

Strong backing

The 2000-Watt Site certificate was developed as part of the “EnergieSchweiz” programme, whereby the Swiss Federal Office of Energy (SFOE) promotes the implementation of the national energy policy with regards to energy efficiency and renewable energies. The certificate is based on the “Energistadt” certification scheme and the SIA-Energy Path for Efficiency for buildings developed by the Swiss Association of Engineers and Architects (SIA). The “Energistadt” association is responsible for the certification.

www.2000watt.ch

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The 2000-Watt Site

Our future living environment



Quality of life in an urban context

A 2000-Watt Site is more than the sum of the houses. The "2000-Watt Site" certificate allows for the first time to evaluate large site developments in terms of building quality, density, mixed usage and mobility. The integrative view on the entire site rather than individual buildings fills a gap. It opens up the perspective by depicting the whole living environment. The certificate is based on the SIA (Swiss Society of Engineers and Architects) "Energy Path of Efficiency" and the certification scheme "Energienstadt" for municipalities, which labels settlement areas with a sustainable use of resources and efforts towards climate protection. The assessment includes embodied energy for the construction, operational energy for the operation as well as everyday mobility caused by the use and location of the building. The continuous improvement process is assessed analogous to the "Energienstadt" certification process. The outcome of this is an added value for all stakeholders – users, investors and municipalities – with considerable lower resource consumption.



Sihlbogen

A living neighbourhood in the west of Bern

The settlement "Stöckacker Süd in Bümpliz" – a neighbourhood to the west of Bern – offers good public transport connections. By 2017, a role model for a settlement with 146 urban apartments will be built. All buildings will comply with the Minergie-P-Eco standard. It has been labelled a "2000-Watt Site" by the Swiss Federal Office of Energy SFOE and the association "Energienstadt" as one of more than twenty development sites in Switzerland (state January 2017).

Urban space for all

The total energy consumption of the site "Stöckacker Süd" is optimized to the targets of the 2000-Watt society. The aim for low resource consumption is achieved by energetically optimized buildings in a well-functioning urban development context. This is attained by using a hybrid construction made from concrete and timber as well as using renewable energies. And all of this without giving up on quality and comfort. The mobility concept is focused on non-motorized traffic and public transport. Likewise, the future inhabitants of "Stöckacker Süd" will contribute: they live on a maximum of 60m² living area per person and they do not use a car on a daily basis. A train station in immediate proximity and 510 bicycle parking spaces guarantee urban mobility. In addition, there are 27 parking spaces available for mobility-restricted people and for car-sharing vehicles.

A broader focus

Up to now, only individual buildings qualified for a certification. With the "2000-Watt Site" certificate, large development areas can be assessed in terms of density, mixed usage and building-induced mobility. This broadens the perspective:

- **A whole site rather than an individual building:** The quality of density and mixed usage is taken into account. With smart energy networks, a variety of energy sources and storage systems are included.

- **Overall energy balance instead of reduction to operational energy:** Embodied energy of the construction of buildings and energy requirements for everyday mobility is part of the assessment.
- **Operation phase instead just the construction phase:** The certificate is focused not only on the construction phase but also on the operation phase. This offers a huge potential, which can only be used in collaboration with all users.

Characteristics of a site

- The municipality where the site is located must in principle be a certified "Energienstadt".
- There is an authorized site association as contact point for the association "Energienstadt".
- The site has a minimum size of approximately 10,000 m² (1 hectare) or a floor area of similar size.

The 2000-Watt society

The 2000-Watt society is a vision for a liveable future. Today, the primary energy consumption per capita worldwide is in average 2500 watts – with enormous country-specific differences. At present, each Swiss inhabitant uses about 5500 watts. Both the 2000-Watt site and the SIA-Path of Energy are focusing on the interim goals of the 2000-Watt society for the year 2050.

Urban development, buildings, usage, mobility

Development

Within the urban planning framework the site association and investors set the direction with their planning teams – mostly in cooperation with the municipality and partly under their responsibility. Not only buildings but also the necessary infrastructure such as streets and paths, shops and playgrounds, kindergartens and public transport are part of the plans.



Implementation

The individual buildings are planned step by step. Builders are building based on the planners' specifications. Embodied energy of the building materials is a key element in the planning process. Its optimization, along with the predicted operational energy and the energy from mobility, is crucial for a certification.



Operation

Planning information and projects are the basis for the initial certification of a site, whereas the implementation plan is basis for the final certification in the implementation phase. During the operation phase periodic recertifications are undertaken in order to keep up the 2000-Watt Site certification. Monitoring of the energy consumption of the buildings and the everyday mobility provides a reliable basis for optimizing buildings and infrastructure facilities.



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From planning to use – the 2000-Watt Site works.

The certificate 2000-Watt Site creates added value for all stakeholders – for investors, planners, users, law enforcement and authorities:

- **Users** enjoy a high standard of housing and living. They can live with the assurance that they are contributing towards conserving resources and protecting the climate.
- **Investors and owners** are interested in value-preserving sites offering a high quality of living and working. The quality characteristics are useful for marketing and image-building. Based on the high acceptance the cooperation with authorities is much easier.

- **For local municipalities** the certificate is a guarantee for a successful commercial implementation of energy and climate policy goals. It supports municipalities to bring their concerns to bear at an early stage.

2000-Watt Sites are a significant tool for the implementation of the energy strategy 2050.

The core idea of the 2000-Watt site is an ongoing evaluation process of a site's sustainability in regards to energy in development, planning, implementing and operation. Certificates are issued for a limited time period and must be renewed periodically. They are awarded in two stages: As "site under development" until at least half of the total living space is in use, and after that as "site in operation".



Greencity Zürich