

solarnova: Aesthetics and (energy) efficiency are not mutually exclusive

Wedel, June 10, 2015 – solarnova has been selected as a finalist for the Intersolar AWARD 2015 in the “Projects” category for its contribution to the unique Aktiv-Stadthaus project in Frankfurt am Main, Germany. The building houses 74 residential units and two business units and is a prime example of the European Union’s Directive on Energy Efficiency which will go into force in 2021. solarnova’s BIPV modules (building-integrated photovoltaic) are integrated into building facades and play a key role for meeting the objectives set out by the EU. They are tailor made to each building and carry the “Made in Germany” quality seal.

The 348 glass and glass PV modules integrated into the building’s exterior ensure that the occupants’ energy consumption can in fact be met. An energy surplus can even be achieved. The black tinted glass units with an output of 338 kWp were developed in close collaboration between architects, designers, builders and the PV specialist solarnova. Size, power and, of course, structural design and building aesthetics, like the color of the modules all the way to the cells, were crucial topics. The solarnova units carry the "Made in Germany" quality seal and add to the yield generated from the building’s high-efficiency rooftop system by 117.6 kWp. Located in the middle of Frankfurt's city center, the 6,500 square meter edifice is a visually and architecturally charming living space that will make a valuable contribution to climate protection and to reducing CO₂ emissions in the future. The Aktiv-Stadthaus is a research and model project on the future of sustainable buildings by the building contractor ABG Frankfurt Holding and the German Federal Ministry of Transport, Building and Urban Development.

The Aktiv-Stadthaus is regarded as a shining example for urban multi-family dwellings constructed as energy-plus buildings: The combination of a well-insulated building exterior, efficient building technology, renewable energies and efficient household appliances with A+++ standards is unique in Europe. The building already fulfills the requirements set out in the EU Directive on European Buildings starting in 2021. According to the directive, Member States shall only permit the construction of “nearly-zero energy buildings” from this point on. BIPV can open up new avenues between the poles of aesthetic standards, building code requirements and investment.

More than just a facade

Without the energy generated from the building’s facade, the Aktiv-Stadthaus would not have been able to meet its own electricity requirements, even with its comprehensive PV rooftop system consisting of about 1,000 highly efficient modules. The solutions together even produce a surplus which is stored in a battery. 250 kilowatt-hours are saved there waiting to be retrieved (during the night). A display allows Aktiv-Stadthaus tenants to compare their energy consumption with the current generation.

"Our customized photovoltaic solutions for building integration bring the unique requirements of architects, planners and building contractors together perfectly," says solarnova Managing Director Sylvia Schmenk. There is a reason solar power is known as the most attractive form of renewable energy: "During the early stages of planning, we already advise our customers and partners on how they can meet their efficiency, aesthetics and economic viability demands through the use of the highest quality products in solar technology."

BIPV – Aesthetically appealing and efficient

Unlike a standard PV module, building integrated photovoltaic (BIPV) also function as shading, weather protection, visual and sound insulation, and even as thermal insulation through insulated glazing in addition to generating power. The mostly customized glass-glass or glass-backsheet solar modules are integrated into facades, balustrades, overhead glazing and solar shading installations, thus replacing traditional building materials and components. solarnova has specialized in the production of customized BIPV modules for decades. The planning and project size is determined in collaboration with other project stakeholders – for form, color, transparency, and naturally, performance.

Press Release

June 2015

solarnova*

Photovoltaics in city centers

The idea behind the Aktiv-Stadthaus comes from the architect professor Manfred Hegger. He is a pioneer in energy-efficient architecture and was the Chair for energy-efficient construction at the Darmstadt University of Applied Sciences until 2014. He also served as a board member on the German Sustainable Building Council (DGNB) for many years. The building contractor is the ABG Frankfurt Holding – a municipal housing company that houses nearly a quarter of Frankfurt's population with its 50,000 residential units.

Our latest press releases and pictures can be found at:

<http://solarnova.de/en/media.html>

About solarnova

solarnova has been producing quality photovoltaic (PV) modules in Wedel near Hamburg, Germany since 1996. The original company founders came from the research and development division at AEG, which had already built one of the first PV production lines in Wedel at the beginning of the 1980s. The solutions produced here were used for specialized applications in aerospace and satellite technology. solarnova has developed an excellent reputation worldwide, particularly as a manufacturer of individual modules for building-integrated photovoltaics (BIPV). BIPV not only complements conventional building materials, but also replaces them. In addition to generating power, building integrated PV also functions as shading, weather protection, visual and sound insulation, and even as thermal insulation through insulated glazing. solarnova is also a reliable OEM partner, has its own high-performance standard module series (SOL GT) and operates worldwide as an expert for turnkey fabs by providing service for the construction of turnkey module plants. Single and multi-purpose buildings, such as the EWE ARENA in Oldenburg (Germany), the PUMA Plaza in Herzogenaurach (Germany) and the Public Safety Building in Salt Lake City (USA) are also part of solarnova's portfolio.

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