

Solutii pentru impulsionarea modernizarii energetice a cladirilor din Romania

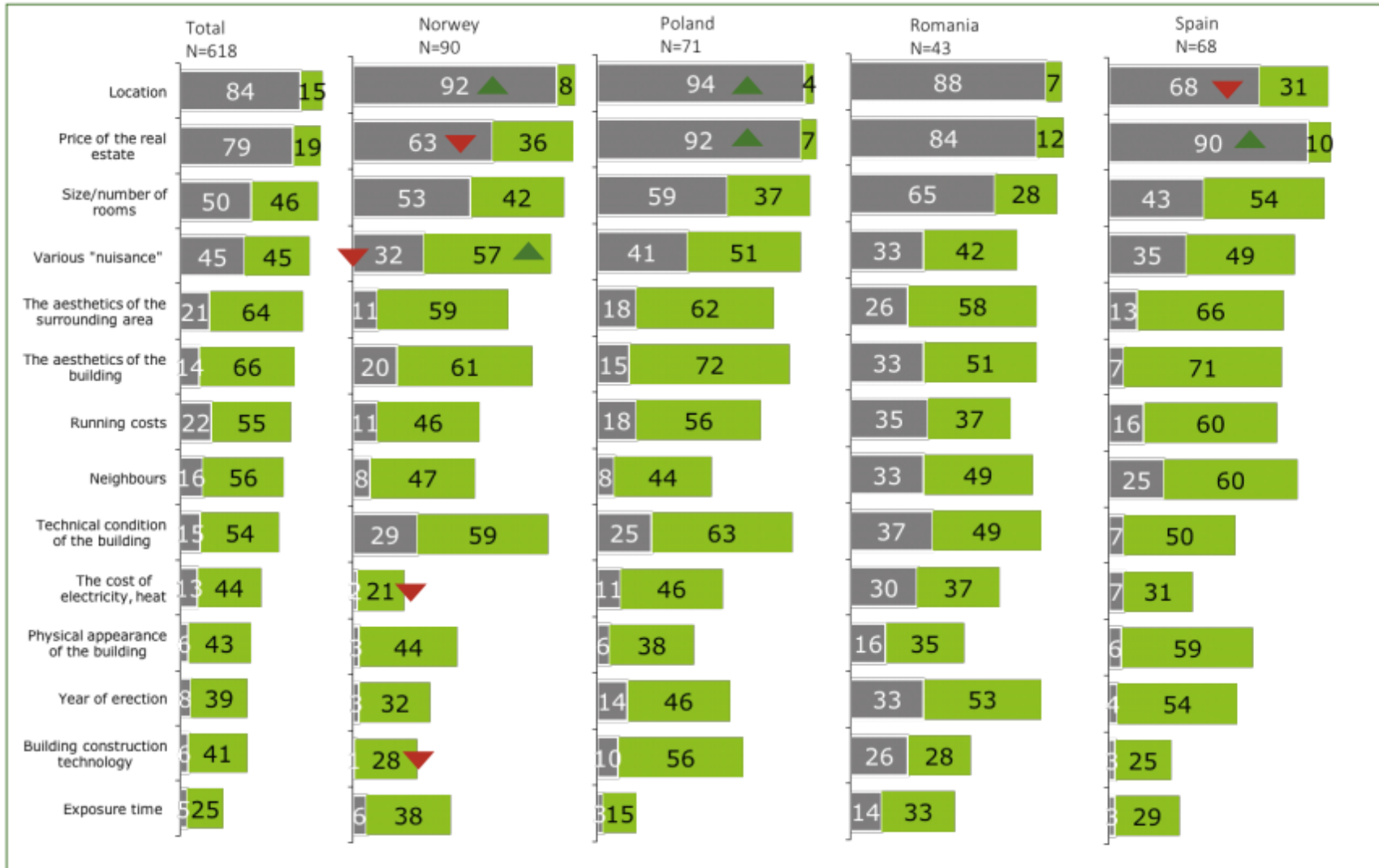
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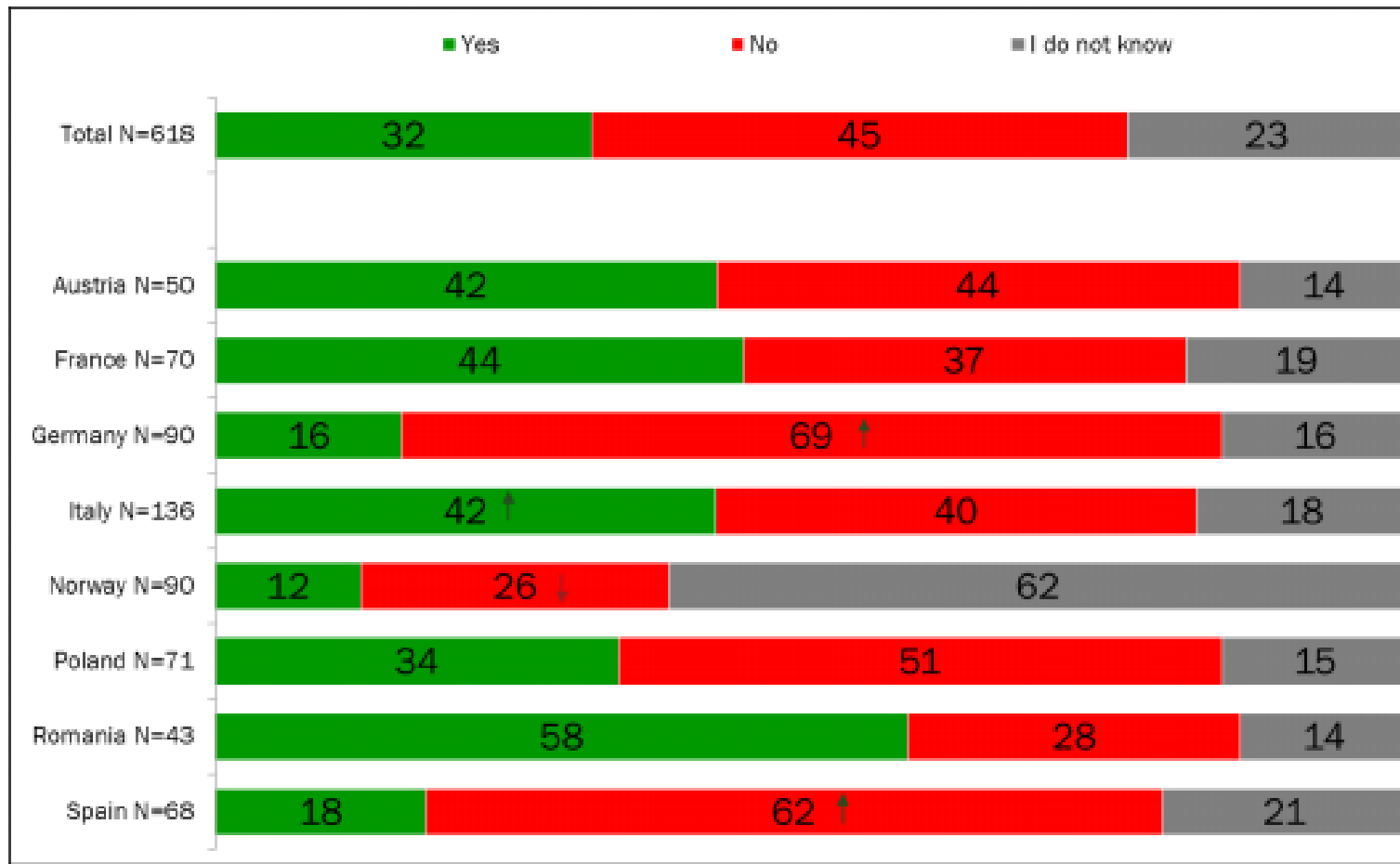
Source: Quantitative report on real estate agents survey ZEBRA 2020





% answers ▲ ▼ Significantly higher/lower score - total vs the country

Figure 10: Do you think there is a link between EPCs and the improvement of the energy efficiency of buildings?



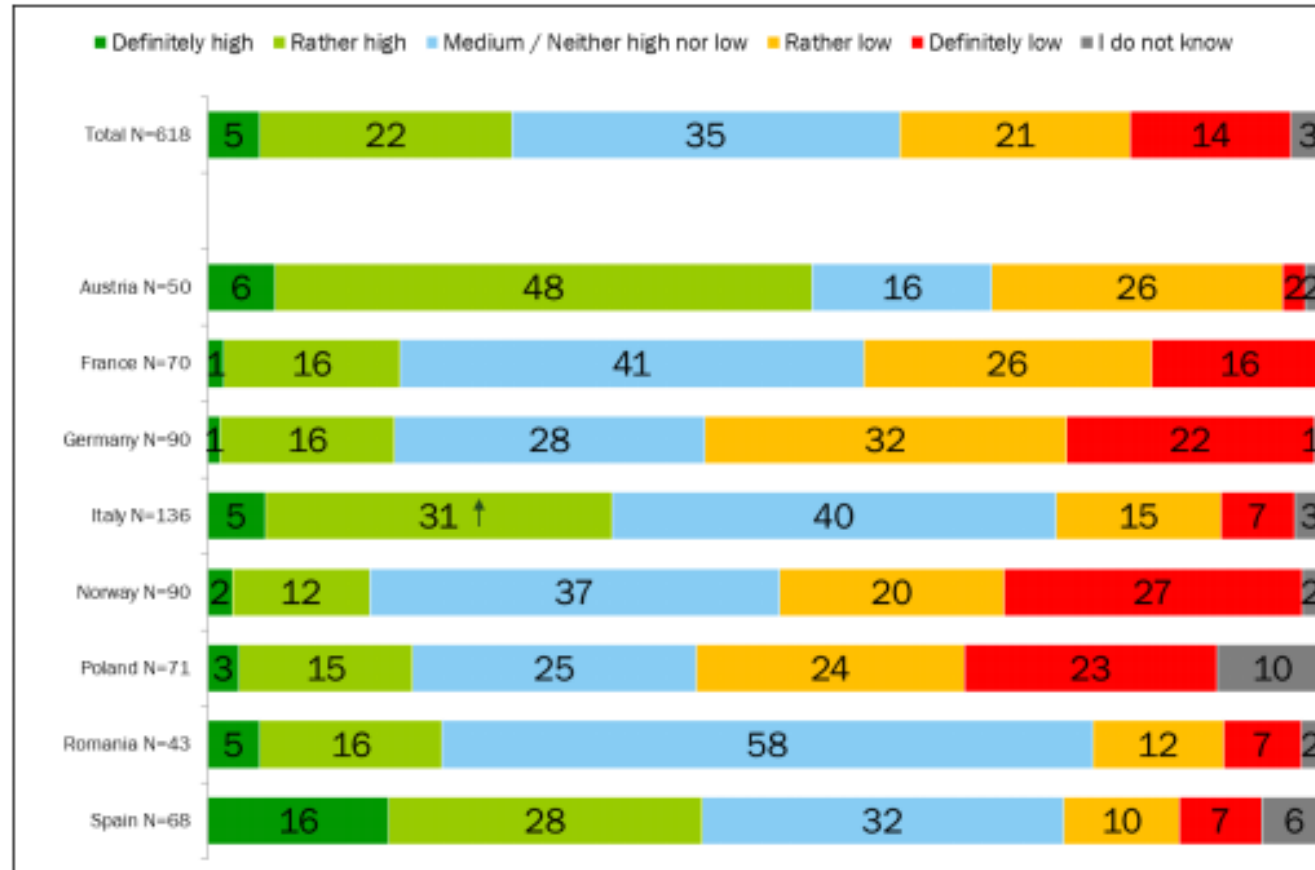
% answers

↑ ↓ Significantly higher/ lower score - total vs the country

Source: Quantitative report on real estate agents survey ZEBRA2020

Generally, the reliability of data provided by the EPC is evaluated relatively low. (Figure 7)

Figure 7: How do you assess the reliability of data provided by EPCs in your country?



% answers

↑ ↓ Significantly higher/ lower score - total vs the country

Source: Quantitative report on real estate agents survey ZEBRA2020

Table 33: Sales and rental surpluses given as percentages of average dwelling prices in the respective samples of each of the analysed countries. The linear model was used to calculate the surpluses in each case

Country	Sales surplus		Rental surplus	
	% value	Adjusted R ²	% value	Adjusted R ²
Austria	18	0.280480	5.2	0.747323
Czech Republic	11	0.256793	4.0	0.335202
Denmark	13	0.191310	5.1	0.342421
France	9.0	0.327088	2.0	0.072216
Germany (pre-2014 EPC) ⁶	0.60	0.203651	-3.2	0.300827
Germany (post-2014 EPC)	7.9	0.111914	4.4	0.317947
Luxembourg ⁴	2.6	0.351598	0.084	0.310141
The Netherlands	-0.81	0.565894	-4.0	0.573943
Norway	6.4	0.270419	-	-
Slovakia	16	0.383564	-	-
Spain	27	0.486787	22	0.318142
Sweden	3.2	0.108788	-	-
United Kingdom	4.8	0.430918	-	-

⁶ For countries with linear rating systems, surpluses are given for a 50-point improvement, as this is the averaged equivalent of the post-2014 letter classes. It is also fairly typical for other national systems.

THE “CLEAN ENERGY FOR ALL EUROPEANS” PACKAGE

IN THE PROPOSAL

COLLECTING DATA

National databases to collect EPC information (*EPBD*).

Aggregated anonymised data to be made available on request to public authorities (*EPBD*).

Requirements to collect energy consumption data for public buildings (*EPBD*).

Numeric indicator of primary energy use in kWh/(m².y) (*EPBD*).

Back to 2010...

Was decided to create a program to promote energy efficiency in the Central Government (Eco.AP), which included Energy Performance Contracts as way to promote energy efficiency in Public Sector;

The development of Energy Performance Contracts was not impossible regarding the existing Public Procurement Rules, but was complex;

On that way, it was decided that the best option was the development of a specific legal framework for EPCs and also the development of a tender specification model to be used by the public sector...

Objectives:

- Promote the efficient use of energy in Central Government;
- Promote the development of the ESCO market in Portugal, both on the public and private sector;
- Contribute to achieve the goals established in NEEAP to reduce energy consumption in Public Administration Sector in 30% until 2020.

Main Measures :

- Existence of an Energy Manager in all Central Government Bodies;
- Development of the Barometer Eco.AP in order to evaluate the energy efficiency of the Central Government Sector
- **Development of Energy Performance Contracts** in the buildings/equipments with an higher energy consumption (or inefficiency);
- In order to ensure the quality of energy efficiency service providers to the public sector was published Normative Order No. 15/2012 of 3 July, establishing the qualification system of energy service companies, establishing different requirements technical and financial nature due to the energy consumption of buildings or equipment.

30%
de eficiência
energética

Legal Framework

RCM n.º 2/2011, from January 12th

- Creates the Eco.AP program

Decree-Law 29/2011, from February 28th

- Develops the legal framework for energy performance contracts in the public sector, in coordination with the remaining procedures for public contracting

Normative Order n.º 15/2012, from July 3rd

- Creates a ESCO pre-qualification system

RCM n.º 67/2012, from August 9th

- Established that all EPC in the Central Government must be coordinated by the Energy Ministry

Ordinance n.º 60/2013, from February 5th

- Publish the tender specification model to be used by the public sector in tender for energy performance contracts development (EED obligation, Article 5)

DL 68-A/2015, from April 30th

- Extends Eco.AP to regional and local government

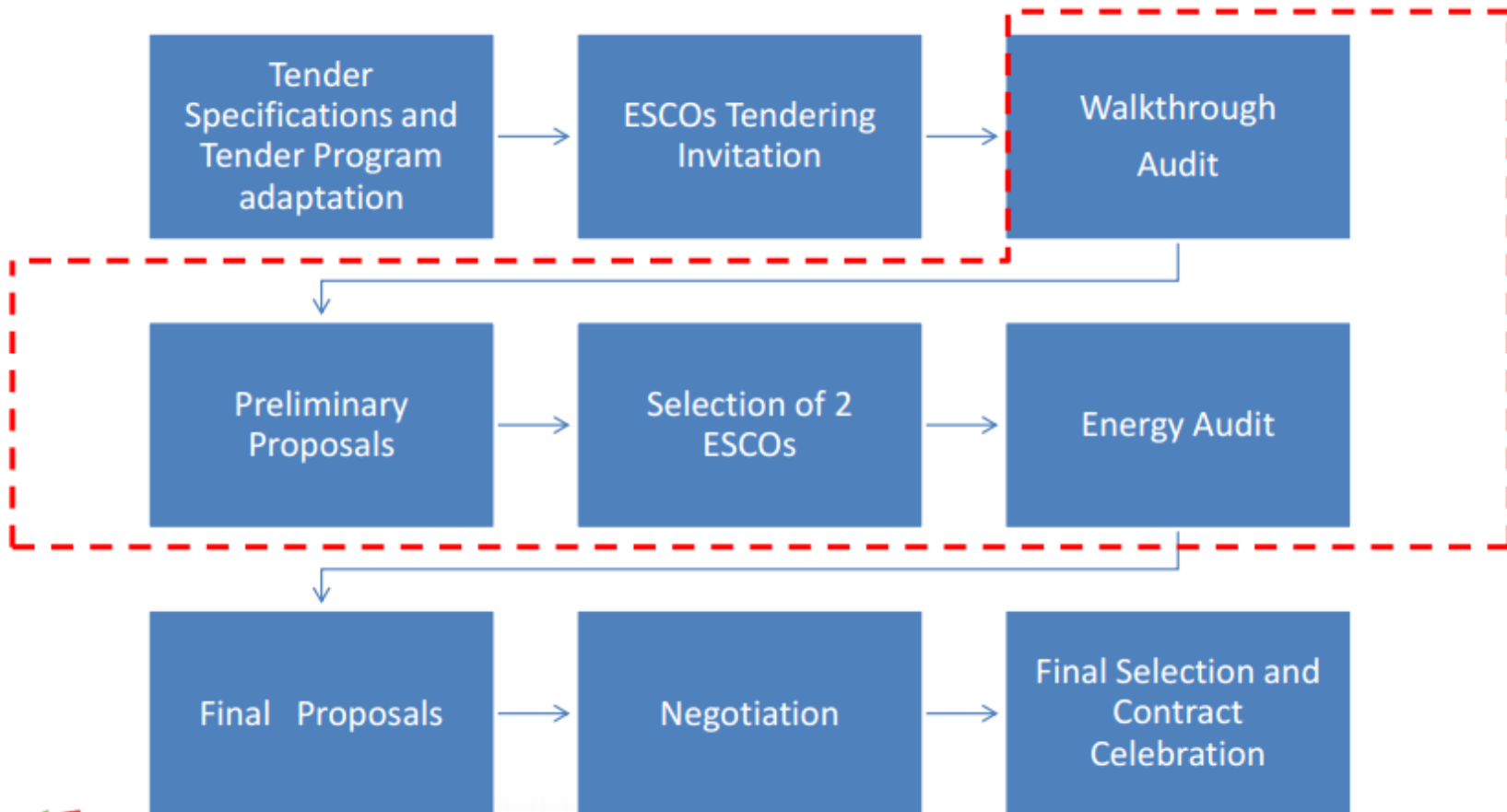
ESCO – Pre Qualification System

Driver	Levels	Technical Requirements	Financial Requirements
Complexity of buildings / Equipments	Level 1 $\leq 3 \text{ GWh}_{eq}$	<ul style="list-style-type: none"> • 2 Energy Expert (EPBD) • 1 Energy Auditor 	<ul style="list-style-type: none"> • Turnover $\geq 200 \text{ k€}$ • Financial Autonomy $\geq 15\%$
	Level 2 $> 3 \text{ GWh}_{eq}$	<ul style="list-style-type: none"> • 2 Energy Expert (EPBD) • 1 Energy Auditor • 1 CMVP • 2 Engineer (SGCIE) 	<ul style="list-style-type: none"> • Turnover $\geq 1 \text{ M€}$ • Financial Autonomy $\geq 15\%$

Was established a pre qualification system that is mandatory for all ESCOs that want to develop EPCs with the public sector. Currently there are approximately 50 ESCOs qualified in Portugal.

30%
de eficiência
energética

Tender Procedures



$$P = \left[\frac{NPV - NPV_{min}}{NPV_{min}} \right] \times 50\% + \left[\frac{16 - n}{16 - 6} \right] \times 50\%$$

P	Overall evaluation;
NPV	Net present value of the energy savings guaranteed to the public body;
NPVmin	Net present value of the minimum energy savings guaranteed to the public body (tender specification model requirements);
n	contract period.

$$NPV = \sum_{i=1}^t \left[\frac{PG_t \times E_{en\ i_t} \times Tbl\ i_t}{(1 + 4\%)^t} \right]$$

- PG_t Minimum share of the energy savings that remain with the public body [minimum 10%], in the year t ;
- $E_{en\ i_t}$ Contractual energy savings due to the ESCO activity, by energy source (i), in the year t ;
- $Tbl\ i_t$ Energy cost, by energy source (i), as defined in the tender specification model, in the year t ;

Note: Energy cost is annually actualized in accordance with the Consumer Price Index, and not based on real price evolution. Energy acquisition is excluded from the Energy Performance Contract.

$$NPV_{min} = \sum_{i=1}^t \left[\frac{PGmin_t \times Een\ min_t \times Tbl\ i_t}{(1 + 4\%)^t} \right]$$

- $PGmin_t$ Minimum share of the energy savings that remain with the public body [10%];
- $Een\ min_t$ Minimum energy savings to be achieved by the ESCO, by energy source (i);
- $Tbl\ i_t$ Energy cost, by energy source, as defined in the tender specification model;

30%
de eficiência
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EPCs implemented

Traffic lighting system in Lisbon Municipality, replacing approximately 20.000 incandescent lamps by LEDs;

	GALP/VIVAPOWER	MANVIA
Proposed energy reduction	94,36 %	94,10 %
Energy savings	6 502 934,73 €	6 485 256,73 €
Municipality savings	26,40 %	23,00 %
Contract lifetime	2 years	2,5 years
NPV	420 939,97 €	451 923,34 €
NPVmin	304 165,35 €	375 848, 36 €
Overall classification	69%	54%



SFH

- 815 000 buildings
- floor area 77 mil. m²
- 1920 – 1990
- 33 % renovated
- 2,6 % per year



MFD

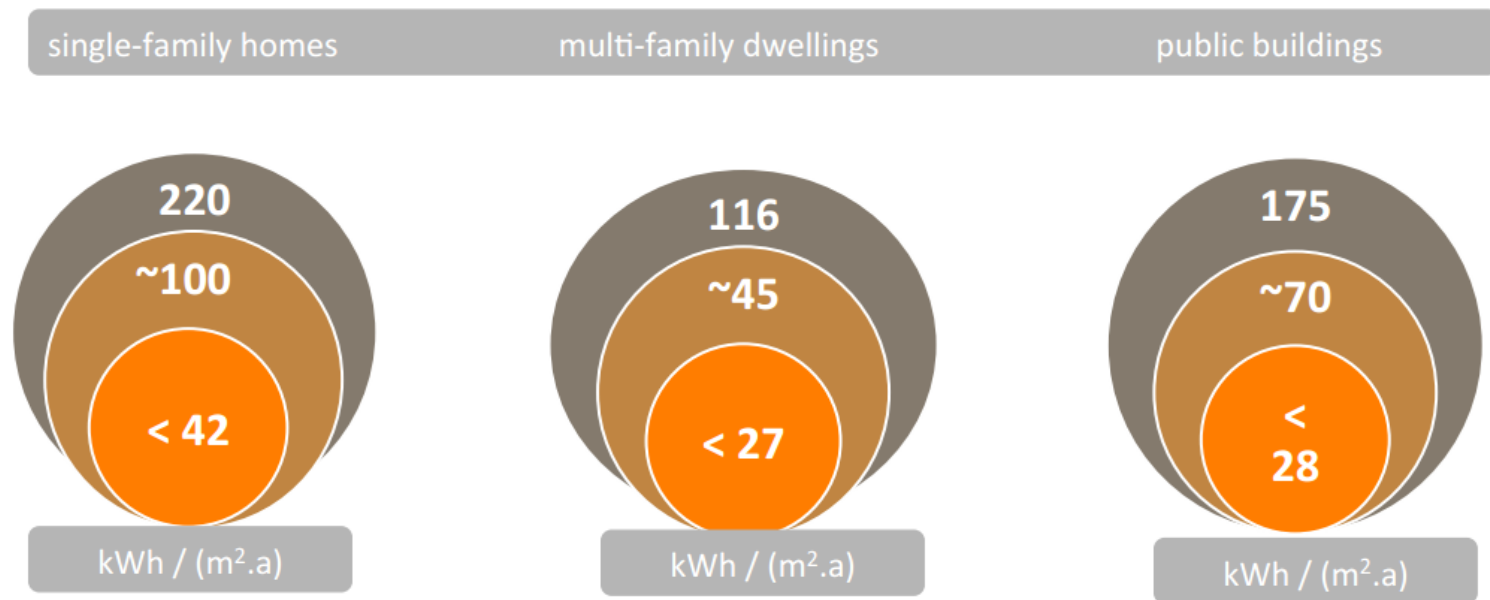
- 880 000 flats
- 65 000 buldings
- floor area 65 mili. m²
- 1960 – 1990
- 50 % renovated
- 3,3 % per year



PB

- 15 500 buildings
- 1960 – 1990
- 18 % renovated
- 1 % per year

energy consumption for heating



programme design

Support intensity

- maximum 30 % of eligible and paid costs
- max. 5 000 € depending on heat transfer coefficient of building structures (U)

Depending upon the thermal capabilities of the various structures that are external walls, external filling openings (windows, doors), roof and internal structures between heating and unheated spaces

Basic condition: meet requirements of thermal performance of building structures by demonstrating the value of HTC of building structures according to Slovak technical standarts

- max. 1 000 € depending on the demands for heating
- *Required maximum energy need for heating in compliance of reulations*
- 500 € per project, energy assessment and certificate (not limited to 30%)

6,500 €



30 mil. €

level of subsidy depending on the energy performance achieved

<p>Payment upon reached values of heat energy demand equal to or less than the normalized value of heat demand for heating depending on the form factor of the family house by Slovak technical standards applicable from January 1, 2016</p>	<p>Payment upon reached values of heat energy demand equal to or less than the normalized value of heat demand for heating depending on the form factor of the family house by Slovak technical standards valid until December 31, 2015</p>	<p>Payment upon reached values of heat energy demand higher than the normalized value of heat demand for heating depending on the form factor of the family house by Slovak technical standards valid until December 31, 2015</p>
<p>€ 1,000</p>	<p>€ 500</p>	<p>€ 0</p>

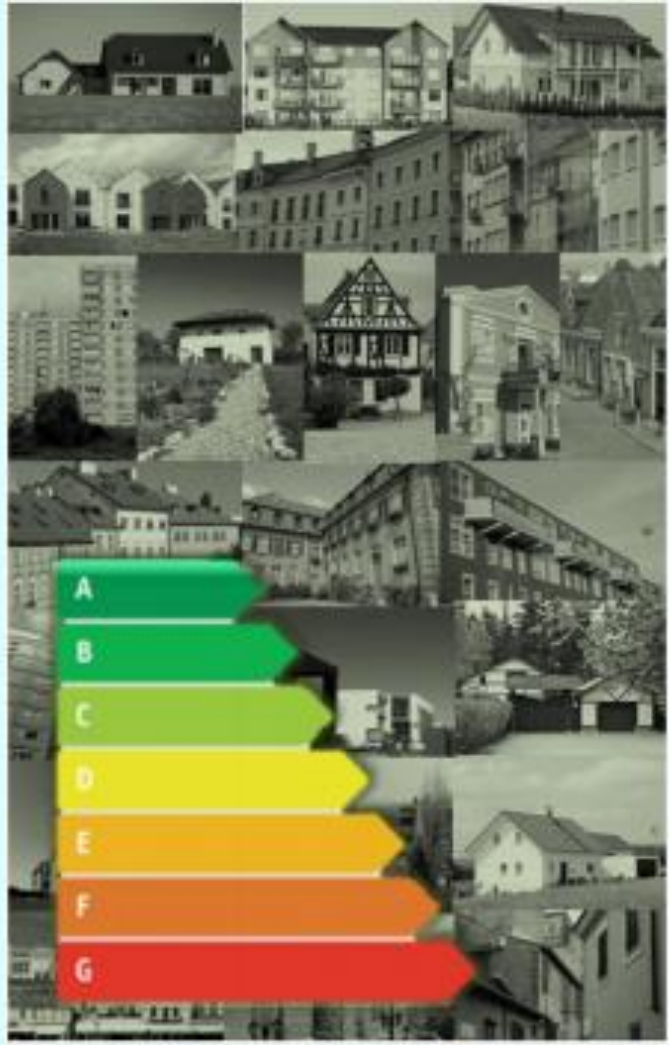
programme design

Eligibility

- Slovak Republic resident and the owner of the house
- SFH older than 10 years
- total floor area of less than
 - $\leq 150 \text{ m}^2$ one – storey SFH
 - $\leq 250 \text{ m}^2$ multi-storey SFH
- insulation and windows

Application process

- e –form & print documents mailed
- List of documents before insulation
- List of documents after insulation
- calls for application



Va mulțumesc pentru atenție !

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