
GEMINI next Generation AG (Inc.)
Make home ownership affordable,
Enable functional energy transition.

The Single-family house is dead, long live the new SFH!

In 1960, 2,000 liters of heating oil, 2,000 liters of gasoline for the mobility of the residents and 5,000 kWh of electricity were typical for the annual requirements of a new single-family home.

50 years later, this has become 500 liters of heating oil, 1,000 liters of diesel and 4,000 kWh of electricity. The low-energy house, the lowest-energy house, but all these new designations were aimed only at reducing the energy demand for room heating.

Some even made the absurd claim: “Because we are so economical, we heat directly with electricity.”

In housing, there are energy requirements for:

* Production of the building
* space heating and cooling
* mobility
* Household electricity
* hot water
* production of all the things we consume.

To focus only and exclusively on less energy demand for room heating is an absurd ignoring of 5 other problem areas.

Ignorance made the Single-family house unpopular in politics

Homeownership in a detached Single-family house results in the highest level of housing satisfaction. But the ignorance of the manufacturers with the energy problem let the policy increasingly no more the satisfaction of the inhabitants, but only the space need and the energy need see.

We are the countermovement

The own single-family house, a dream of many, but many have given up this dream because of today's cost situation, because even a pair of high earners can only think about the loan repayment for decades.

We have been researching since 2018 to reduce production costs, reduce energy demand and produce the most electricity possible, which is fed into the grid according to demand.

The old single-family house was an energy waster; the new single-family house should become the central component of a functional energy transition: Using land twice, for living, as a solar power plant, but also as a storage power plant with sodium batteries to reduce the cost of grid expansion by feeding energy into the grid demand based.

In 2025, we plan to show the first five houses in Unken.

Establish worldwide a new building standard

Who would have thought in 2003, that the new registration of ICE cars will be abolished 2025 in Norway and 2035 in the EU? 2003 was the year, Tesla Inc. was created.

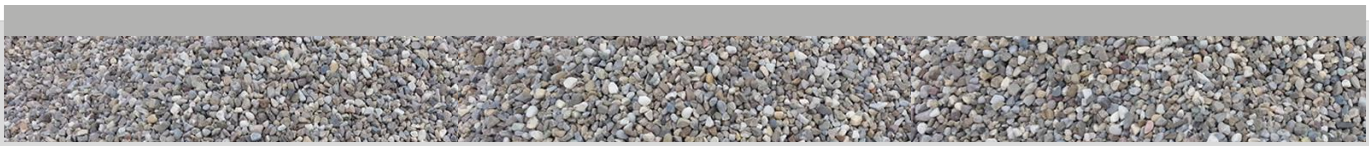
We define the new building standard, CPSH — Climate Protection Superiority House.

The replication factor is the central measurement of this standard: how many houses of the same type could be produced with the excess electricity of one house in 30 years?

This building standard is far beyond the imagination of today's architects and builders.

Saving starts with the foundation

The absurd material battle for the foundation, where some suppliers want €39,000 for 82 m^2 of foundation. Why? Are there any convincing reasons? No, only high costs and 6 t of CO2 emissions during concrete production alone.



64 m^3 excavated earth removed

95 t of crushed stone

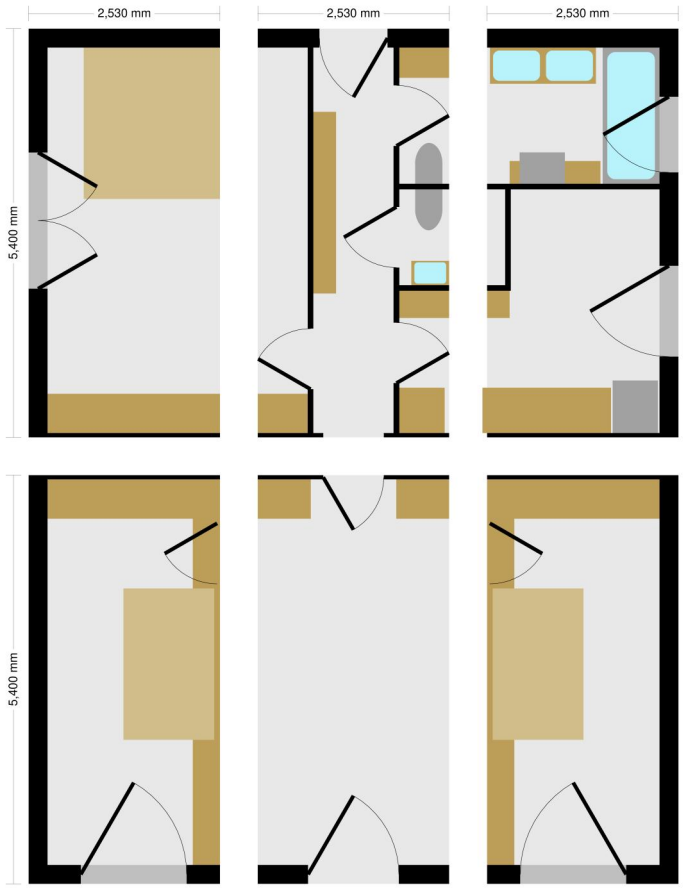
32 t concrete

Access road must be suitable for heavy trucks.

The 12 foundation screws of 20 kg each are much less steel than reinforcement needed for a concrete foundation.

Later we will also offer option “Venezia”: In the event of a flood, the house can float, the foundation bolts as an anchor point.

An electric excavator screwing in the foundation screws.



6 House segments

Do as much work as possible on the shop floor, as little work as possible on the construction site.

Another way to make homeownership affordable.

Building site? No, we don't say construction site, we say placement site, because so little work is left at the placement site.

XL with 3 segments more

Too small? Then just 3 segments more, which then form the XL version.

We recommend the standard version for families up to 2 children and the XL version for families up to 4 children.

If the property is large enough, the standard version can be extended to the 4.6 m longer XL version with 2 additional rooms.

From DIY self-pickup to turnkey ready to live in

The ultimate experiential vacation: make your own house segments in the factory workshop, then pull them to the property on a special trailer. To be booked as “DIY self-pickup.”

It is also possible turnkey to live or any mixture of these two options. Assemble the complete interior in the configurator, or buy the house empty without furniture.

A house segment is driven to the property on a special trailer. B+E driving license is enough.

The trailer is positioned, then the house segment can be connected with the foundation screws.

We have shrunk the cellar

The basement is a very expensive storage place, for all the things we are ready to throw away after the next flood.

Here, too, we have found a better solution with very low cost: We shrunk the basement to 58 cm high: 24 drawers accessible from the outside. All within the thermal envelope of the house. About 800 l volume per drawer. Extremely large space and the best climate for everything you want to store.

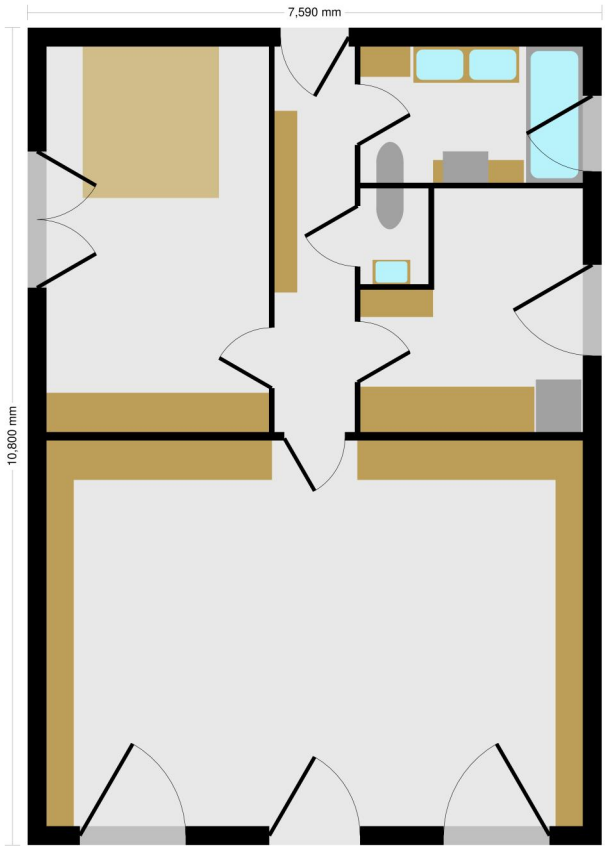
4 drawers are pulled out. There are 12 on each side of the house, a total of 24, 34 in the XL version.

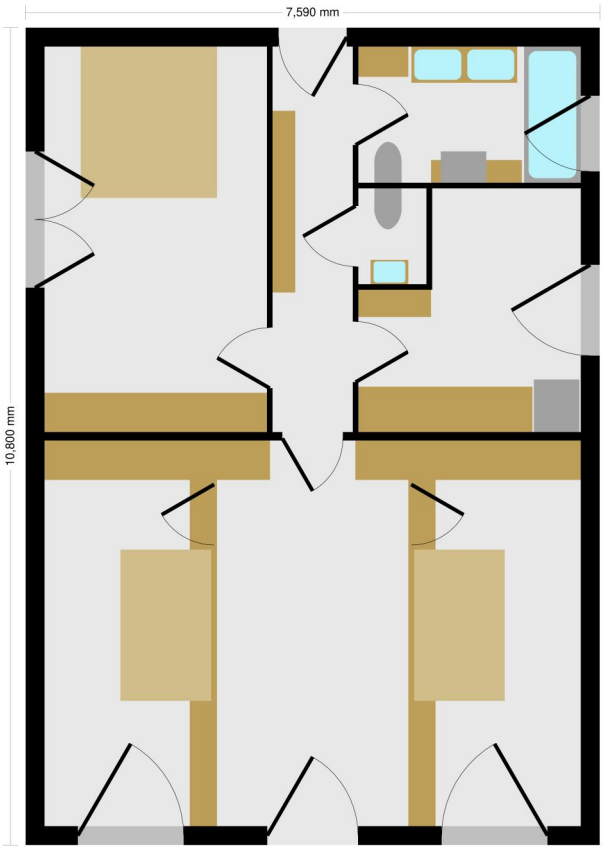
2 to 4 rooms, 4 to 6 for XL, changed in minutes.

Does the living room have to be 35 m^2 all the time, or is it enough if it is 35 m^2 for a family celebration or party? Our solution is sliding wall/furniture elements mounted on rails on the ceiling.

In this way, 2 more children's rooms, offices, guest rooms can be created to the left and right of the living room. That is why we recommend already the standard version with 70 m^2 of living space for families with up to 2 children.

The wall/furniture element can be ordered with an integrated bed 90, 100, 120, 140 or 160 cm wide.





Always the best air quality with ventilation system

Ventilating through the windows means in summer unwanted intruders such as gnats, wasps and hornets, or even just pollen to which you are allergic. Then in winter high heat loss.

Our ventilation system with heat and moisture recovery from exhaust air is extremely quiet and economical because the air only has to move slowly through the extremely large 20 cm pipes.

Flowering meadow with high biodiversity no problem because the biodiversity stays outside.

CO2, HCHO and TVOC sensors ramp up the system to 500 m^3/h if there is thick air in the house.

More range and less power consumption in winter

33.6 kW peak (44.8 kW peak for the XL version) is still not enough solar power. Add another 10 kW peak with a carport or garage.

For electric cars, a properly insulated garage with underfloor heating means a reduction in power consumption. The interior and the battery must have a favorable temperature for people and batteries when driving. Lithium batteries must not be charged below 0°.

The highly optimized heating system of the house can achieve this with significantly less power consumption than an electric car parked outdoors. Typically the garage will be heated to 10° to 15°, more is possible of course.

In addition to parking cars, the garage can still serve as a gym, hobby cellar or workshop. In the event of a disaster, the garage becomes a high-quality shelter.

Amazon, Apple, Dell, Google, Hewlett Packard, Microsoft all started in an uninsulated garage. A heated, very well insulated garage is already a considerable advantage.

Synergy saves costs, material and space

A photovoltaic system needs a foundation, a house also needs a foundation. A house needs a roof, photovoltaic is the cheapest roof. Humans feel most comfortable at certain temperatures. Batteries also have an ideal temperature for least degradation and longest life.

Fortunately, the ideal temperatures for humans and batteries are very similar. Power electronics for inverters last longest at low temperatures. So what could be more logical than not also using the elaborate cooling and heating system of the house for water-cooled inverters?

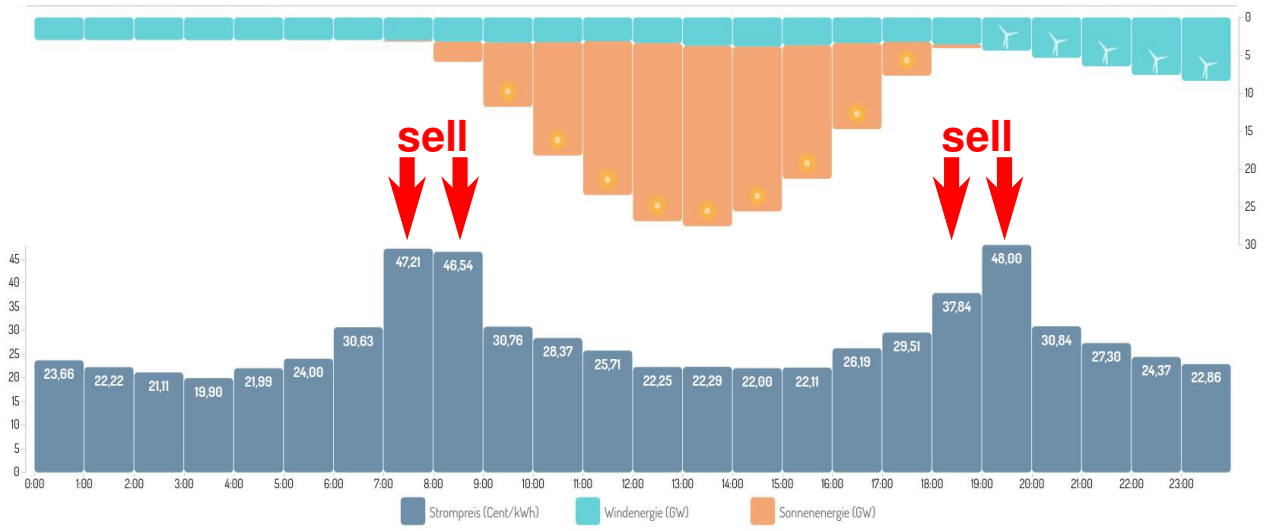
With electrolytic capacitors, the service life doubles for every 10° less operating temperature. We collect all the scientific studies on this subject in order to offer the most reliable, long-lasting product possible.

But the most important thing is the saving of space: housing, solar power plant, storage power plant and infrastructure for electric mobility, all in one to save space.

Sodium batteries for demand based grid feed-in

What is demand based? Currently, the only indication of this is provided by spot market prices: If the price is high, then demand can only be met with very expensive, because inefficient, peak load power plants. While a smoothly running CCGT power plant converts up to more than 60% of the thermal energy in the gas into electricity, gas turbine peaking power plants have a maximum efficiency of 38%, but tend to be less than 30% when used for rapid load changes.

This causes the morning and evening price spikes typical of sunny days in the electricity market. The batteries of their house fight against this. As a result, the batteries pay for themselves, for you as a homeowner, for the community, because it means the least possible grid expansion is required and less gas has to be used in peak load power plants.



Hourly prices on the German day-ahead spot market in October 12th 2022

The on-board computer as spot market master salesman

Constantly studying weather forecasts, solar yield forecasts and the spot market, deciding when to feed in how much electricity, that's just one of the many tasks of the on-board computer.

Smart home is not just a buzzword, it is about using the energy systems of the house in the best possible way for the benefit of the owners.

Then we just feed in the solar power only at night!

Again and again headlines: “Grid operator does not approve new photovoltaic system due to lack of sufficient grid capacity”. If you place your GEMINI next Generation house in such an area, we will argue with the grid operator that until sufficient grid capacity is available, we will feed in the solar power only at night.

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We are currently a research company and busy with product development.

We plan to offer this house in Europe from 2025 and worldwide from 2027.

Until then, several capital increases are planned.