricity for heating (in inefficient way), which then helps decreasing coal fired thermal plants utilisation;
- Reduces air pollution from inefficient individual stoves (PM10, PM2.5, NOx, SO2, soot);
- Reduces CO2 emissions;
- Increases comfort conditions,
- Enables the delivery of renewable and waste energy where it is otherwise difficult (dense urban city areas).

Renewable District Energy in the Western Balkans (ReDEWeB)

PROGRAMME DESCRIPTION

- ReDEWeB aims to enable renewable district energy investment in the Western Balkans
- EUR 4 m funds available for 2019-2022, for both technical assistance and investment grants, funded by the Government of Austria
- Additional EUR 8.5m funded by SECO, to be utilised in Serbia for CAPEX grants, policy and TC work

TYPE OF SUPPORT PROVIDED

- Policy support for renewable district energy
- Project preparation and feasibility studies
- Capacity building and networking
- Capex grants

GEOGRAPHY

- All WB countries



TARGET ACTIVITIES

TA component will support four areas of activity:

- I. National policy activities** developed in close cooperation with Energy Community Secretariat - ECS (supporting development of country Renewable District Energy action plans, supporting countries to meet their RE and EE targets from Energy Community Treaty)
- II. City policy activities** (integrating ReDE sources, generation and storage into municipalities' urban planning, introducing ReDE generation and EE measures for selected cities, advocating consumption based billing, etc.)
- III. Project preparation support to cities and developers** (mapping of DE consumption in selected municipalities, mapping of economically feasible RE sources, preparation of Feasibility studies, designs and PPP proposals for ReDE, etc.)
- IV. Capacity building** (education, networking and knowledge sharing; establishing a network of ReDE professionals; organising annual ReDEWeB conferences)
- V. Capex grants for selected projects**

ReDEWeB Fund - Technologies



European Bank
for Reconstruction and Development

No	COO	City	Project scope	Processing stage	Category
1	Serbia	Pancevo	Solar thermal* + Network refurbishment** + Buildings Energy Efficiency **	Pre-Feasibility Study completed. The City decided to proceed further with the project development. Feasibility study contracted.	Private* Public**
2	Kosovo	Pristina	Solar thermal	Joint work with KfW being a lead IFI. Pre-Feasibility Study completed. The City decided to proceed further with the project development.	Public
3	Serbia	Bor	Solar thermal* + Buildings Energy Efficiency ** + Substations modernisation** + Network refurbishment **	Pre-Feasibility Study completed. The City decided to proceed further with the project development.	Private* Public**
4	Serbia	Novi Sad	Solar thermal	Pre-Feasibility Study completed. Presenting the results to the Mayor.	Public
5	Montenegro	Zabljak	Biomass based greenfield district heating development	Pre-Feasibility Study completed. The City decided to proceed further with the project development.	Private
6	Serbia	Valjevo	Heat pump (Waste water Treatment Facility - WWTF) + Extension and New connections to DH system + Buildings Energy Efficiency	Pre-Feasibility under development.	Public
7	Serbia	Sabac	Heat pump utilising the heat from the waste water treatment facility (WWTF)	Contracting the consultants for the pre-feasibility study	Private
8	Serbia	Nis	Phase 1 Solar thermal* + Buildings Energy Efficiency ** Phase 2 Geothermal + Biomass + DH Energy Efficiency	Expression of interest received. Mandate letter-signing phase. Concept development phase.	Private* Public** Public
9	Serbia	Zrenjanin	Solar thermal* + Buildings Energy Efficiency **	Expression of interest received.	Private* Public**
10	Bosnia & Hercegovina	Sarajevo	Heat pump utilising geothermal heat - Energy efficiency in DH plant	Expression of interest received.	Public
11	Bosnia & Hercegovina	Banja Luka	DH Network refurbishment + Industrial waste heat	Expression of interest received.	Public
12	Serbia	Kraljevo	Heat pump* + Buildings Energy Efficiency ** + CHP**	Expression of interest received.	Private* Public**

Demand side measures / Financing



European Bank
for Reconstruction and Development

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Questions

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Magnus Andersson

Partner at IMCG

Finance Expert for the Celsius Initiative

Investing in DHC

Getting skin in the game



Next step: Investing in DHC – Getting skin in the game

Magnus Andersson, Celsius & IMCG
9th of December, 2020





MAGNUS ANDERSSON

Director Business development

Impact focus – From idea to commissioning
Celsius – Financial instruments & Growth

Smart Cities & Energy Transition -
Financial instruments for energy transition

European Commission & EIB
+100 EU grants and investments

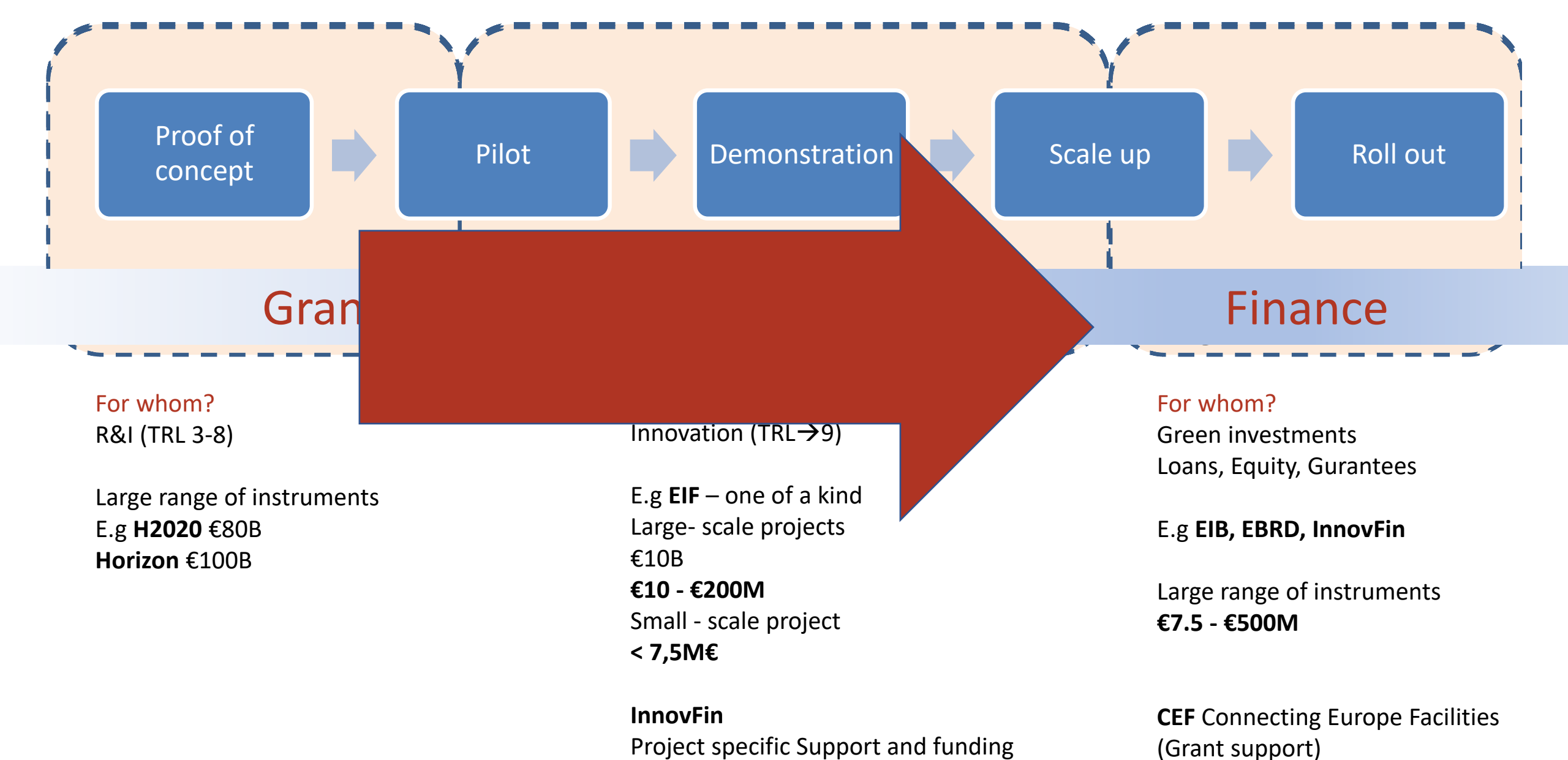


Celsius activities with financial instruments

It is on-going!

Objectives

- Support the development of financial instruments to better fit heating and cooling projects
- Enhance scaling and deployment by closing the gap between **funding** and **investments**
- Knowledge transfers – Celsius partners





Exciting period

Innovations as AI, vaccine, Space X, development is visual and well communicated - the development is moving in an unprecedented speed!

We are witnessing a similar development within sustainable financing! A radical and critical development, due to its nature, often below the radar of general media, associate press - **but most likely more significant to humanity.**

Trends



EIB & EIF becomes The Climate Bank – committing **€1 trillion** of investment in climate and environmental 2021-2030.

Capital Market Union – Common standards and approach towards sustainable finance - reorientation of pools of global saving and international capital markets.

Global movement - Financial Policies For Sustainable Investments

Taxonomy

Forbes – **Lower risk, investments in green**

CRA – Climate risk assessment

Next steps



Ongoing
Final interviews
with Investors
&
Cities/Utilities

- 2021 Jan
Short paper to EC

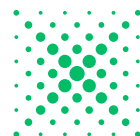
Chair CELSIUS
EC, EIB, EEFIG, Germany,
France, London, etc

Knowledge transfer
Webinars
End of Q1
Tune in!

Urban Agenda -
Energy Transition
Partnership



- Objective to involve Urban Authorities in policy development and implementation
 - Better Funding Energy Transition Partnership



FlexiGrid



 Federal Ministry
Republic of Austria
Climate Action, Environment,
Energy, Mobility,
Innovation and Technology

Thank you!

SEBASTIAN **MARX**

EU Advocacy & Project Development



**Johanneberg
Science Park**



REGIONALNA ENERGETSKA AGENCIJA
NORTH-WEST CROATIA
SJEVEROZAPADNE HRVATSKE
REGIONAL ENERGY AGENCY



**EUROHEAT
& POWER**



**JKP BEOGRADSKJE
ELEKTRANE**

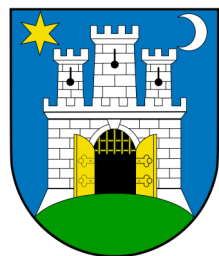


TEHNOSTAN

d.o.o. za proizvodnju, distribuciju i opskrbu toplinskom energijom



REWARDHeat



MADRID



Swedish Environmental
Research Institute



REUSEHEAT

Strasbourg.eu
eurométropole



European Bank
for Reconstruction and Development



ENERGYCITIES



ENERGY



Göteborg Energi



**Covenant of Mayors
for Climate & Energy
EUROPE**



EUCF
European City Facility

In collaboration with

