

Press Release

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The Lindell family lives "One Tonne Life" with a climate-smart wooden house, an electric car and advanced energy solutions

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With the "One Tonne Life" project, A-hus, Vattenfall and Volvo Cars aim to demonstrate what it means in practice for a family to adopt a climate-smart lifestyle.

The technology and the solutions that the Lindell family use to live the "One Tonne Life" are already available or will become available in the very near future.

A-hus President Peter Mossbrant explains:

"Our goal is to make low-energy wooden houses available to a broad market. More people should be able to live climate-smart - without compromising on comfort, function or design. We offer everything under one well-insulated roof. In fact, we will start selling this type of house in the end of January 2011."

The plans for the villa were drawn up by architect Gert Wingårdh. He has made the white house more energy-efficient and given it a more interesting appearance with the characteristic protruding framework around each window, the wind-catcher in the entrance hall and the large integrated veranda alongside the living room. Together with the black roof and the south-facing solar panels, the house has a truly unique personality all on its own.

Sealed climate shell, solar cells and solar panels

The "One Tonne Life" house has triple-layer walls with exceptional insulation capability and minimal air leakage. Other important features are improved insulation in the roof and foundations, as well as lowenergy windows and doors.

The wind-catcher in the entry hall prevents large airflows between the inside and the outside. This creates a comfortable climate inside the house and the energy consumption becomes lower. The protruding frames around the windows shade the interior when the sun is high in the summer sky, yet let in the winter sun's energy when it is low on the horizon.

In order to ensure a supply of fresh air to the well-encapsulated house, there is a ventilation unit that sucks out spent poor-quality air and replaces it with fresh, tempered air delivered to the bedrooms, living room and other public areas. The heat in the spent air is recycled.

The building's heating requirements are largely met by the incoming air, the occupants' body heat and heat-generating household appliances. Supplementary underfloor heating is installed on the bottom floor. The solar cells on the roof and the south-facing facade generate electricity that provides additional heating or is used to recharge the electric car. Any electricity that is not consumed by the family is fed into the national grid.

The solar panels on the carport roof meet a large portion of the household's heating and hot water requirements during April to October. When the sun is not shining and the accumulator tanks have no solar power stored, the Lindell family get renewable energy from Vattenfall.

Volvo C30 Electric - up to 150 km on one charge

The family's Volvo C30 Electric operates quietly and emits no carbon dioxide at all when it is recharged with renewable electricity. The electric car is part of Volvo Cars' drive to promote electrification. It offers the very same comfort, interior space and safety as the standard version of the C30. The difference is that the Volvo Electric C30 is powered solely by electricity.

The "One Tonne Life" project gives Volvo Cars the opportunity to study how the electric car fits in with a modern family's lifestyle.

"We will reap immense benefit from the project in our ongoing development of electric cars. It will give us clear information about what we need to deliver so buyers feel that a battery-powered car is attractive and cost-effective to drive and own," says Lennart Stegland, manager of Volvo Cars' Special Vehicles division.

The Volvo C30 Electric is powered by lithium-ion batteries that are recharged via a regular wall socket. A full charge takes about eight hours. The range on a full charge is up to 150 kilometres. "150 kilometres is much more than the average European commuter drives in one day. In "One Tonne Life" this range will cover most of the Lindell family's transport requirements," says Lennart Stegland.

Smart energy solutions

Climate-smart and energy-producing houses are an important piece of the puzzle in the development of intelligent electricity grids, which in turn are an important ingredient in a sustainable society.

Vattenfall has several projects dealing with the development of intelligent electricity grids and energy solutions for households that focus on electricity monitoring and energy efficiency enhancement. As a result, some home-owners can be both electricity consumers and small-scale electricity producers, for instance by utilising solar cell technology.

In "One Tonne Life" Vattenfall is making a variety of contributions including Energy Watch - cutting-edge technology for measuring the family's electricity consumption in real time.

"We're helping the Lindell family keep a watch on their electricity consumption and also helping the family members use their electricity in an efficient way," says Torbjörn Wahlborg, President of Vattenfall Norden. He adds: "We are also working on a further development of the electricity grid so that a family whose home is fitted with solar cells is able to sell its surplus to us when their own production exceeds demand. At the same time, they get a secure supply of electricity from green sources such as windpower or hydropower when the sun is not shining."

Eco-conscious choices

Food represents about one-quarter of a household's climate footprint, and supermarket chain ICA sees considerable potential here for reducing carbon dioxide emissions through active choices.

"We have a wide range of eco-marked, ecologically produced and locally grown produce. By participating in "One Tonne Life" we hope to find new ways of involving and helping our customers make simple but significant choices both in the supermarket and in the kitchen at home," says ICA environmental affairs manager Maria Smith.

Energy-efficient household appliances

Household appliances account for up to half of a normal household's total energy consumption - and the way these appliances are used also affects the size of the electricity bill. Over the past 15 years, Siemens has cut energy consumption of its appliances by up to 80 percent, and its figures for energy and water consumption are of world class.

"Our aim is to help ensure that tomorrow's household can continue to live as comfortably as today's, but with due care for the environment. The products that the Lindell family use show how far we have already come. We will also help them use their white goods in the best possible way," says Martin Knobloch, President of Siemens Home Appliances Northern Europe.

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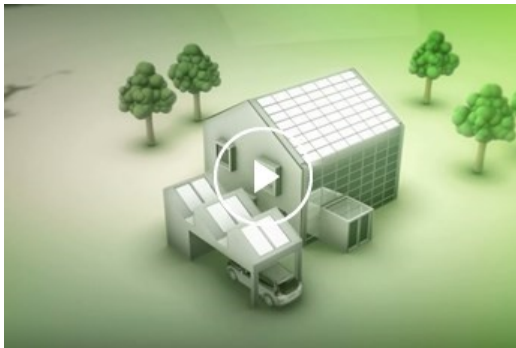
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