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

The old family home is dead, long live the new family home!

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 for the annual requirements of a new single-family home were typical.

50 years later, this became 500 liters of heating oil, 1,000 liters of diesel and 4,000 kWh of electricity. Low-energy house and the lowest-energy house emerged, but all these new designations were aimed only at reducing the energy demand for space heating.

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

In housing, there are energy requirements to consider:

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

To focus only on less energy demand for space heating is an absurd ignoring of five other problem areas.

Ignorance made the EFH unpopular in politics

Home ownership of a detached EFH yields the highest level of housing satisfaction. But manufacturers' ignorance of the energy problem increasingly made policymakers look not at occupant satisfaction, but only at space and energy requirements.

We are the countermovement

The own single-family house is a dream of many. But many have given up this dream because of today's cost situation, because even a couple of high earners will only be able to think about loan repayments 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 home was an energy waster; the new single-family home will 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 on demand.

In 2025, we plan to show the first five erected 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.

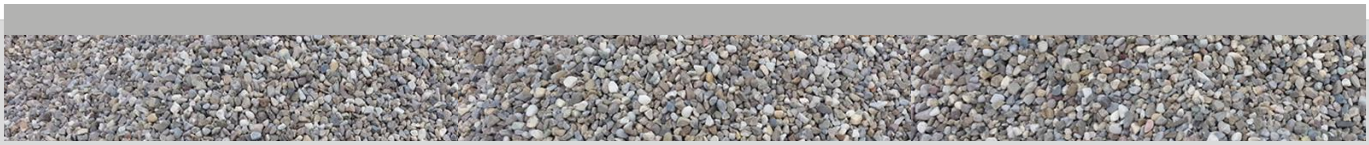
We define the new building standard, CPSH — Climate Protection Superiority House.

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 already begins with the foundation, where some suppliers demand €39,000 for 82 m^2 of foundation. We ask ourselves, what for? Is the concrete foundation indispensable? No, it only causes high costs and 6 tons of CO2 emissions during concrete production alone.



Conventional foundation:

64 m^3 excavated earth removed

95 t of crushed stone

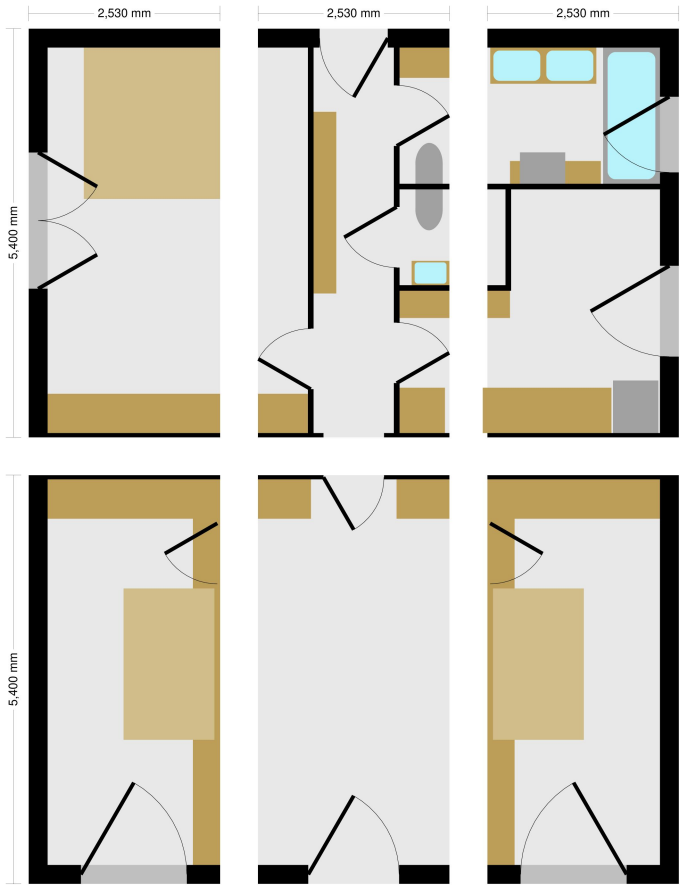
32 t concrete

Access road must be suitable for heavy trucks.

We, on the other hand, use only 12 foundation bolts of 20 kg each for the foundation. This means significantly less steel than is needed for a concrete foundation in terms of reinforcement.

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

An electric excavator screwing in the foundation screws.



Six house segments

With us, all the work is to be done on the shop floor, so there is as little work as possible on the job site.

This is one of our other methods of making home ownership affordable.

That's why we don't say building site, but installation site, because so little work is left at the installation site.

XL with 3 segments more

Our standard version is too small for you? There is also the possibility of three more segments, which then form the XL version.

We recommend the standard version for families up to two children and the XL version for families up to four children.

If the plot is big enough, it is also possible to extend the standard version to the XL version, which is 4.6 m longer and has 2 more rooms.

From DIY self-pickup to turnkey ready to live in.

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

The house is also available turnkey for living or any hybrid of these two options. You can assemble the complete furniture 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: with 24 drawers accessible from the outside. All within the thermal envelope of the house. There is about 800 l of volume space per drawer. This means an 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? We offer movable rooms by sliding wall/furniture elements suspended from the ceiling on rails.

This way, 2 more children's rooms, offices or guest rooms can be created to the left and right of the living room. That is why we recommend even 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 with 90, 100, 120, 140 or 160 cm width.

Always the best air quality with ventilation system

Ventilating through the windows in summer often means unwanted intruders such as gnats, wasps and hornets, or even pollen to which you are allergic. In winter it means 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 be moved slowly through the very large 20 cm pipes.

A flowering meadow with biodiversity is no problem with it, because the biodiversity stays outside.

CO2, HCHO and TVOC sensors automatically 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

The house equipped with 34.5 kW peak (46 kW peak in the XL version) are still far from enough solar power. There is another 10 kW peak from the carport or garage.

For electric cars, a properly insulated garage with underfloor heating means a reduction in power consumption. This is because the interior and the battery must have a temperature that is favorable 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 outside. Typically the garage will be heated to 10° to 15°, more is possible of course.

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

The companies Amazon, Apple, Dell, Google, Hewlett Packard and 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, just like a house. Also a house needs a roof and for this we use the cheapest roof: photovoltaic. Likewise, the ideal temperature for human and battery is very similar. For batteries, the ideal temperature means the least degradation and the longest life.

Fortunately, the ideal temperatures for humans and accumulators are very similar. Power electronics for inverters last longest at low temperature. So what could be more logical than not using the house's cooling and heating system for water-cooled inverters as well?

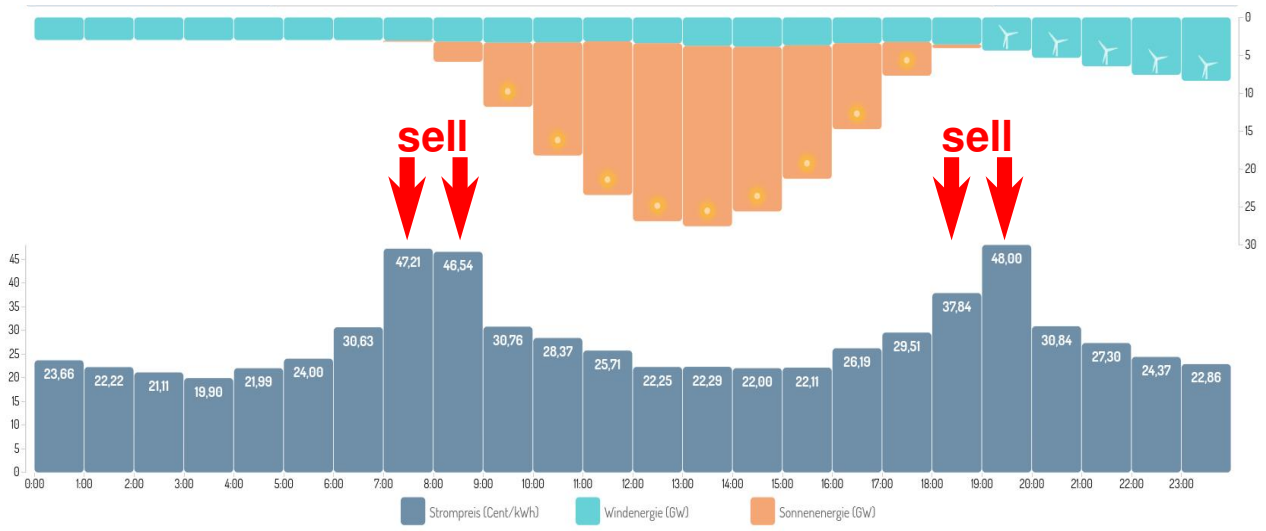
With electrolytic capacitors, the service life doubles for every 10° less operating temperature. We collect all the scientific studies on this subject to be able to offer the most reliable, long-lasting product possible.

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 on-demand grid feeding

What is demand response? 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 accumulators of their house fight against this. As a result, the batteries pay for themselves, creating an advantage for you as a homeowner and for the community, because it means the least possible grid expansion is required and less gas has to be generated 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

Constant weather forecasts, solar yield forecasts, studying the spot market and deciding when to feed in how much electricity. That's just one of many tasks performed by their home's on-board computer.

Here, the smarthome is not just some buzzword, but the ability to make the best use of the home's energy systems for the benefit of the owners.

Then we just feed in the solar power at night!

Time and again, you read headlines like, "Grid operator won't approve new photovoltaic system due to lack of sufficient grid capacity." Should you install 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 only feed in the solar power 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 2026 and worldwide from 2028.

Until then, several capital increases are planned.