



**GreenPix**

Zero Energy Media Wall

**Simone Giostra & Partners**







Amid the many shining new structures occasioned by the Beijing Olympics, one may shine a little brighter still, at least after nightfall. But what makes the Zero Energy Wall such a star is not merely its giant LED display surface, but also the fact that turning it on will use only energy garnered passively by the building itself. Designed by New York office Simone Giostra & Partners, the media wall, located not far from the Olympics site, is the largest colour-LED display wall on Earth, and the very first integrated curtain wall photovoltaic system. Described simply, the wall soaks in solar energy by day (at least when Beijing's polluted atmosphere allows it to) and regenerates it by night as powered LED light shows.

Opening last month with graphic shows by artists Xu Wenkai, Michael Bell Smith, Takeshi Murata, Shih Chieh Huang, Feng Mengbo and Varvara Shavrova, this is the first venue in China dedicated to digital media art. It is already a standout in a city of remarkable recent constructions, and the LED displays, theoretically infinite in their creative potential (need we mention advertising?), offer years of low-cost entertainment value. The added bonus of free power to run them only sweetens the deal. But clearly the project has a didactic purpose as well, located as the wall is in a land of pollution, rapid development and uneven building standards. By showing that an innovative curtain wall solution (engineered by Arup) can not only lead the way in green technology but also produce visible innovation, Greenpix guides by example. Indeed, in Asia, nightlighting of buildings is so

often overdone, with scant regard for environmental protection, that it is to be hoped this entry will open a few eyes. Hong Kong could certainly use such an idea, as could Tokyo.

It is interesting to note that Suntech China, the major Chinese manufacturer of solar technology components, was deeply involved in the project, adhering closely to the design of German companies Schueco and SunWays. The teams collaborated to develop the means for laminating the cells onto the glass wall in varying densities depending on the desired penetration of natural light. In effect, the cells form a type of solar screen during the day, helping to reduce solar gain even as they are using it to create energy themselves.

In anticipation of the day when all buildings are zero-energy consumers (or even net producers of energy), the Greenpix may be said to be a harbinger of things soon to come. While solar energy systems are still in their technological infancy, issues such as global warming and energy scarcity will continue to encourage their rapid evolution, and architecture will probably be the main beneficiary. With enormous areas of surface glass, large buildings are a natural site for solar harvesting, and as the technology advances – and costs come down – we will see many more such examples, with or without the signature graphic artwork. Treat this as installation art or urban necessity; either way it's dressed to impress.

