Stimulation of the EPC market in Lithuania

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The European PPP Expertise Centre

- Established in September 2008
- A unique cooperative initiative of the EIB, the European Commission and EU Candidate and Member States
- International team of 18 professionals
- Membership: Initially 20, EPEC now numbers 39 Members
- Excellent engagement from Members with more than 120 participations annually in EPEC working groups

EPEC and Energy Efficiency

Why EPEC?

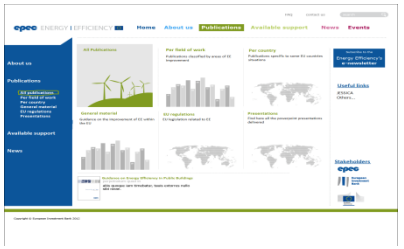
- Clear public sector need for private sector knowledge and expertise

Why now?

- Energy Efficiency is key part of EU 2020 strategy
- The Energy Efficiency Directive recently approved imposes energy saving obligations on Member States
- The Cohesion Policy proposals for 2014 -2020 allocate a significant amount of funding to Energy Efficiency and Renewable Energy
- ELENA, JESSICA, EEEF to support investment in Energy Efficiency/Renewable Energy

Energy Efficiency (EE) Mandate

Materials: guidance and fact-sheets	Events	Knowledge-sharing
• EE in public buildings • Street-lighting • Cohesion Policy 2014 - 2020 • ESCOs and EPC • Information about ELENA, JESSICA, EEEF	• Workshops • Round tables • Seminars • Conferences	• Dedicated website • www.eib.org/epec/ee • Case-study database • Stakeholder cooperation



Energy Performance Contracting (EPC) Campaign

- Launched by DG ENER in October 2012
- Awareness of EPC at national, regional and local levels
- Series of practical workshops to increase knowledge, build confidence and share experience
- Three pillars working to complement each other: EPEC, ManagEnergy and the Covenant of Mayors

Energy Efficiency Directive (EED) content

The EED provides opportunities to develop the EPC market (1/3):

- **Article 5** – Required renovation of 3% of central government buildings
- **Article 7** – EE obligations 1.5% target for energy companies to be met
- **Article 8** – Obligation for large companies to do mandatory energy audits
- **Article 18**
  - Member-states (MS) to **provide model EPCs, as well as information on best practices for EPC**
  - MS to take, if necessary, measures to **remove the regulatory and non-regulatory barriers that impede the uptake of EPC**

Public Sector Policy issues (1)

Enable public sector knowledge and capacity	• Strong leadership role from the centre • Support individual projects/ pilots • Make use of national or regional "public knowledge centres" to ease information access • Develop model standard contracts
Reform budgeting and public procurement rules	• Streamline budgeting and EU grant rules to boost EE investment (i.e. multi-annual budgeting) • Incorporate lifecycle costs/EE criteria into decision-making process • Design public tender procedures compatible with EPC/ESCO model
Develop a conducive legislative framework	• Adapt legislation to remove key obstacles to EE, i.e. minimize split incentives/ enable energy savings recovery from tenants • Streamline ownership rules and homeowners associations that can engage more easily in binding decisions

Public Sector Policy issues (2)

Actively promote EPCs and market development at national level	• Awareness/educational campaigns and events, pilot projects • Transparent and engaged ESCO associations • 3rd party organizations as market/ project facilitators; public ESCOs
Encourage harmonized procedures/ Monitoring & Verification protocols + baseline data	• Facilitate and streamline energy audits • Standardize M&V protocols, i.e. via wide-spread usage of the International Performance Measurement and Verification Protocol (IPMVP)
Ease the access to financing	• Ease the access to financing for ESCOs and availability of financial instruments (revolving and guarantee funds, low-interest loans etc. • Address small project-size and high transaction costs (i.e. bundle) • Mainstream EE lending into commercial bank operations

EIB Involvement in Energy Efficiency

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Direct loans

- Large-scale projects (more than 25m)

Intermediated loans

- Small and medium-scale projects (particularly to SMEs) via national and regional intermediary banks
- Lending decision remains with the financial intermediary

Financial Instruments

- ELENA
- JESSICA
- EEEF
- DEEP Green

European Energy Efficiency Fund (EEEF)

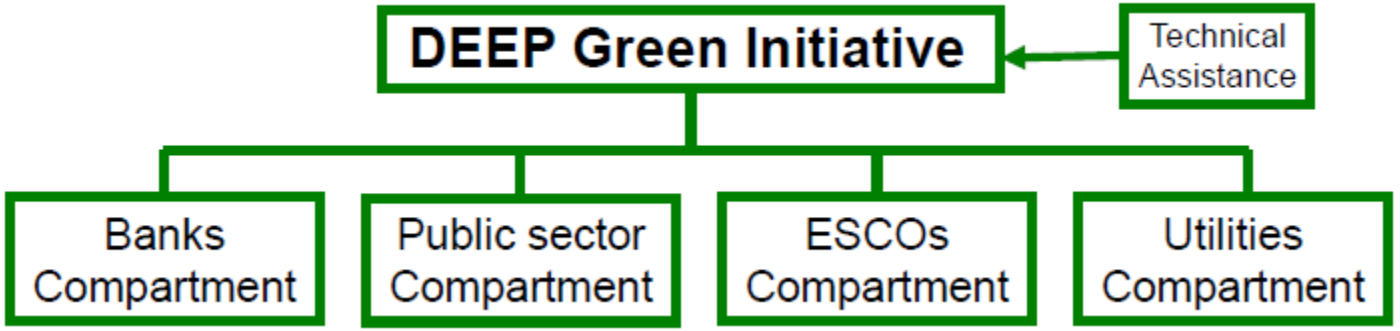
EEEF at a glance

EEEF stands for European Energy Efficiency Fund

- EEEF is dedicated to **mitigating climate change** through market-based financing in the EU Member States
- Its aim is to support **all EU Member States** to achieve the ambitious EU climate targets (20/20/20)
- How: Financing Energy Efficiency (EE) and Renewable Energy (RE) projects in the **public sector at the local level**
- Beneficiaries: Municipalities, local or regional authorities; public and private entities acting on their behalf (i.e. utilities, public transportation providers, social housing associations)
- What**:** Investments split into three project categories:
  - Energy Efficiency
  - Renewable energy
  - Clean Urban Transport

Debt for Energy Efficiency Projects (DEEP GREEN)

DEEP GREEN BASICS



New EE products	Debt for Energy Efficiency Projects Green (DEEP Green) is an EIB initiative that aims at developing a suite of new financial products for four key groups of players in the EE market, namely, banks, public sector, ESCOs and utilities.
Aggregation and de-risking	DEEP Green targets aggregation and de-risking of energy efficiency (EE) projects, which are key barriers to the financing of EE investments
More lending to EE	These new products will increase debt financing availability for EE projects by further developing EIB and commercial bank lending activity to EE.

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Additional information, EEEF

Structure of the Fund

EEEF capital

- Initial capital of euro 265 M
  - —European Commission: 125 M (initiator)
  - —European Investment Bank: 75 M (founding investor)
  - —Cassa Depositi e Prestiti: 60 M (founding investor)
  - —Deutsche Bank: 5 M (investor and investment advisor)

- Technical Assistance (TA) facility of EUR 20m provided by the European Commission

- Form: SICAV, investment in forms of **loans**, **guarantees** or **equity**. Bankable projects. No grants.

Advantages of EEEF compared to other market instruments

- Innovative financing according to needs: junior loan, convertible debt, equity participation, tailor-made senior loan (longer duration or grace periods), EPC as collateral to secure a loan, forfeiting scheme. Fund can also operate as sole investor

- Long maturity: flexible, up to 20 years for debt

- Technical Assistance (TA): euro 20 M in total grant for project development phase, up to 90% of eligible costs. Linked with EEEF funding. Based on ELENA model.

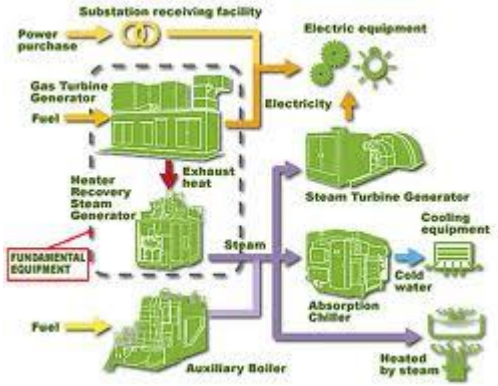
- Fast & flexible procedures : no more than 6 months from pre-screening until financing

Eligible Investment

Several eligibility criteria must be met

- General eligibility criteria such as:
  - Municipal link
  - Commitment of municipality to mitigate climate change (i.e. Covenant of Mayors initiative)
  - CO2 emission savings of at least 20%
  - Use of proven technologies
- Furthermore, each technology may have its own specific eligibility criteria
- Projects shall be preferably between EUR 5 and 25 m / smaller project sizes reviewed case by case
- Alignment with relevant EU legislation
- Eligibility check online available here,

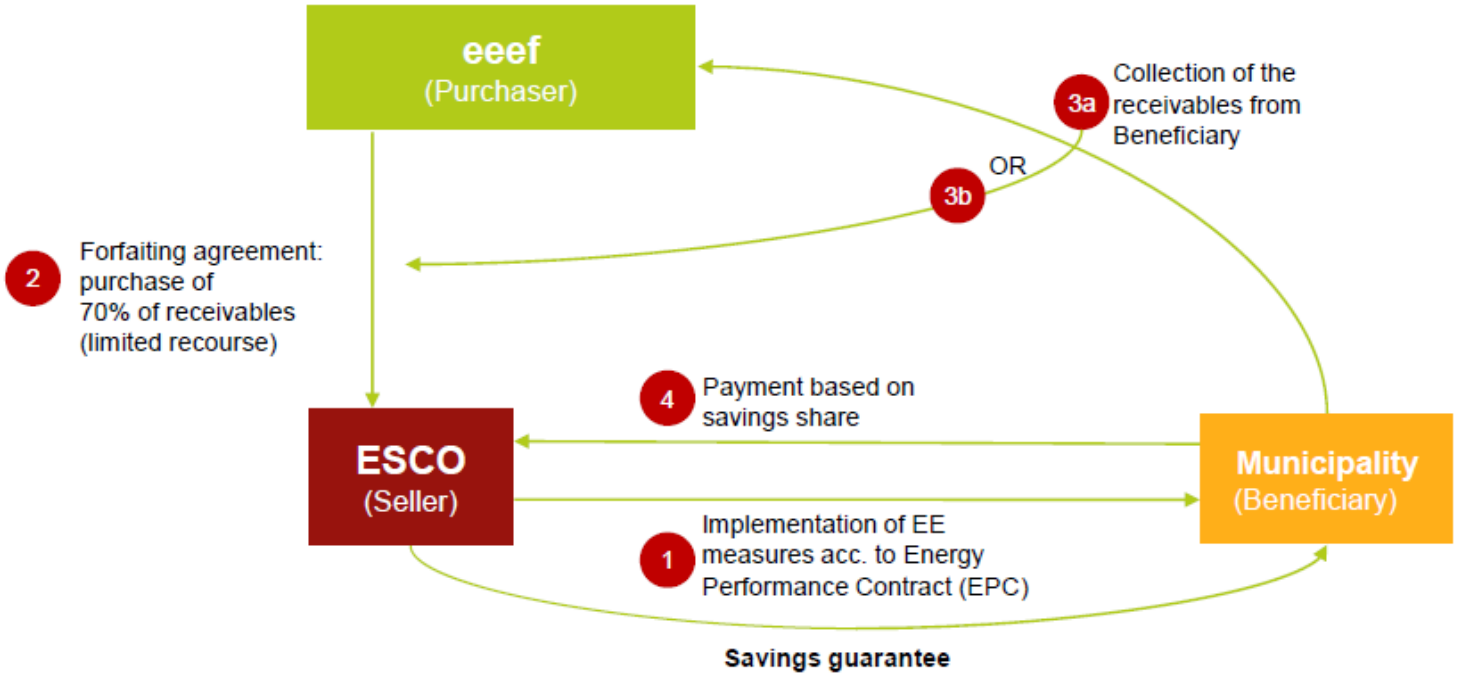
http://eeef.eu/eligibility-check.html



Potential project structures

Project examples	Characteristics	Project structures
Building upgrades	▪ Energy audits completed, vast energy savings potential ▪ Sufficient know-how of ESCO in case of big projects ▪ Savings guarantee required ▪ Depending on counterparty risk additional parental/municipal guarantee required	▪ Senior debt ▪ Mezzanine / equity ▪ Funding via co-investments in SPV or NewCo ▪ Forfaiting (mostly for Building upgrades in a ESCO structure) ▪ Leasing (mostly for clean urban transport projects)
Street lighting	▪ Only light bulbs, switch boards plus EE related measures can be financed, not the light pole itself ▪ Ownership of lighting points need to be in municipal hand ▪ Technology with good track-record only	
Biomass plants	▪ Contracts for input (feed-stock) / output (e.g. Electricity/heat) in place ▪ Substitution of input possible ▪ Technology with good-track record (e.g. boilers , turbines etc.) ▪ O&M concept	
Photovoltaic	▪ Land ownership in municipal hand ▪ Grid connection secured ▪ Feed-in tariff secured ▪ O&M concept ▪ Bankable module supplier	

Forfeiting structure – guaranteed savings from the ESCO



ESCO commits to increase the energy efficiency and guarantees certain savings for the Municipality (by way of an independent guarantee)

ESCO sells a certain part of its remuneration receivables at a limited-recourse[1] base to the eeef, the purchase price is the net present value of the remuneration receivables discounted at a certain factor

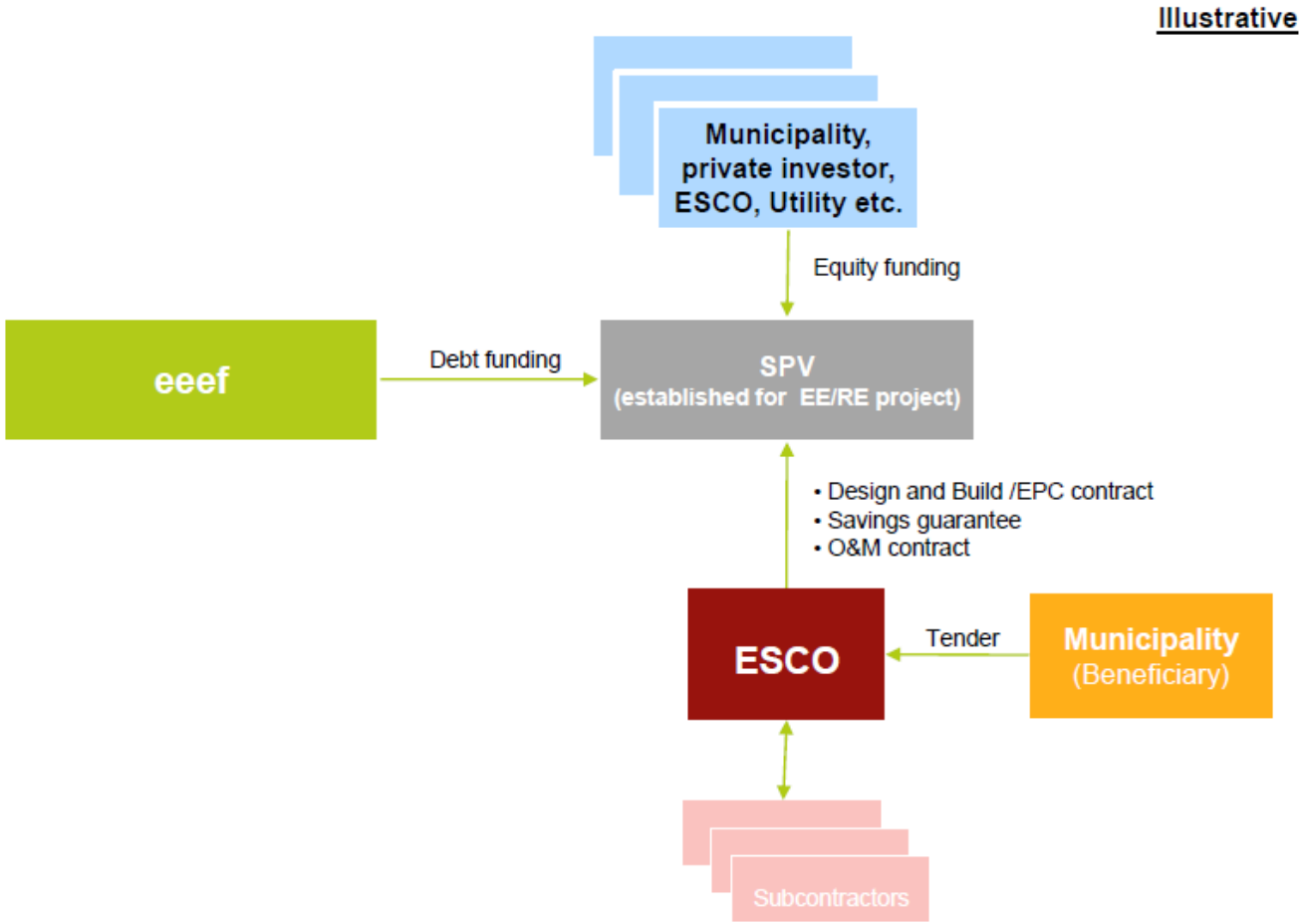
EEEF collects the remuneration receivables from the Municipality

The forfaiting agreement will be signed by the ESCO and EEEF, however the Municipality has to agree to certain representations/undertakings

[1] Limited recourse means that EEEF has counterparty risk of Beneficiary to a certain extent in case of default and limited recourse rights against the Seller

Source EEEF

Funding via special purpose vehicle (SPV)



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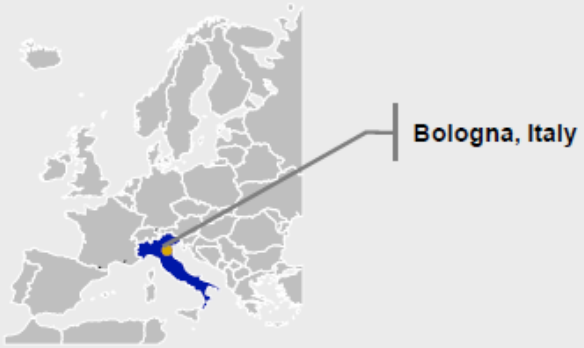
Case Study I: Energy efficiency upgrade for the University Hospital S. Orsola Malpighi - Bologna, Italy

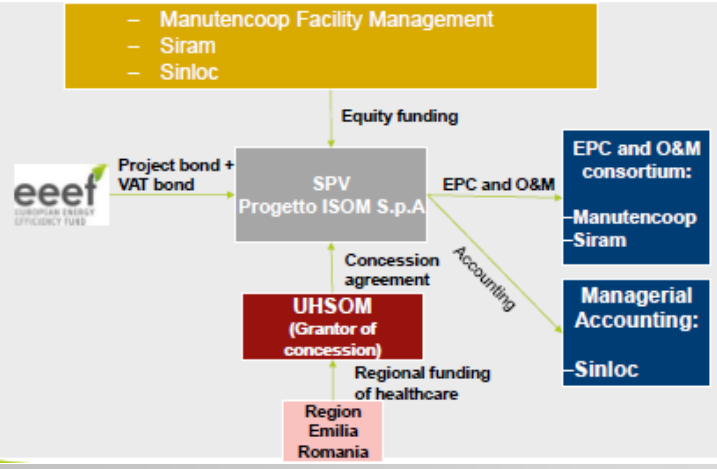
Project description

Partners:	– **Progetto ISOM S.p.A (project SPV)** – **University Hospital S. Orsola Malpighi (grantor of concession)**
Measures: energy efficiency CCHP	– Upgrade of entire fluids' production and distribution system of the hospital – Including a tri-generation plant for the combined production of cooling, heat and power (CCHP)
Results:	– Reduction of CO2 emissions of 14,136 t p.a., approx. 31% compared to baseline

Location



Project structure



Investment characteristics

Key data:

- Total project volume: €41 m (equity provided by Manutencoop Facility Management, Siram, Sinloc and Iter Cooperativa Ravennate)
- EEEF funded volume: €32m via a project bond structure
- Duration of financing: 20 years

Highlights:

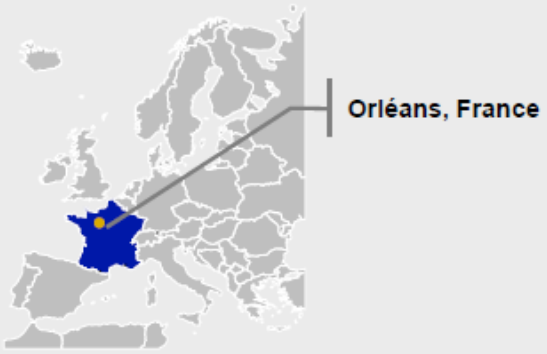
- Largest energy efficiency upgrade in Italy under a Public Private Partnership (PPP) framework
- Lighthouse project for the Italian and European energy efficiency market demonstrating the positive impact of a major energy efficiency investment in a complex hospital; replication potenial

Case Study II: Combined Heat and Power Plant (biomass) – City of Orléans, France Location

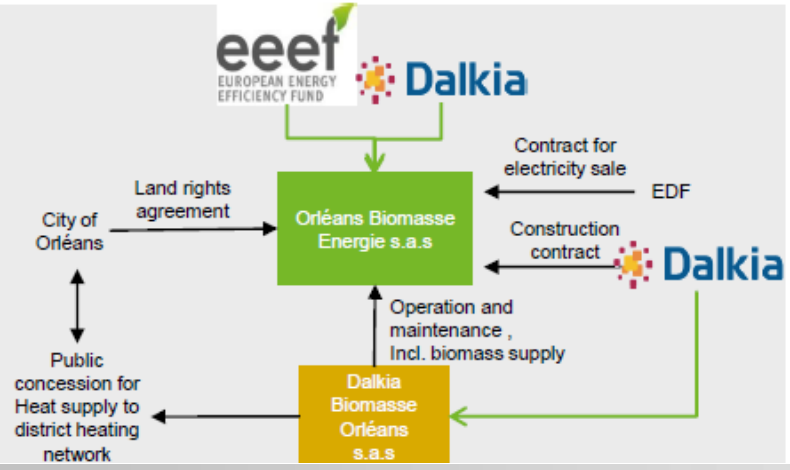
Project description

Partners:	– **City of Orléans, Dalkia France, eeef**
Measures: Biomass plant/ energy efficiency	– Dalkia won a public tender realized under a French Regulation Commission Tender („CRE3“) for electricity /heat generation fired by biomass – Biomass-fired combined heat and power plant with a capacity of 7.5 MW in electricity and 17 MW thermal energy
Results:	– Reduction of CO2 emissions of 20,500t p.a., approx. 89.1% compared to baseline – Energy production 50.826 kWh p.a.

Location



Project structure



Investment characteristics

Key data:

- EEEF is a 84,4% shareholder of Orléans Biomasse Energie s.a.s alongside Dalkia with 15.6%.
- Total project volume: €36 m
- Total debt financing volume: €30m (provided by Crédit Agricole)
- Duration of financing: 18 years

Highlights:

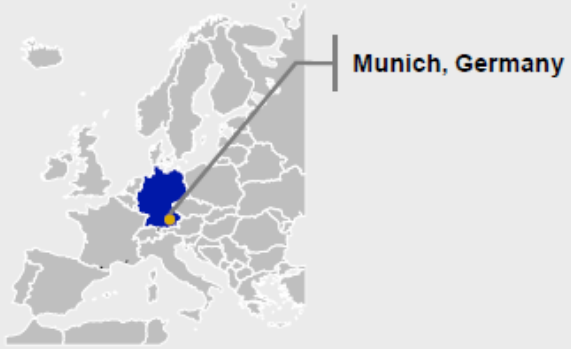
- Decentralized energy supply for City of Orleans using existing district network
- Supply of biomass within 100 km
- Long term PPA agreement with EDF

Case Study III: Building retrofit for the University of Applied Sciences - Munich, Germany

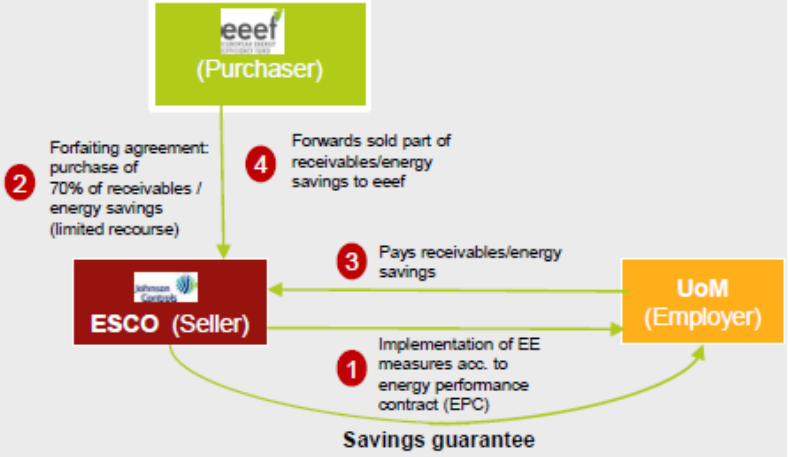
Project description

Partners:	– **University of Applied Sciences Munich (UoM), Johnson Controls, eeef**
Measures: Building upgrade/ energy efficiency	– Installations of combined heat and power plant – Installation of energy efficient lighting – Optimization of heating – Optimization of building management
Results:	– Reduction of CO2 emissions 88t p.a. approx. 11.6% compared to baseline – Guaranteed energy savings € 118,860 p.a. (41.7%)

Location



Financing structure



Investment characteristics

Key data:

- Financing volume: approx. €0.6 m
- Duration of financing: 10 years
- Monthly interest and principal payments

Highlights:

- Second project with the innovative forfeiting structure
- EE measure including a CHP plant (decentralized energy production)
- Role model for further energy efficiency investments in schools, universities etc.