Sun on every roof and facade

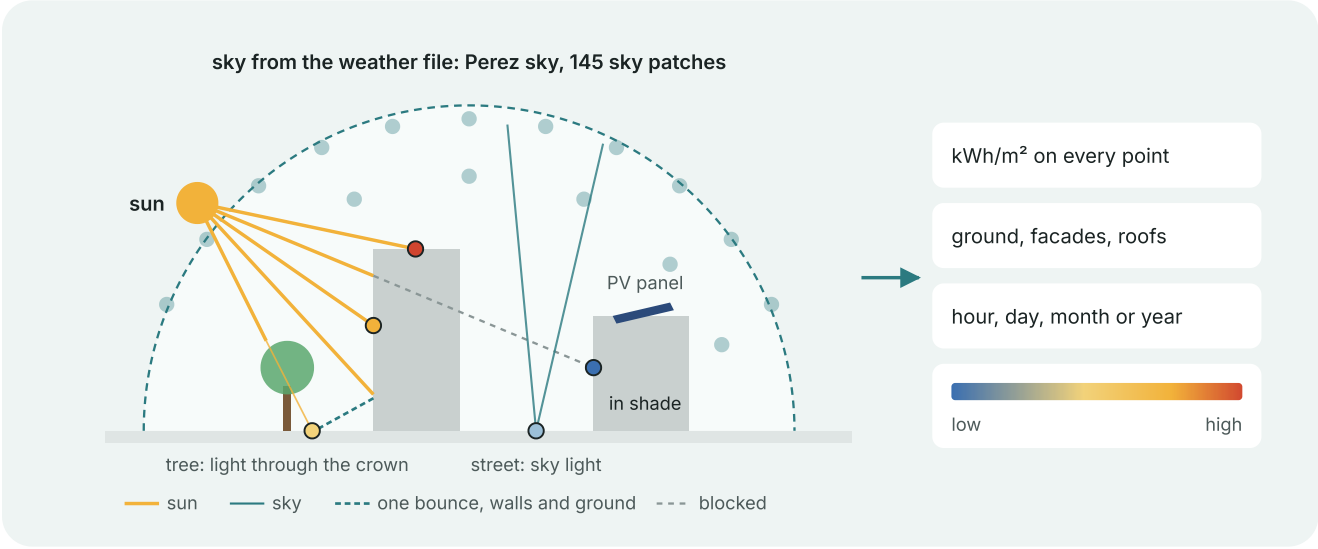
Solar energy in kWh/m² on the ground, on facades and on roofs, for any hour, day, month or year. With the real neighbours, trees and shading devices.

97 %
agreement with Radiance on a real Vienna tile (median; 95 % on a Hong Kong tile)

2 to 6 %
median difference in narrow street canyons, sun only

1 to 4 s
per 512 m × 512 m tile. 400 km² of Berlin at 1 m in 44 s, end to end

Checked against Radiance 6.1 with 8 reflections, the same geometry, materials and sky. Aligned with ISO 52010-1, VDI 3789-2 and the Perez all-weather sky. For scale: a good field pyranometer is about ±4 %.



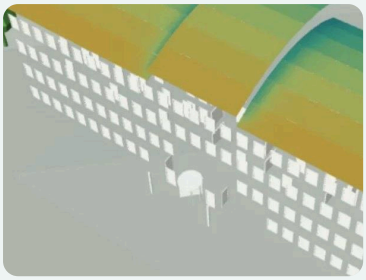


Vienna inner city: solar energy on every roof, facade and street, with the trees along the canal.



Dense high-rise district: facades in deep shade next to fully sunlit roofs and slopes.

What your users could get from it



Which roofs and facades pay for PV?

Solar energy per square metre on every roof and facade, for the full year. Rank the surfaces before you plan panels.

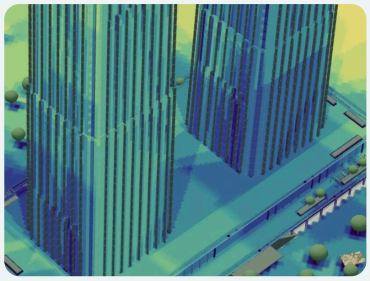
Sell it as: PV potential map



How much sun heats this facade?

Solar load on each facade, hour by hour. Size the cooling, and put data-centre halls and plant on the cool side.

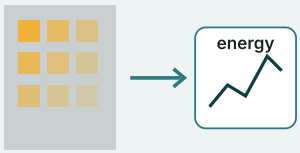
Sell it as: facade heat load



Where does the square need shade?

Sun on every square metre of a square or playground. Test new trees and shade sails; deciduous trees lose their leaves in winter.

Sell it as: shade planner



What goes into the energy model?

Hourly solar input per facade, with the real neighbours, trees and shading devices. Not a free building in an empty field.

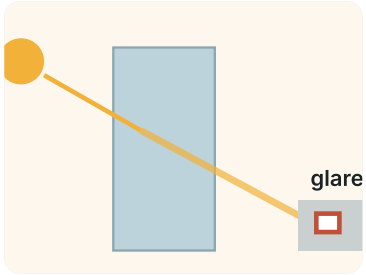
Sell it as: real-site solar input



Which massing gets the most sun?

Compare options in seconds: sun on the facades, the roofs and the open space around them, for each option.

Sell it as: solar access check



Does the glass dazzle anyone? Next

Find where glass facades send glare into streets, windows and roads, before the facade is built.

Sell it as: glare check

Three ways into your web app

1 · A layer while you design

Colours on roofs, facades and the ground in the 3D view. Move a block, add a tree, run it again in seconds.

2 · One number per option

"Best roof for PV." "Facade with the highest heat load." kWh/m² per surface, easy to compare between options.

3 · A whole city layer

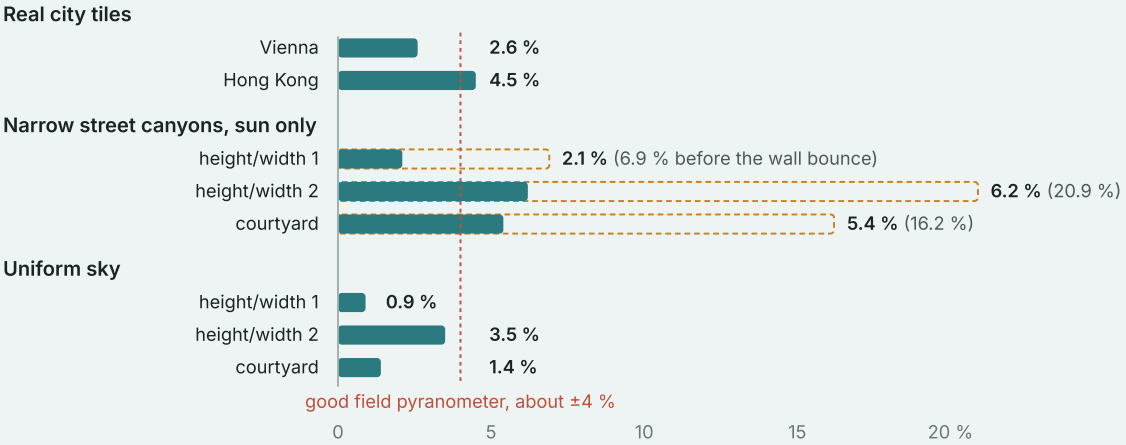
Every roof and facade of a city at 1 m. 400 km² of Berlin in 44 s, end to end.

One upload, more answers. The same buildings also give sun hours, daylight, wind and heat comfort. The same run serves seasonal planting and green facades: leaf-off in winter, full shade in summer.

What goes in, and how it is tested

INPUT	WE GET IT AUTOMATICALLY	BETTER, IF YOU HAVE IT
Buildings Now	Your massing model, and the neighbours from OpenStreetMap or open 3D city models	Your own context model
Weather Now	The weather file of the site, with direct and diffuse radiation	Your own station data
Trees Now	Open tree data, with crown transmission and leaf season	City tree register
Ground material Now	A default ground, which sets the ground reflectance	Your ground materials
Installations Now	None by default	PV panels, fins, screens and green facades, with their transmittance

Median difference to Radiance 6.1 (8 reflections), same geometry, materials and sky



Free building against full Radiance: −1.7 % (Vienna), −0.4 % (Hong Kong). Dashed bars: before the wall bounce.

What it does

- Solar energy in kWh/m² on ground, facades and roofs
- Any period: hour, day, month or year
- Perez all-weather sky, 145 patches, from the weather file
- Ray-traced shade and sky exposure per point
- One bounce from walls, light from the ground
- Trees with crown transmission and leaf season
- PV panels, fins, screens and green facades as shading
- 1 to 4 s per 512 m tile; a city of 400 km² in under a minute

Limit: one light bounce; glass reflects like a matte wall.

Next step: send us one site and one question, PV on the roofs or heat on the facades. We run it and show you every surface in kWh/m².

Images: Vienna inner city, a high-rise district and demo projects (simulated), our model.