

Summary of rooftop solar analysis

Location: Oslo, Norway

Date of analysis: Aug/2025

Recommendation: install 25 solar panels (10.88 kWp, 48.82 m²), for a net present value of NOK 24.351,36 with a payback of 17.6 years.

Main economic results

Financing	NPV (NOK)	Payback (years)	IRR (%/year)	LCOE (NOK/kWh)
Gov. subsidies and 75% bank debt	14,591.63 EUR 1,228.82	18.4	5.0%	0.776 EUR 0.065
Gov. subsidies and 100% supplier's credit	24,351.36 EUR 2,050.73	17.6	6.1%	0.734 EUR 0.062
Gov. subsidies and 100% equity	17,603.45 EUR 1,482.46	16.5	5.0%	0.763 EUR 0.064
No gov. subsidies and 100% equity	-3,490.30 EUR -293.93	19.0	3.7%	0.854 EUR 0.072

(All rows are for 25 panels)

*The conversion from NOK to EUR has been made based on the exchange rate of 11.8745 from the European Central Bank as of August 4, 2025 (ECB 2025).

Additional results

With a 12 kWh battery and a 25-panel solar system, fully financed through 100% supplier credit at an interest rate of 2.17%, the required upfront investment is NOK 74,906.25. The battery holds 3,670.45 kWh/year, but the NPV declines to -39,952, with a payback period of 23.8 years and an LCOE of 1.191. As there are no additional subsidies for batteries in Norway, the investment remains financially unattractive.

Main inputs and assumption

Household and Economics

Electricity Consumption	27,905	kWh/year	Inflation	2%	per year
Electricity price – buy	1.061717	NOK/kWh	Bank loan interest rate	4.96%	per year
Electricity price – sell	0.488	NOK/kWh	Bank loan maturity	5	years
			Equity cost of capital	3.93%	per year

PV panels

Peak power	435	W/panel	System losses and degradation with age	14%	of output
Panel area	1.95	m ² /panel			
Useful life	30	Years	Maintenance costs	2%	of CAPEX

Total cost of optimal installation size (without subsidies)	137,785	NOK
Total cost of optimal installation size (after subsidies)	116,692	NOK

Government subsidies

The Norwegian government offers a fixed subsidies of NOK 7,500 (EUR 631.61) and adds NOK 1,250 (EUR 105.27) for every kWp of installed capacity, up to a ceiling of 20 kWp.

Some PV panel suppliers

- Solcellespesialisten: <https://bolig.solcellespesialisten.no/>
- Otovo: https://solceller.no/?_gl=1*1s7phem*_up*MQ..*_gs*MQ..&gclid=CjwKCAjwg7PDBhBxEiwAf1CVu4FwVmiBvxg7vWA23-m05AF7VN3gQRw8aQc3CVvpOnoKzkjhZ5E0uBoC8ZgQAuD_BwE&gbraid=0AAAAADy4S4FIWu5NTAOgLK_c6xWmUMCCv

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