SolarLayout

PRODUCT BROCHURE

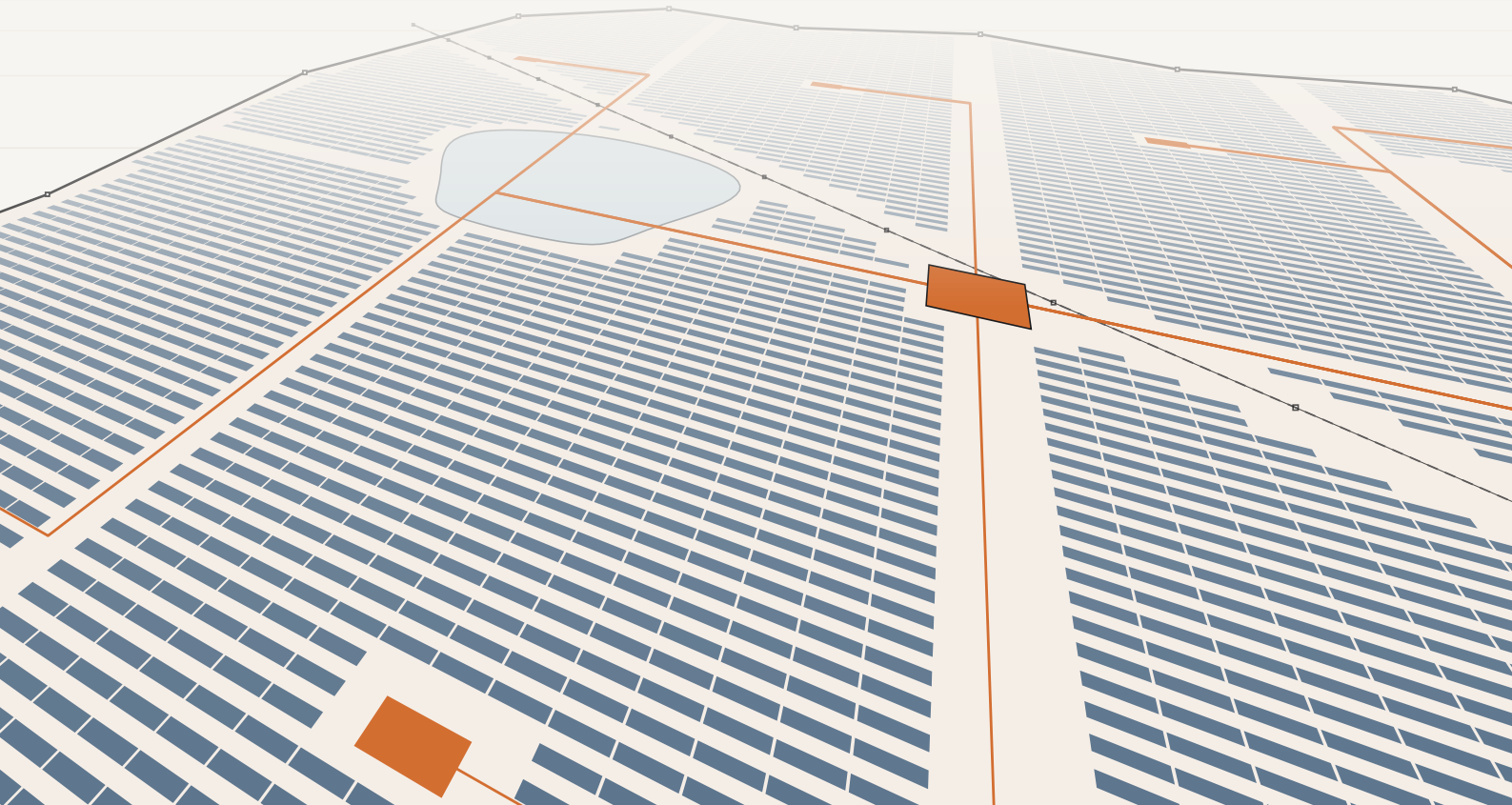
# SolarLayout is engineering software for PV solar plants, battery storage and rooftop solar.

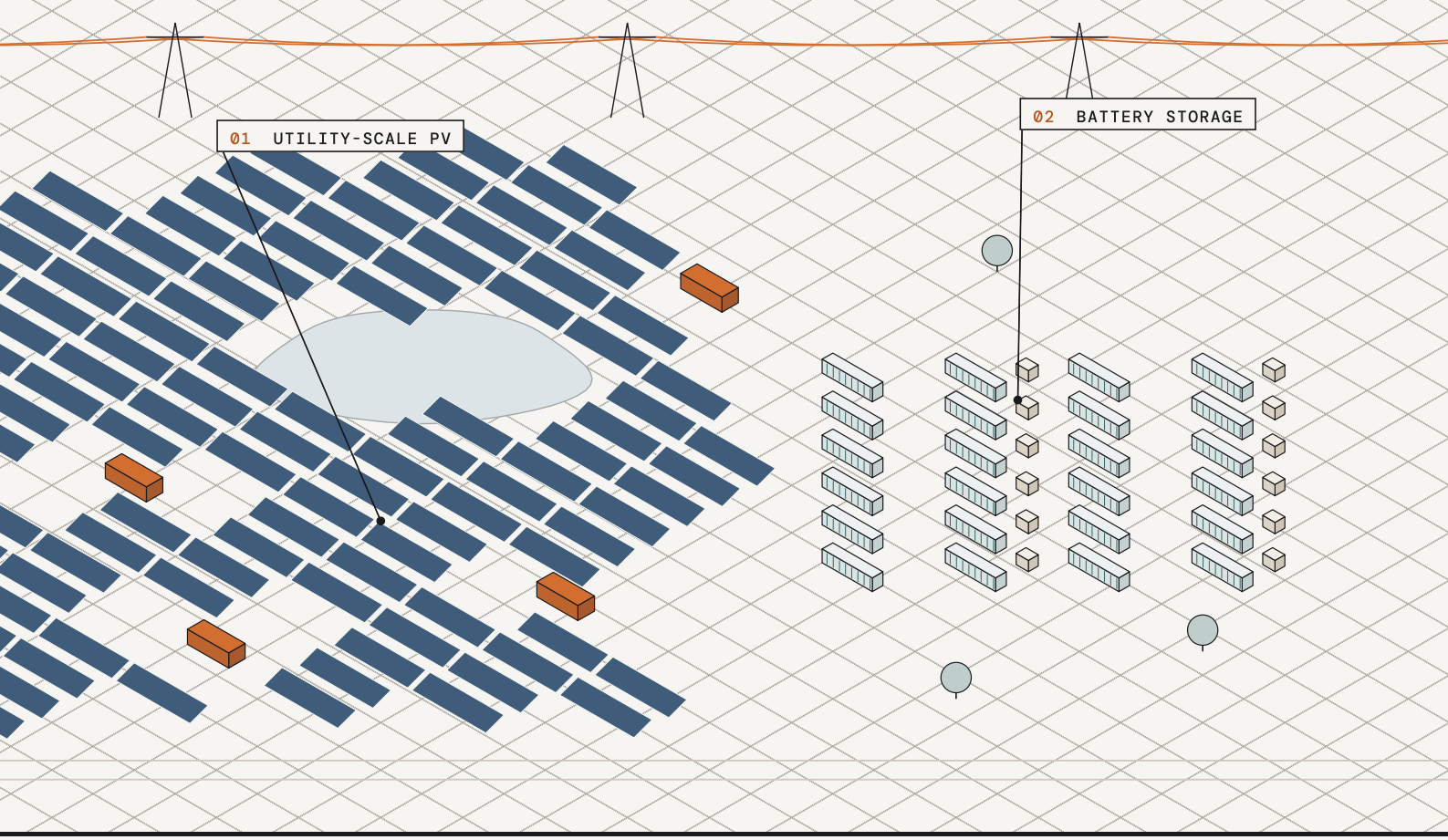
SolarLayout takes a project from its first inputs and generates finished drawings, reports and files.

01
**SolarLayout Desktop**
Utility-scale PV plants

02
**BESS Desktop**
Battery energy storage

03
**SolarLayout Rooftop**
Rooftop solar · Free






ABOUT SOLARLAYOUT

# SolarLayout builds design software for solar and storage projects.

SolarLayout Desktop lays out utility-scale PV plants from a site boundary. BESS Desktop sizes, simulates and finances battery storage projects. SolarLayout Rooftop designs rooftop PV systems in a web browser, at no cost.

The products serve EPC design teams, developers and IPPs, consultants and installers. They produce the layouts, calculations and documents that bids, feasibility studies and installations need.

### EPC design teams

Plant layouts, cable routing, single-line diagrams and bills of materials for bids and detailed design.

### Developers and IPPs

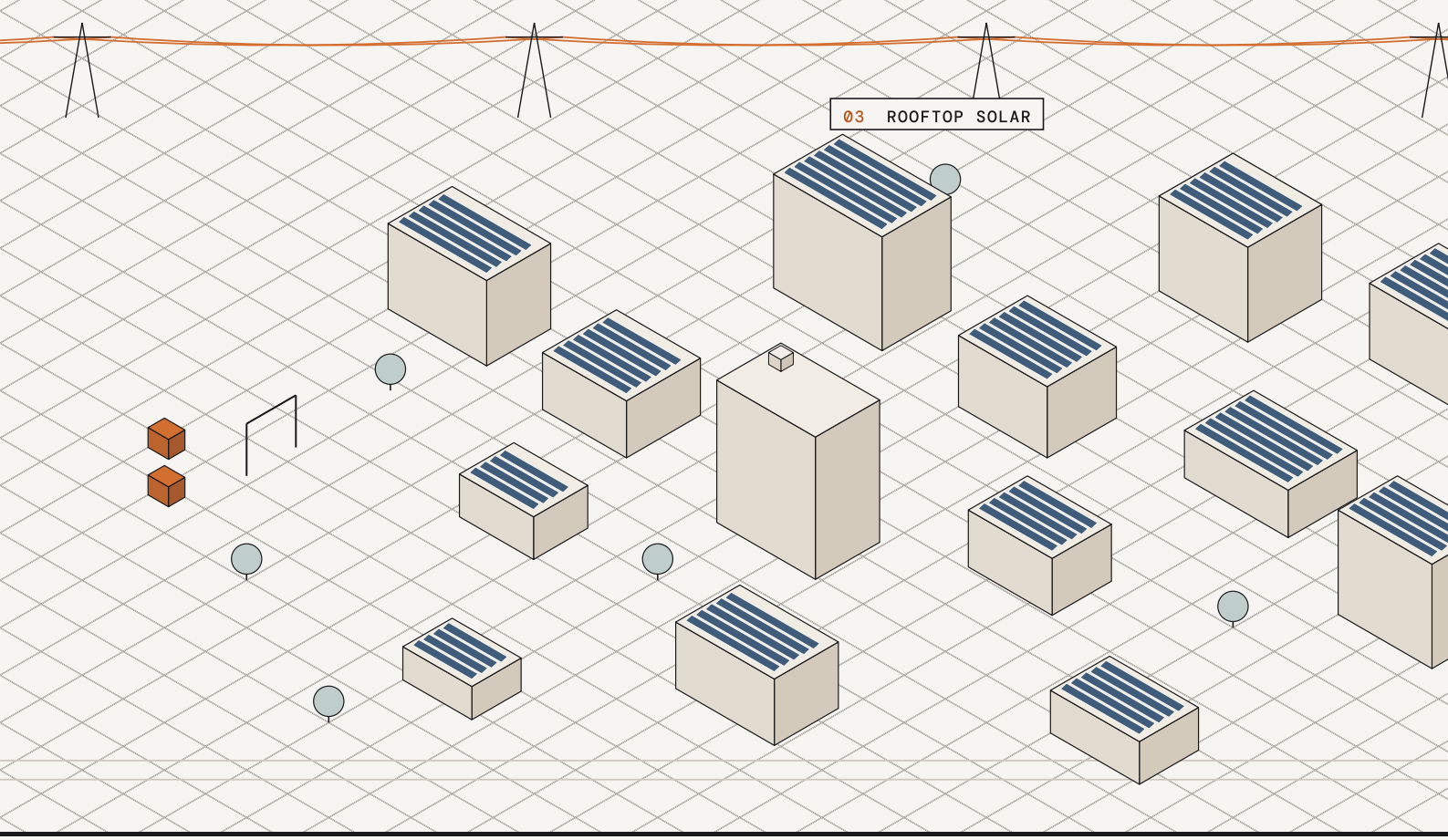
Site capacity, energy yield and storage sizing for feasibility studies and tenders.

### Consultants

Independent checks of layouts, yields, battery dispatch and project finances.

### Installers

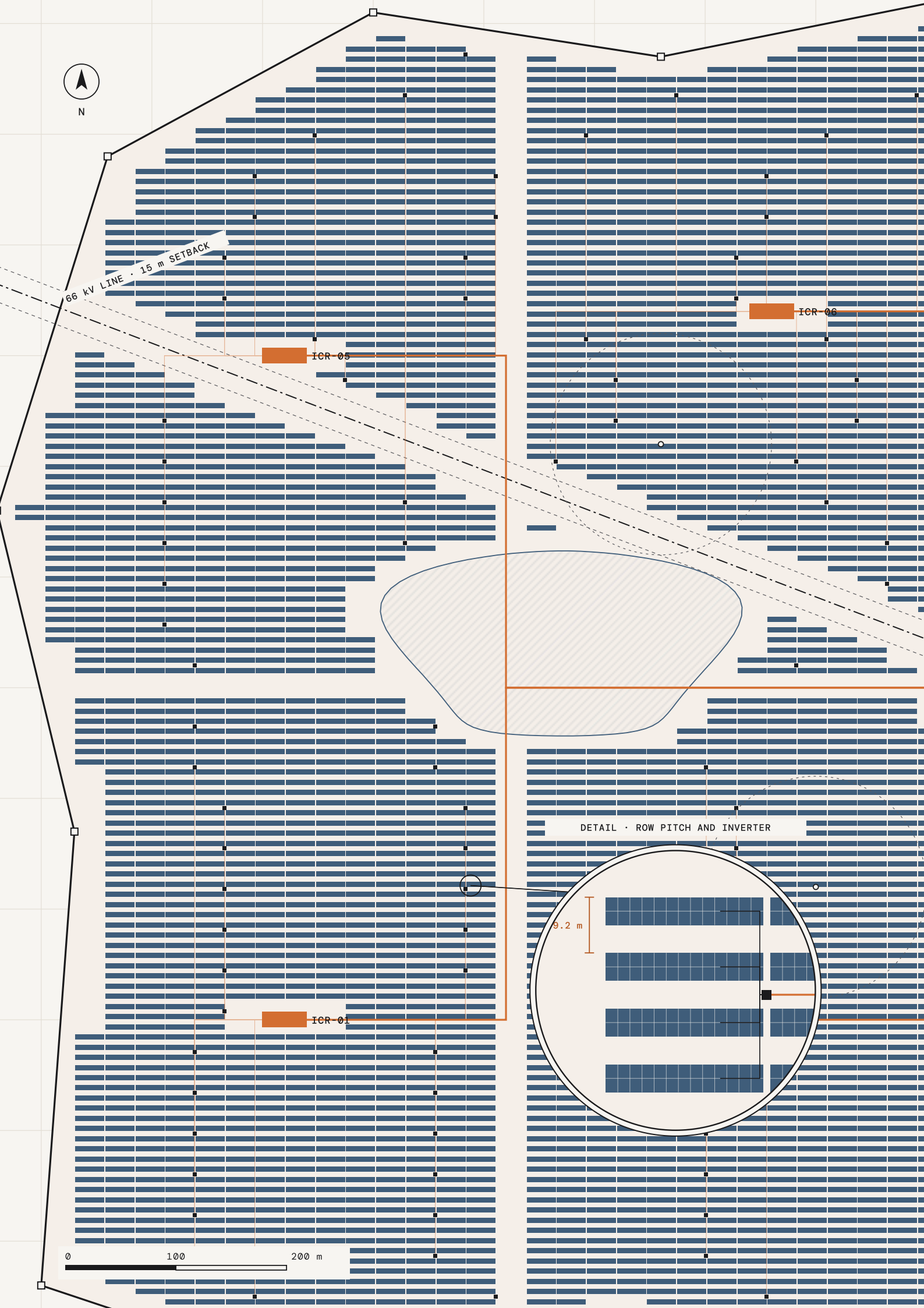
Rooftop layouts, strings and installation files for homes and commercial buildings.




THE THREE PRODUCTS

# The products cover three kinds of project.

| | 01<br>**SolarLayout Desktop** | 02<br>**BESS Desktop** | 03<br>**SolarLayout Rooftop** |
|---|---|---|---|
| PROJECTS | Utility-scale PV plants with fixed-tilt tables or single-axis trackers | Solar, wind and hybrid plants with storage, and standalone BESS | Rooftop PV on flat and sloped roofs |
| INPUTS | Site boundary as KMZ, KML or DXF, or a scaled image | Generation profile, peak hours and contract terms | Roof outline on a satellite map, obstacles, modules and inverters |
| OUTPUTS | Layout, cable routing, single-line diagram, bill of materials, energy yield and project report | 15-minute dispatch, DFR compliance, financial model, single-line diagram and PDF report | Layout, strings, shade map, energy yield, report, single-line diagram, bill of materials and CAD files |
| RUNS ON | Windows 10 and 11, 64-bit | Windows 10 and 11, 64-bit | A web browser on a phone, tablet or computer |
| COST | Free to download and try | Free to download and try | **Free** |


N
66 kV LINE · 15 m SETBACK
ICR-05
ICR-06
ICR-01
DETAIL · ROW PITCH AND INVERTER
9.2 m
0
100
200 m

01 · UTILITY-SCALE PV PLANTS

# SolarLayout Desktop

## SolarLayout Desktop produces a complete plant layout from a site boundary.

HOW IT WORKS

### 1 Load the site

Load the boundary as a KMZ, KML or DXF file, or trace it over a scaled image. The software reads water bodies, roads, trees and transmission-line corridors from the file and keeps them clear of the layout.

### 2 Generate the layout

The software places fixed-tilt tables or single-axis trackers, string or central inverters, ICRs and lightning arresters, and routes the DC, AC and MV cables. Terrain data keeps tables off slopes beyond the set limits.

### 3 Review and refine

Move ICRs, draw obstructions and place the main control room in Sketch mode. Design checks report what the layout could not meet, such as a feeder over its voltage-drop limit.

### 4 Calculate and export

Calculate the energy yield from PVGIS weather data or a weather file of your own. Export the project report, the single-line diagram, the bill of materials and the CAD files.

ENGINEERING STUDIES

- Earthing design with IEC sizing and IS 3043 and IEEE 80 checks
- Pile layout with coordinates in local, UTM and latitude-longitude
- Cut-and-fill volumes from the terrain
- Robotic cleaning fleet sizing
- Energy yield at P50, P75 and P90 over the plant life

EXPORTS

- Project report in Word or PDF
- Bill of materials in Excel or PDF
- KMZ for Google Earth
- DXF for AutoCAD and BricsCAD
- Pile coordinates in Excel
- Energy time series in CSV

A sample site is included, so a layout can be generated before a boundary file is ready.

Windows 10 and 11, 64-bit. Free to download and try.

**Scan to download**

solarlayout.app/products/solarlayout

02 · BATTERY ENERGY STORAGE

# BESS Desktop

## BESS Desktop sizes, simulates and finances a battery storage project.

HOW IT WORKS

### 1 Describe the project

Choose solar + BESS, wind + BESS, solar + wind + BESS or standalone BESS. Load the generation profile, set the peak hours and enter the contract terms from the tender.

### 2 Simulate the dispatch

The software runs the plant and the battery at 15-minute intervals across the year, for a firming contract or a peak-shift contract. It checks the peak, off-peak and monthly DFR targets and calculates the penalties.

### 3 Model the finances

The software builds a year-by-year financial model with battery degradation, replacement or augmentation, debt, tax, depreciation and working capital.

### 4 Optimise and test

The optimiser searches for the solar, wind and battery sizes that give the best return. The sensitivity tools show which inputs move the result most.

RESULTS

- Project, equity and post-tax IRR
- NPV, payback, MoIC and profitability index
- Minimum and average DSCR
- LCOE and LCOS
- Dispatch over 35,040 intervals a year
- Monthly DFR compliance, shortfalls and penalties

ANALYSIS AND EXPORTS

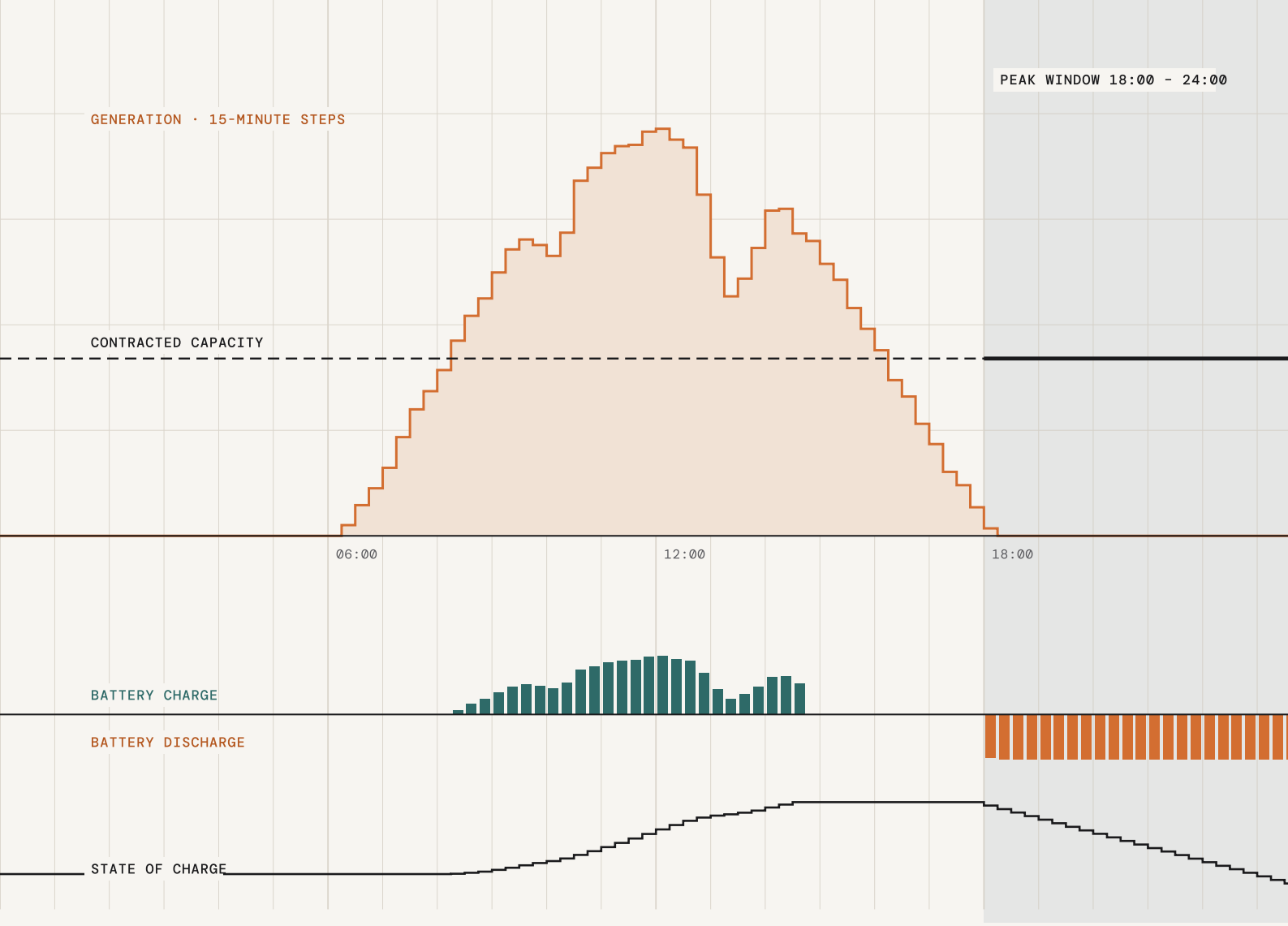
- Single-variable sweep and tornado chart
- Two-variable IRR heatmap and breakeven solver
- Monte Carlo analysis
- PDF report with charts, compliance and cash flow
- Single-line diagram with IEC symbols, in DXF and KMZ
- Dashboard plots in PNG and DFR data in CSV

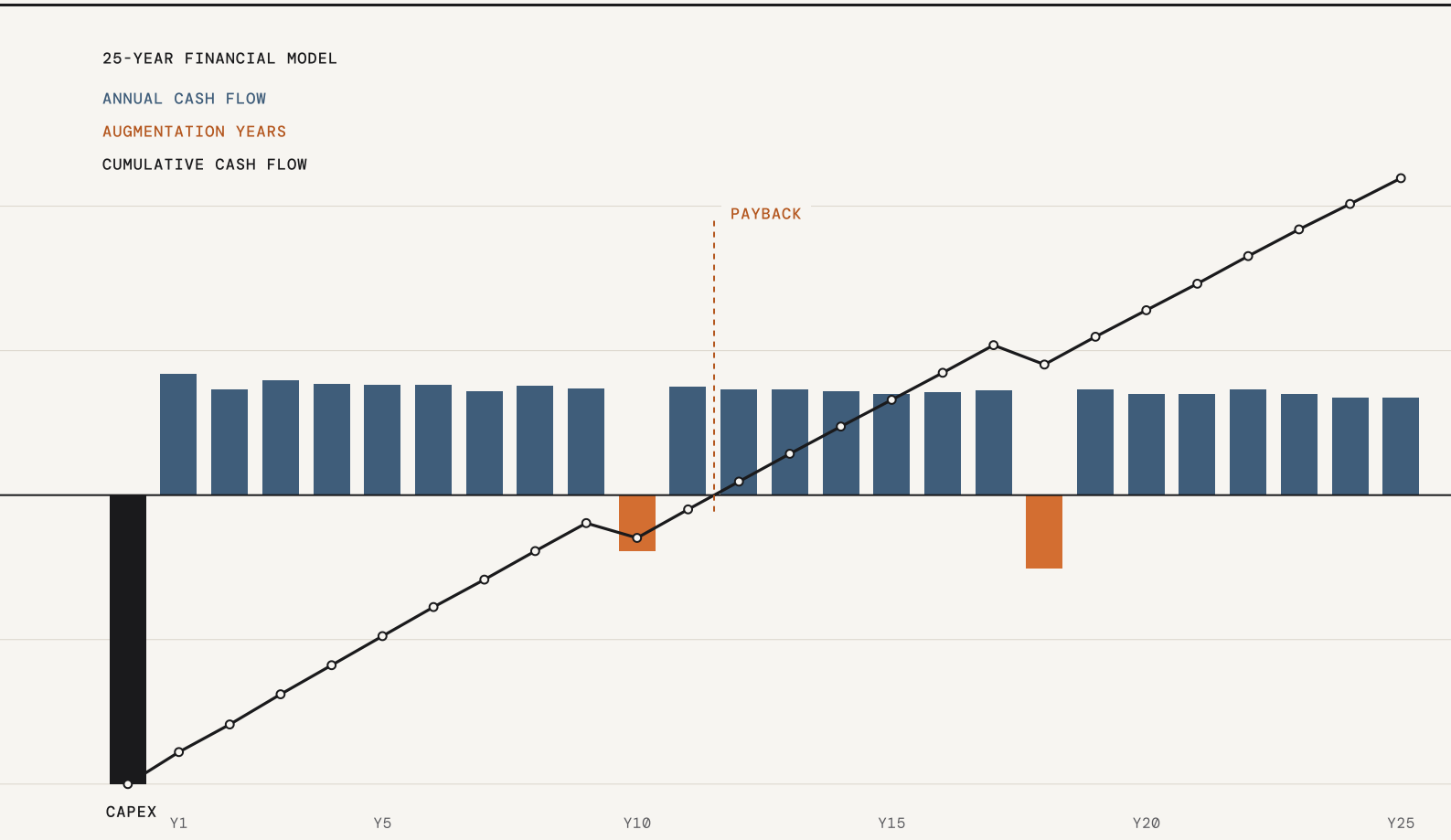
A contracted capacity profile and a market price series can be added as optional inputs.

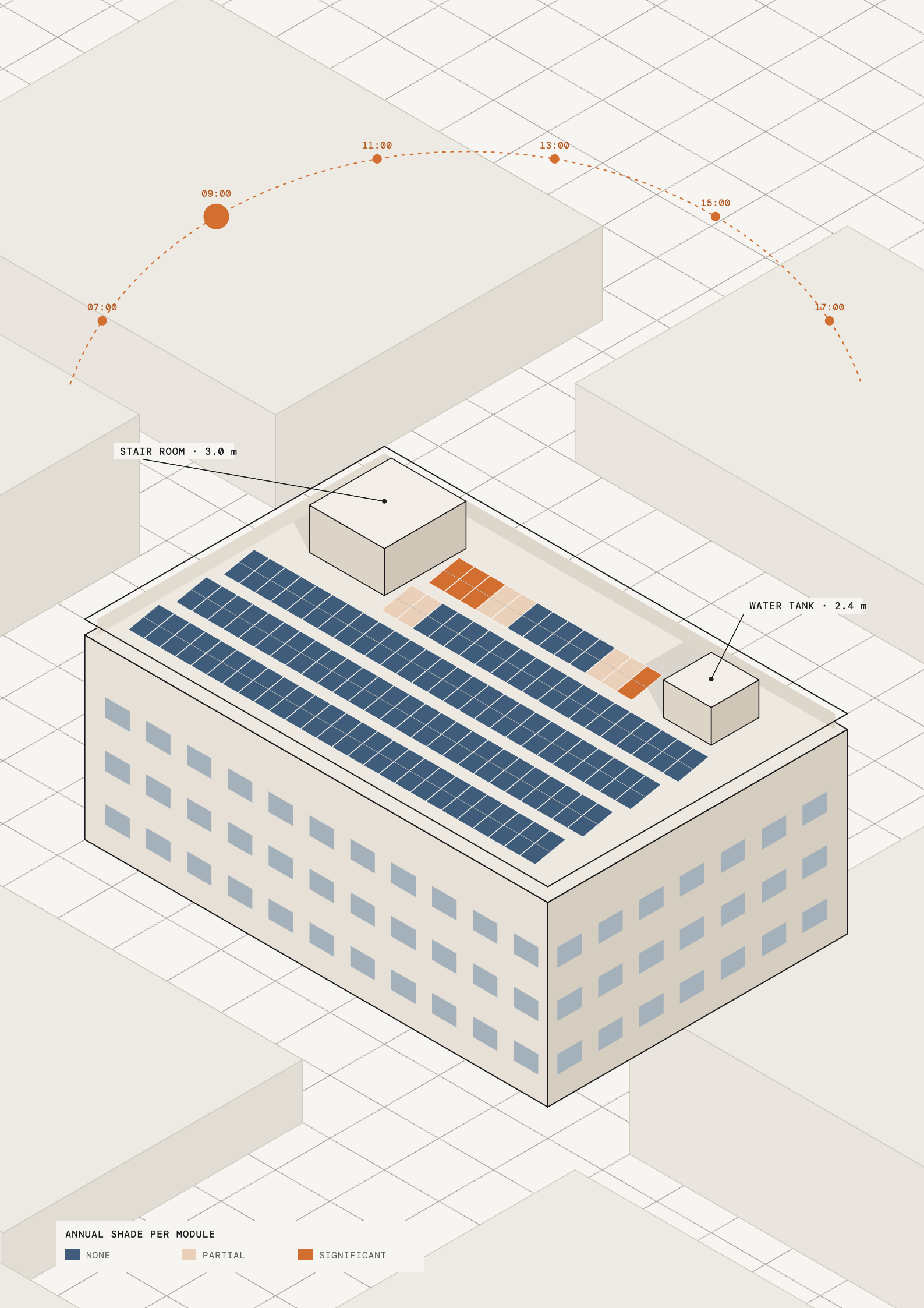
Windows 10 and 11, 64-bit. Free to download and try.

**Scan to download**

solarlayout.app/products/bess


PEAK WINDOW 18:00 - 24:00
GENERATION · 15-MINUTE STEPS
CONTRACTED CAPACITY
06:00
12:00
18:00
BATTERY CHARGE
BATTERY DISCHARGE
STATE OF CHARGE


25-YEAR FINANCIAL MODEL
ANNUAL CASH FLOW
AUGMENTATION YEARS
CUMULATIVE CASH FLOW
PAYBACK
CAPEX
Y1
Y5
Y10
Y15
Y20
Y25


07:00
09:00
11:00
13:00
15:00
17:00
STAIR ROOM · 3.0 m
WATER TANK · 2.4 m
ANNUAL SHADE PER MODULE
NONE
PARTIAL
SIGNIFICANT

03 · ROOFTOP SOLAR

# SolarLayout Rooftop FREE

## SolarLayout Rooftop designs a rooftop PV system in the browser, at no cost.

HOW IT WORKS

### 1 Find and outline the roof

Search for an address or coordinates. Draw the roof on satellite imagery, detect it from the building footprint or enter it by hand. Add tanks, stair rooms, walls, trees and nearby buildings with their heights.

### 2 Lay out the array

Choose a flat roof with tilted rows, a flat east-west array or a sloped roof with flush modules. Set the edge setbacks, the walkways and the hours that must stay free of shade.

### 3 Wire the strings

Pick modules and inverters from the PAN and OND libraries or upload your own files. The software compares stringing options by DC/AC ratio, clipping and energy, and lists the best option first.

### 4 Simulate and hand over

The software simulates 8,760 hours with PVGIS weather or your own file, maps the annual shade on the modules and lists the losses from sunlight to grid by name.

WHAT YOU RECEIVE

- Design report
- Single-line diagram
- Bill of materials and cable schedule
- Energy yield at P50, P75 and P90
- DXF and KMZ files
- Hourly simulation data, and all files in one zip

ACCESS

- Runs in a web browser on a phone, tablet or computer
- Installs to the home screen of a phone or tablet
- No account required
- Designs are stored on your device
- Free of charge

Open SolarLayout Rooftop in a browser and start with an address.

No installation and no account required.

**Scan to open**

solarlayout.app/products/rooftop

DELIVERABLES

# The table shows what the three products deliver.

| | SolarLayout Desktop | BESS Desktop | SolarLayout Rooftop |
|---|---|---|---|
| Automatic layout | ● | — | ● |
| Cable routing | ● | — | — |
| Cable schedule | ● | — | ● |
| Single-line diagram | ● | ● | ● |
| Bill of materials | ● | — | ● |
| Energy yield at P50, P75 and P90 | ● | — | ● |
| Annual shade map per module | — | — | ● |
| Earthing design | ● | — | — |
| Pile coordinates and cut-and-fill volumes | ● | — | — |
| 15-minute dispatch simulation | — | ● | — |
| DFR compliance and penalties | — | ● | — |
| Financial model with IRR, NPV and DSCR | — | ● | — |
| Sensitivity and Monte Carlo analysis | — | ● | — |
| Report | ● | ● | ● |
| KMZ and DXF files | ● | ● | ● |
| RUNS ON | Windows | Windows | Web browser |
| COST | Free to try | Free to try | **Free** |

GETTING STARTED

# You can try all three products free of charge.

## 1 Scan the code

The codes on this page open the product pages on solarlayout.app.

## 2 Install or open

Install SolarLayout Desktop or BESS Desktop on Windows 10 or 11. Open SolarLayout Rooftop in a web browser; it needs no installation.

## 3 Start a project

SolarLayout Desktop includes a sample site, so a layout can be generated before a boundary file is ready. BESS Desktop starts from a generation profile, and SolarLayout Rooftop starts from an address.

**SolarLayout Desktop**

`solarlayout.app/products/solarlayout`

**BESS Desktop**

`solarlayout.app/products/bess`

**SolarLayout Rooftop**

`solarlayout.app/products/rooftop`

SolarLayout

TALK TO US

# Talk to us about licensing, onboarding and pricing.

Write to us or call us. We will help you choose the right product and set it up for your organisation.

| | |
|---|---|
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| PHONE | +91 74830 21209 |
| WEB | solarlayout.app |

SolarLayout is a product of
Rensaar Private Limited, Bangalore, India.