PlusEnergy school in Luxemburg wins multiple awards

The specifications submitted by the Luxembourg government officials for this project were demanding. The new building for the Secondary School for Health Professions (Lycée technique pour professions des santé) was to be designed to generate a net-positive energy balance. Given that the energy balance also takes account of embodied energy, the building is to produce more energy over the course of its lifecycle than the energy consumed for its construction, opera-tion and removal.

In order to achieve the very high objectives set here, pressure was applied equally to both sides of the balance sheet. On the consumption side, the optimum conditions included good thermal insulation, an innovative ventilation concept and the optimum use of passive energy gains, together with the timber construction and minimal earth-moving operations. On the generation side, full and logical use is made of solar energy. Thermal collectors integrated into the façade provide seasonal solar storage. The roof is made of solar panels and generates the necessary electricity surplus from a renewable source.

EBP was responsible for advising the planning team with regard to energy efficiency, the choice of construction type in conjunction with grey energy, the calculation of grey energy for the choice of construction, the balance sheet for a Plus-Energy building and ECO certification (various procedures to take account of different requirements and planning considerations), and obtaining MINERGIE-P(A)-ECO certification, including “translation” of the Luxembourg supporting documentation to correspond to the equivalent Swiss papers, and determining the discrepancies between the Luxembourg and Swiss life-cycle

Client

Administration des Bâtiments publics, Luxemburg

Facts

Period	2009 - 2019
Project Country	Luxembourg

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assessments together with the EMPA.

The project was certified in accordance with the MINERGIE-P-ECO standard and received multiple design awards in 2019. These awards included the Lauréat Grand Prix Construction Durable, as well as the Green Solutions Award, which was conferred by Construction21.

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