



PRIMĂRIA
SECTORULUI 6



Invest in the future!

**Energy efficiency
in
public schools**



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Energy efficiency in public schools



Summary

Success story

Challenges

Actual state



Success story

Explore ELENA supported projects
all over Europe



12 existing schools – Deep retrofit

1	Heating and cooling	District network
2	DHW	Solar panels
3	Electricity	PV panels
4	Mechanical ventilation	Heat recovery
5	Command and control	BMS



8 new nZEB buildings: 5 after-school
3 kindergarden

1	Heating and cooling	Heat pumps
2	DHW	Solar panels
3	Electricity	PV panels
4	Mechanical ventilation	Heat recovery
5	Command and control	BMS



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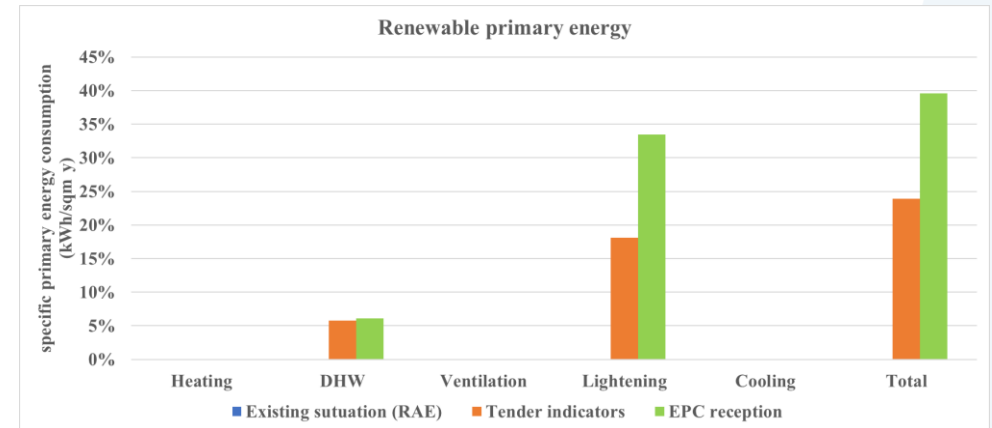
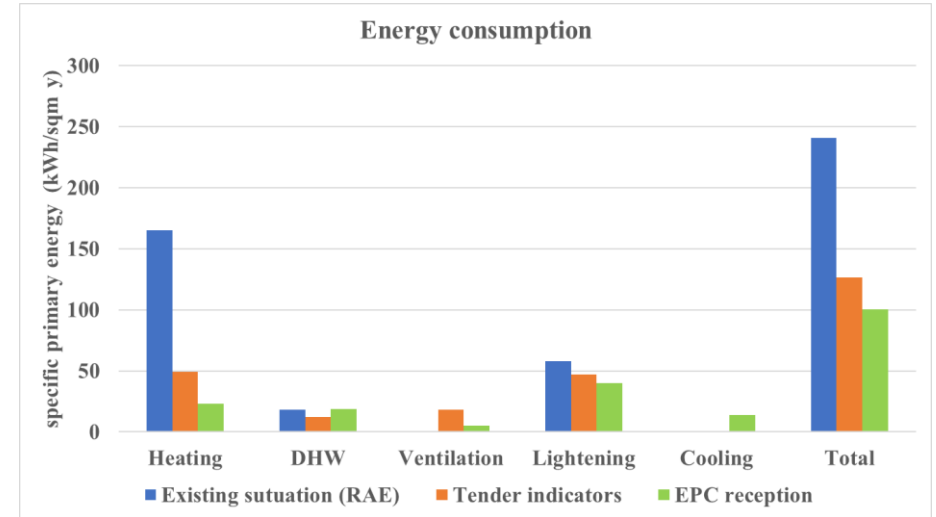
Energy efficiency in public schools

Actual state

12 existing schools – Deep retrofit



Adrian Păunescu



Renewable energy 36%

Energy consumption decrease 58%



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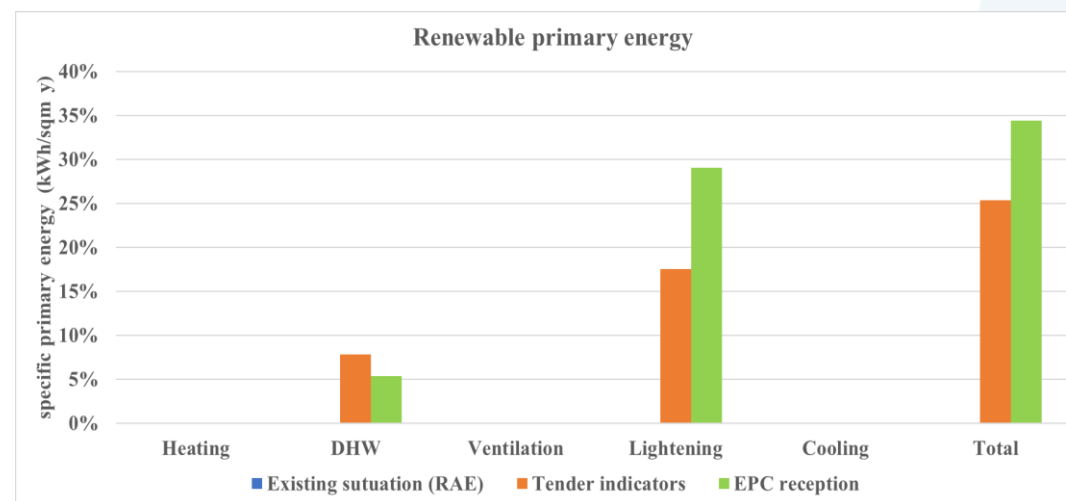
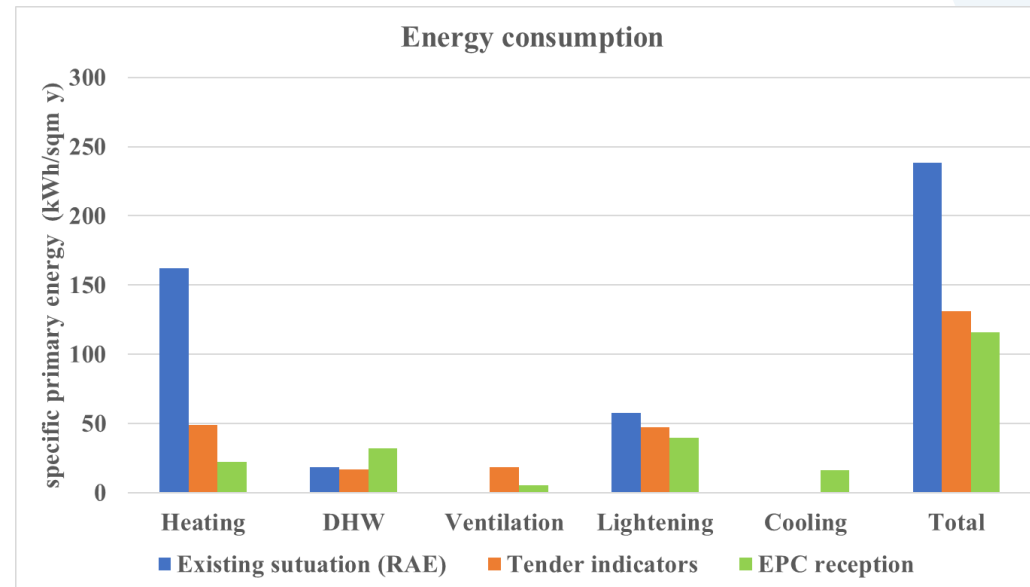
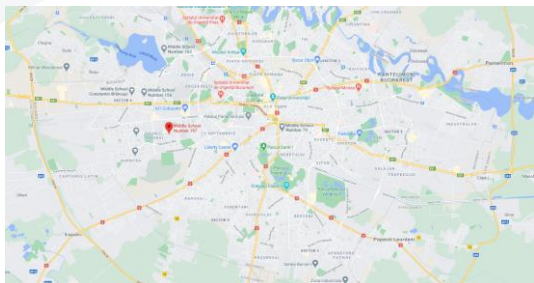
Energy efficiency in public schools

Actual state

12 existing schools – Deep retrofit



197



Renewable energy 34%

Energy consumption decrease 51%





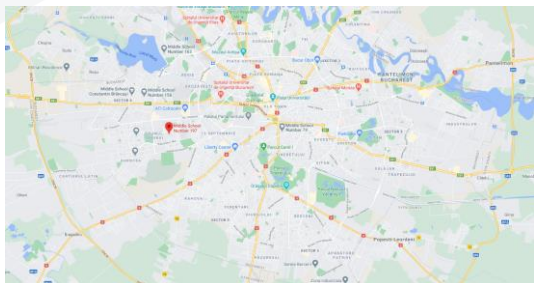
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Energy efficiency in public schools

Actual state 12 existing schools – Deep retrofit



197





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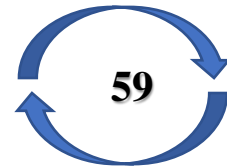
Energy efficiency in public schools

Actual state

12 existing schools – Deep retrofit



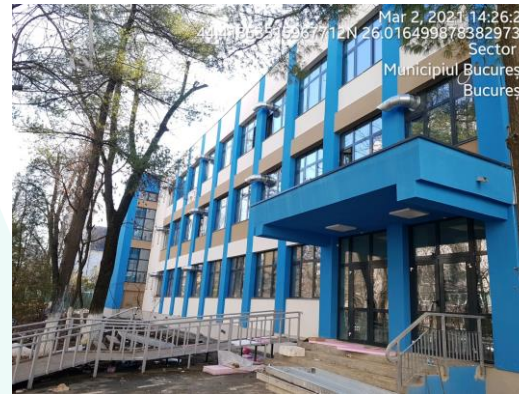
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Sector 6
Municipiul București
București



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Sector 6
Municipiul București
București



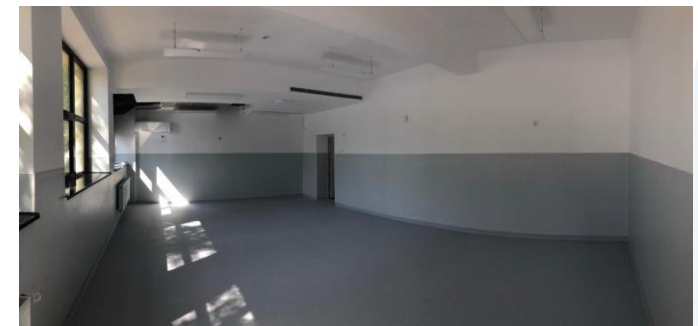
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Municipiul București
București



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Sector 6
Municipiul București
București



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Aleea Cămpul cu Flori
Sector 6
Municipiul București
București





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Actual state

8 new nZEB buildings





PRIMĂRIA
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8 new nZEB buildings



NO



NO





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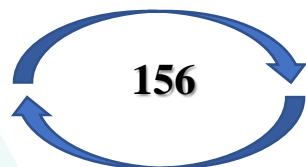
Energy efficiency in public schools

Actual state

8 new nZEB buildings



NO





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Energy efficiency in public schools



Challenges

existing schools – Deep retrofit

New schools – nZEB

execution timeline

thermal bridges

correlation Dali-ISU-Pth

renewable energy percentage

works' quality check

limit of total primary energy

renewable energy percentage

utilities' network relocation

school containers



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CONTACT:

5 Mendeleev Str, 5^d Floor

District 1, Bucharest

(+40) 314 250 666

office@tudconsult.ro