

THE DIPLOMAT
Bucharest



ROMANIAN ENERGY EFFICIENCY SUMMIT 2015

CALL FOR ACTION IN ENERGY EFFICIENCY

12 June 2015, Crowne Plaza Hotel, Bucharest



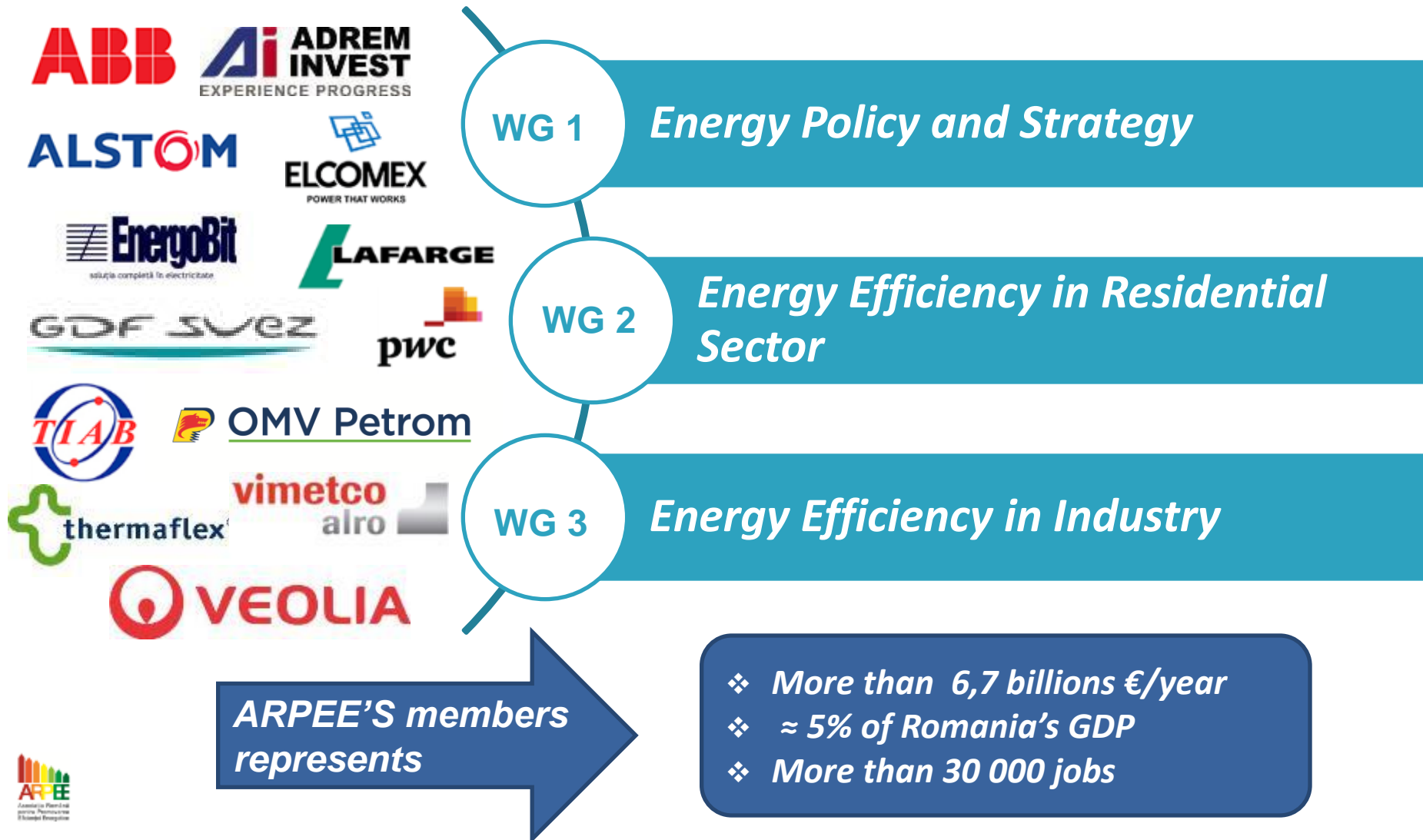
Asociația Română
pentru Promovarea
Eficienței Energetice

Efficiency Everywhere
Energy & Environment

Gerard VERDEBOUT
President ARPEE



About ARPEE : Who are we ?



Energy Consumption comparison



Global Energy consumption by segments



Energy consumption in Romania



Industry
30,7%



Transportation
32%



Buildings 37,8%

Focus on Residential sector



3 million apartments, 97% private properties and 7.8 million residents



83,000 blocks of flats.



About 75% of the buildings are old, being built 40-55 years ago.



Average heat consumption of 250-300 kWh/(m²/year), 2 times higher than the EU average → 100 – 150 kWh/(m²/year)



Average heat consumption is 7 – 8 Gcal/family



Energy bill split is Heating 57%, Hot Sanitary Water 25%, electricity 11% & others 7%



Rehabilitation is a slow process due to lack of sufficient funds, and inefficient financing schemes implemented to date

Case Study : 45 % yearly savings

Block of flats built in 1978
Heating volume 5063 m³

- Central heating with radiators.

Thermal rehabilitation
bloc de 4 floors.

- Total investment:
 - 1257 euro/garsoniera (45,8 euro/m²)
 - 2000 – 2500 euro/apartment of 2/3 rooms,

Yearly Heating Savings:

- From 516,2 MWh/year to 285.5 MWh/year → 188 kWh/(m².year) → 103,9 kWh/(m².year),
- Savings 45,2 %

Breakdown of Thermal Rehabilitation costs

Rehabilitation Action	Investment	Energy savings
1. Exterior walls insulation → 8 cm polystyrene	34,7 %	25,8 %
2. Insulation attic floor with 12 cm polystyrene	5,2 %	11,4 %
3. Installation insulating glass windows	28,7 %	18,0 %
4. Installation of thermostatic valves on radiators and heat cost allocators	6,8 %	7,6 %
5. Hydraulic balancing of the heating distribution network	3,3 %	4,7 %
6. Thermal insulation of distribution heating pipes and hot water in the basement	1,6 %	8,5 %
7. Sanitary fittings with low water consumption and individual metering hot water	19,7%	24,0 %

Conclusion



Need Investment for thermal rehabilitation of buildings , almost EUR 5 billion throughout 15 years (50% by 2020, 25% by 2025, 25% by 2030).



Need a new legislation to meet the 2030 energy efficiency with target based on the revision of the energy efficiency and performance of buildings Directives.

Need to develop a 'Smart Financing for Smart Buildings'-initiative to make existing buildings more energy-efficient, facilitating access to existing funding instruments.