

Invitation for competition submissions

Multi-Comfort-House School – A New Concept for Learning

International, two-stage, open competition

**Participants:
Students**

**Organiser:
Saint-Gobain Isover**

1. General information

1.1. Subject

The subject of the competition is the creative approach to the concept of energy-efficient construction based on the passive house standard.

The aim is to design a school that combines classical school elements with modern learning facilities. The school is intended for children from the age of 6 to 15, with a capacity between 200 and 230 students. In addition, the school should set a positive example in terms of ecology and sustainability.

Within the scope of the project, participants are free to design and propose all facilities of modern learning such as experimental laboratories, exhibition and performance rooms, sports hall, library, internet and communications room, etc. These facilities can be designed separately or combined depending on the individual concept. Safety aspects, e.g. fire protection and escape routes, and practical issues such as a canteen and cloakroom should also be taken into consideration.

Learning with all your senses requires excellent room acoustics to ensure perfect speech intelligibility. Reverberation time should therefore be around 0.5 seconds.

The outside space of the school should also be designed in an environmentally friendly way, including for example pedagogical elements such as a bio-garden, biotope, playground, etc.

In addition, the social and ecological benefits offered by the school can be further used as an evening school for adults and a cultural meeting point for the neighbourhood.

1.2. Participation is open to

Students of architecture and construction engineering from universities in Austria, Hungary, Slovenia, Slovakia, Croatia, Serbia, Macedonia, Montenegro, Bosnia and Herzegovina, Bulgaria, Romania, Lithuania, Latvia, Estonia and the Ukraine, Kazakhstan, UK, Czech Republic, Russia, South Africa, etc. (please add your country if you are organizing the participation in this contest).

Participation is allowed on an individual basis or in teams of up to 3 people. Only one project may be submitted per person and team.

1.3. Awarding organisation

Saint-Gobain Isover.

[Insert name and address of respective national Isover contact person]

*Robert Schild
Saint-Gobain Insulation
Thermal, Acoustic and Fire Marketing Manager
18 avenue d'Alsace
La Défense 3 - 92400 COURBEVOIE*

*Phone +33 (0)1 47 62 40 24
Fax +33 (0)1 47 62 50 48
Mobile +33 (0) 608 21 54 28
E-mail robert.schild@saint-gobain.com*

1.4. Form and organisation of the competition

The competition will have a two-stage, open format.

First stage

The first stage is a national contest in each of the participating countries where the five best entries will be chosen. The first-, second- and third-placed submissions will receive an award at a presentation ceremony.

Second stage

In the second stage, the three best entries from each country will participate in an international final congress and exhibition of the students' projects. This will take place at a gala in Dubrovnik to which the national winners will be invited, together with their professor(s).

During this event, the participating projects will be displayed for exhibition and discussion.

In the course of the international congress, the participants will have the opportunity to give a three-minute presentation covering the basic ideas behind their projects. These presentations will be followed by an open discussion and comments by the professors in order to ensure a rich exchange of experience.

The aim of the second stage is to use the time for excursus and fruitful exchange of experience between the countries and to discuss the possible contribution of architecture to environmental protection. For this reason, there will be no international jury and no awarding of an international winner.

1.5. Prize money

First stage – national competition:

1 st prize	€
2 nd prize	€
3 rd prize	€

1.6. Time schedule

National announcement of the competition at the respective universities:

[Start September 2007](#)

Distribution of invitation for competition submissions as part of an information event:

[Start October 2007](#)

[Contact person: "Name, contact details"](#)

Closing date for submissions to the national competition:

[March 2008 at local universities \(according to local needs\)](#)

National jury meeting and award ceremony:

[Completed by March 2008](#)

International Congress:

[01-04 June 2008 in Dubrovnik](#)

1.7. National jury

The selection of the national winners will be carried out by a national jury consisting of representatives of the architectural faculties and employees of Saint-Gobain Isover.

1.8. Transportation and travel expenses

The risks and costs incurred for the submission of entries to the national awarding organisations shall be borne by the participants.

The project documentation shall be forwarded to the final international gala by the respective national Isover Company. Furthermore, Isover shall bear the entire travel expenses as well as the costs of board and lodgings for the participants at the international gala in Dubrovnik.

1.9. Legal aspects

The competition participants shall retain unlimited copyright on their projects. The submitted documentation shall become property of the organiser (Saint-Gobain Isover). In addition, the organiser shall obtain the full rights of use, and all participants implicitly agree to the publication of their projects.

The decision of the jury shall be final. All participants hereby accept the incontestable and definite nature of the jury's decisions.

By participating in the competition, the students acknowledge and accept the terms and conditions laid down in this invitation for submissions.

2. Details of the task

The school should be designed using the passive house construction method. The building(s) should accommodate children from the age of 6 to 15, with a capacity of 200 to 230 students.

The school should fit its surrounding natural and cultural environment while the choice of location is completely unrestricted. Emphasis should be placed on feasibility, which in turn requires structurally effective and cost-efficient solutions.

Within the scope of the project, participants are free to design and propose all facilities of modern learning such as experimental laboratories, exhibition and performance rooms, sports hall, library, internet and communications room, etc. These facilities can be designed separately or combined depending on the individual concept. Safety aspects, e.g. fire protection and escape routes, and practical issues such as canteen, cloakroom and access for handicapped people should also be taken into consideration.

It is a well-known fact that good sound insulation and room acoustics are conducive to the learning process and should therefore be duly considered at the planning stage.

The outside space of the school can also be designed in an environmentally friendly way, including for example some pedagogical elements such as a bio-garden, biotope, playground, etc.

In addition, the social and ecological benefits offered by the school can be further used as an evening school for adults and a cultural meeting point for the neighbourhood.

2.1. Premises

The premises can be freely chosen and must be represented on a plan of the site. For the purpose of better illustration, the premises or the surrounding natural and cultural environment can be photographed (the construction site does not need to be real in the legal sense).

2.2. Type of construction, technical parameters

In order to achieve the passive house standard, high-performance thermal insulation should be installed on the one hand whilst the principles of energy-optimised building should also be taken into consideration.

Learning with all your senses requires excellent sound insulation and room acoustics to ensure perfect speech intelligibility. Reverberation time should therefore be around 0.5 seconds.

In the course of the competition, lectures on the subject of "Passive house planning and construction" will be held at the various faculties.

2.2.1. Construction

Basically, the construction method (static system, wood, mineral or steel construction) can be chosen freely - on condition that Isover products shall be employed in the process. Isover shall provide free planning assistance in the form of a CD containing structural details and sample constructions as well as a brochure on passive houses, both of which will be supplied together with the invitation for submissions.

Additionally, the following Isover contact persons will be available to answer any questions: ["insert country-specific name / contact details"](#)

2.2.2. Technical parameters for heat insulation

The exterior structural components should have the following U-values:

- All opaque external structural components $U \leq 0.15 \text{ W}/(\text{m}^2\text{K})$
- Windows and doors $U_{\text{Wtotal}} \leq 0.8 \text{ W}/(\text{m}^2\text{K})$

In the case of very small volumes or a poor surface-to-volume ratio, the opaque structural components should have an U-value of up to $0.1 \text{ W}/(\text{m}^2\text{K})$.

2.2.3. Protection against overheating in summer

The planning should include sufficient external protection from the sun for the east-, south- and west-facing windows.

2.2.4. Technical parameters for fire protection

Fire protection requirements for structural components:
The fire protection should meet the respective national standards.

2.2.5. Technical parameters for soundproofing

Sufficient soundproofing should also be taken into consideration in order to assure the high quality of the learning environment.

Exterior walls and roof – protection against airborne noise: $R_w \geq 55$ dB
Protection against airborne noise between classrooms and corridors etc: $R_w \geq 63$ dB
Footfall soundproofing for ceilings: $L_{nt,w} \leq 40$ dB

In practice, sufficient soundproofing for windows and doors as well as for sanitary installations and ventilation systems should be taken into account.

The most important factor for speech intelligibility is excellent room acoustics. The reverberation time should therefore be around 0.5 seconds.

2.3. Competition requirements

2.3.1. The following minimum requirements should be observed:

- Plan of site 1:200 or 1:500, according to requirements
- Floor plan and cross-section 1:100
- Views 1:100
- Isometric representation or perspective of the building(s), or model photos
- Horizontal facade cross-section 1:10
- Vertical facade cross-section 1:10
- View of the south facade 1:10
- Construction details 1:5
- List of extensions with U-values
- Design report – description of the design concept
- Description of construction

2.3.2. In addition, the following may also be submitted:

- Description of the process of construction or assembly, with particular emphasis on the airtightness of the building
- Representation of the possibilities for coupling or terracing of buildings – designing a compact development structure
- Additional ecological installations, e.g. active use of solar energy, etc.
- Use of rainwater for watering gardens and toilet flushing

2.4. Formalities for submissions

Projects should be submitted in any poster format for national stage of competition (e.g. 79 x 120 cm). In the international stage of the competition the projects will be presented on roll-ups. To fit perfectly to roll-up presentation maximum size can be 79 x 205 cm. Additionally the projects are needed in digital form for printing a brochure.

HOW TO PREPARE FILES FOR DIGITAL PRINTING:

Prepare the print files

DIMENSIONS: 79 X 205 cm

RESOLUTION: 150 dpi

FORMAT: tiff, eps or pdf

COLOUR MODE: CMYK

DO NOT COMPRESS FILES .

Each poster should be clear and legible and indicate the project title as well as the drafter's name (or all names in the case of a team submission).

Furthermore, it is necessary to hand in the Personal Information Sheet which is attached to this invitation for submissions.

2.5. Assessment criteria

2.5.1. General assessment criteria

70 % architectural design:

Structural arrangement, development of the property and creation of a perfect learning environment, usefulness of the floor plans, attention paid to the surrounding natural and cultural environment.

30 % technical understanding and concept of the "multi-comfort house":

Basic suitability for the passive house concept, constructional knowledge and compliance with the technical parameters, feasible and cost-effective realisation.

Personal Information Sheet

"Multi-comfort house" school – a new concept for learning

Participant

Name:
Address:

Signature:

Telephone:
Matriculation number:

Bank account number:
Bank identification number:
Bank:

Additional participants (for project teams)

Name:
Address:

Signature:

Telephone:
Matriculation number:

Name:
Address:

Signature:

Telephone:
Matriculation number:

With their signature the participants confirm their authorship of the submitted project.

Place, date: