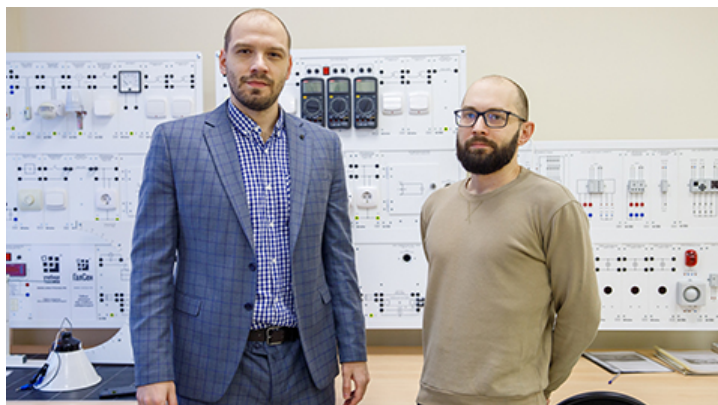


SibFU's engineers develop energy-efficient blinds

The Department of Building Design and Real Estate Expertise of the School of Engineering and Construction, SibFU, designed and manufactured blinds to reduce heat loss through windows.



It is assumed that at night or during particularly cold periods, windows can be closed with shutters made of multilayer PVC panels, reducing heat loss by about 40%. You can use the development in the summer — reducing the heating of the room, which means saving energy for air conditioning.

The design looks like blinds with statically fixed slats rotating around their axis. The bearing part is a frame made of aluminum profiles. The thermal insulation of the frame is made of extruded polystyrene foam. The slats are made of three-layer PVC panels. Such blinds give an effect even while remaining open — the seal on the frame does not allow air to penetrate through the gaps.

Now the development is being modernized: solar panels are mounted on the blinds. The energy obtained in this way even from one window is enough to illuminate the room where the blinds are installed. Perhaps if such blinds were installed throughout the SibFU campus, all outdoor lighting could be powered from them. Thus, it will be possible to reduce energy consumption, taking a step towards renewable energy.

“For civil engineers, the opportunity to use the campus as a research and technology ground is becoming an essential condition for the emergence of cutting-edge research and development. The design of energy-efficient blinds showed the effectiveness of its use even at the design and modeling stage. Field tests made it possible to confirm the reliability of the calculated data. The results of the work in the future will allow us to optimize the costs associated with maintaining the campus and increase the comfort of staying in it”, comments **Aleksey Zhzhonykh**, Head of the Building Ecology and Energy Efficiency Laboratory, School of Engineering and Construction, SibFU. *“Our team, working on the strategic project Center for Low-Carbon Development and Climate policy, which was included in the “Priority 2030”, is developing a pool of design solutions, including “green” campus of the university. In the nearest future, the campus will begin to be filled with new technological solutions and in the future will become a model district of the city, an advanced platform for the introduction of technologies and services that meet the goals of sustainable development, a center for experiments and innovations.”*

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