This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 754521.

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CA EED Webinar 28th April 2020

Energy Performance Contracting as a catalyst for building renovation in the public sector

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 754521.

Context

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CA EED Berlin March 2020 (cancelled)- WG6.3 Energy Performance Contracting as a catalyst for building renovation in the public sector

CA EED Lisbon 13-15th October 2020 – Two sessions

Alan Ryan, Sustainable Energy Authority of Ireland, Ireland
Timo Vihavainen, Energy Authority, Finland
Miroslav Marias, Ministry of economy, Slovakia
Angel Nikolaev, BSERC, Bulgaria

(More at https://www.ca-eed.eu/Plenary-Meetings/CA-EED-2-Plenary-Meetings/6-7th-CA-EED-Lisbon-October-2020**)**

EA2 Public buildings , EA3 Public purchasing, EA8 Energy services and ESCOs

Article 5, 18, 20

Webinar notes

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- The audience will be muted throughout the session
- To ask questions type them into the “Questions” box.
  - Please address **all your questions to ‘all panellists’** – that way we can all see them. Webinar specific issues or question you can ask Adrianna directly
  - Questions will mostly be answered at the end of the presentation
  - Any questions not answered can be clarified afterwards in relevant to all
- The webinar will be recorded and added to the private section of the CA EED website.

Agenda

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3pm CET **Alan Ryan**	**15 min**	**Webinar Introduction, overview of WG6.2 report findings**
DG ENER (TBC)	5 min	DG ENER update on recent policy developments
Robert Pernetta & Laurent Bender EIB	30 min	EIB's perspective on the development across different MS regarding comprehensive building renovation via EPC; update on most recent development of EPC financing models; overview of EIB group's supports to EPC schemes.
Christoph Blaschke	15 min	B.E.M. Berliner Energiemanagement GmbH – building renovation programme in Berlin using EPC and non EPC solutions, experience with full risk transfer EPC and 3rd party financing and the recent development of a lighter EPC model and internal revolving fund, examples of success www.bem-berlin.de
Various	15 min	Member State updates – those MS planning EPC related actions in the next 6-9 months (there will be more detailed presentations at the Lisbon plenary). Some MS are working on EPC related actions but will have more to report in Lisbon. Ireland – Alan Ryan, SEAI Czech – Vladimir Sochor, Ministry of Industry and Trade Scotland – Richard Lockhart, Scottish Futures Trust
Angel Nikolaev	5 min	Relevant H2020 projects and their outputs
Approx 4:30 CET **Alan Ryan**	5 min	Wrap up and initial plan for the Lisbon session on WG6.2

PS building renovation plans

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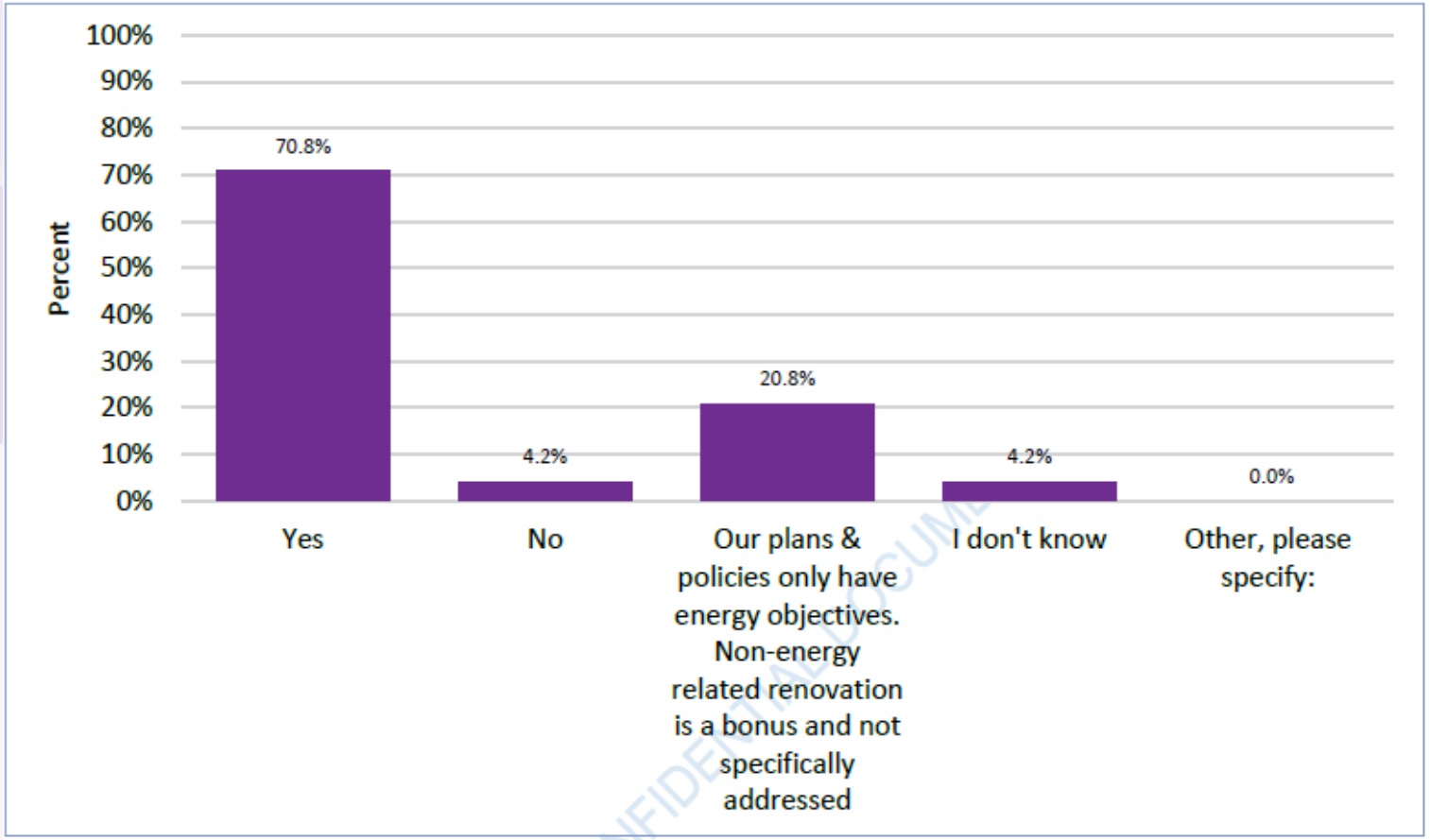
1.2 Does your MS have objectives to renovate public sector buildings as part of broader energy plans or policies?



PS building renovation plans

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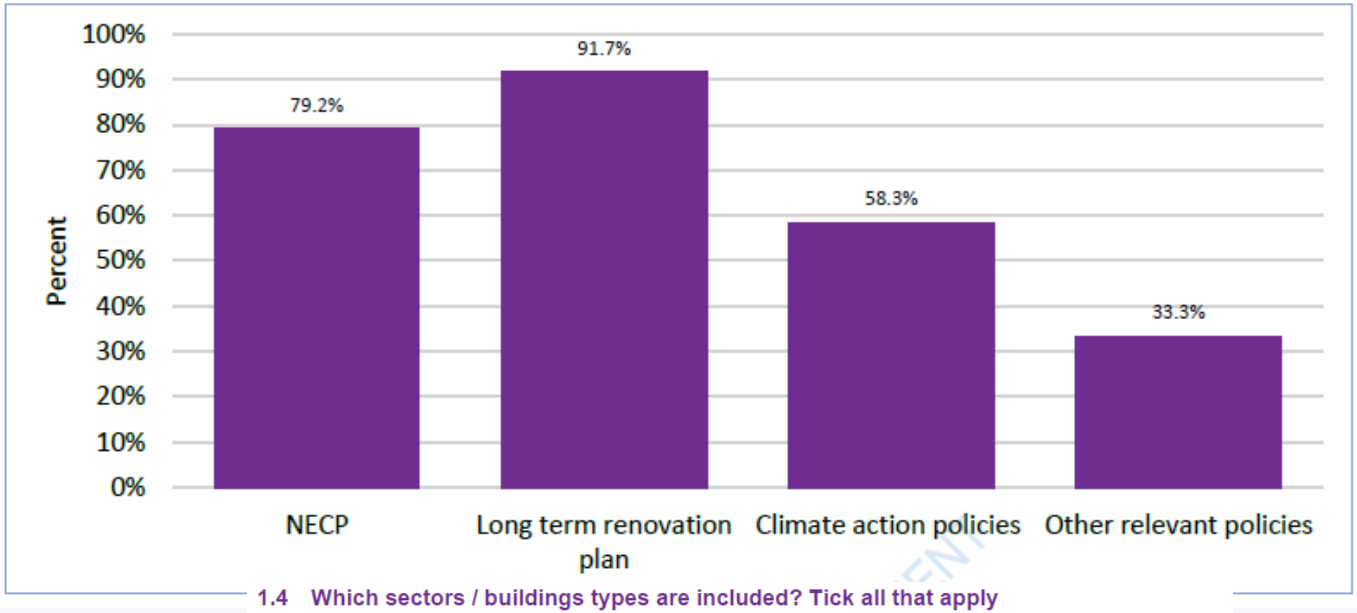
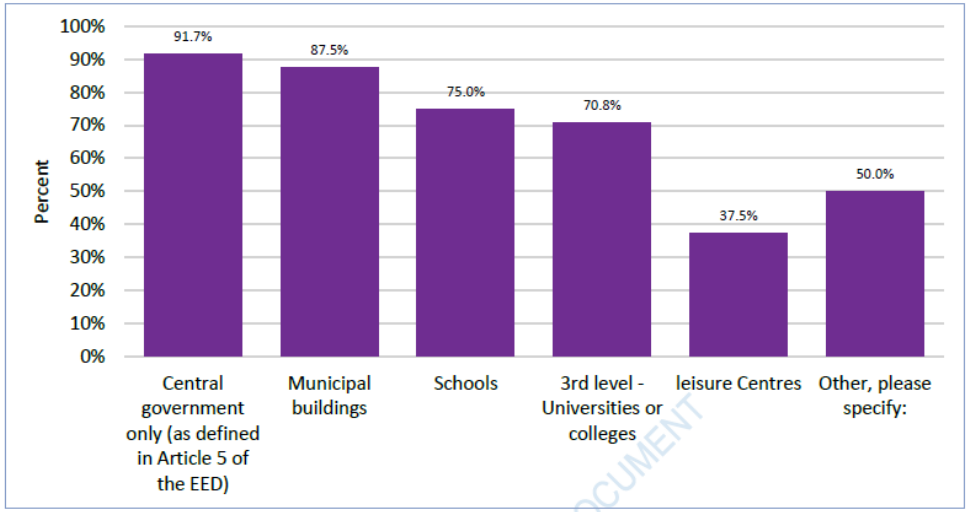
1.3 Renovation of public buildings is an important part of the following policies. Tick all that apply



1.4 Which sectors / buildings types are included? Tick all that apply



FOR A SUSTAINABLE FUTURE

PS building renovation plans

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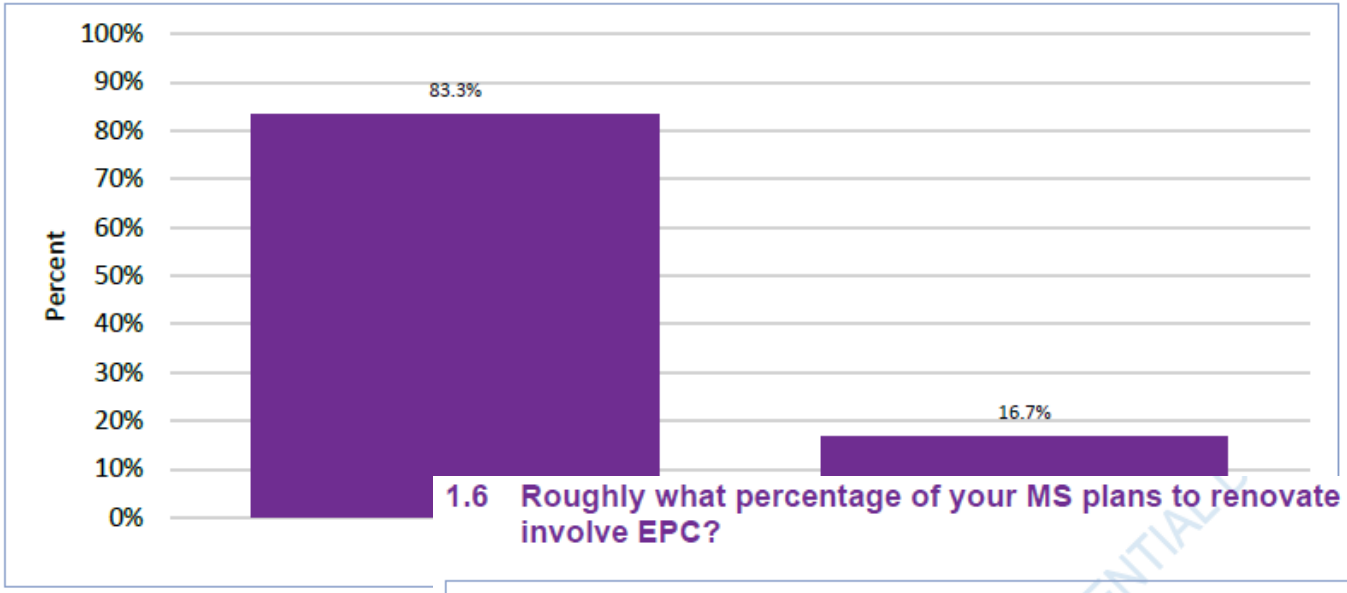
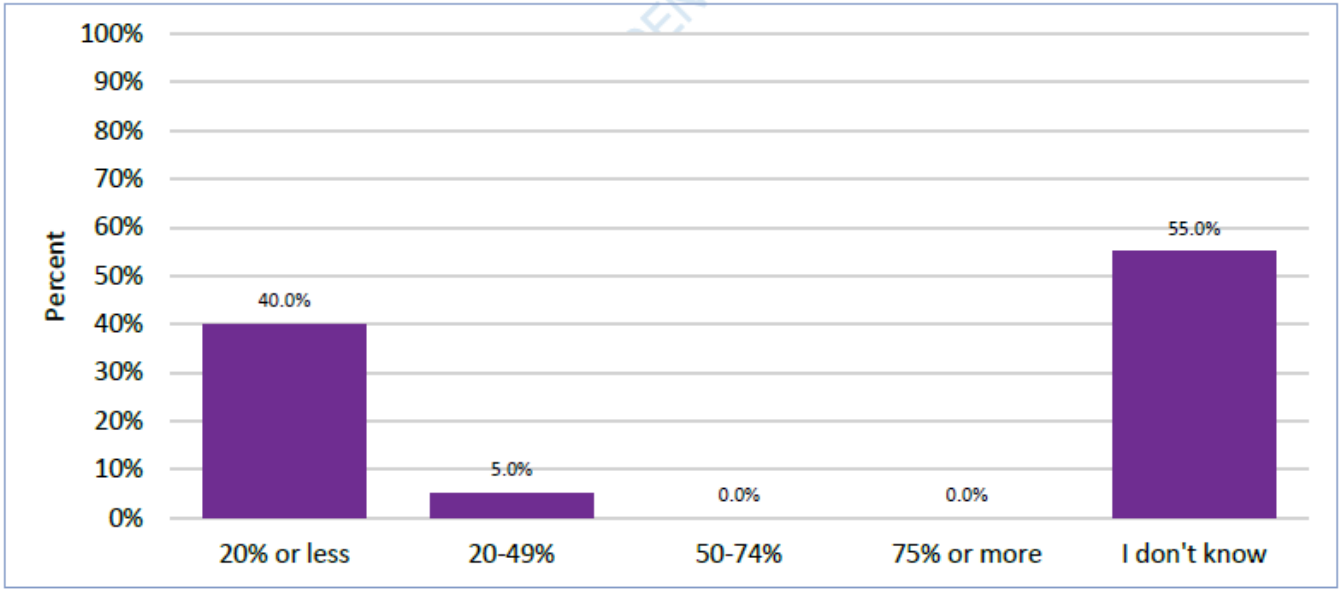
1.5 Is Energy Performance Contracting (EPC) part of your plans to renovate public sector buildings?



1.6 Roughly what percentage of your MS plans to renovate public sector buildings will involve EPC?



What do we mean by ‘renovation’

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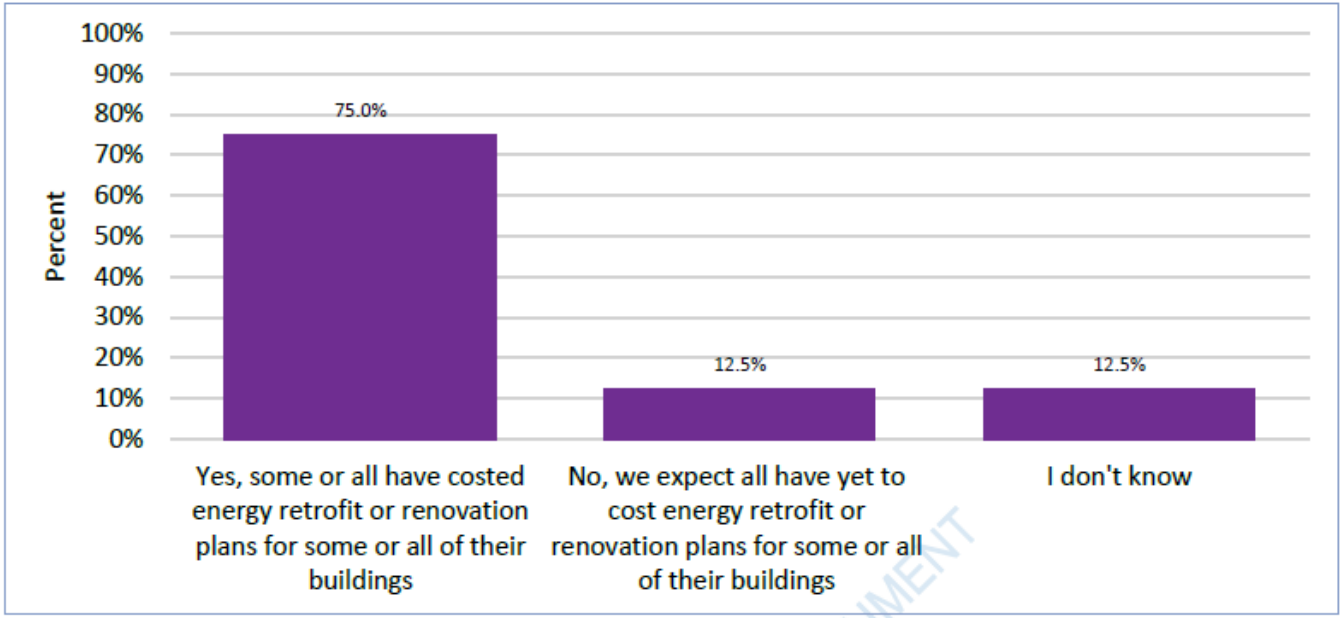
1.10 Have any public bodies in your MS costed energy retrofit or renovation plans for their building stock?



What do we mean by ‘renovation’

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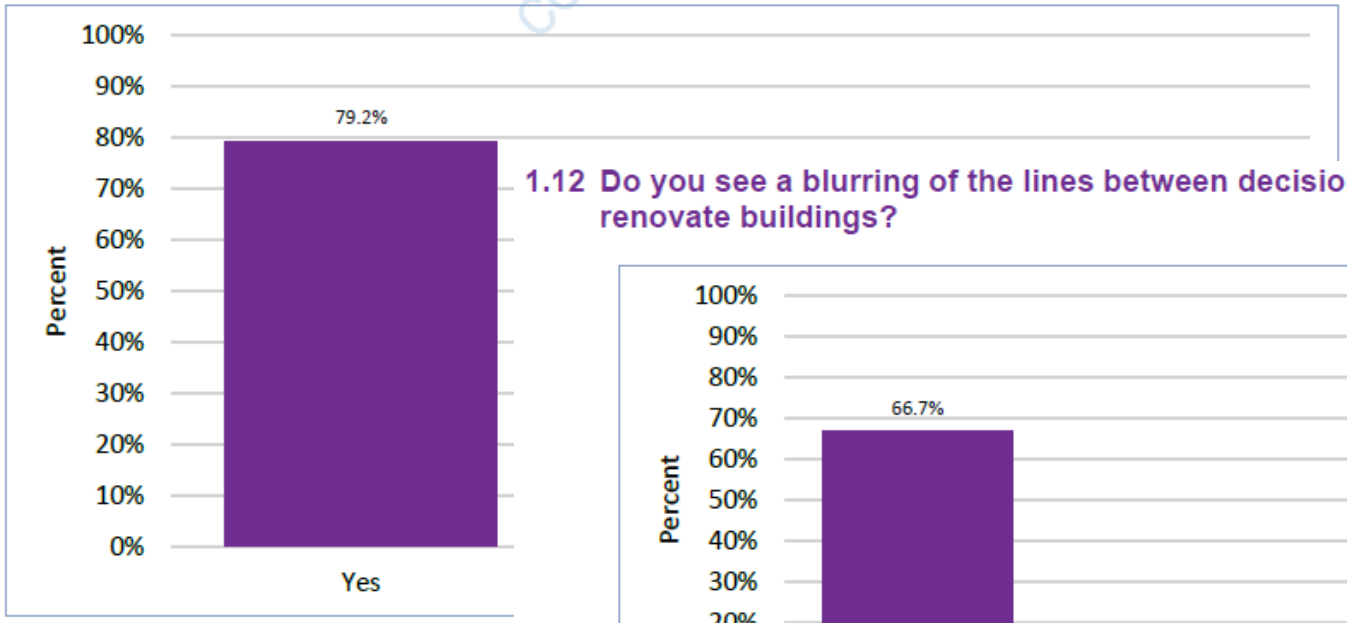
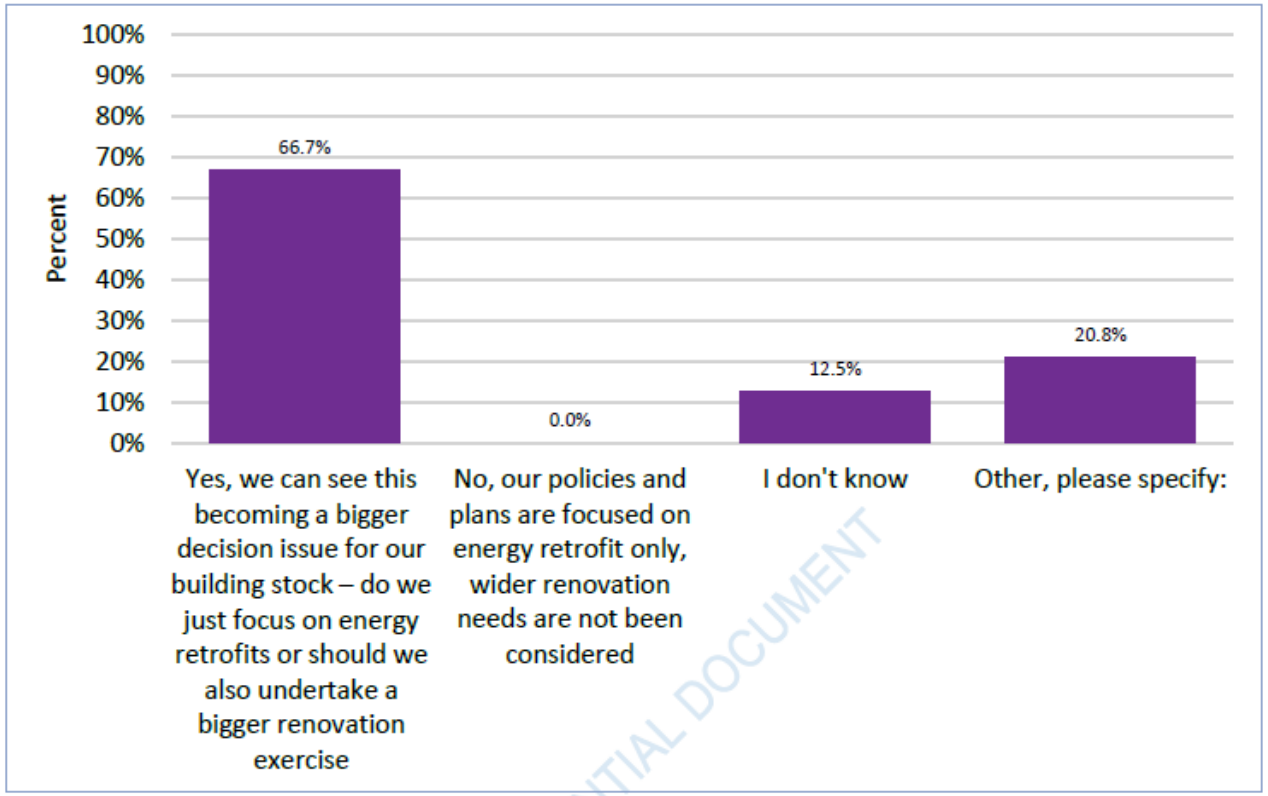
1.11 In many MS the cost of deep retrofit and achieving a high EPBD rating can be equivalent to undertaking a significant renovation on the building. Is this an area of concern in your MS?



1.12 Do you see a blurring of the lines between decisions to energy retrofit or overall renovate buildings?



Good practices

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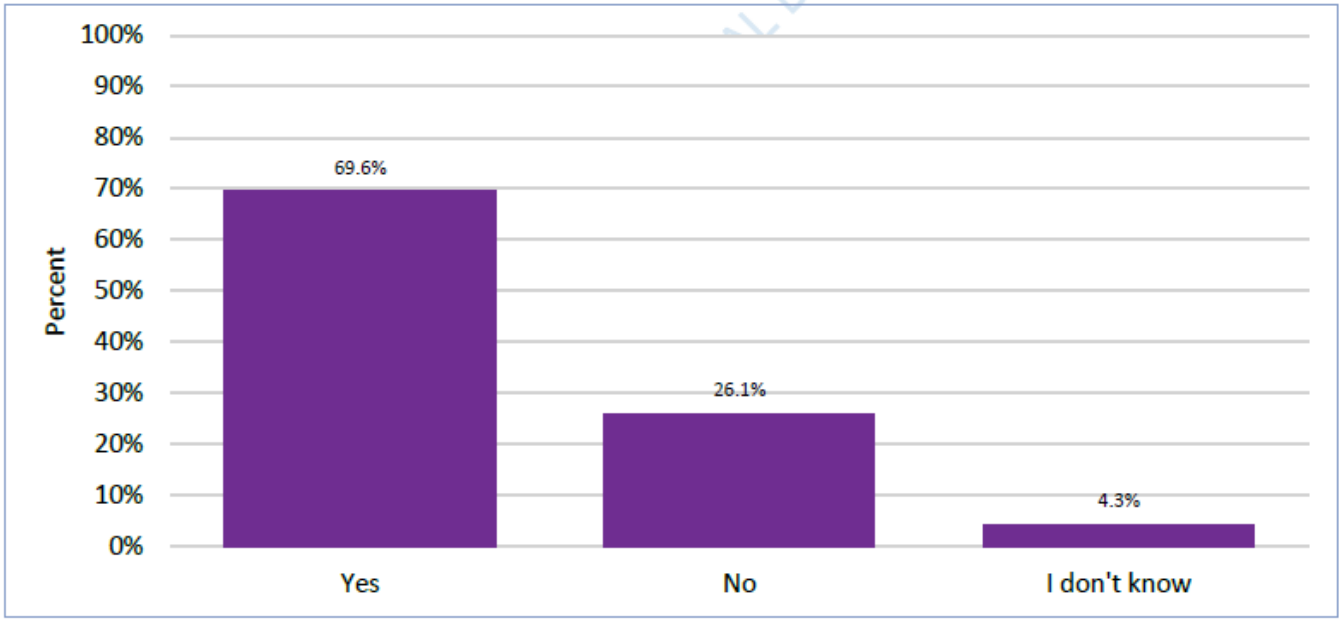
1.13 Are there examples in your MS of where EPC was used to renovate public sector buildings?



23 MS have replied positively, but only 16 of them have provided specific example of public buildings renovation through EPC:

Executive summary

This report identifies which MS have plans for renovation of public sector buildings, to what extent these plans align with energy retrofit plans, if at all; and specifically, what role does EPC have in renovating public sector buildings, and which MS are using the model as a catalyst to retrofit more buildings. That is as a result of the EPC, renovate more buildings and over a quicker timeframe.

Additionally, the report identifies to what extent MS make a distinction between energy retrofit of a building (work undertaken solely to improve the energy performance or rating of a building) and general renovation (works not specifically targeting an energy related benefit, i.e. internal walls, doors, floor improvements, general electrical system improvements etc), particularly considering the similarity of deep energy retrofit and renovation projects.

The report is mainly based on the results of WG6.2 questionnaire from January 2020, completed by 24 respondents - 23 of 28 MS and Norway.

90% of the responding MS have renovation plans for public sector buildings. 70% have wider renovation plans or policies and don't distinguish between energy retrofit and general renovation works, although the drivers for action seem to be to improve energy performance as opposed to the renovation needs of the buildings. 20% of MS have plans or policies with energy objectives only.

EPC is expected to play a role in energy retrofitting of public sector buildings in 80% of MS. Some MS have comprehensive retrofit progammes utilising the EPC model. Some plan to use EPC but it is still not clear where and what role EPC will have in their renovation plans and policies. All but one MS (LT) which answered that EPC has a role believe it will only be applied in a small percentage of their building stock. There is a mix of reasons for considering EPC, but the main one is the access to third party (private) finance, followed by the guaranteed energy savings, and the access to external expertise in project management and technical issues.

Over 70% of MS respondents believe that there is little difference between an energy retrofit project and overall building renovation. To achieve a high energy rating of a building means undertaking fabric (building envelope) and in some cases technological (e.g. heating, lighting systems) improvements. There are many good examples and projects listed of where the EPC model was used to renovate a building, achieve significant savings, and improve the building rating.

Generally there is a positive attitude towards EPC and its role to accelerate renovation in public sector buildings. Many MS have renovation plans and are actively exploring the role EPC can play.

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Working Group 6.2 : EPC as a catalyst for renovation of public sector buildings

-

EIB update on EPC models and EPC financing for comprehensive building renovation

Laurent Bender and Robert Pernetta,

EIB Financial Instrument Advisory

European Investment Bank

Energy efficiency can boost economies quickly, with long-lasting benefits

Energy efficiency as COVID-19 crisis response

- **Energy efficiency actions can support the goals of economic stimulus programmes** by supporting existing workforces and creating new jobs.
- **Governments can deliver stimulus at scale and speed** by leveraging existing programmes and standardising designs, eligibility criteria and contracts.
- **Aiming for high energy efficiency**; setting sufficiently attractive incentives to deliver high uptake; considering the capacity of suppliers to scale up rapidly while maintaining quality and safety of products and services.
- **Government can facilitate better outcomes from large-scale investment programmes** by addressing unnecessary regulatory barriers; turning short-term impacts into long-term transformations by raising energy efficiency standards.

Source: Energy efficiency and economic stimulus: IEA strategic considerations for policy makers

Glossary

CAPEX	Capital expenditure
CBA	Cost Benefit Analysis
Due diligence	Research and analysis of a company in preparation for a business transaction
EPC	Energy Performance Contracting
ESCO	Energy Service Company
Forfaiting	Sales of future receivables without recourse against the seller (true sale)
HVAC	Heating, Ventilation and Air Conditioning
NPV	Net present value
OPEX	Operational expenditure
Recourse	In the context of sale of receivables, when the seller's responsibility can be enforced in case of receivable's payment defaut.
Sale of receivables	Assignment of the rights (sale) related to client's invoices to a financial company at a discount price (purchase price),
Step-in rights	The right of a lender to replace the ESCO in the EPC contract

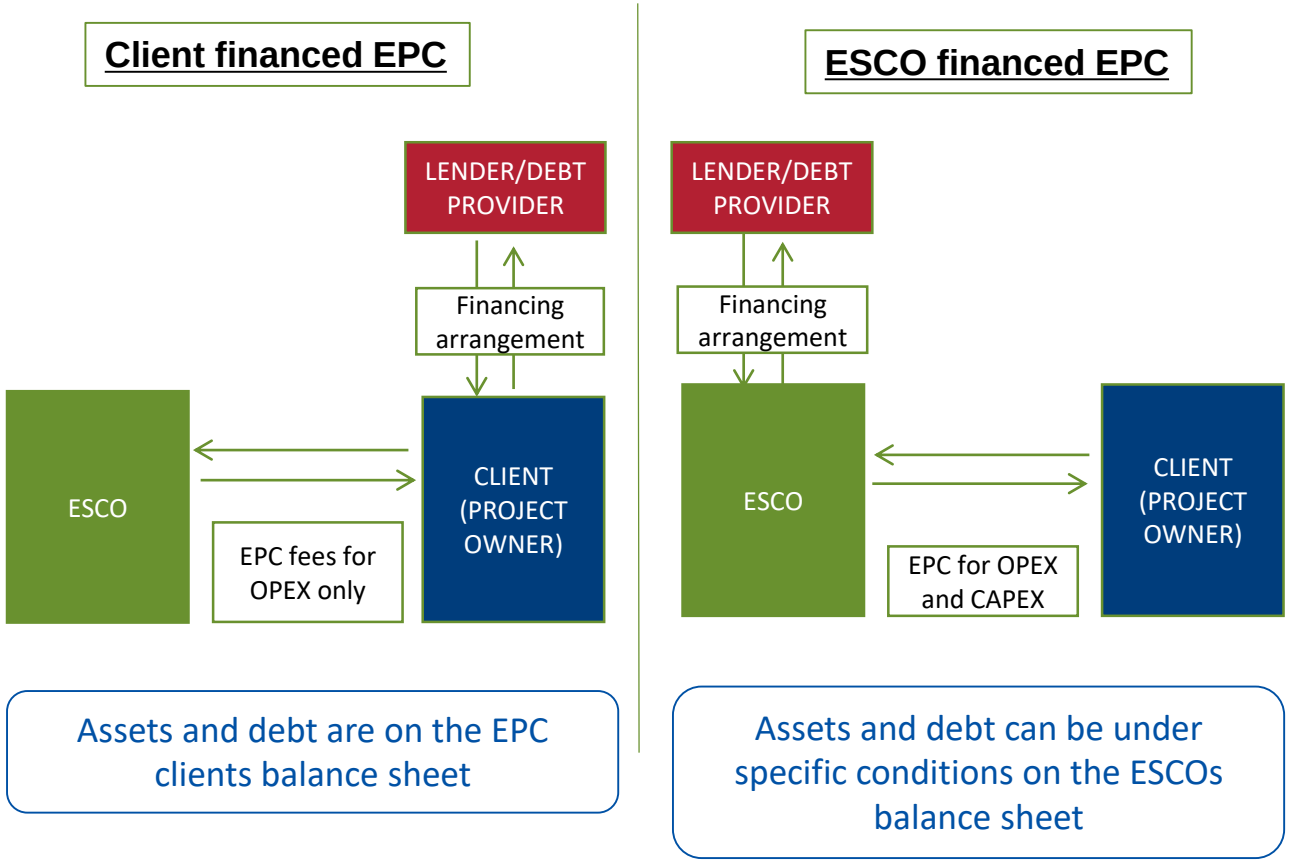
EUROSTAT STATISTICAL RULES
KEY IMPACTS

Potential and barriers for EPC in the public sector

- According to National Energy & Climate Plans (NECP) market potential is large:
  - 3% annual renovation obligation for central governments
  - Public sector building are important to contribute to 2030 targets
  - EPC model is mentioned in many NECPs as a tool for realising targets

- But, the potential of the EPC in the public sector is currently not exploited due to:
  - Lack of awareness, trust and track record of the public authorities
  - Project development capacity needed and complex procurement processes
  - Statistical treatment of EPC which implies additional public debt and deficit
  - Access to finance for the ESCO (EPC providers) which is generally an underdeveloped market as a result
  - Inadequate investment grants schemes, no synergies with private financing

Who finances EPC?



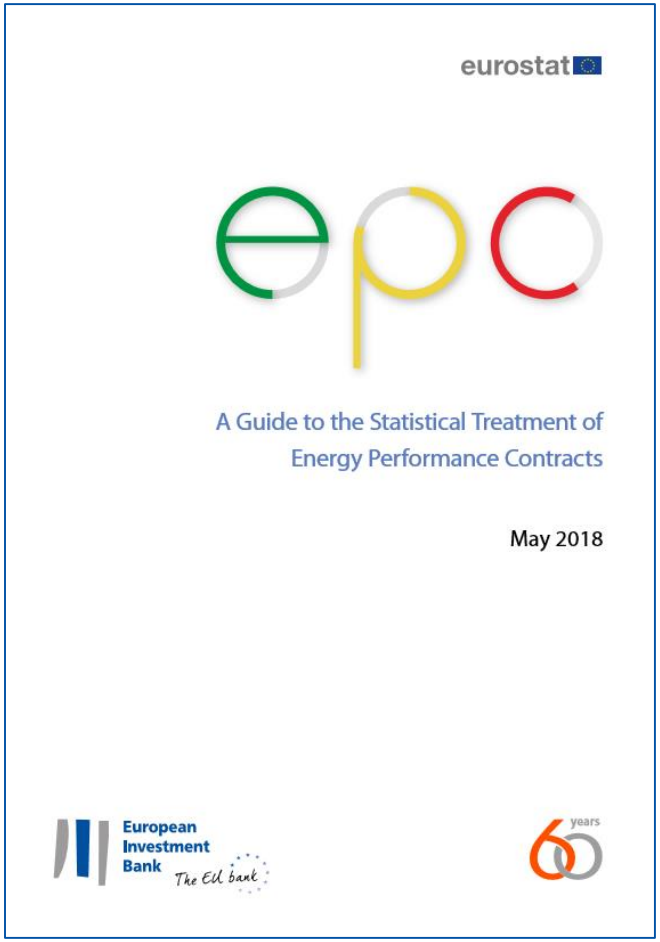
Utilising the EPC guide to support EPC market stimulation

The EPC guide:

- Based on existing rules, translating them into contract terms
- Explains Eurostat's interpretation and application of the rules
- Official Eurostat guidance and the reference point for Eurostat advice and decision on EPCs
- Can be used to assess future EPCs and/or reassess signed EPCs

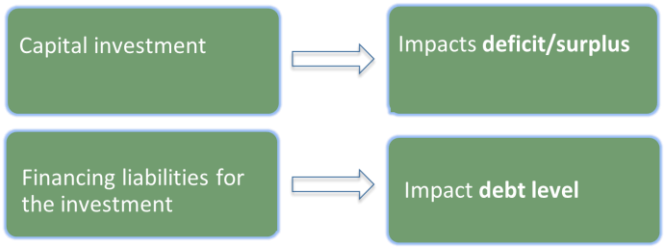
The guide is not:

- Not covering national budgetary rules or accounting rules
- Not about value for money or bankability of EPC



What do Eurostat's rules imply?

If an asset is "**on balance sheet**" for government:



If an asset is "**off balance sheet**" the government only records any regular payments for services over the long-term.

This implies:

- Government **only makes full payments to ESCO if the energy savings are achieved**.
- The ESCO has to provide the technical **and the financing solution** to the public body. (Funded EPC)
- The ESCO will have to finance the EE measure for **at least 8 years**.
- The EPC arrangement needs **to comply with specific standard provisions** to ensure public off-balance sheet treatment.

Challenges

- The EPC arrangement can **include removable and non-removable assets**, ensuring larger project cost amount.
- The ESCO **is better remunerated** with a minimum reward of 2/3 of extra savings.

Opportunities

Eurostat/EIB EPC Guide

One year after

- “Maastricht neutral” model contracts approved by Eurostat for: Slovakia and Scotland
- “Maastricht neutral” model contracts in preparation or consulted with national statistical offices: Austria, Belgium, Croatia, Czech Republic, Greece, Ireland, Latvia, Lithuania, Poland, Romania, Spain and UK
- First “Maastricht neutral” EPC tender awarded in Catalonia ongoing procurement Slovakia (City of Bratislava with ELENA support)
- Other budgetary restrictions to sign EPC still exist in several countries

FINANCING OF EPC

Financing for EPC projects from public sector EPC client‘s perspective

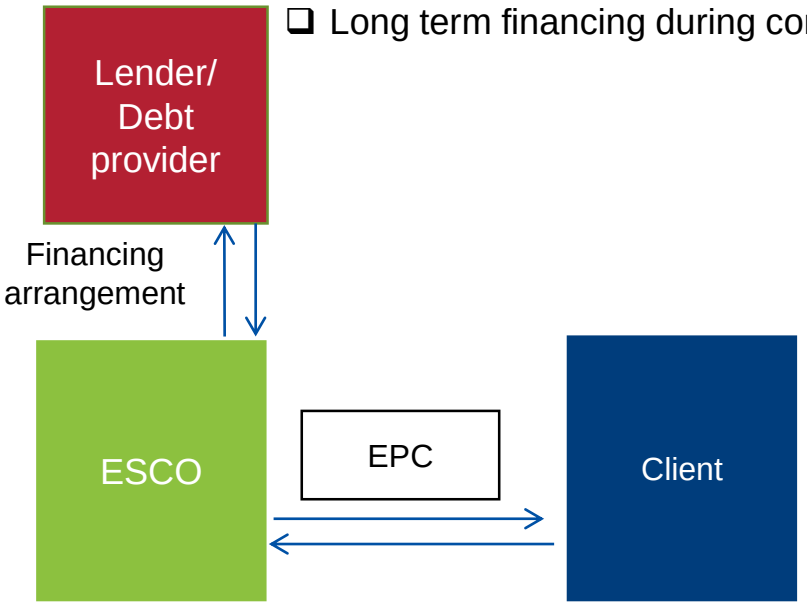
- Public sector **pays for savings** and not for measures/investments
- EPC provides **positive cash-flow** during performance period (energy cost and maintenance cost)
- Third-party financing EPC **shifts expenditure from investment budget to operational budget**
- Investment may **not count as municipal debt** (depending on national rules)
- **Capital grants** can shorten contract duration or increase savings achieved
- **ESCO financing cost** is usually higher than government or municipal borrowing cost

ESCO financed EPC: The financial challenges and opportunities

- Bridge financing for the construction and ramp-up period (high risk) Financial intermediary short term financing.

combined with

- Long term financing during contract period (low risk)



Challenge of financing "Maastricht neutral" EPCs

- More risk shifted to private sector
- Contract duration longer than 8 years
- Performance based EPC fees
- Limits to using government financing or guarantees

Possible solutions

- Standardised templates
- Best practises
- ESIF financial instruments

- Combining long term financing and technical solution.
- ESCO has limited borrowing capacity due to equity/debt ratio.

Adressing EPC financing challenges with public (state or EU) funds

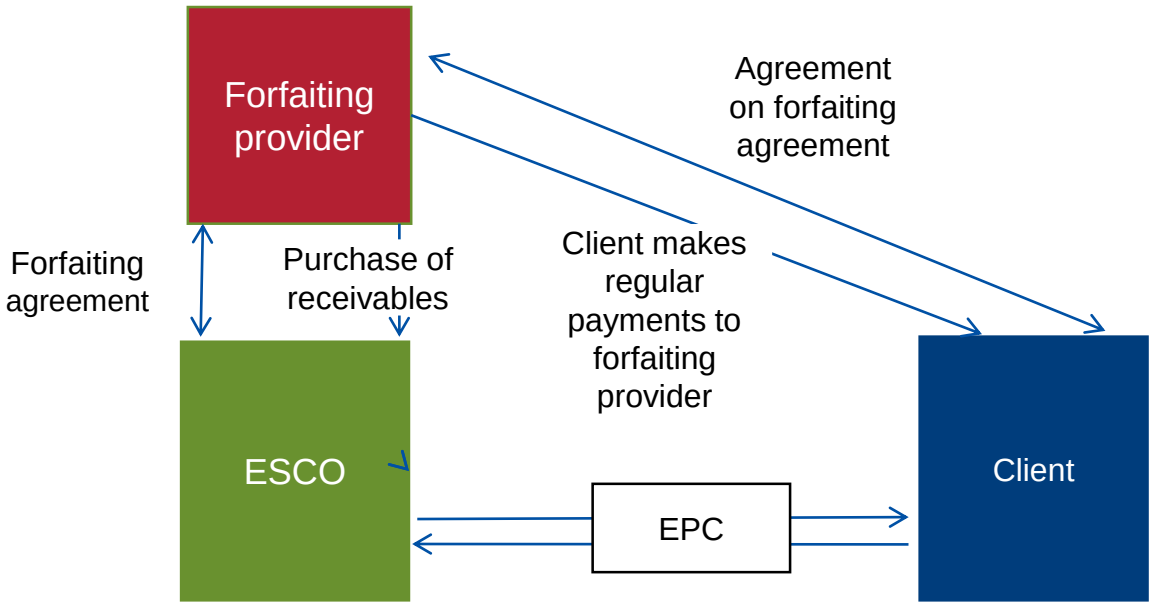
Advantages of public financing to EPC (FIs)

- FIs can provide long-term financing at favourable terms
- Lower collateral requirements / lower risk for banks through guarantees
- Dedicated EPC debt and equity funds
- **EU funds support for "Maastricht neutral" EPC contracts**
  - ESIF does not count as government financing (but public co-financing does)
  - ESIF grants do not count as government payment

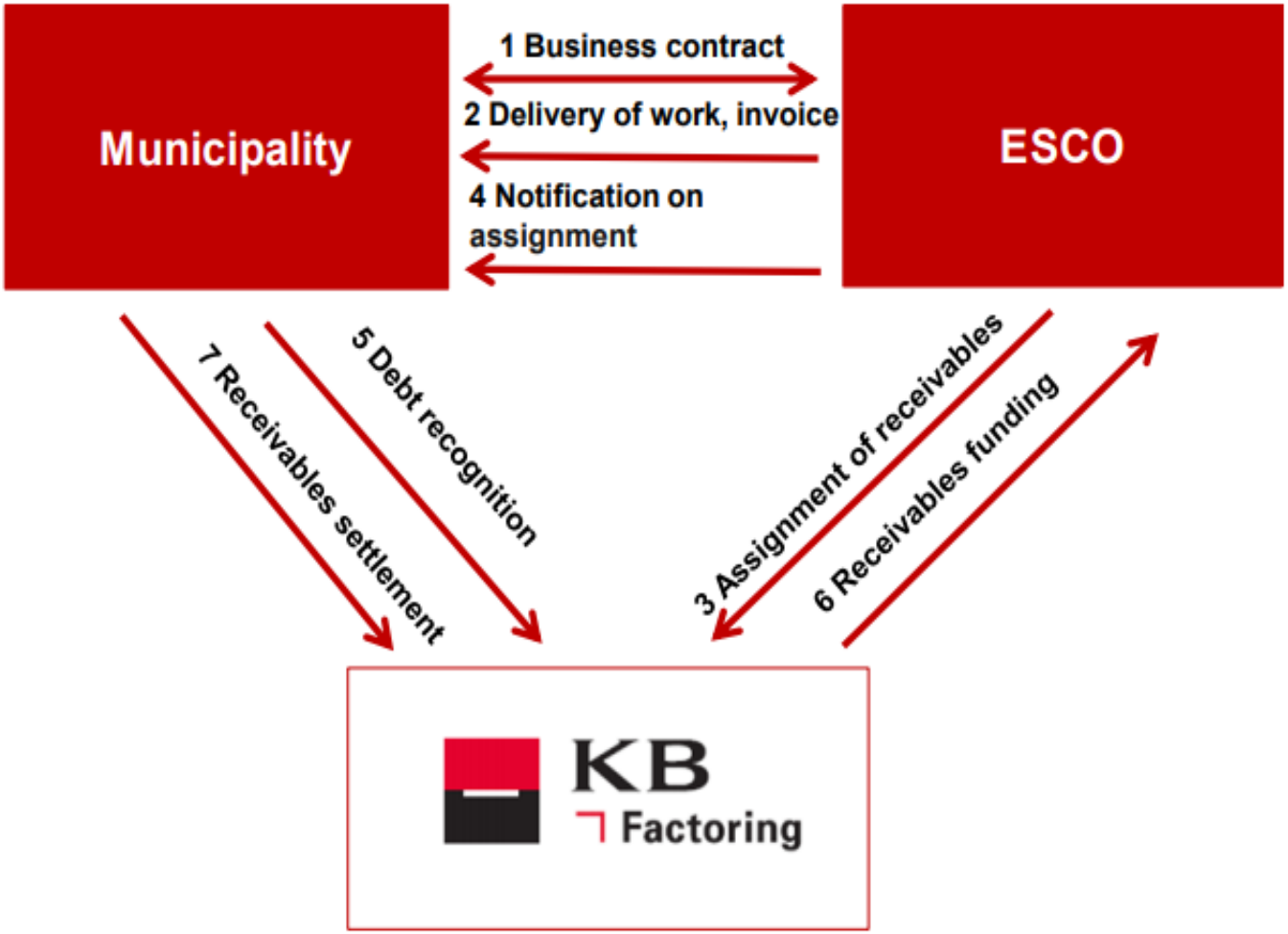
Challenges

- State aid to projects
- Difficulties regarding eligiblity of cost
- Difficulties to pay grants to ESCOs

Forfaiting concept



Forfaiting example



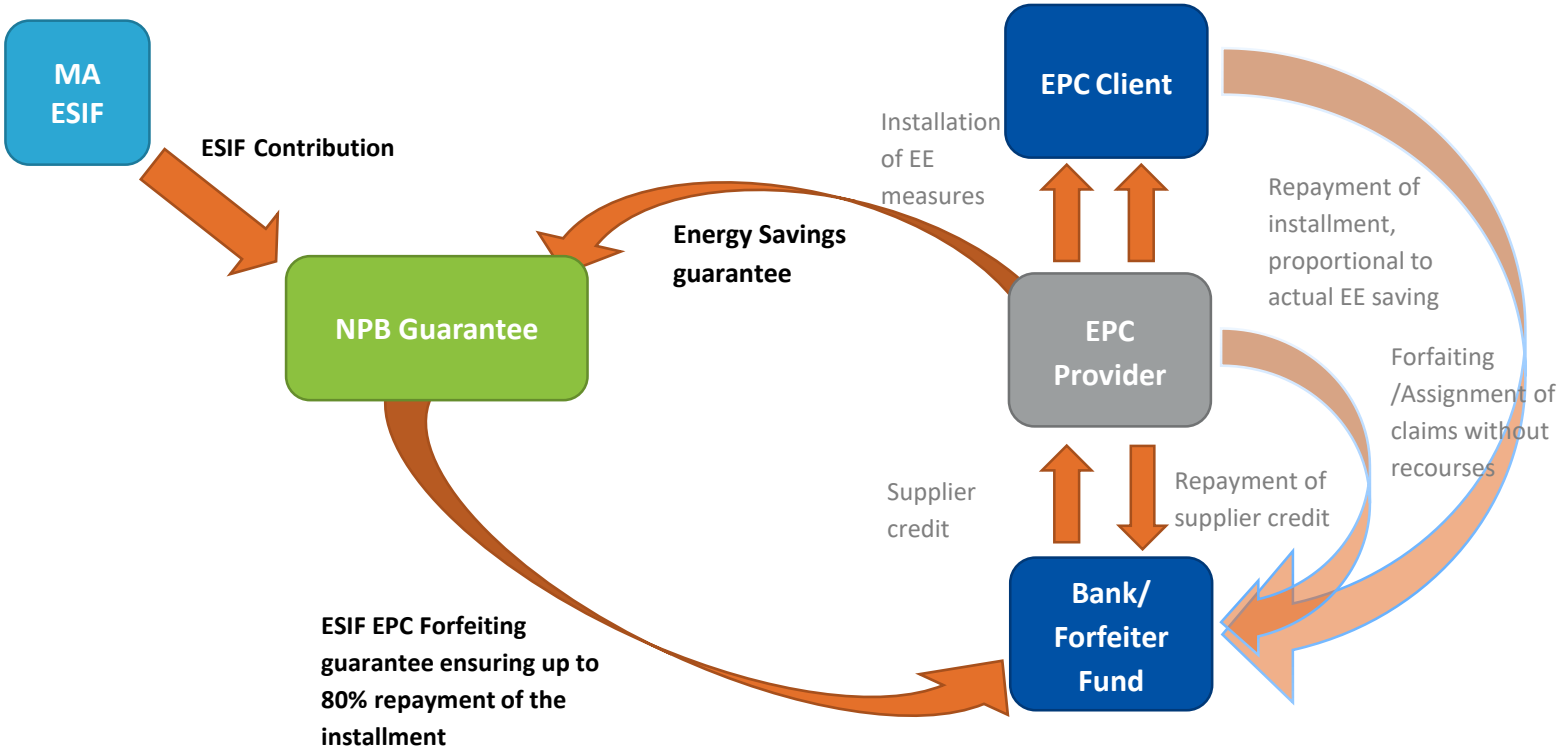
Forfaiting instrument

- A forfaiting financial instrument can be set up as
  - Debt instrument **(forfaiting loans)** purchasing EPC receivables
  - Guarantee instrument, providing a guarantee to EPC forfaiters
    - Guarantee for credit risk
    - Guarantee for performance risk
- Financing for EPC projects under ESIF
  - **ESCOs** are considered as “agents” (State aid should *pass through* to EPC client)
  - Forfaiting agreement **to be signed before commissioning**
  - **Eligible capital expenditures have to be listed** in the EPC contract
  - Cannot be combined with a **bridge loan from EU budget (ESIF, InvestEU)** – *double financing*

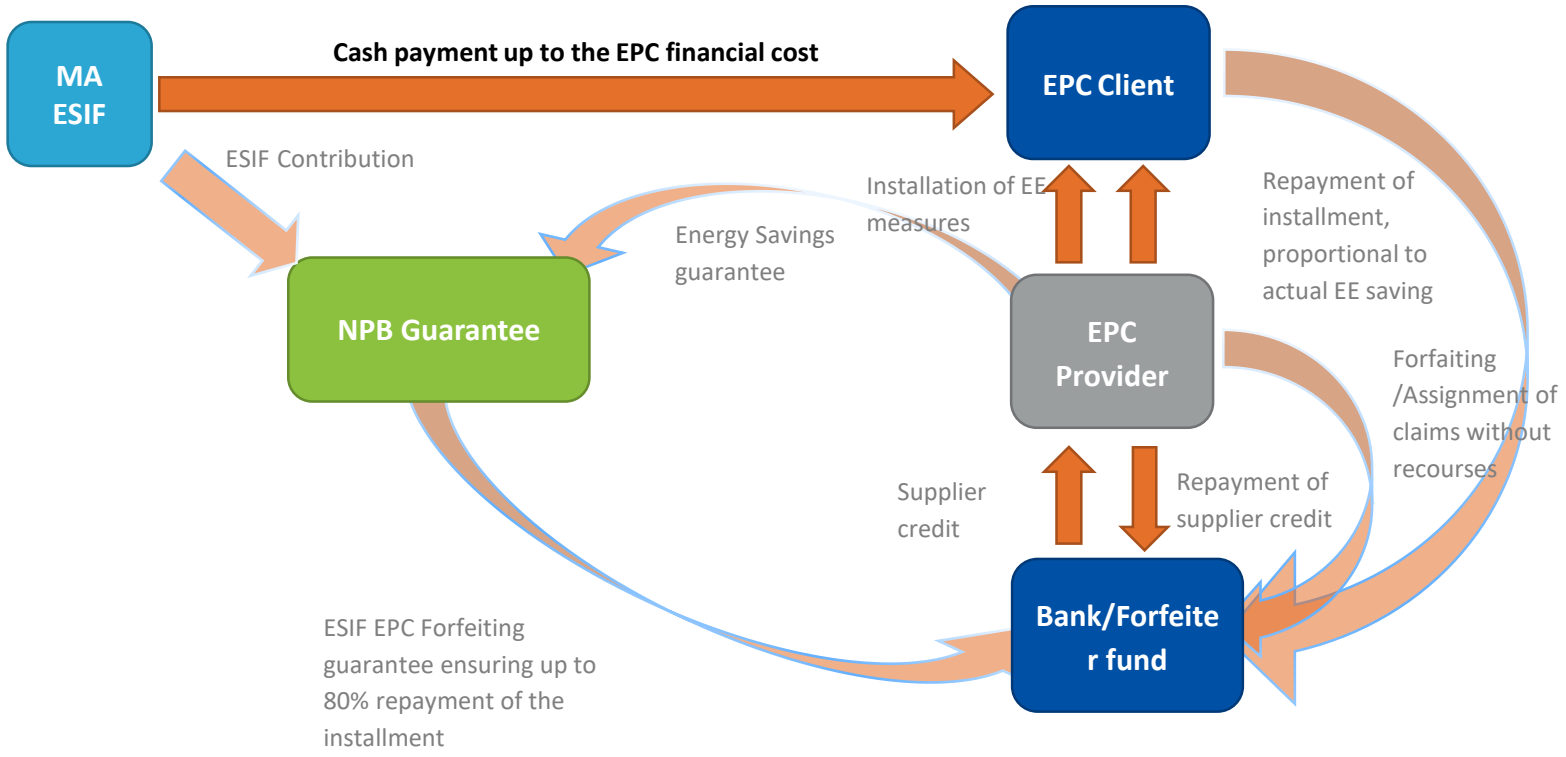
Forfaiting schemes can also be set up with national budget, revenues from carbon allowances or the Modernisation Fund

EXAMPLES OF EPC FORFAITING SCHEMES

Design of a “Maastricht neutral” Guarantee Financial Instrument for EPC



Design of a "Maastricht neutral" Guarantee Financial Instrument for EPC + **Interest rate subsidy**



Technical Assistance One-Stop-Shop

Increasing impact of FI by combining it with project development assistance and other measures:

- Increase interest for and **trust in EPC** among building owners and/or building users through **code of conduct**
- Using **standard contract** to reduce transaction cost for financial intermediaries
- Covering cost of **project preparation** for EPC clients, with support of ELENA
- **Guidance of EPC client** through procurement, negotiations with ESCO and successful project implementation
- Helping EPC client to **address potential energy saving shortfalls** during first years of the project guarantee phase
- Mobilising **investment grants** from ESIF for comprehensive renvovation

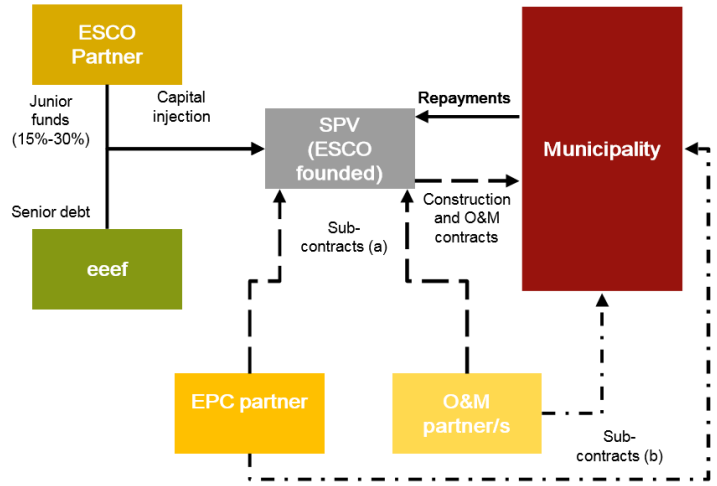
EEEF forfaiting example
project finance vs. forfaiting of EPC

eeef is a financing instrument with flexibility to structure funding according to projects' needs

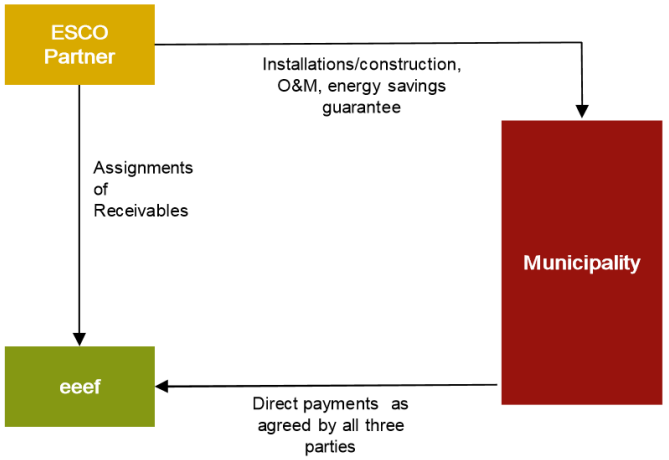
Various financing instruments

- The Fund offers various financing instruments including senior debt, mezzanine, equity, leasing structures and forfeiting loans. In addition to direct lending, two tailored funding structures are illustrated below
- Fund can operate as part of a lending group or as the sole investor in projects to simplify implementation and lower execution costs

Classic project finance structure



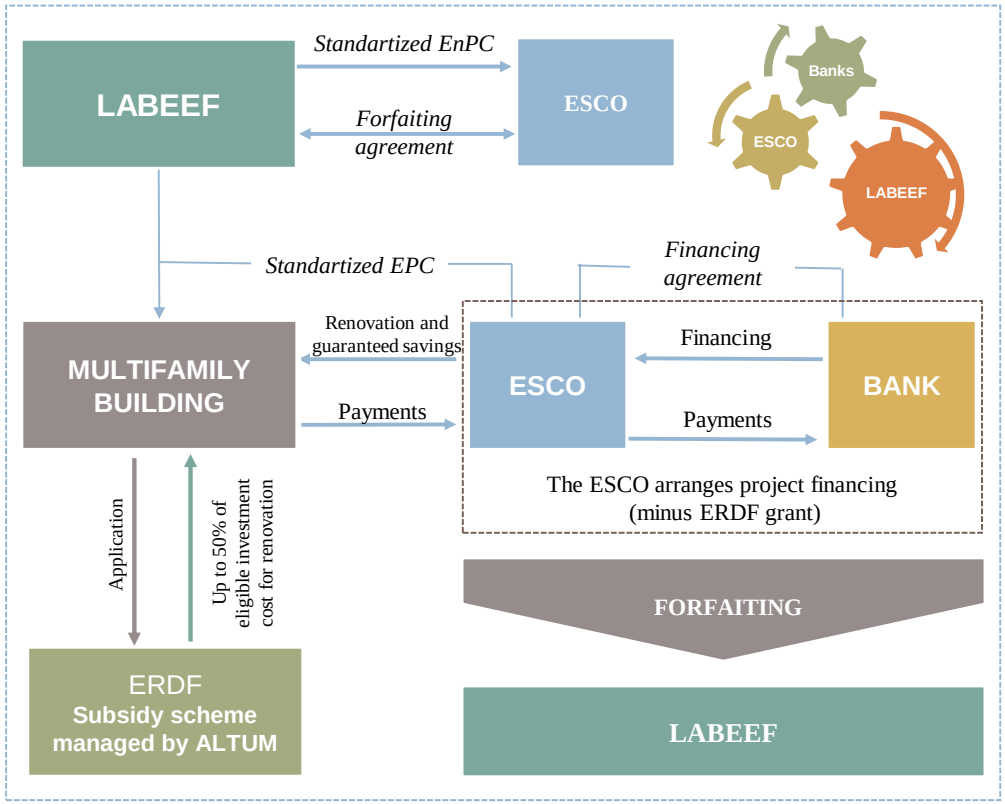
Purchase of receivables



Forfaiting scheme in Latvia

LABEEF ENERGY EFFICIENCY FINANCING SCHEME

Including the use of ERDF



LABEEF buys energy savings and associated cash flows forward

ESCO designs, implements and finances the project

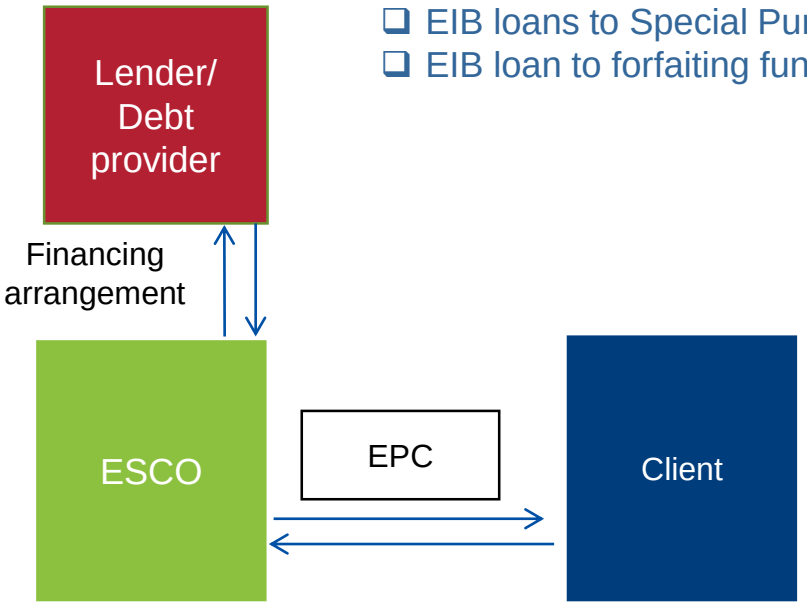
LABEEF forfaits the contracts and provides long term financing – Master ESCO

The selection of construction and installation companies must be tendered by ESCOs and approved by ALTUM to ensure competitive selection of contractors and to avoid conflict of interest.

EIB'S SUPPORT TO EPC MARKET DEVELOPMENT

EIB‘ Group financing opportunities for EPC

- Long term financing
  - Senior or risk sharing loans to financial intermediaries
  - Guarantees to financial intermediaries for loans to ESCOs or forfaiting
  - EIB loans to Special Purpose Vehicles
  - EIB loan to forfaiting fund or forfaiting product of bank



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- Contract duration longer than 8 years
- Performance based EPC fees
- Limits to using government financing or guarantees

Possible solutions

- Standardised templates
- Best practises
- ESIF financial instruments

- Financing of ESCOs (ESCOs ususally to small for EIB lending)
  - Loans to banks for lending to ESCOs
- ESCO has limited borrowing capacity due to equity/debt ratio
  - EIB quasi equity/mezzanine debt to ESCO
  - EIF managed funds of funds to invest in ESCOs

- Lending to EPC clients
  - Long-term loans to public sector for individual projects or investment programmes

What is ELENA?

Projects implement

- Established in 2009 as **E**uropean **L**ocal **EN**ergy **A**ssistance – not only local anymore
- Managed by the EIB
- Financed by the Horizon 2020
- Grant for preparation of investment programmes (up to 90% of cost)
- Required leverage:
  - 20 for sustainable energy projects
  - 10 for clean urban transport
  - 10 for residential sector
- 3 years implementation period for energy projects

Project example ELENA

Case: EPC programme of City of Ljubljana

- Objective: implement a large investment programme improving energy performance of public buildings through EPC
- Several tenders have been prepared and contracts signed for EE improvements in similar buildings and using same EE technologies
- ELENA grant budget: EUR 1.35m
- Investment amount prepared : EUR 49m

ELENA Technical Assistance support provided for:

- ✓ Set up of an internal Project Implementation Unit and grouping buildings
- ✓ Preparation of energy audits, checking the energy baseline for the selected buildings, tender documentation preparation, design of the EPC contracts, tender evaluation
- ✓ External legal and financial advice to establish the required legal basis for the EPC approach

Advisory Hub examples for support to EPC

- Financial analysis of street lighting project in Vilnius supported under URBIS
- Developing a forfaiting financial instrument in the Czech Republic and Luxembourg
- Supporting Walloon Region in developing a debt fund one-stop model (STF) dedicated to residential housing (in cooperation with Elena team)
- Smart city and Smart islands study including EPC in Croatia
- Review of the Slovak EPC model contract regarding balance sheet treatment
- Support to public real estate manager in developing an EPC based building renovation scheme in Latvia

European Investment Advisory Hub (EIAH)

Our aim is to strengthen Europe's investment environment and improve the ***quality of investment projects***

A **single access point** to a comprehensive offer of advisory and technical assistance services

An instrument to assess and **address** unmet **needs** for advisory support

A **cooperation platform** to leverage and exchange expertise from EIAH partners

THANK YOU !

More information at:

EIB Advisory Services:

Emily Smith e.smith@eib.org

Laurent Bender l.bender@eib.org

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European Investment Advisory Hub

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Agenda

CONCERTED ACTION
ENERGY EFFICIENCY
DIRECTIVE

Alan Ryan	**15 min**	**Webinar Introduction, overview of WG6.2 report findings**
DG ENER (TBC)	5min	DG ENER update on recent policy developments
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B·E·M

100 % Tochter der BIM

EPC model & internal revolving fund of Berliner Energiemanagement GmbH

Christoph Blaschke, Energy Efficiency Manager

28 February
2020

EFRE
...eine Chance durch Europa!

Co-funded by the Horizon 2020
Programme of the European Union

Mission of B.E.M. as subsidiary of BIM

- *Berliner Immobilienmanagement GmbH (BIM)*
  Owner representative of the real estate assets of the Berlin Senate
- BIM GmbH portfolio - state-owned real estate, various asset groups, including the

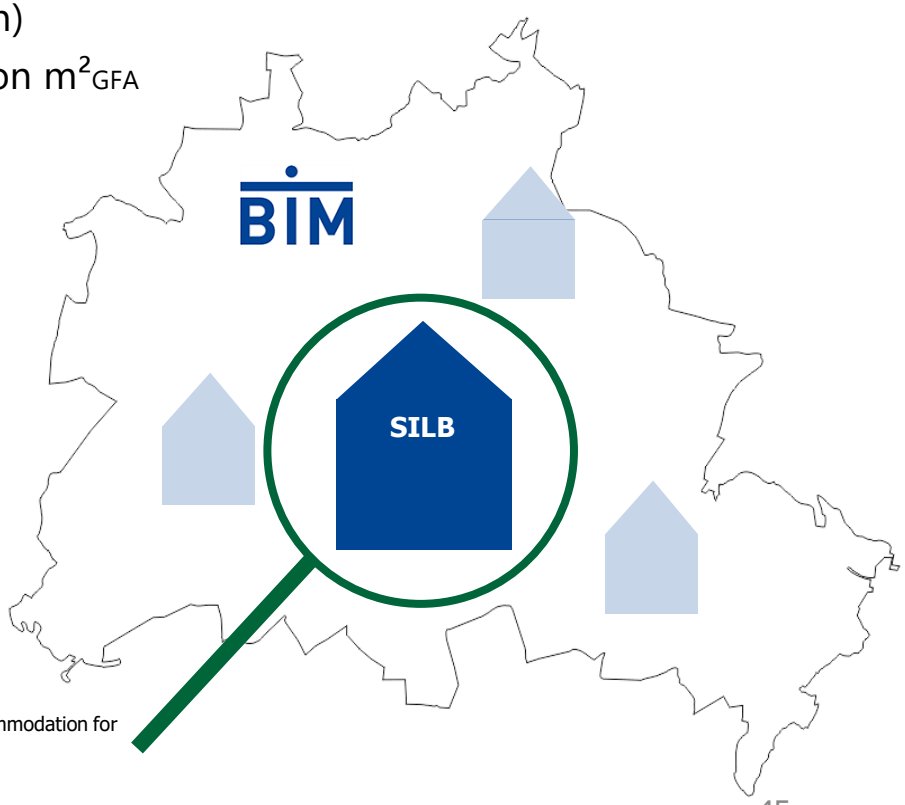
  SILB* (Special property of the state of Berlin)

  Heterogeneous use - around 5 million m^2_{GFA}

  approx. 380 building complexes

Energy efficiency measures in the area of technical building equipment
including electrical systems

Payback period < 10 years
Maximum CO_2 savings



* Portfolios of SILB:

Fire stations, schools, courts, correctional facilities, cultural sites, police stations, external tenants, accommodation for refugees & general stock (tax offices, administration buildings, etc.)

Energy efficiency measures

B·E·M

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technical building equipment

including

electrical systems

Heating

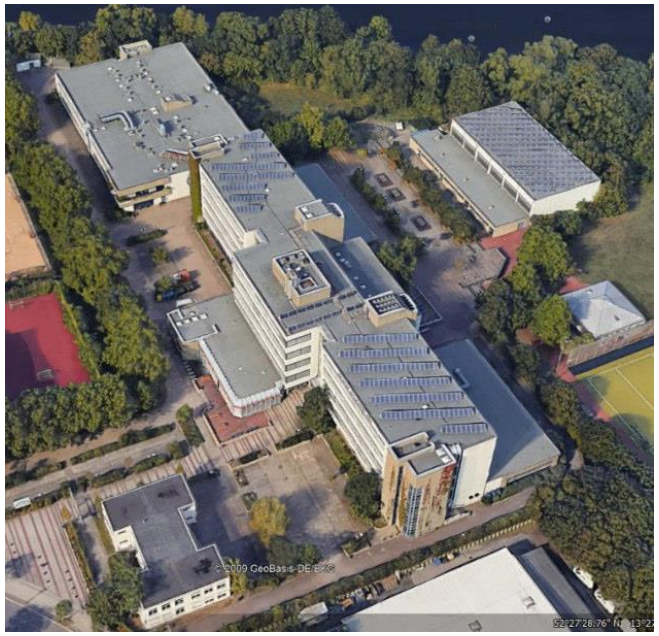
Artificial lighting

Ventilation

Measurement and control

Cooling

EPC example: Berlin Secondary College for Information and Medical Equipment Technology



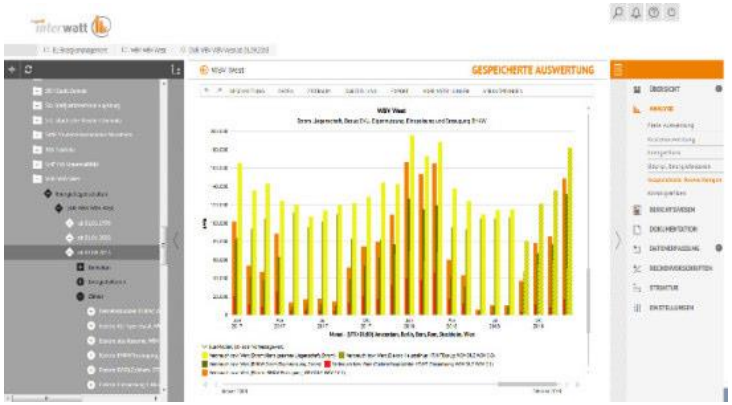
OSZ Haarlemer Str. 27	Floor Area	
Building 1	18.704,28	m²
Building 2	5.158,94	m²
Building 4 (gym)	1.360,64	m²
Building 5 (garage)	15,40	m²
Building 7 (club house)	391,86	m²
Total	25.631,12	m²

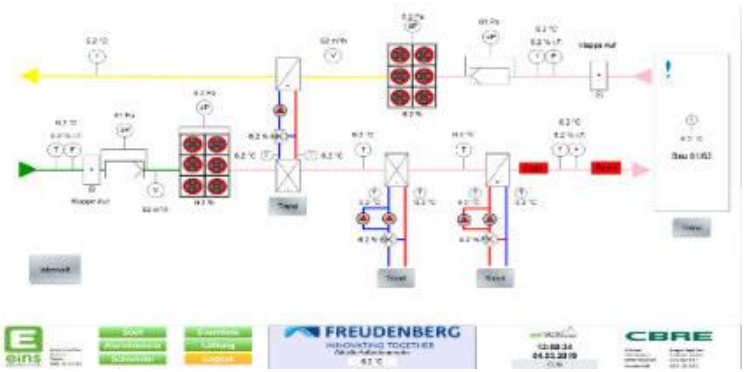
Key project data		
CO2 Savings		
CO2 emissions baseline	1.160,8	Tons / year
Savings guarantee for CO2 emissions	486,6	Tons / year
% of the CO2 emissions baseline	41,9%	
Project economics		
Energy cost baseline	278.008	EUR (without VAT)
Total investment amount	1.283.853	EUR (without VAT)
Guaranteed energy cost savings	129.048	EUR (without VAT)
Payback period	9,95	years
Duration of the main obligation	18	months*
	*from main service start (01.07.2020)	

OSZ IMT college was founded in 2002 and is the biggest school of its kind in Berlin with around 3.000 students and 160 teachers. The students are, on average, between 16 and 22 years old.

Awarded technical concept (E1 Energiemanagement GmbH)

- Heating technology – CHP
- Heating technology - further measures (e.g. optimization of the system hydraulics)
- Ventilation technology
- Artificial lighting
- Measurement and control equipment
- Various measures (e.g. optimization of the central refrigeration system)
- Controlling and monitoring system (web-based building management system)
- Concept of user motivation





Contractual concept: General contractor agreement with commissioning monitoring

- New lighter EPC model using an **internal revolving fund**
- A simpler contractual guarantee making a portion of payment conditional on performance (Energy Performance-Related Payment)
- The contractor's right to remuneration is made up of the following components:
  a. **Investment share**: 80% of the total investment
  b. **Performance share**: 20% of the total investment
- If less than 70% of the savings target is achieved, the contractor is no longer entitled to compensation for the performance share
- If the CO_2 emissions are reduced by 70% of the savings target, the contractor will receive 40% of the performance share. With savings of over 70%, the entitlement to remuneration for the performance share increases in a ratio of 1:2

CO2 saving target achievement	Share of the performance share to be paid
< 70 %	0
70%	40%
75%	50%
80%	60%
85%	70%
90%	80%
95%	90%
100%	100%
105%	110%
110%	120%
115%	130%
120%	140%
125%	150%

EPC and non EPC solutions for energy efficiency: Lessons Learned

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- **Risk of Achieving Savings**: Performance share motivates to put effort into maximizing the savings (often by tuning the installation post-commissioning)
- **Supply of Capital**: Financing by Revolving Fund lowers financial cost and fastens implementation (corresponds to a pre-arranged financing)
- **Size and Duration of Contract**: Using a Revolving Funds enables shorter contract terms and more flexible financing options
- **Procurement Process**: Energy performance-related clauses can be incorporated in various forms of contracts or agreements
- **Measurement and Verification of Saving**: Costs and benefits should not be disproportionate and influencing factors should be controllable by the partners
- **Numbering-up** and **Scale-up** are two successful models to accelerate energy efficiency investments depending on the size of the property
- **Tenant-landlord model** for public buildings enables a kind of "on-bill financing agreement" to refund the Revolving Fund

B.E.M. Energy Project Solutions

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Heat package
Combination of heating control optimization, hydraulic balancing and pump optimization

Individual room temperature control
Efficiency optimization of room-by-room heating. Installation of intelligent single room thermostats

Own holistic projects or general contractor model
Holistic and cross-discipline implementation of property-specific efficiency measures in the area of technical building equipment

Provision of CHP plants
in cooperation with the Berliner Stadtwerke

Conversion to LED
Efficiency optimization of artificial lighting. Substitution of conventional fluorescent materials on LED

Digitalization
Development of a cross-property building management system as well as an energy monitoring and controlling system

Energy Communities / Quarters
Shared use of decentralized energy generation

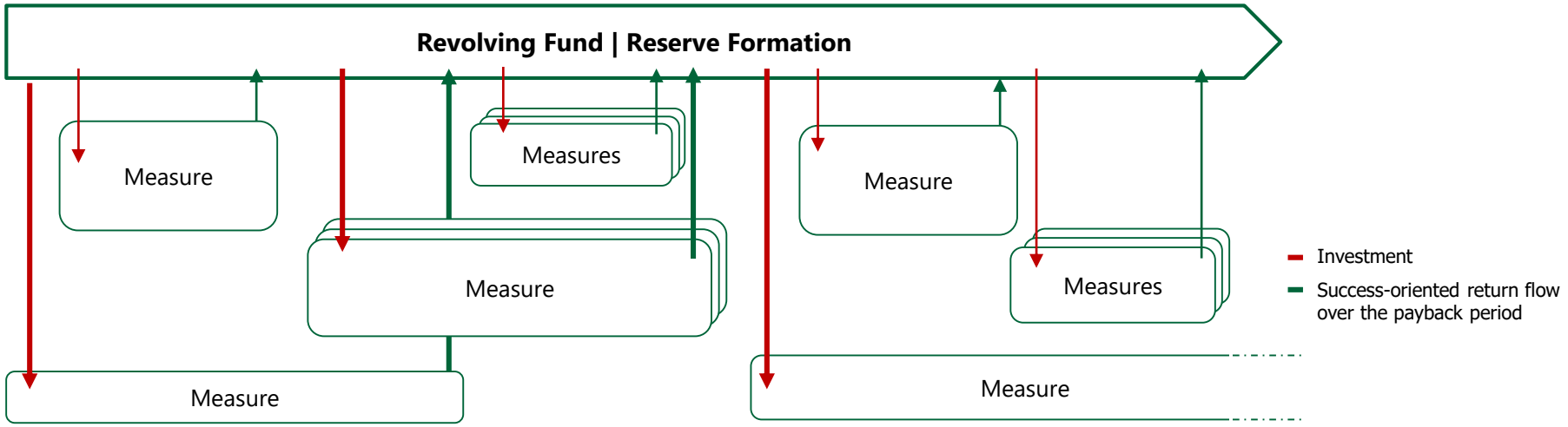
- in customer facilities (BIM properties)
- in urban quarters

Voltage management
Optimization of the power grid quality, regulation of the supply voltage

Energy Efficiency Finance: Revolving Fund

The total costs of measures in the SILB (analysis, planning and implementation) are financed by a revolving fund

- Provided by the Senate Department for Finance
- The full amount of the investment (including the B.E.M. costs) is refinanced through the energy cost savings resulting from the measure
- Fund increase through grants (BENE, BEK)



bem-berlin.de

Thanks for your interest!

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B.E.M. Berliner Energiemanagement GmbH

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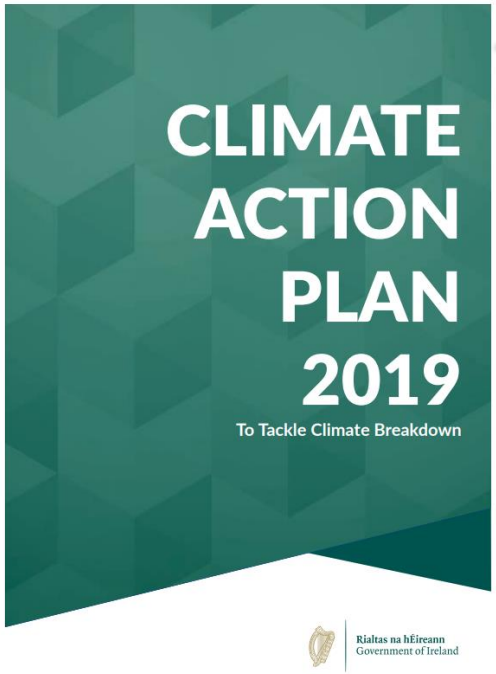
Ireland - next 6 – 9 months



Energy Performance Contracting

Action 68: Support the wider deployment and use of EPCs by building capacity and expertise in the public sector			
Steps Necessary for Delivery	**Timeline by Quarter**	**Lead**	**Other Key Stakeholders**
SEAI will continue to promote awareness and understanding of EPC, and provide Project Assistance Grants, training and other supports to public and private sector organisations to implement EPC projects	Ongoing	SEAI	
Instigate analysis of the further potential for EPC to deliver energy efficiency projects in the Irish Public Sector as part of the EU structural fund (SRSS) support study	Q2 2019	DPER	DCCAE, SEAI
Highlight more widely the potential of EPC and resources already in place to help PSBs to help public bodies identify opportunities for its appropriate use (e.g. guidance, standardised forms of contract and project assistance grants); examples of where EPC is being used effectively.	Q4 2019	SEAI D/EPO	D/EPO
Develop and deliver EPC facilitator training	Q2 2020	SEAI	AIEA (Association of Irish Energy Agencies)
Facilitate PSBs and sectors, as part of their energy efficiency improvement plans, to develop, embed or access, the competencies and resources needed to avail of EPC, (whether centralised EPC expertise or dispersed/tailored approaches)	Q2 2020	SEAI	

Notable successful projects

< €1m - Dublin City Council leisure centres, St. John of God Hospital

€12 Mater Hospital EPC (CHP, heating system, windows, lighting, internal works)

seai SUSTAINABLE ENERGY AUTHORITY OF IRELAND

Czech energy savings opportunities – EPC projects

Energy Performance Contracting – optimal combination of financial instruments and guarantees for energy savings

- **efficient way to implement energy management with contractually guaranteed energy savings**

- history of Czech EPC projects – **more than 25 years** (first projects in 1993-94)
- **model EPC contract** – over 20 years
- **need to adapt the model EPC contract to EUROSTAT rules** (first version in 2015)
- Guide to the Statistical Treatment of EPC (May 2018) – **adaptation during 2020**
- ***over 250 EPC projects: investments 140 mil. EUR and savings 160 mil. EUR***

Scotland

EPC Framework and Revenue Funded EPC

SCOTTISH FUTURES TRUST

Public Sector Retrofit Framework

- First – 2016; Second - 2020
- Framework contractors
- Project Support Unit (Mott MacDonald)

Energy Performance Contracts (EPCs)

- Install measures and provide related services
- Guaranteed Energy Performance/Savings
- Measurement and Verification - Payments

EPCs and Funding

- Design and Build (Capital)
- Design Build Finance and Maintain (Revenue)

- ONS and Eurostat Approval

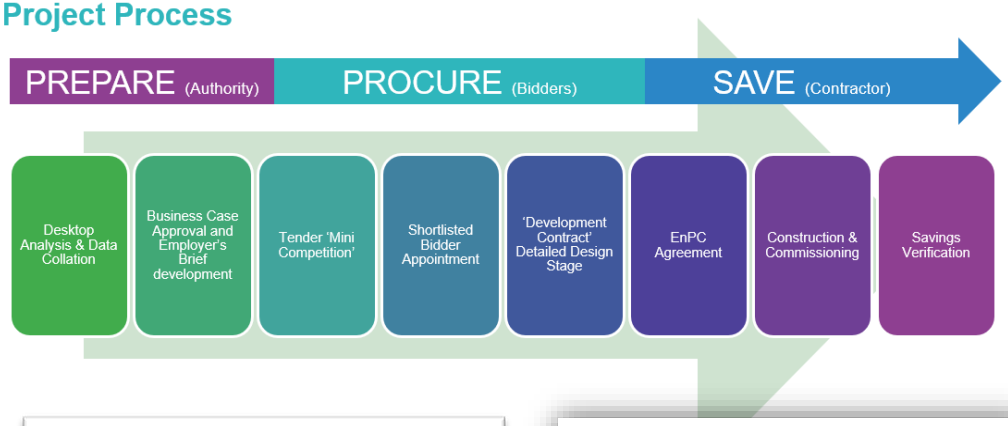
- liaising with UK Govt, devolved administrations and EU colleagues

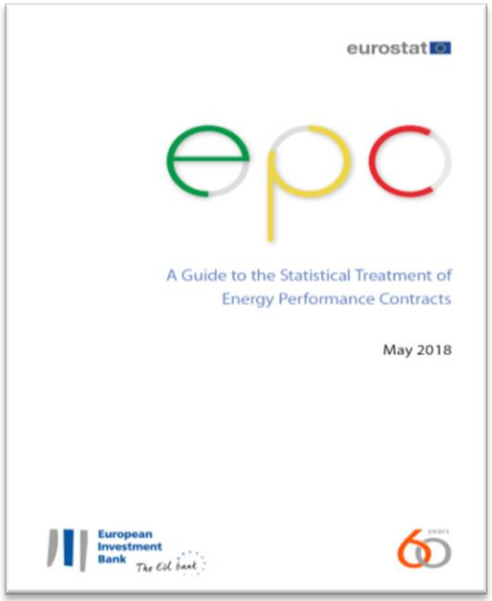
- Pilot Projects – NHS and College sector

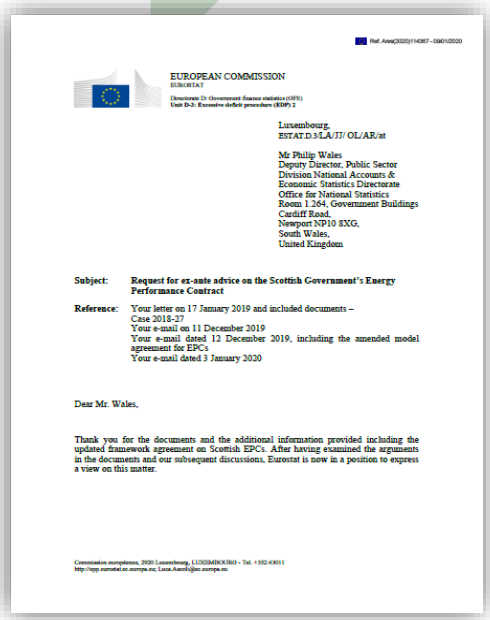
Potential Scope (Revenue)

- Scotland c£300m+ in central govt estate
  - (c£250m in NHS estate alone)
- rUK c£4.5bn (UK Govt/BEIS)

NDEEF EnPC Project Process







Other MS with specific plans

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Most MS utilising EPC are planning enhancements

'Advanced' i.e.

- Slovenia – planning the next phase of their successful EPC programme
- Slovakia – first Maastricht neutral project in procurement
- Scotland
- Czech ….

'Some success and/or exploring role can play' i.e.

- Cyprus – developing national programmes
- Netherlands
- Lithuania
- Ireland …

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Relevant H2020 / IEE projects and their outputs (1)

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2020TOGETHER (link)

implementation of measures to improve energy efficiency of buildings and public lighting in pilot municipalities through new forms of PPP (incl. EPC)

TRANSPARENSE (link)

Code of conduct for EPC – basic values and principles for a successful EPC, serving as a minimum guarantee of the quality of EPC projects

QualitEE (link)

Energy efficiency services in buildings: market surveys, quality assessment criteria, quality assurance schemes, procurement handbook

GUARANTEE (link)

develops innovative EPC business and financing models addressing split incentives barrier, EPC contract variants for public and private sector

Relevant H2020 / IEE projects and their outputs (2)

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Trust EPC South (link)

GREPCon tool – identifies EE & RE measures in buildings and assessment of the technical and financial feasibility of an EPC project

MARTE (link)

promotes local investment into EE in the healthcare sector, by means of market studies, tender documents, financing mechanisms, and strategies

BEnerGI (link)

technical, legal & financial assistance for municipalities: innovative funding, capacity building materials, public access to municipal energy data

CITYnvest (link)

Successful innovative financing models for EE renovations in public buildings, based on EPC, TPF, revolving funds, cooperatives and others

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* Reflections on the key ingredients for a successful EPC market

Commitment	Confidence	Competence
'**Permission**' from state for public bodies – national programmes	**Trust** in EPC model, ESCOs and the value proposition	**Facilitation-** Understanding **when** and **how**
Finance – how it will work nationally, for the public body and the ESCO	**Standardisation** – model contracts, procurement frameworks, evaluation tools, M&V protocols etc	**Experience** to procure, deliver and manage contracts
Internal champions - for up to 3 years	**Supports** – technical assistance grants, promote good practices and success stories, promote awareness and understanding of the EPC model	

** After three CA EED plenary session specifically on EPC (other sessions have discussed EPC), and observing successful EU MS and North American EPC market*

Thank you for your attention

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Thank our panelists
Thank you for participating

See you in Lisbon!