

Energy Efficiency Good Practice





HOW WE STARTED TO BUILD ENERGY SAVING BUILDINGS

- **EXPERIENCE.** UAB „CONSTRA“ has more than 10 years experience in construction.
- **CHALLENGE.** Why not? It was the first idea when one client asked to build an energy saving house.
- **TO BE INTERESTED IN INNOVATIONS.** Annually I am visiting the biggest construction expositions in Germany and other Europe countries in order to learn what is new and how can I make a building more innovative.



A+ and A++ BUILDINGS IN LITHUANIA. STATISTICS.

The number of buildings having high Energy Efficiency is growing rapidly:

- Currently there are **5** buildings having **A++** Energy Efficiency certificate in Lithuania.
3 of them were certified during last 2 months period.
- Currently there are **206** buildings having **A+** Energy Efficiency certificate in Lithuania.
34% of them were certified in year 2018.



STAGES TO BUILD AN ENERGY SAVING BUILDING

- **PROJECTION.** All building components and questions should be analyzed and solved during the first construction stage – projection.
- **KNOWLEDGE.** Personally as constructor you should make some homework before beginning of works: learn and analyze specifications of materials and work in order to achieve high results of building energy efficiency.
- **SUPERVISION.** Construction process should be strictly supervised.



CHALLENGES

- **HERMETIC ASSURANCE.** Windows, doors, roof and other parts of a building must be installed accurate and tight. All these stages of work must be carefully supervised.
- **LACK OF KNOWLEDGE.** Construction workers do not have required knowledge how and why they should make more accurate and higher quality job.
- **PERSUADE A CLIENT.** Clients do not know enough information and do not know benefits of energy saving buildings.



BENEFITS OF LIVING IN THE ENERGY SAVING HOUSE

- **COMFORT.** Buildings having high energy efficiency level are comfortable, quiete and good for your health.
- **AFFORDABLE.** Operating, maintenance and energy costs are lower for buildings having high energy efficiency level than for traditional buildings.
- **MARKET VALUE.** Buildings having better energy efficiency level have much higher value due to modern and innovative building solutions.
- **PEACE OF MIND.** You feel better if you live in an energy saving house which reduce impact on climate changes and use renewable energy for the needs.

Cost difference

STATEMENT	Energy efficiency level							
	B		A		A+		A++	
Foundation	—	100%	—	100%	—	100%	—	100%
Walls	—	100%	—	100%	—	100%	—	100%
Roof	—	100%	—	100%	—	100%	—	100%
Insulation (walls, floor, roof)	—	100%	↑	125%	↑	150%	↑	175%
Plumbing	—	100%	—	100%	—	100%	—	100%
Ventilation system	—	100%	↑	103%	↑	104%	↑	105%
Windows, doors	—	100%	↑	110%	↑	115%	↑	120%
Solar power							+4% to cost	
TOTAL price difference compared to B				12%		17%		23%



MYTH 1. THE COST OF A BUILDING HAVING BETTER ENERGY EFFICIENCY LEVEL IS TOO HIGH AND THE RESULT DOES NOT PAY OFF.

Total cost of a building having better than B energy efficiency is **12% - 23%** higher depending on building needs.

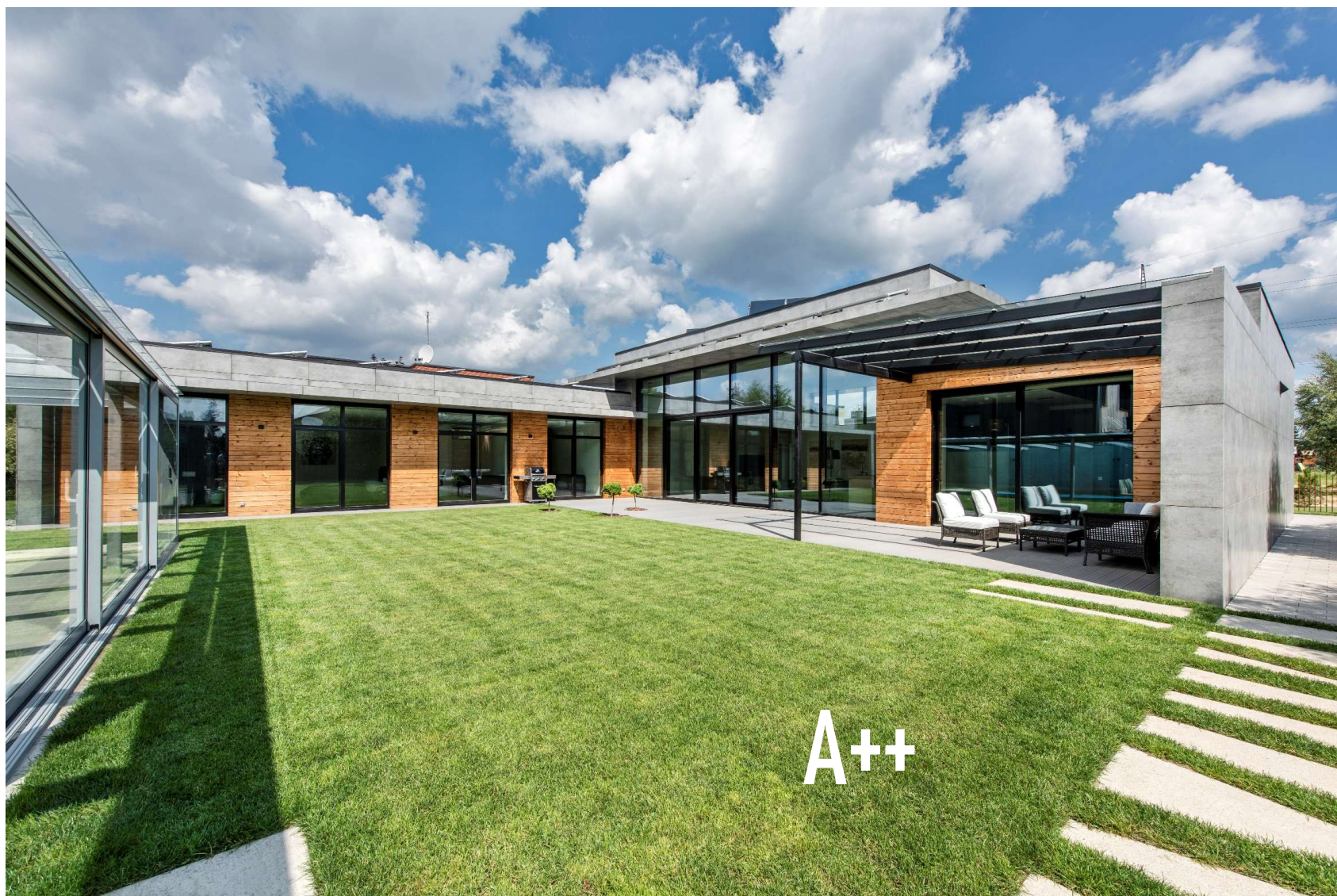


MYTH 2. A BUILDING HAVING BETTER ENERGY EFFICIENCY LEVEL IS UNATTRACTIVE, IT CANNOT BE MODERN (HIGH CEILING, BIG WINDOWS AND ETC.).

Examples of **A+** and **A++** houses



A+

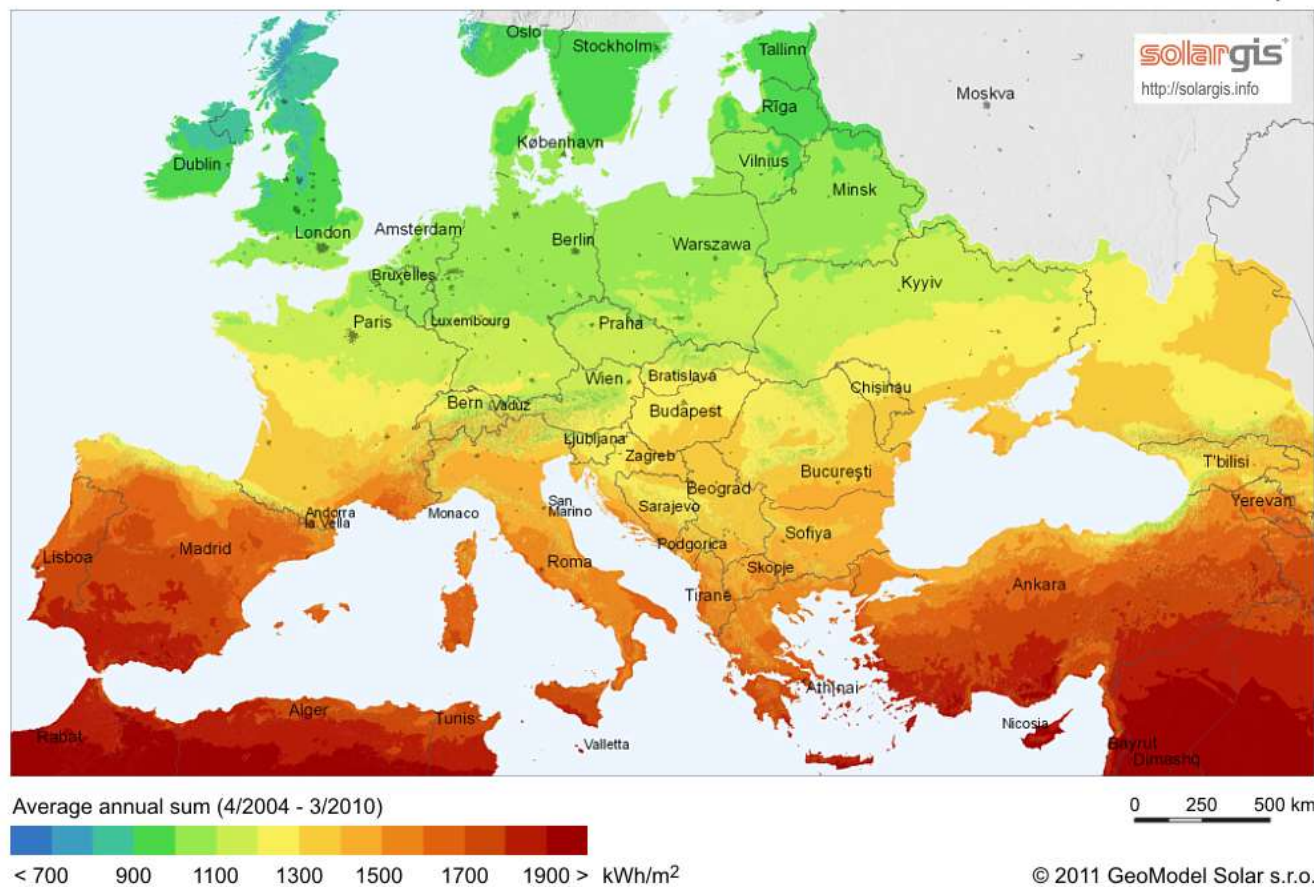


A++

MYTH 3. SOLAR ENERGY IS NOT EFFECTIVE IN LITHUANIA DUE TO NOT MANY SUNNY DAY IN OUR REGION.

Global horizontal irradiation

Europe



QUESTIONS?



THANK YOU

Prepared by Slavomir Volkov

