EXPERT PRO
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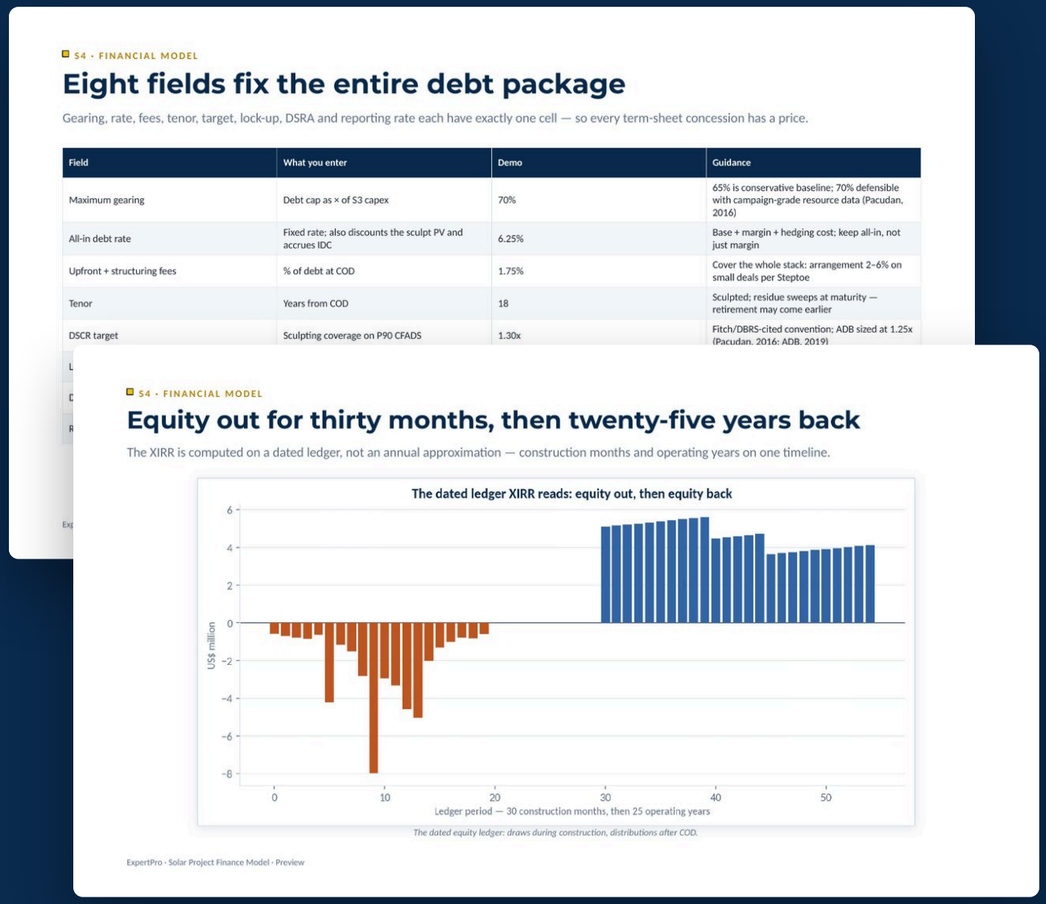
PRODUCT PREVIEW · GUIDED TOUR

Solar Project Finance Model

Size senior debt on P90, sculpt it on DSCR and measure equity on P50, in one Excel model for a utility-scale solar plant.

25 operating years | Debt sized on P90 | 21 checks | No macros



Illustrative demonstration data from the worked example. Not investment advice. 10 pages.

Debt is sized on P90; equity is measured on P50

The scenario selector moves the equity case; the debt case is always P90. That single sentence is most of what bankable means here.

The debt case — locked at the FC base	The equity case — live
P90 energy, base prices, base opex; immune to the six deltas by construction	Scenario factor P50 / P75 / P90 plus all six sensitivity deltas apply
Sculpted to a 1.30x DSCR target on P90 CFADS	Priced by XIRR on a dated ledger: 11.81% equity IRR in the demo
Capacity is the PV of P90 CFADS at the 6.25% debt rate	Minimum DSCR 1.39x on the active case
The P90 profile holds 1.30x flat until retirement	Distributions are what is left after the waterfall
Stays FC-locked after close, so the Data Tables never need a re-freeze	Deltas model forward-looking stress on the equity view only
Lock-up floor 1.20x, watched by CHK-S4-13 (WARNING)	Committee IRR band watched by CHK-S4-15 (WARNING)

S4 · FINANCIAL MODEL

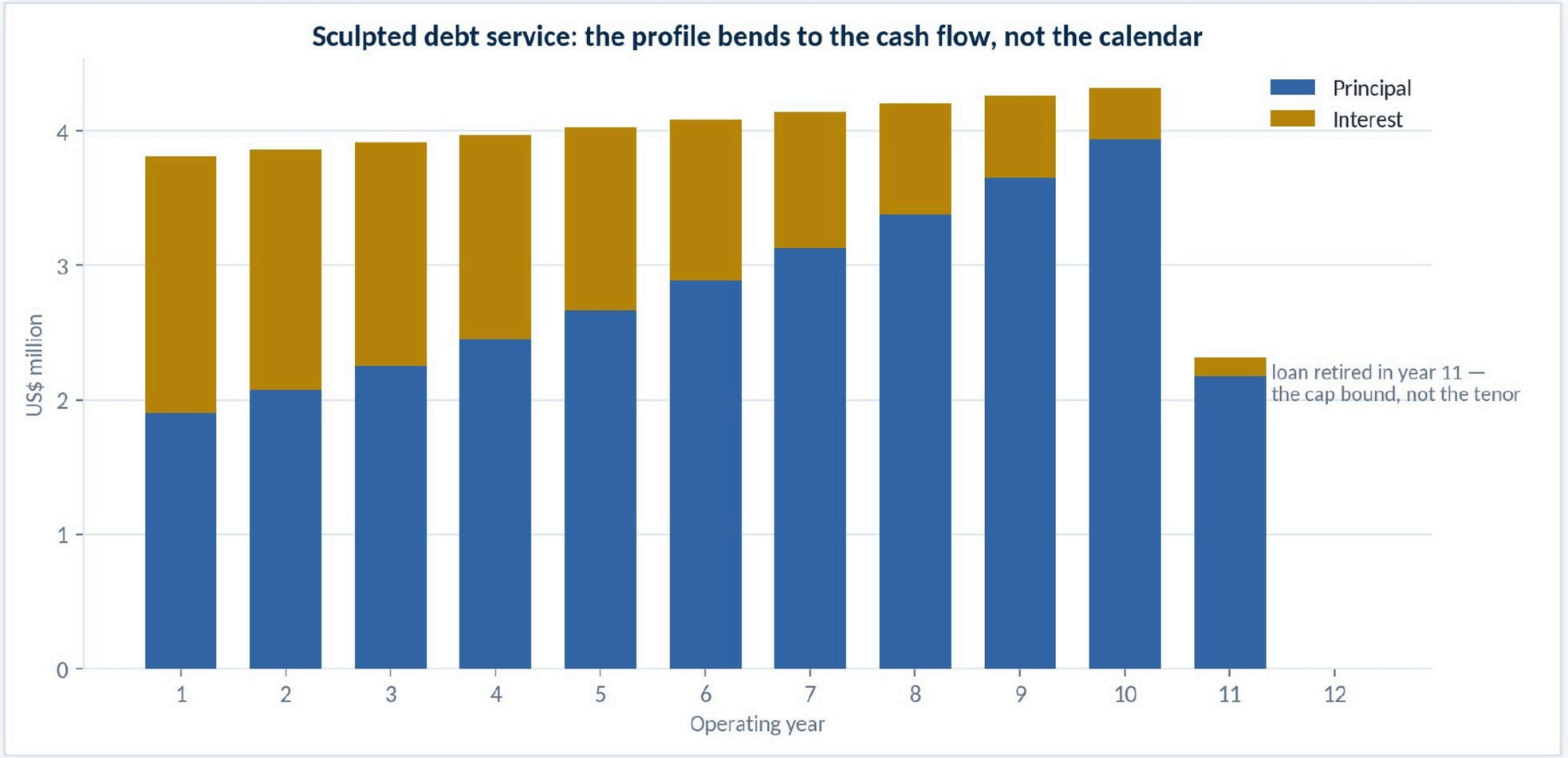
Eight fields fix the entire debt package

Gearing, rate, fees, tenor, target, lock-up, DSRA and reporting rate each have exactly one cell — so every term-sheet concession has a price.

Field	What you enter	Demo	Guidance
Maximum gearing	Debt cap as × of S3 capex	70%	65% is conservative baseline; 70% defensible with campaign-grade resource data (Pacudan, 2016)
All-in debt rate	Fixed rate; also discounts the sculpt PV and accrues IDC	6.25%	Base + margin + hedging cost; keep all-in, not just margin
Upfront + structuring fees	% of debt at COD	1.75%	Cover the whole stack: arrangement 2–6% on small deals per Steptoe
Tenor	Years from COD	18	Sculpted; residue sweeps at maturity — retirement may come earlier
DSCR target	Sculpting coverage on P90 CFADS	1.30x	Fitch/DBRS-cited convention; ADB sized at 1.25x (Pacudan, 2016; ADB, 2019)
Lock-up threshold	Covenant floor for the warning check	1.20x	Distribution lock-up level in typical term sheets
DSRA	Months of forward debt service	6	Steptoe waterfall's reserve level; funded at COD by equity here
Reporting rate	Equity NPV discount rate	10%	Committee convention, not a market price

Sculpted debt bends to the cash flow, not the calendar

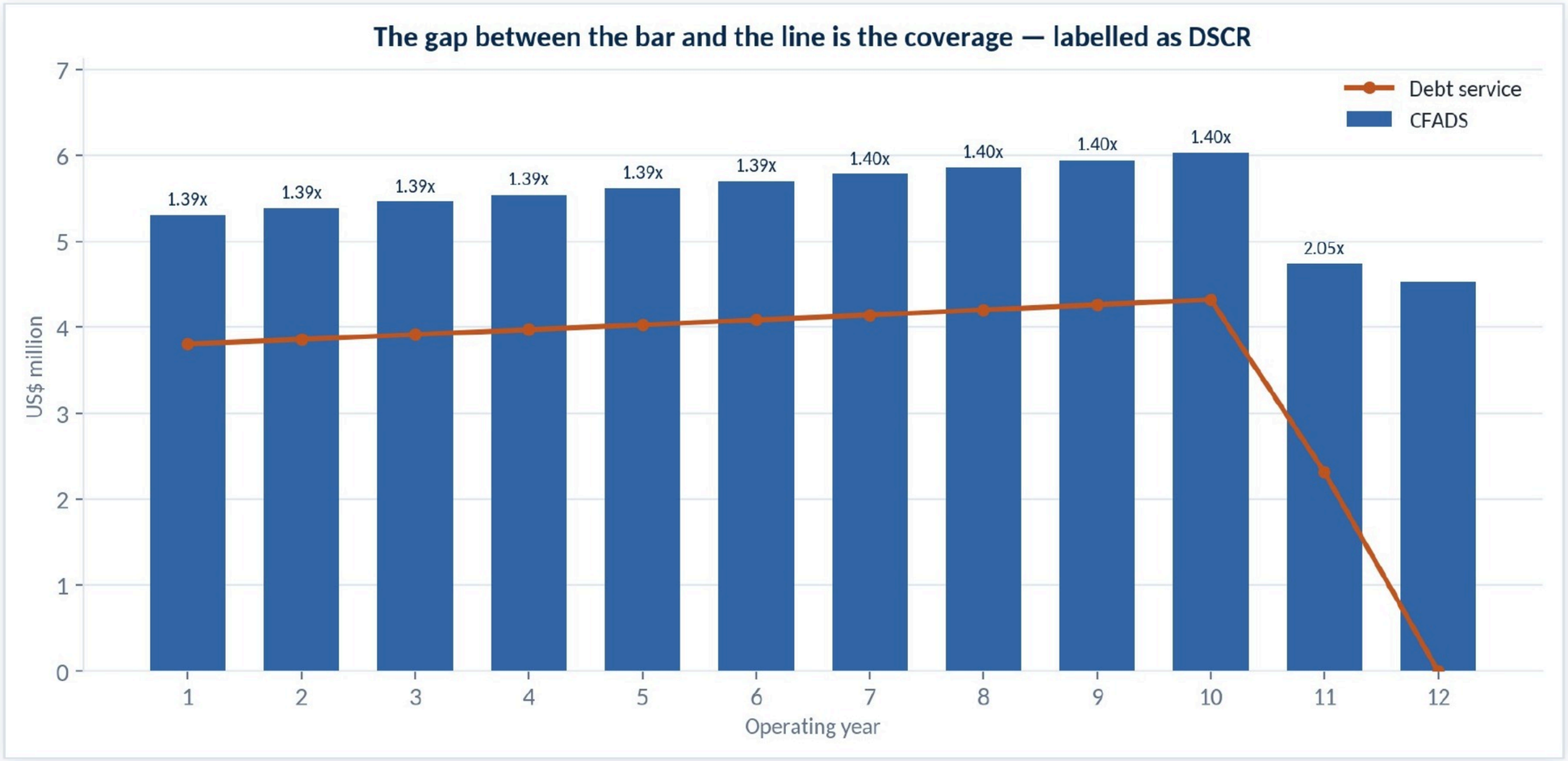
Principal is whatever the target coverage leaves after interest — so the profile rises with the plant's cash and stops when the loan is repaid.



Annual debt service on the demo: principal and interest, sculpted at 1.30x on P90.

The gap between the bar and the line is the DSCR

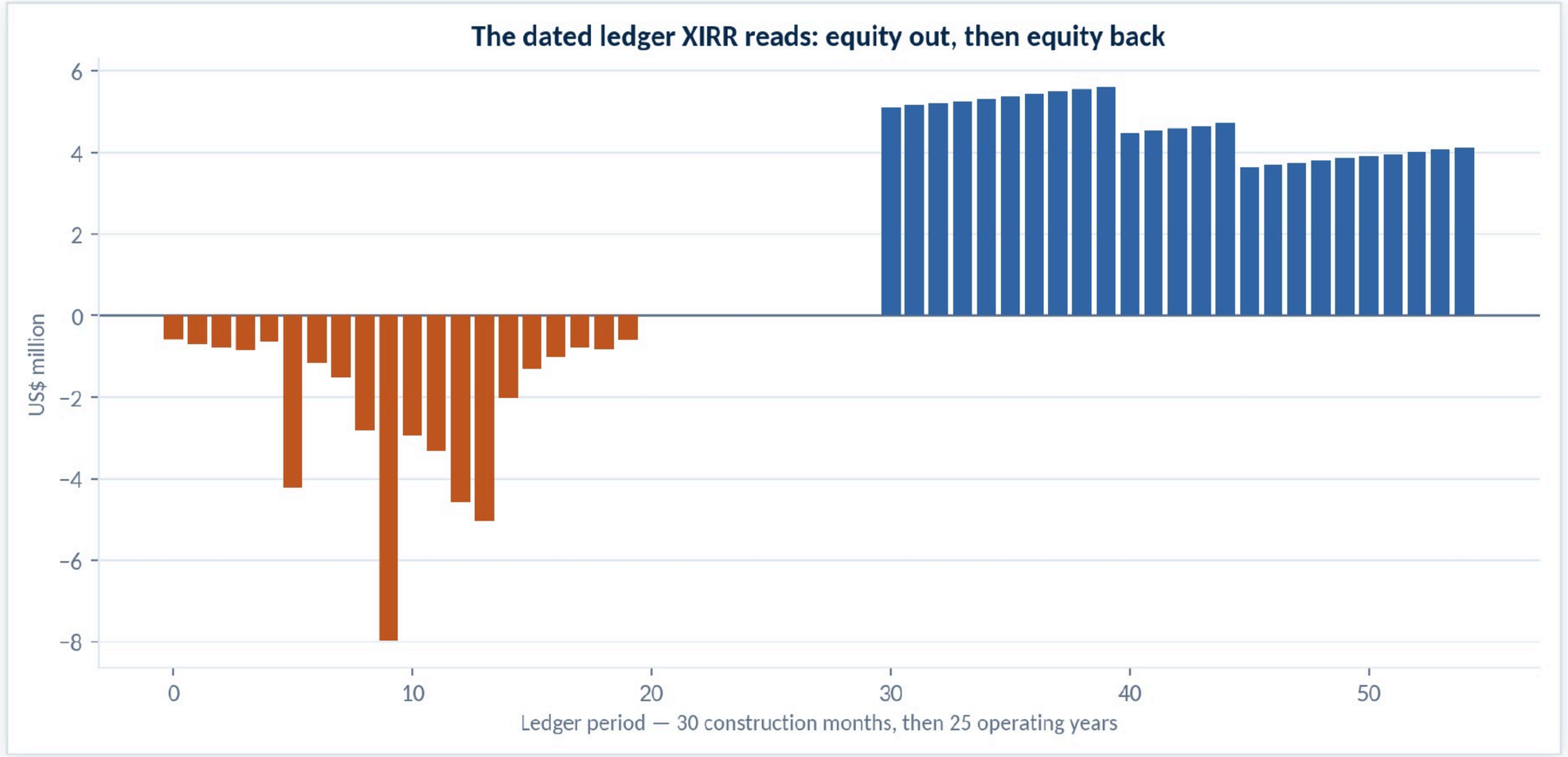
Coverage is not an opinion — it is a ratio computed every year between the cash the plant generates and the service it owes.



CFADS against debt service, with the resulting DSCR printed above each year.

Equity out for thirty months, then twenty-five years back

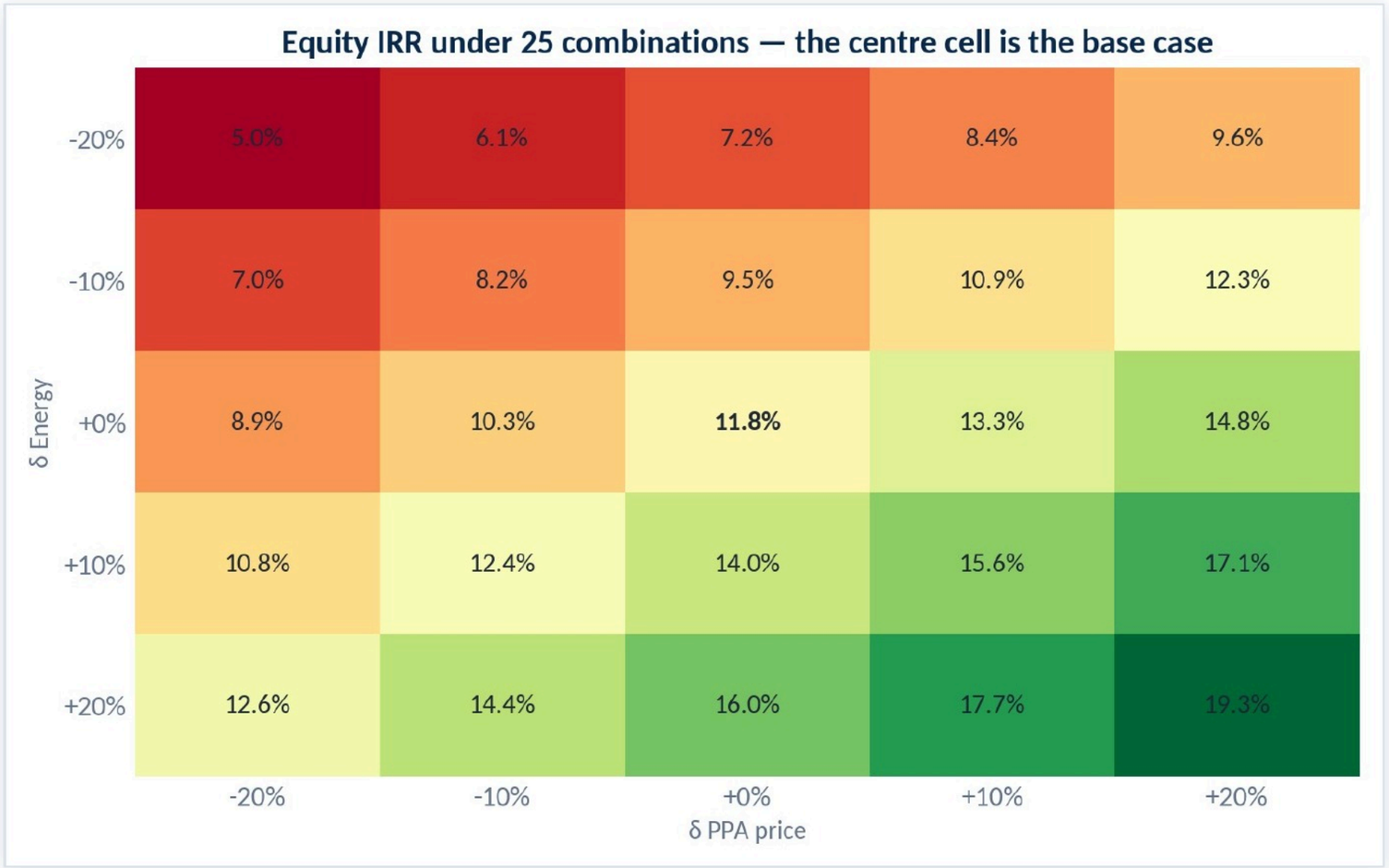
The XIRR is computed on a dated ledger, not an annual approximation — construction months and operating years on one timeline.



The dated equity ledger: draws during construction, distributions after COD.

Twenty-five combinations, one page, no re-freeze

The sensitivity grids flex the equity case only. Debt stays locked at financial close, exactly as it behaves in reality after signing.



Equity IRR across ±20% on energy and PPA price — the delivered values, computed by an independent reimplementation of the model.

S4 · FINANCIAL MODEL

Twenty-one checks stand between model and decision

The Checks sheet is generated from the delivered workbook, so its wording and the manual's wording cannot drift apart.

- **The pasted chain — 01 to 06.** Both upstream seals, currency, plant size, the COD seam to the day, and the S3 monthly reconciliation.
- **Provenance — 17, 18, 19, 20.** EXACT label alignment on both blocks, one shared site identity, and one export per template.
- **Funding closure — 07, 08.** Cumulative capex and debt reach their targets; sources equal uses and the monthly equity ledger closes.
- **Debt integrity — 09, 10.** The loan amortises to zero by final maturity, and both frozen quantities sit inside tolerance.
- **Ties and tax — 11, 12, 16.** The ops P50 row reproduces S2, depreciation allocates its base, and no Excel errors anywhere.
- **Committee gates — 13, 14, 15, 21.** Lock-up and IRR-band warnings, XIRR finds a root, and every sensitivity delta is zero.

WHAT YOU RECEIVE

What is in the download

Format: Excel + PDF.

XLSX	The standalone financial model workbook
INPUTS	A Standalone Input Adapter and an Input Data Map
GUIDE	The detailed user manual and a Standalone Quick Start
DEMO	A pre-loaded demonstration case and licence documentation

Before you buy

- Desktop Excel 2019 or Microsoft 365.
- Energy study and construction estimate are prepared outside the model.
- It does not replace a lender's model, credit approval, tax opinion or independent engineer report.
- Includes a configurable, simplified Chilean corporate-tax treatment.

Every workbook opens on the complete worked example, so you can follow the finished answer before entering your own data.

WHO BUILT IT

Built by the ExpertPro team

ExpertPro builds the financial and decision infrastructure behind capital projects, at the intersection of project finance, engineering economics and data.

7	100+	15+	50+
senior specialists	years of combined experience	professional certifications	delivered projects

The team

- Project finance and public-private partnerships, PMP® and APMG CP3P® certified
- Data architecture and data science, led by a mathematician
- Process automation and governance, with more than twenty years in banking
- Information security and compliance: ISO/IEC 27001 Lead Auditor and CEH
- Enterprise systems integration and machine-learning engineering

Every model

- Built to the FAST Standard 02c: Flexible, Appropriate, Structured, Transparent
- No macros and no hidden logic; one formula per calculation row
- A documented source and status behind every input
- A checks panel that must read green before results leave the workbook
- A complete user manual and a worked demonstration case

Master's degrees in industrial engineering, information technology and business, a degree in mathematics, and programmes from MIT (applied AI) and HarvardX (data science). Delivery in five Latin American countries, across energy and utilities, transport, logistics, agroindustry and healthcare.