



Toolkit:

Enabling private energy efficiency investment

Municipal and Utility Services: Session 8

John Dulac

New Delhi 11 December 2018

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1. **Where to start:** Energy use in municipalities
2. **Where to start:** Energy efficiency potential in municipalities
3. **Toolkit:** Energy efficient municipal planning
4. **Toolkit:** Energy efficient technologies
Where do I get help? IEA's Technology Collaboration Programmes
5. **What are the steps:** Implementing energy efficiency programmes – target setting
6. **What are the steps :** Implementing energy efficiency programmes – implementation
7. **What are the steps:** Enable public energy efficiency investment
8. **What are the steps:** Enable private energy efficiency investment
Special session: Multiple benefits of energy efficiency for Municipalities
9. **Did it work:** Evaluation and energy efficiency indicators
Special session: International and regional initiatives that can help
10. **Energy Efficiency Quiz:** Understanding energy efficiency in municipal & utility services

8. What are the steps: Enabling private energy efficiency investment

Trainer(s): John Dulac

Purpose: To teach the different financing mechanisms available from private finance and explore case studies unique to financing energy efficiency projects.

Scenario: There are ambitious targets, but seemingly little funding available to realise energy efficiency projects.

Question: What are the private financing options that you can take?

Investment-grade energy efficiency policy

What is it?

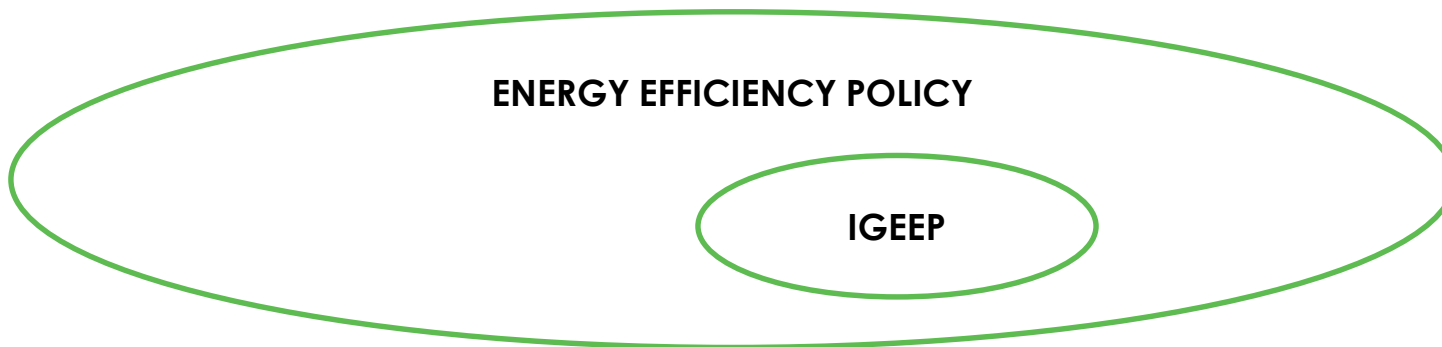
Why is it important?

Introduction to a banker

Investment-grade energy efficiency policy: What is it?

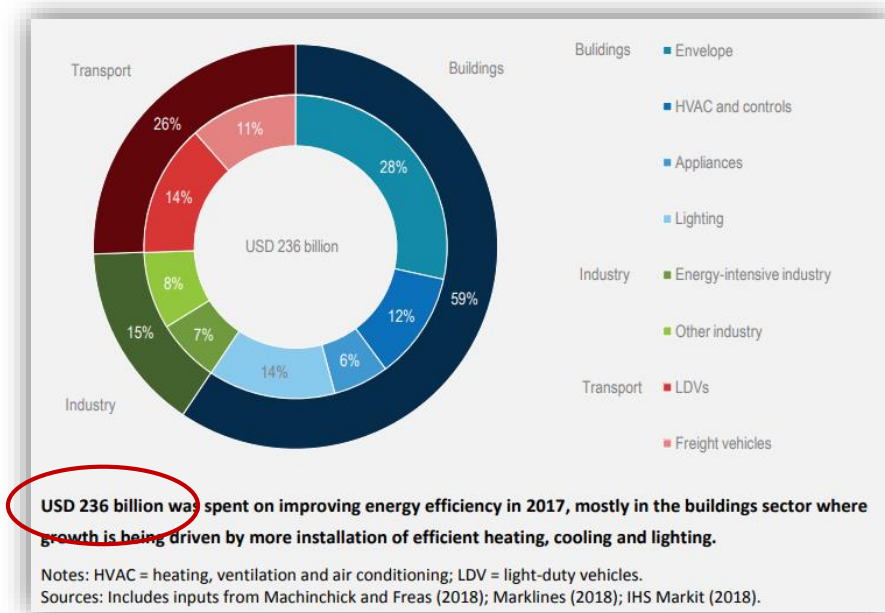
- What is energy efficiency policy?
 - A set of strategies, legislation, regulations, measures, programmes that together stimulate energy efficiency improvement
- What is investment-grade energy efficiency policy?

A set of strategies, legislation, regulations, measures and programmes that together ~~enable investments~~ stimulate energy efficiency improvement



Investment-grade policy: Why is it important?

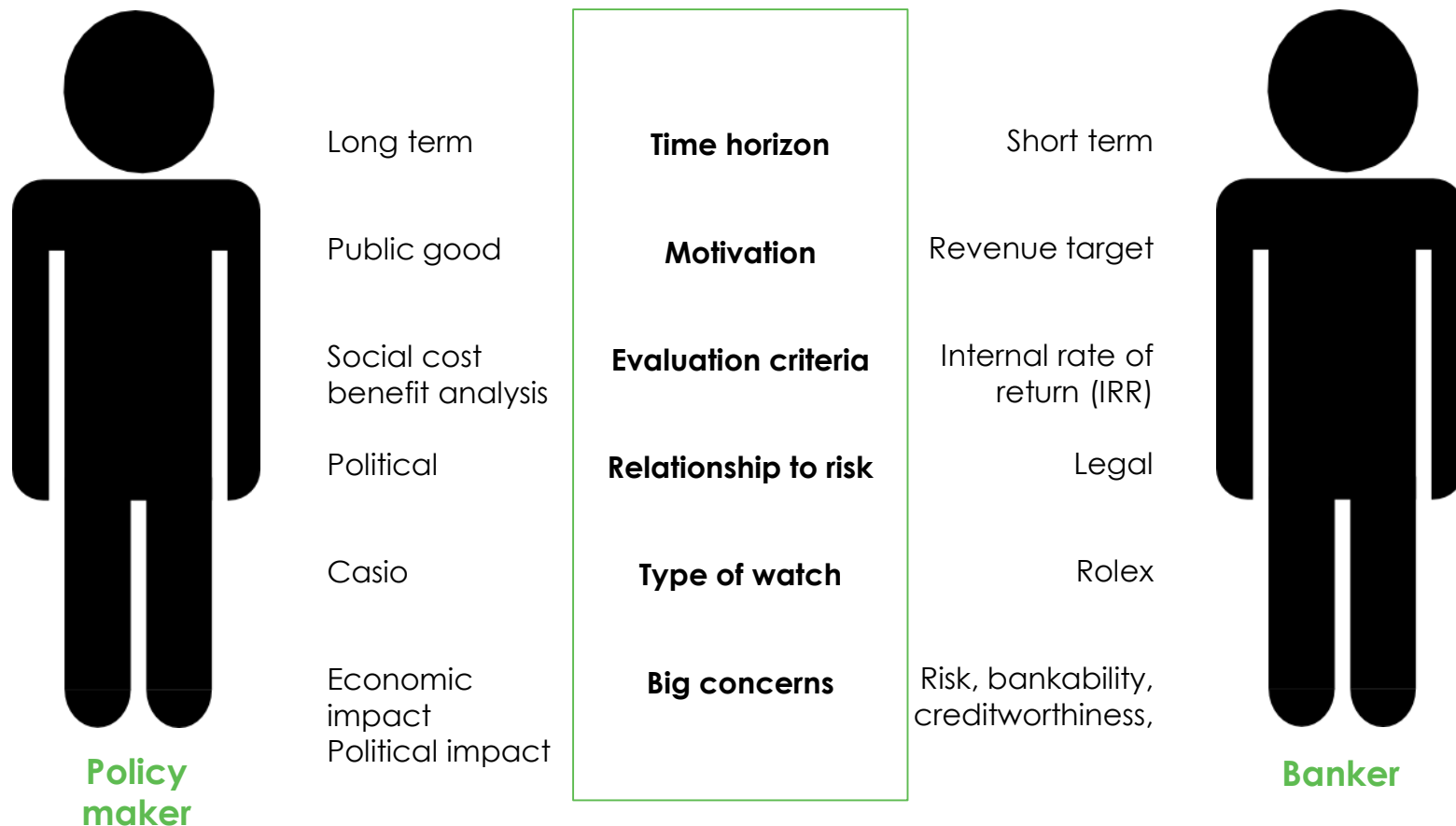
- Global investments for energy efficiency improvements in 2017 was USD 236 billion



At least \$496 billion

Estimated investment needed for energy efficiency through 2040

Investment-grade energy efficiency policy: Introduction to a banker



Investment-grade policy

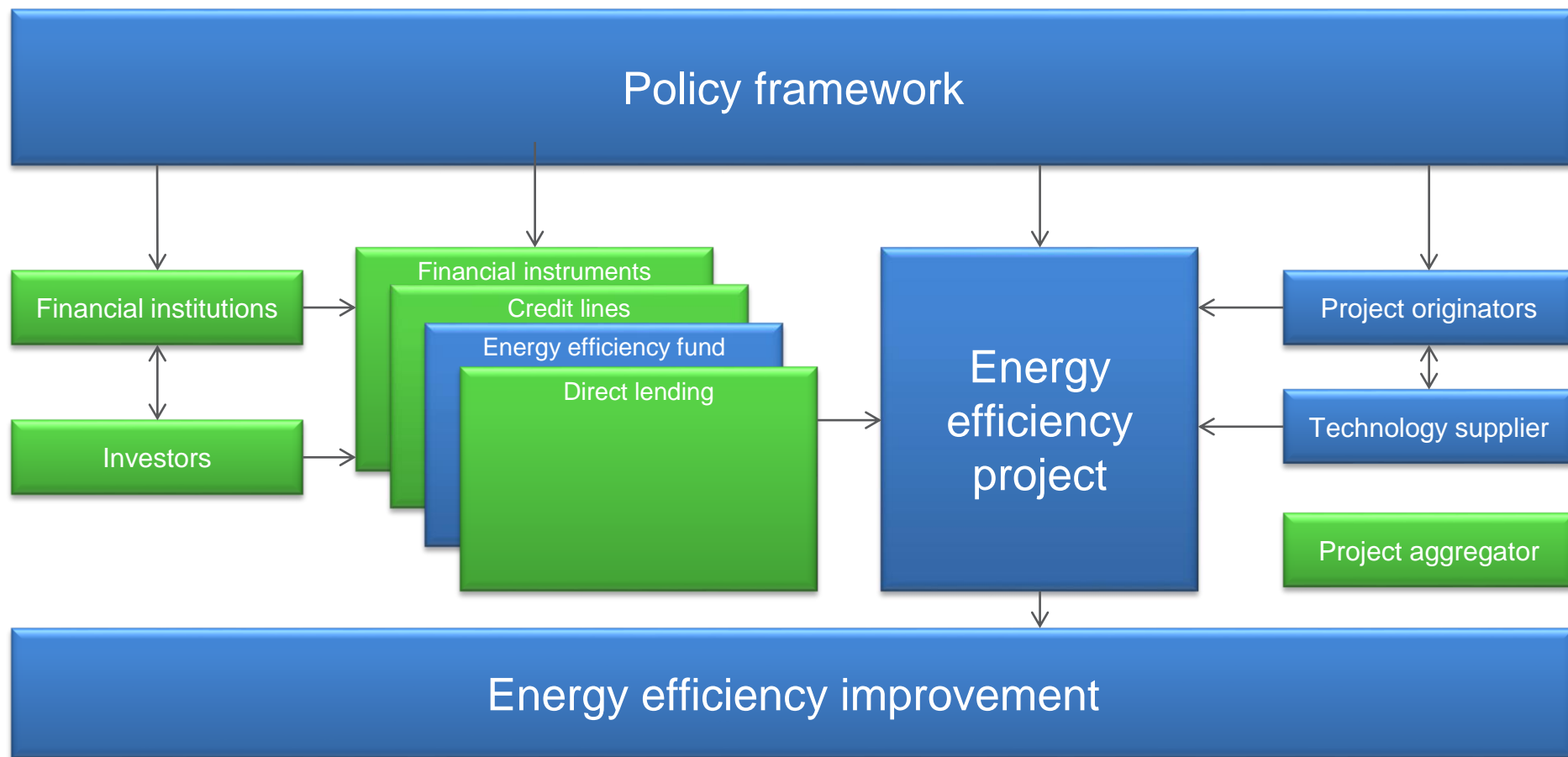
How is it different to ordinary energy efficiency policy?

What does it look like?

Example – Western Balkans: ESCOs

- Focused **goal**
- Focus on specific set of **barriers**
- Focused group of **stakeholders**
- Specific **criteria**
 - For evaluating appropriateness of measures
 - For evaluating success of measures
- Specific **types of measures**
 - Including those not traditionally associated with energy efficiency

Investment-grade policy: What does it look like?



OBJECTIVE

Support enabling environment for ESCO business models in the Western Balkans.

ACTIVITIES AND RESULTS (COMPLETED 2017)

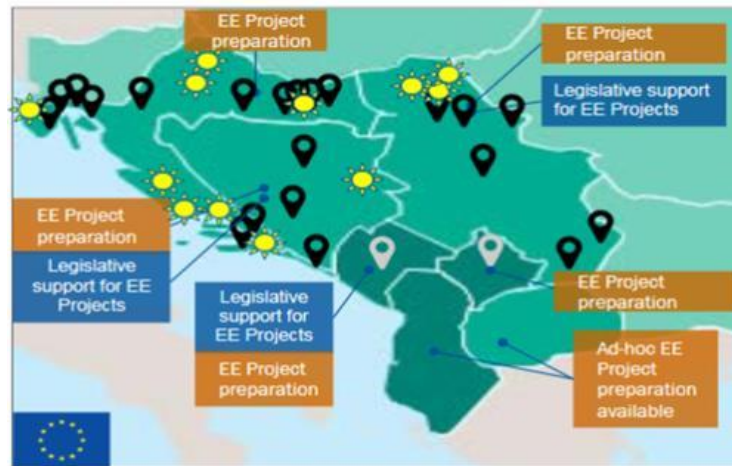
- Legislative support of EE projects,
- Providing model ESCO contracts including energy performance contracting and energy supply contracting,
- Standardising public procurement and contracting documents to lower transaction costs,
- Energy Efficiency Project Preparation,
- Procurement laws.

TARGETED GET OUTCOMES

- 11 street lighting projects tendered/implemented, 6 projects to be tendered and implemented in Q1/2017, 20 projects under preparation for tendering, including street lighting in Belgrade and Novi Sad

INVESTMENT OUTCOMES

- Total potential capex of ca. €53m arising from REEP support

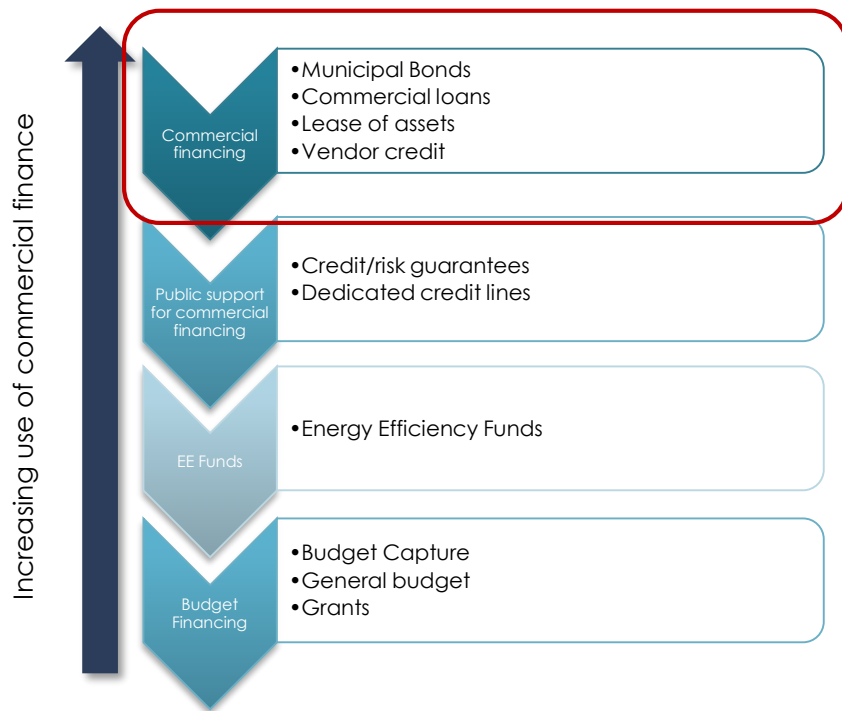


Private funding sources and financing mechanisms

What are the options?

Business models

The Financing Ladder



Funding sources:

- Commercial banks → loans
- Equipment suppliers → vendor credit
- Asset lessors → leasing of EE equipment
- Investors → equity

- ESPC (typically with ESCO):
 - Shared Savings
 - Guaranteed Savings
 - Energy Supply Contracting
 - Lease Rental/Contracting
 - Build-Own-Operate (BOO)
 - Build-Own-Operate-Transfer (BOOT)
 - Lighting as a Service (LaaS)
- Energy Service Agreement
- Utility On-Bill Financing
- Power Purchase Agreements
- Sale and Lease Back

Challenges to private municipal funding

- Characteristics of municipalities (especially for smaller-sized cities):
 - Perception of **low creditworthiness/high risk**
 - **Small revenue** bases
 - **Limited borrowing capacity**
- Requirements for **collateral and recourse**, if concerns arise over municipalities' ability to cover debt service payments
- Lack of **long-term loans**
- Absence of 'hard' **cash flows**
 - e.g. in circumstances where there may be less predictable revenue streams
- High **transaction costs**

Overcoming challenges: financing mechanism selection

Overcoming challenges: financing mechanism selection

There is no simple relationship in the selection of an appropriate financing mechanism to a municipality's set of challenges.










???

- What specific challenges is my city facing?
- Which funders would be averse to getting involved? Which ones can be motivated to provide financing?
- What strategies can I employ to make the situation more attractive?
- Should one or more mechanisms be employed?

Challenges	Potential Financing Mechanism	
	Small Municipalities	Large Municipalities
Insufficient revenue base	Budget financing Revolving EE funds PPPs	Municipal funds (instead of more sector-focused funds) SPV Approach
Ltd revenue-raising powers		
Limited borrowing powers		
Restrictions on use of funds		
Req. for collateral or recourse	Vendor credit Lease of assets Risk guarantees ESPCs with ESCOs Aggregation of smaller projects	Commercial debt ESPCs with ESCOs Public ESCOs Municipal bonds
Creditworthiness		
Absence of hard cash flows		
High Transaction Costs		

Overcoming challenges: financing mechanism selection

Increased consideration of private finance

Situation	Issues/Challenges	Financing Mechanism	Action
Does the municipality have sufficient resources to fund the project?	 Allocation of funds from budget	General budget financing	Establish budget line item for project
Are grants available from donors?	 Grants may not finance entire projects	Partial budget financing and partial grant	Prepare grant application
Are funds available from state or national governments?	 Funds may provide only partial financing	Budget capture	Apply for national funds
Is there an energy efficiency fund?	 Eligibility criteria for the EE fund	EE fund	Apply to the EE fund
Are commercial banks willing to offer dedicated credit lines and/or risk sharing programs?	 Creditworthiness, collateral and borrowing capacity of municipality	Dedicated credit lines or risk guarantee programs	Review eligibility for these mechanisms
Is the municipality creditworthy and does it have borrowing capacity?	 Criteria used by commercial banks to assess creditworthiness	Dedicated credit lines or risk guarantee programs	Access credit lines or risk sharing programs
Are there active ESCOs in the local market?	 Developing ESPCs	Commercial financing with ESCOs	Negotiate ESPC with ESCOs
Are leasing or vendor financing programs available?	 Eligibility criteria and terms of financing programs	Leasing or vendor finance	Negotiate leasing or vendor financing agreements
Does the municipality have the capacity to issue municipal bonds?	 Market for such bonds; transaction costs	Municipal bonds	Develop municipal bond program

- Joule Assets - eQuad
<https://www.eu.jouleassets.com/about-equad/>
- Energy Efficiency Financial Institutions Group - De-risking Energy Efficiency Platform (DEEP)
<https://deep.eefig.eu/>

Activity

As individuals:

Describe the top three challenges that currently exist in your cities with respect to securing investment. Given what you now know about mobilizing finance:

- Which of these mechanisms do you think would be most viable for your set of challenges?
- What are the pros and cons of employing each mechanism?
- Which would you prioritise and why?



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Emerging models for public ESPC procurement

Model	Description
Indefinite contracting	Overarching government agency competitively procures one or more ESPs and allows public agencies to enter into direct contracts with them without further competition
Public ESCO	ESCO publicly owned, so no requirement for competitive procurement process
Super ESCO	Public ESCO that contracts directly with a public entity and then subcontracts with smaller ESCOs/contractors on competitive basis
Utility ESCO	Public entity contracts directly with its utility without additional procurement
Utility DSM ESP	Publicly owned ESCO uses funds from DSM surcharge to invest in target public agencies at no cost to agency
Internal ESCO	Unit within a public agency acts as ESCO, providing technical and financial services, and receives payments through internal budget transfers
Energy supply contracting	Public agency contracts out delivery of an energy service and selects service provider based simply on cost per unit of service
Procurement agent	Quasi-public entity/NGO helps government agencies, often on fee-for-service basis, develops RFPs and assists through contract award
Project bundling	Overarching government agency bids out group of buildings or facilities for large ESPC
Nodal agencies	Dedicated energy efficiency agency is appointed to facilitate procurement
Ad hoc	No explicit program or mechanism exists to support public ESPCs but no policy to prevent them; therefore projects are developed one at a time

Challenges to municipal public and private financing

Classification of energy efficiency financing barriers

