
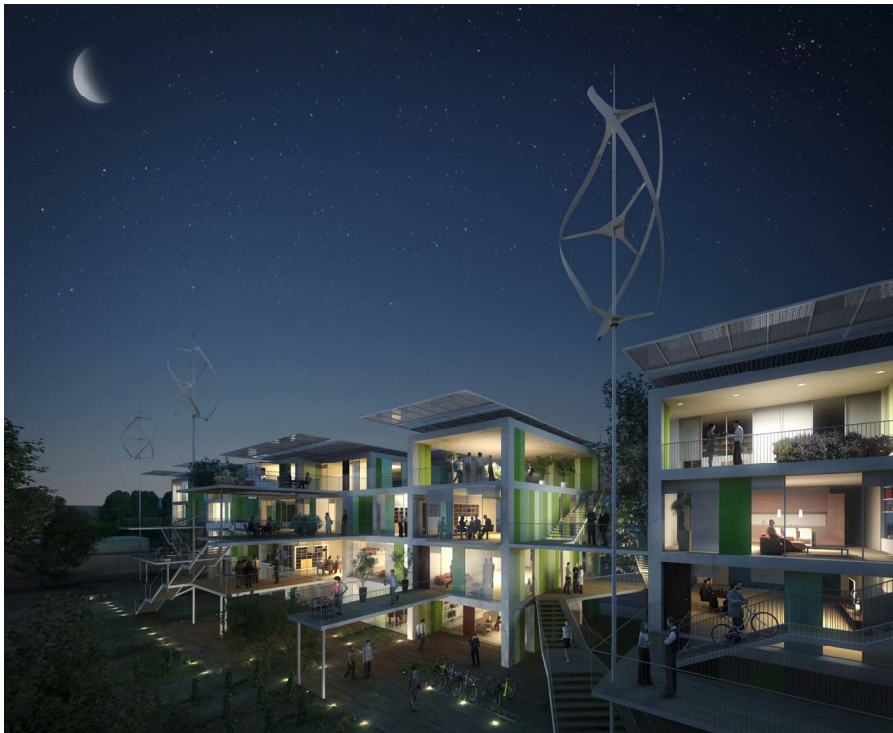


<b>Title of case study</b>	<b>The 100K Home</b>
<b>Name of organization(s)</b>	<b>Mario Cucinella Architects (MCA)</b>
<b>Business sector</b>	Construction and Engineering
<b>Region(s) relevant to case study</b>	<input checked="" type="checkbox"/> All regions <input type="checkbox"/> Africa and the Arab States <input type="checkbox"/> Asia and the Pacific <input type="checkbox"/> Caribbean and Central America <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Least Developed Countries <input type="checkbox"/> North America <input type="checkbox"/> Polar regions <input type="checkbox"/> Small Island Developing States <input type="checkbox"/> South America
<b>Country(s) relevant to case study</b>	Italy (MCA headquarters)
<b>Adaptation sector(s) relevant to case study</b>	<input type="checkbox"/> Business <input type="checkbox"/> Education and training <input type="checkbox"/> Food security, agriculture, forestry and fisheries <input type="checkbox"/> Human health <input type="checkbox"/> Oceans and coastal areas <input type="checkbox"/> Science, assessment, monitoring and early warning <input type="checkbox"/> Terrestrial ecosystems <input type="checkbox"/> Tourism <input checked="" type="checkbox"/> Transport, infrastructure and human settlements <input type="checkbox"/> Water resources <input checked="" type="checkbox"/> Other (please specify): Access to low cost, low environmental impact and well-adapted housing
<b>Adaptation activity</b>	<p>The “100 k € Home” is a research project for a low cost and low impact residential complex. The aim of the project is to develop a high quality, zero CO<sub>2</sub> emissions, and well-adapted housing prototype.</p> <p>As climate warms, projecting terraces and stairways have been designed to control solar irradiation during summer, while the garden and rooftop greenery reduce the heat island effect and contribute to passive cooling. Depending on the climatic conditions of the location, photovoltaic panels, wind turbines, and geothermal heat</p>

	<p>provide at least enough energy to cover the total consumption of each housing unit. Hot water is produced locally thanks to a solar-heating plant integrated into the roofing.</p> <p>Since water scarcity is increasingly an issue for many countries, a rainwater collection system, alongside use of low-consumption fittings, has been designed to lower potable water requirements. The rainwater is then reused for permitted purposes (irrigation of greenery and toilet wastewater).</p> <p>Thanks to its modular structure, passive design, and the flexibility of the project, the “100 k € Home” can easily be adapted specifically to the climatic conditions of each location. Its low energy requirement, covered by renewable energies available on site, and its water harvesting system among other features, make this project accessible, even in locations where reliable access to energy and water sources are strained and likely to be exacerbated by climate change.</p>
<b>Cost-benefit</b>	<p>Thermal simulations of the “100 k € Home” were conducted in locations with differing climates (i.e. USA (New Orleans and Chicago), Ireland, Italy and Palestine). The result of reduced heating and cooling demands translated into lower energy bills for each location, despite the geographic variability of sunlight and wind as resources. Furthermore, as the climate warms, the building may even produce an energy surplus, which can then be sold to the power grid.</p>
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Source: MCA



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Disclaimer: These business cases have been cited to raise awareness about the engagement of the private sector in climate change adaptation. The information in the business cases has been provided either directly by the organization or obtained from a public source. The UNFCCC secretariat has not verified the information and takes no responsibility for it. Users are therefore advised to verify the information before they take any action relying on the information provided in the business cases.