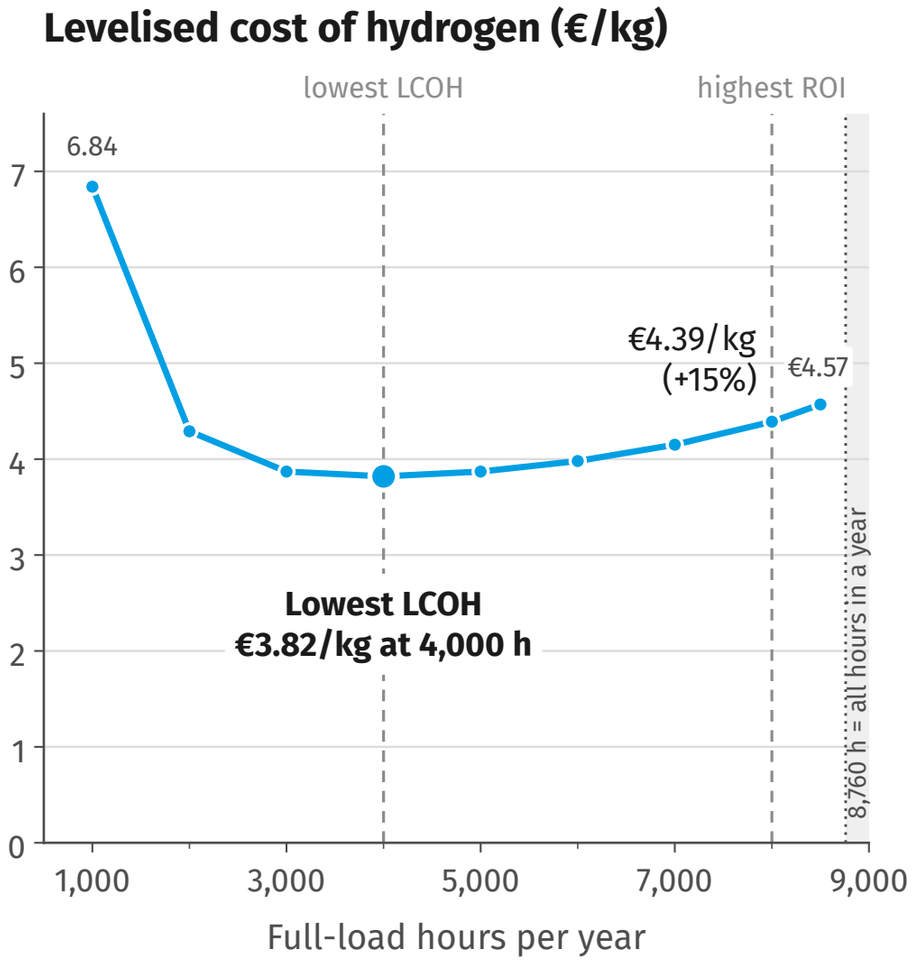
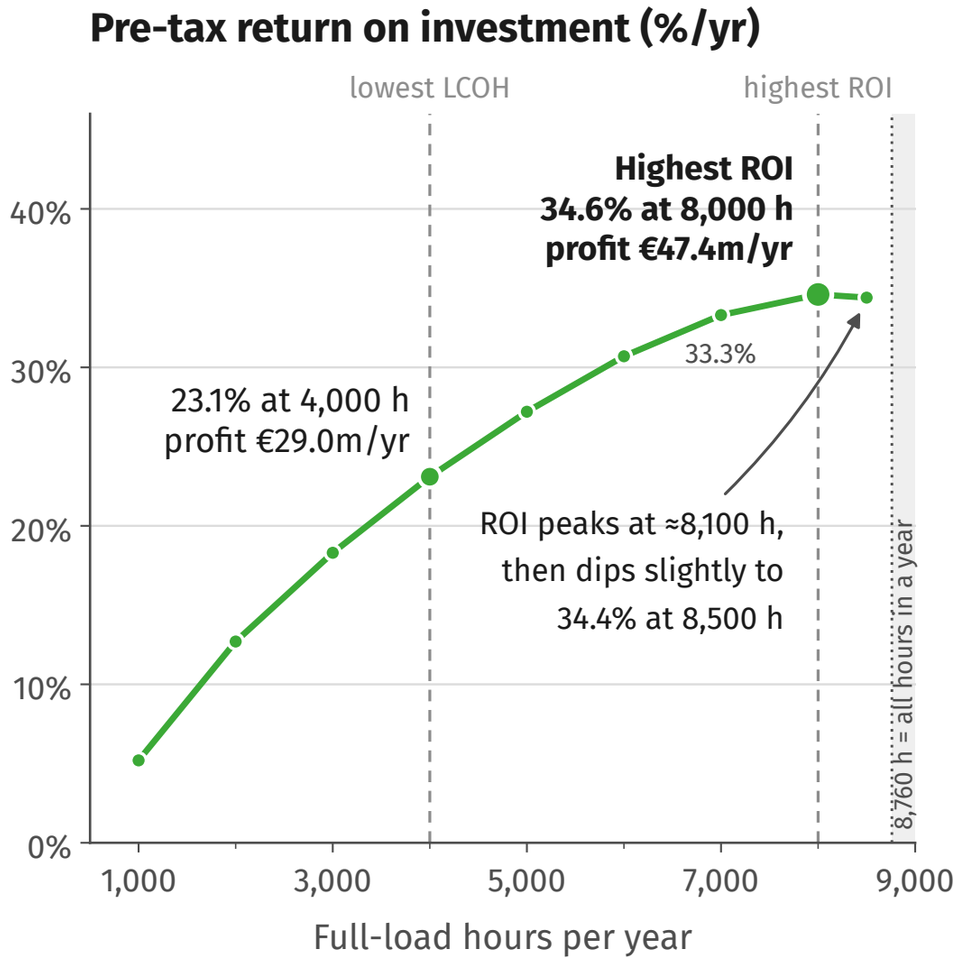
Impact of electrolyser operating hours on financial return on investment

100 MW electrolyser in Germany, hydrogen sold at an illustrative €7/kg





100 MW, €1,600/kW fully installed (€160m), 44 kWh/kg, H2 at 35 bar(g), 10%/yr capital charge, hydrogen sold at an illustrative €7/kg.

Power: cheapest hours of DE-LU day-ahead prices, Oct 2023 – Sep 2026, plus 2026 German charges with current electrolyser exemptions.

ROI = (revenue − power cost − 20-year depreciation) ÷ capex, pre-tax. Profit is after the 10% capital charge. Excludes O&M, stack replacement, tax.

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