

## [BIQ House+SolarLeaf - the use of microalgae](#) [1]

The BIQ (*Bio Intelligent Quotient*) house represents the world's first pilot project for the implementation of a bio-reactive façade in residential buildings. The bio-reactive façade, called SolarLeaf, generates renewable energy from algal biomass and solar thermal heat. In particular, the BIQ house in Hamburg has 200 m<sup>2</sup> of algae filled bio-reactive paneling, which supplies the building with all of the energy it needs while reducing carbon dioxide (CO<sub>2</sub>) emissions by 6 tons per year. This pilot project exemplifies a building integrated system absorbing CO<sub>2</sub> emissions, while cultivating microalgae to generate biomass and heat as renewable energy resources. The environment for photosynthesis is provided by glass photo-bioreactors installed on the south-west and south-east sides. At the same time, this innovative system integrates additional functionalities such as dynamic shading, thermal insulation and noise abatement, highlighting the full potential of this technology. Through this system, the BIQ house can produce energy in a carbon neutral way while working at the same time as a carbon sink through the use of algae for capturing CO<sub>2</sub>. For these reasons, it represents a good practice for future building development to promote a low-carbon urban future and shape better cities in which to live and work.

**Source URL:** <https://pocacito.eu/marketplace/biq-housesolarleaf-use-microalgae>

### **Links**

[1] <https://pocacito.eu/marketplace/biq-housesolarleaf-use-microalgae>