



IFC

**International
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World Bank Group

Invisible M&E

Approach of the Russia Sustainable Energy Finance Program

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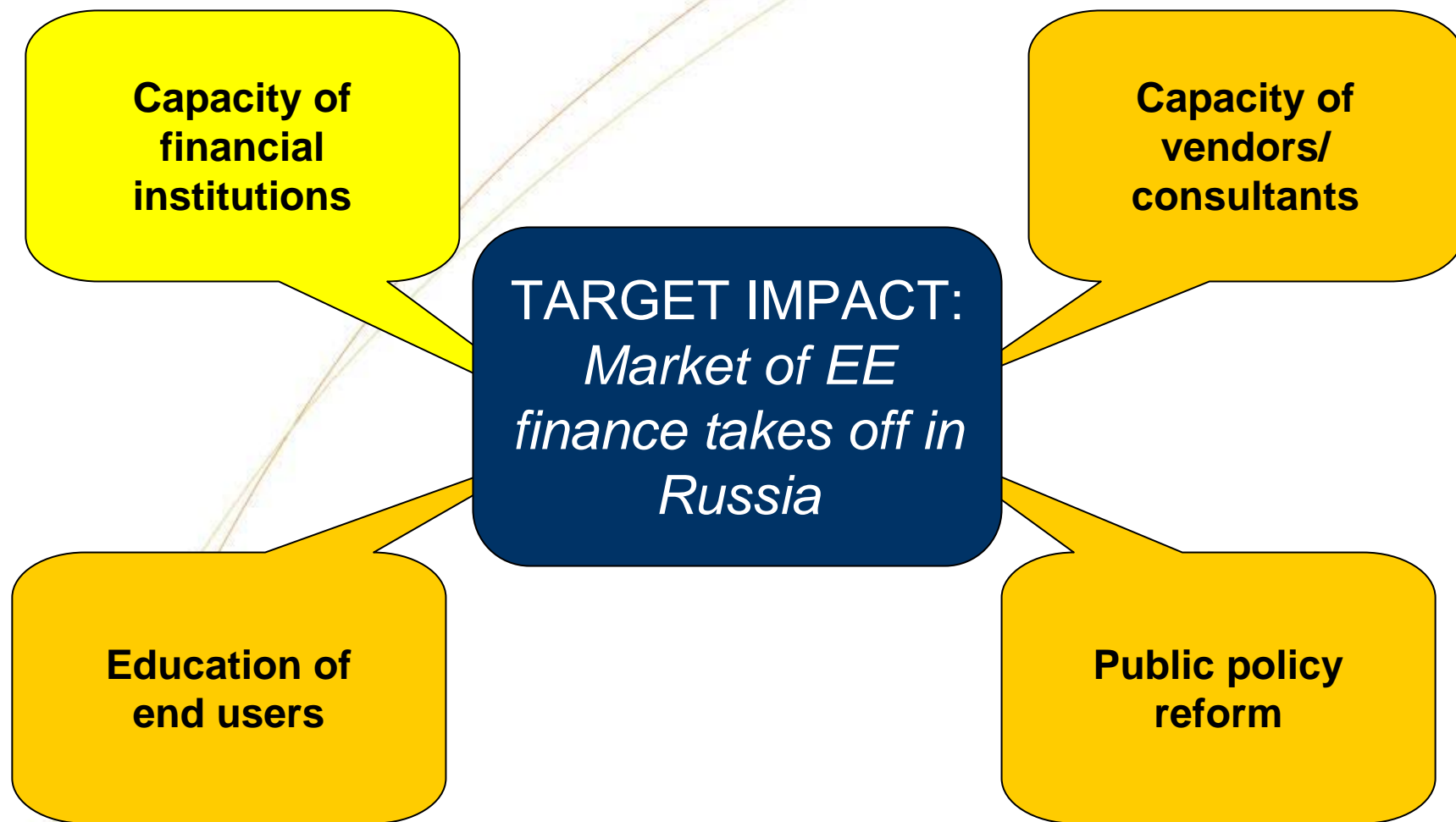
New Delhi, December 11, 2007



 **MINISTRY OF
TRADE AND
INDUSTRY**



Comprehensive advisory agenda for stimulating Energy Efficiency (EE) Investments



What do we need to evaluate with Financial Institutions?

- Volume of EE transactions
- Energy savings by borrowers (GWh/year)
- Energy cost savings by borrowers (\$/year)
- CO2 emissions reductions (tons/year)

How do we know this is “really” Energy Efficiency?

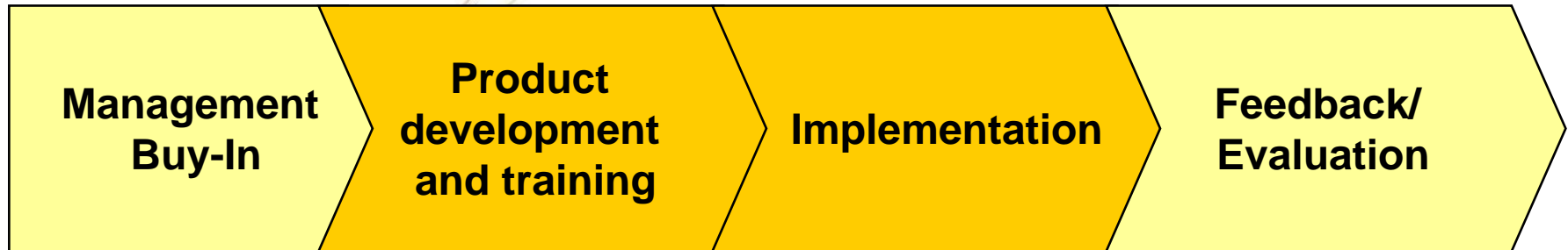
Financial Institution's perspective:

«This is already a complicated product, why should we and our clients be further burdened with extra reporting?»

Client FI

Invisible M&E built into cooperation

Stages of cooperation with Financial Institutions



Agree on
targets for
EE lending

EE Criteria
EE Calculator

Evaluation
workshops

Clear definition of what is EE is the first step

Energy equipment



Process equipment



ROI from energy savings

+

Decrease in per unit energy consumption

>20%

>20%

>5%

>40%

Second step is to equip banks with simple analytical tools: EE Calculator

- Banks calculate energy/CO2 savings as part of their loan assessment
- No additional work for banks to report back to IFC
- IFC gets defensible outcome/impact data



EE Calculator: simple and few data input requirements

ENERGY EFFICIENCY CALCULATOR

Data Input

Production capacity **BEFORE**

1 Гкал/ч

Production capacity **AFTER**

5 Гкал/ч

Total Investment

с НДС

57,830,000

руб.

Annual energy consumption:

Type of energy resource	BEFORE	COST per unit		AFTER	
	Volume	с НДС	Currency		Volume
уголь каменный	1,000.0	2,500	руб.	Годовое потребление	
газ горючий природный		1,300	руб.	Годовое потребление	3,134.1
электроэнергия из сети	1,728.0	2,000	руб.	Годовое потребление	

EE Calculator helps banks to calculate the EE effect in 15-20 minutes

OUTPUT OF THE EE CALCULATOR

KEY INDICATORS

Energy cost savings	638,248 \$/year	
Simple payback period	3.1 years	
Energy savings	14,609 MWh/year	
Investment cost of saving 1 MWh	9.1 \$ / MWh	
CO2 emissions reduction/year	5,463 t CO2/ year	
Lifetime CO2 emissions reduction	81,951 t CO2	
Investment cost of reduction of 1CO2 ton:	24.4 \$ / t CO3	
<u>1. Decrease in per unit energy consumption</u>	33% > 20%	Complies
<u>2. ROI from energy savings</u>	34% > 20%	Complies

Conclusion: THE PROJECT COMPLIES WITH IFC EE CRITERIA

Invisible M&E makes results visible ...

Russia results to date:

- IFC credit lines of **\$35 m**
- 23 sub loans of **\$16 m** to projects worth **\$25 m**
- Energy savings **178 GWh**
- Energy and other costs savings **\$6 m/year**
- CO2 emissions reduction
~48 k tons/year



...is well received by Financial Institutions ...

«Initially we saw energy efficiency as a complicated theoretical concept rather than as a practical business... later we realised that it is simple, quick and fits perfectly with our client needs»

Client branch manager

... and is recognised on an international level

The first Russia program client received a runner-up FT award for sustainable banker of the year



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