

INDUSTRIAL SOLAR ROOF Singapore



Project name:	LBXS 2
Owner/developer:	Lonza Biologics (Tuas) Pte Ltd
Architect:	RSP Architects Planners & Engineers Pte Ltd
Builder:	Bovis Lend Lease Pharmaceutical Pte Ltd
M&E consultant:	Jacobs Engineering Singapore Pte Ltd
Location:	Tuas, Singapore
Commissioned:	June 2009

Technical data

Rated system power	181 kWp	Modules	REC multi-crystalline silicon Solar Fabrik multi-crystalline frameless
Annual energy yield	approx. 210,000 kWh	Inverter	SMA SMC7000TL / 11000TL
CO₂-savings p.a.	approx. 105,000 kg*	Construction type	Metal roof, Bluescope Lysaght Kliplok
		Tilt angle	6° to 16° slope

* Source: based on typical 0.5 tones CO₂/MWh from gas fired power plants

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“The experience gained from this project has been invaluable”, said Stephen Keane of Lonza.

Responsible corporate citizenship

Leading Swiss pharmaceuticals manufacturer Lonza Biologics (Lonza) pioneered the installation of solar PV for industrial buildings in Singapore by installing Singapore’s largest solar PV system as of June 2009.

The system highlights Lonza’s commitment to environmental stewardship.

Lonza’s Admin office & Lab roof provided prominent visibility as well as good exposure to the sun. However, the variable slope posed several design and safety challenges.

Phoenix Solar’s solution was to install a combination of high quality framed and frameless multi-crystalline modules, placing the latter at the

shallow upper slope to improve water run-off.

The result was an aesthetically pleasing solution that seamlessly follows the sloping roof’s profile.

Stringent safety standards required edge fall protection. Conventional scaffolding would be expensive to install and dismantle.

The team developed a new solution with special sockets to support removable safety barriers, which can be reinstated at low cost for future maintenance.

The collaborative effort of the project team resulted in a highly visible solution that showcases innovative application of technical and construction techniques.

