

# Final report

- Market: PL
- Timezone: Europe/Warsaw
- Data coverage: 2024-01-01 00:00:00+01:00 → 2025-06-30 00:00:00+02:00
- Generated at: 2025-12-23 11:19:16.330035+01:00

Latest week snapshot:

- Week start (local): 2025-06-23 00:00:00+02:00
- Price mean: 78.59 €/MWh (WoW +3.11)
- Price P10 - P90: 0.12 → 127.25 €/MWh
- Risk hours: neg=9, spike=4
- Pumped: pump\_hours=153, gen\_hours=68, net\_mean=-46.33 MW
- Pumped spread proxy (generate - pump): 113.17 €/MWh

Backtest snapshot (walk-forward, weekly):

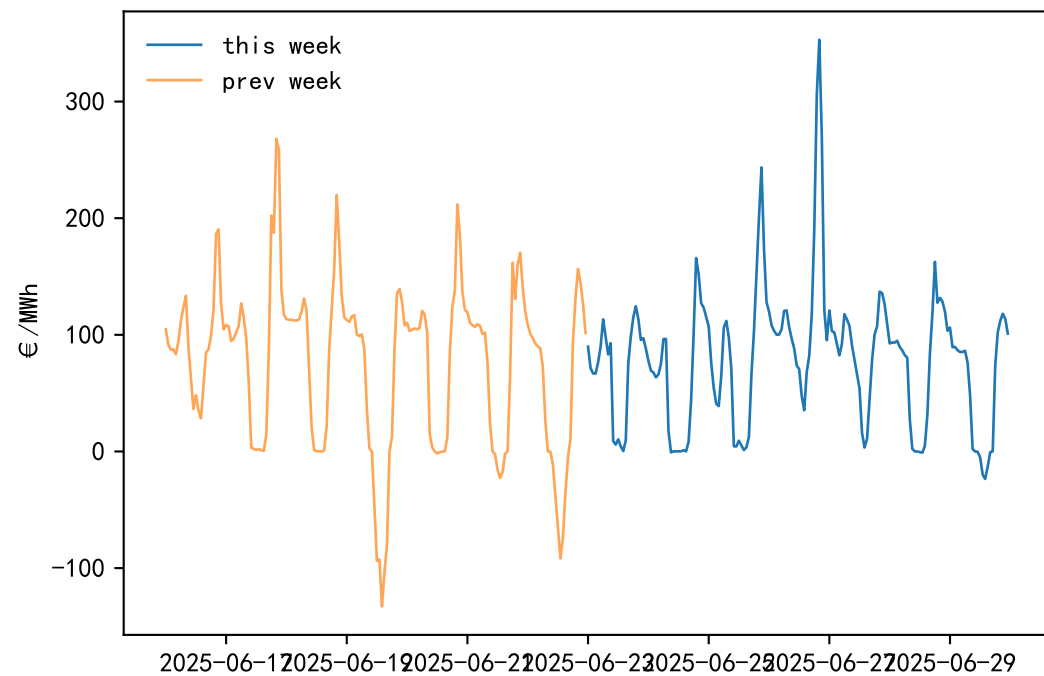
- Train window: 52 weeks | min\_week\_hours=160
- Spike window: 8 weeks
- Direction macro-F1: 0.399
- Interval coverage (P10 - P90): 0.520 | miss rate≈48%
- MAE(|actual - P50|): 18.25 €/MWh

# Methods and pipeline

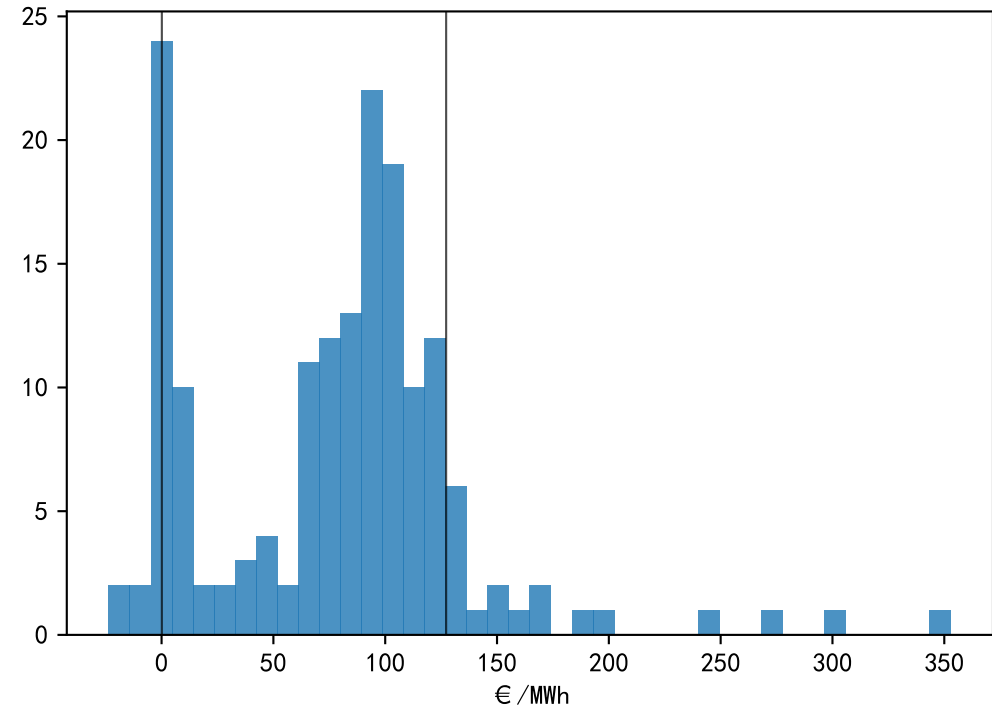
## Pipeline:

- 1) Parse datetime to UTC and convert to market timezone.
- 2) Build hourly features: risk flags (neg/spike), pumped-net and modes, mix shares, ramps.
- 3) Aggregate to weekly table (Monday 00:00 local): price stats + risk hours + pumped behavior + mix.
- 4) Supervised targets: next\_week\_price\_mean and delta.
- 5) Walk-forward backtest (weekly):
  - Direction (Up/Down/Flat) with adaptive threshold  $\theta = 0.25 * \text{std}(\text{delta\_history})$ .
  - Interval (P10/P50/P90) via quantile regression (HistGradientBoostingRegressor, loss=quantile).
- 6) Outputs: weekly report PDF, review narrative, backtest figures, and this final report PDF.

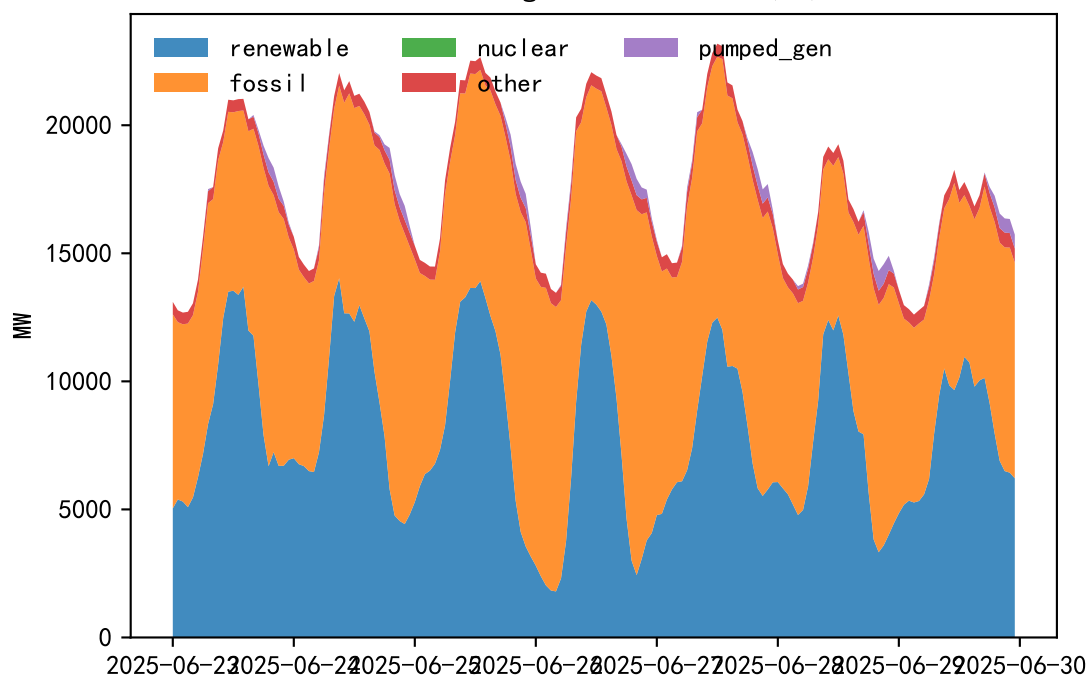
Hourly price: this vs prev week



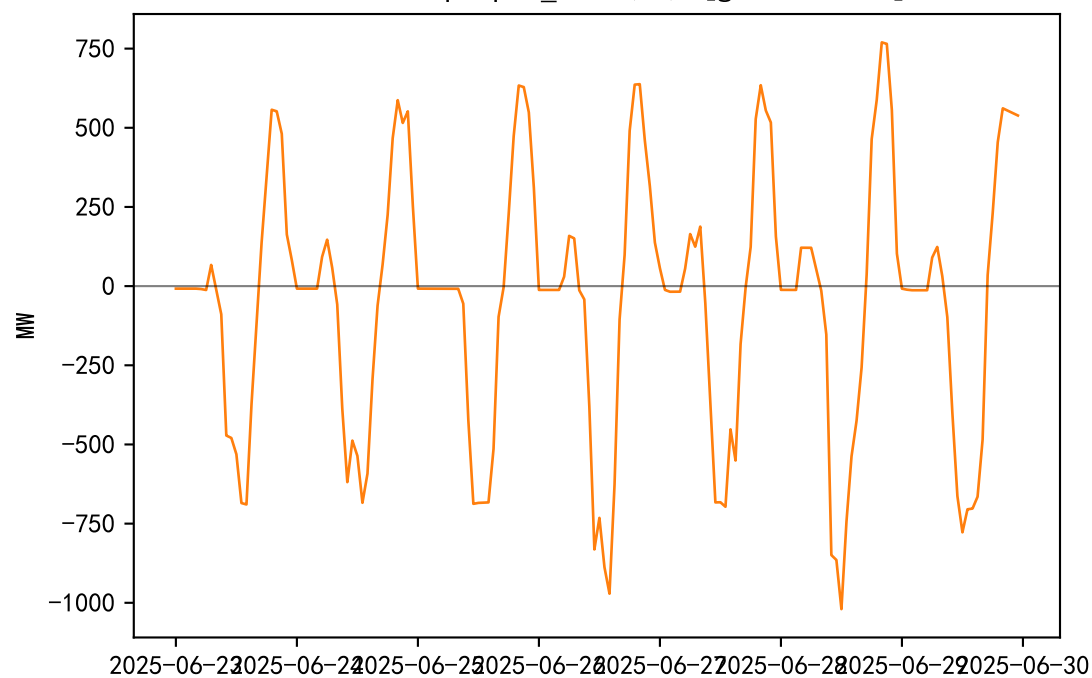
This week price distribution (P10/P90)



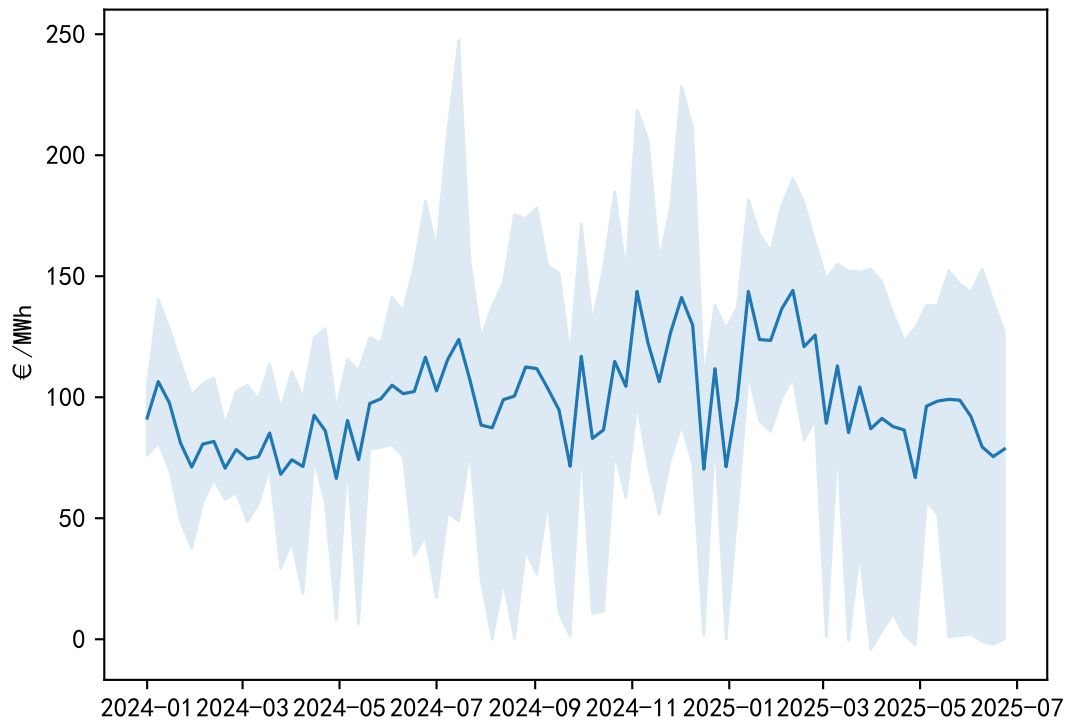
This week generation mix (MW)



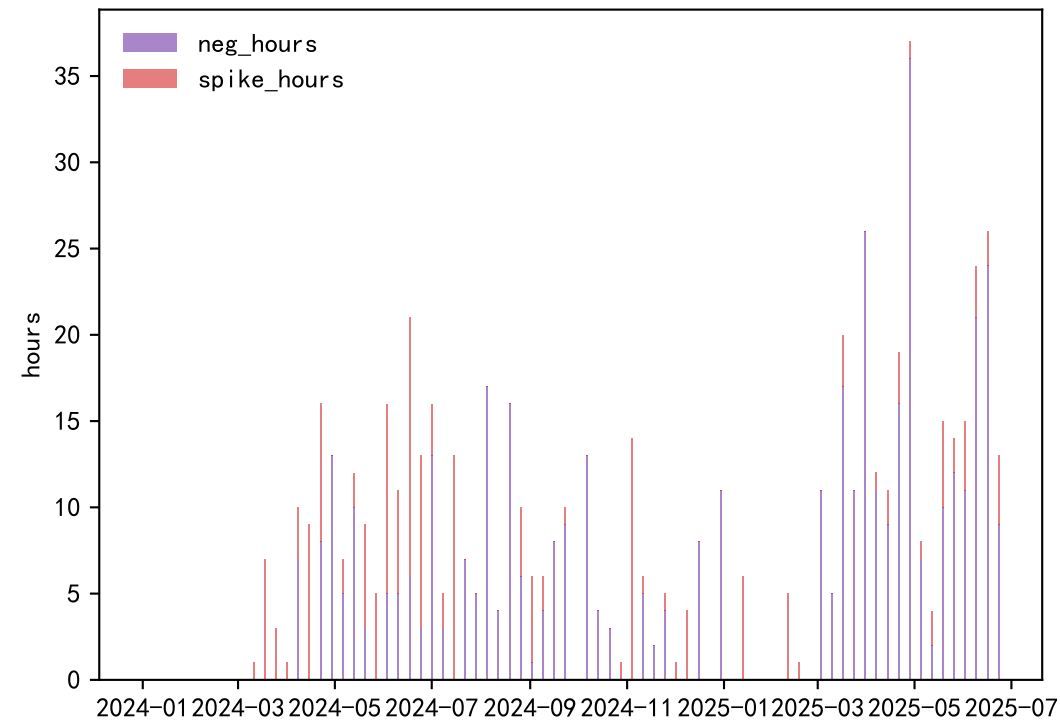
This week pumped\_net (MW) [gen-consume]



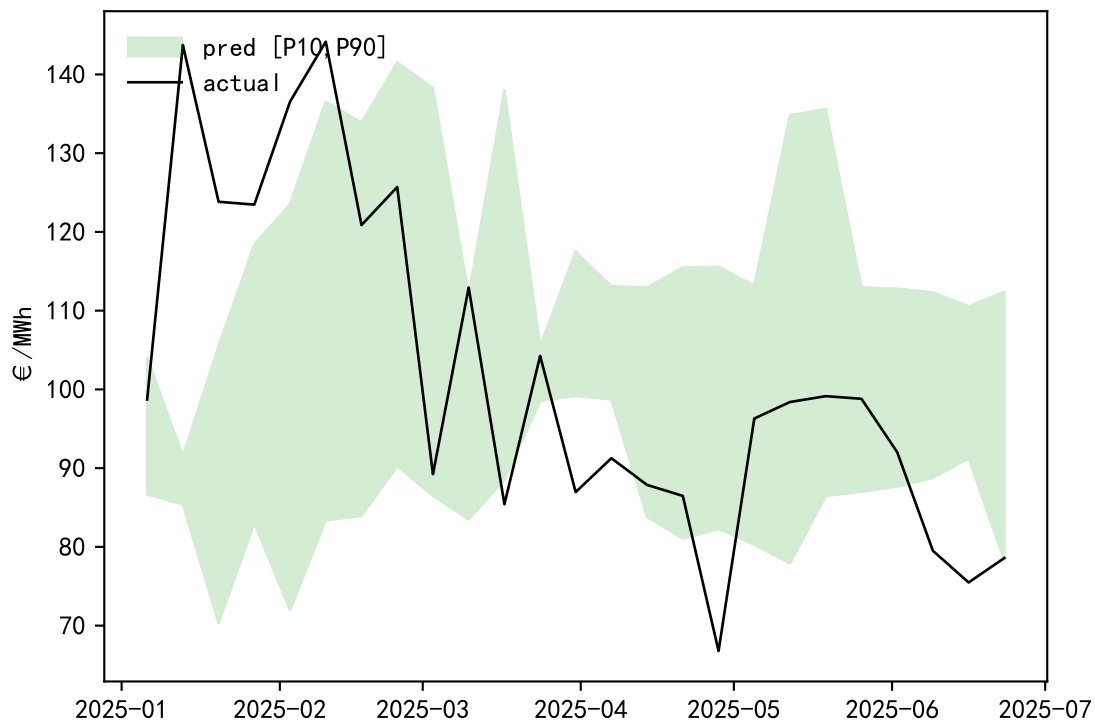
Weekly price mean and P10 - P90 (realized)



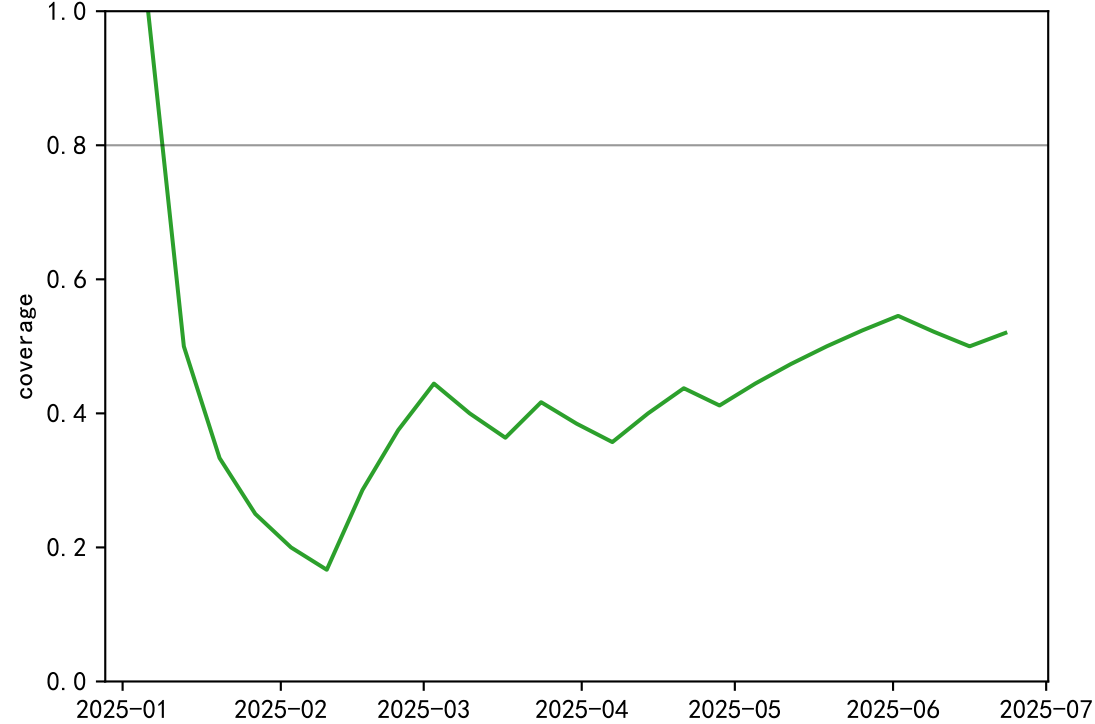
Weekly risk hours (negative + spike)



Backtest: interval vs actual (next-week mean)

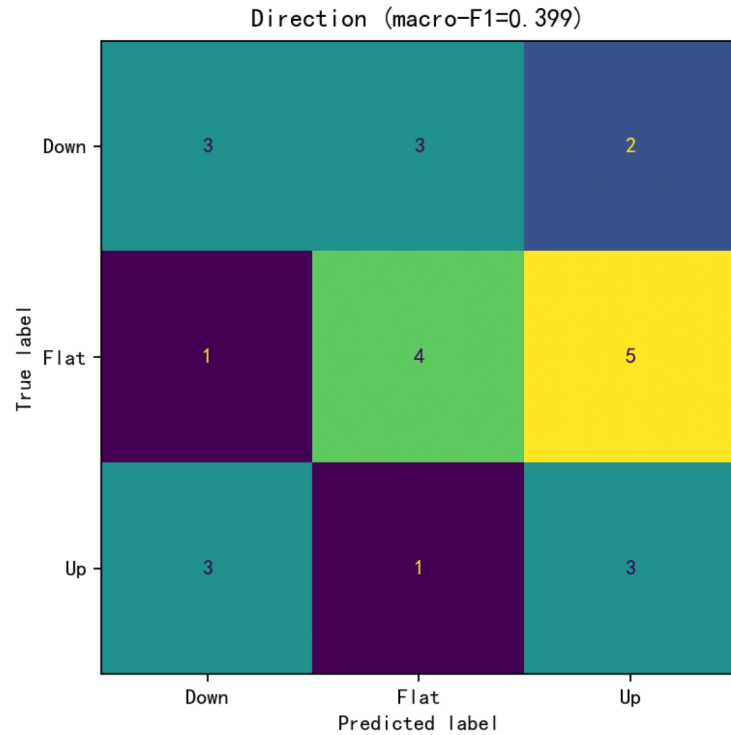


Coverage (cum), macro-F1=0.399

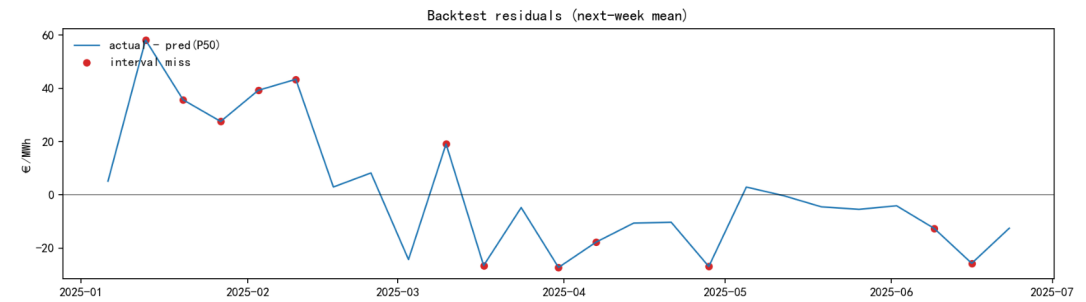


# Backtest diagnostics (figures)

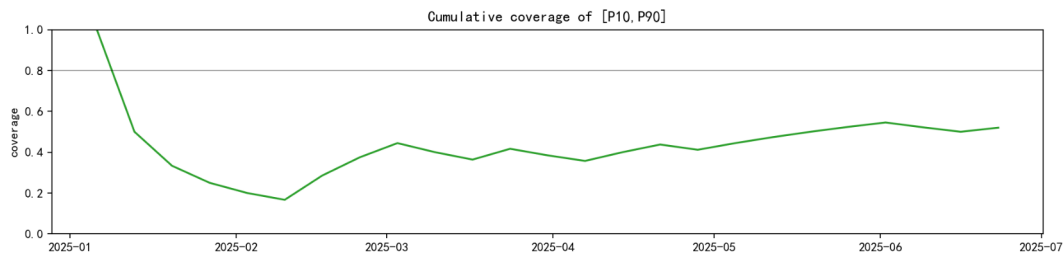
Direction confusion



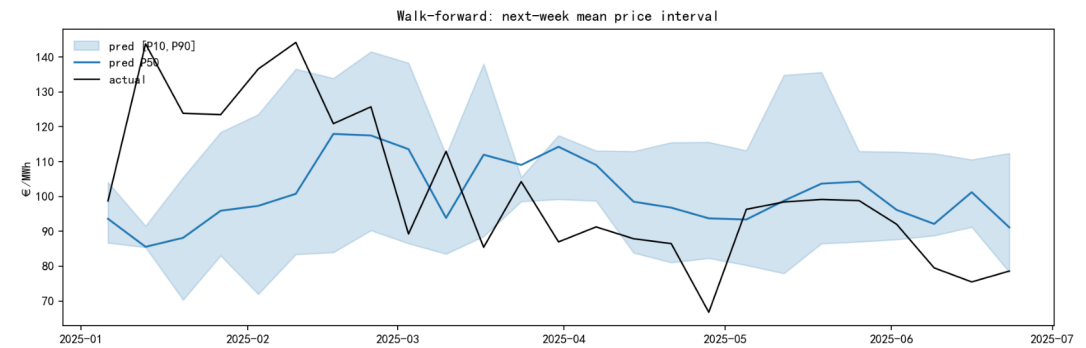
Residuals over time



Coverage over time



Interval backtest



# Review notes

- A narrative review is generated at: `reports/weekly_review.md` (recent 8 weeks).
- Use it as a structured log: conclusion → possible drivers → risk note → next-week watchlist.

## Notes:

- Interval coverage is sensitive to tail events and regime changes.
- If miss rate is high, increase train window, enrich features, or adjust thresholds.