The Cost of a Dry Year

Turning Albania’s hydro dependence into regional value

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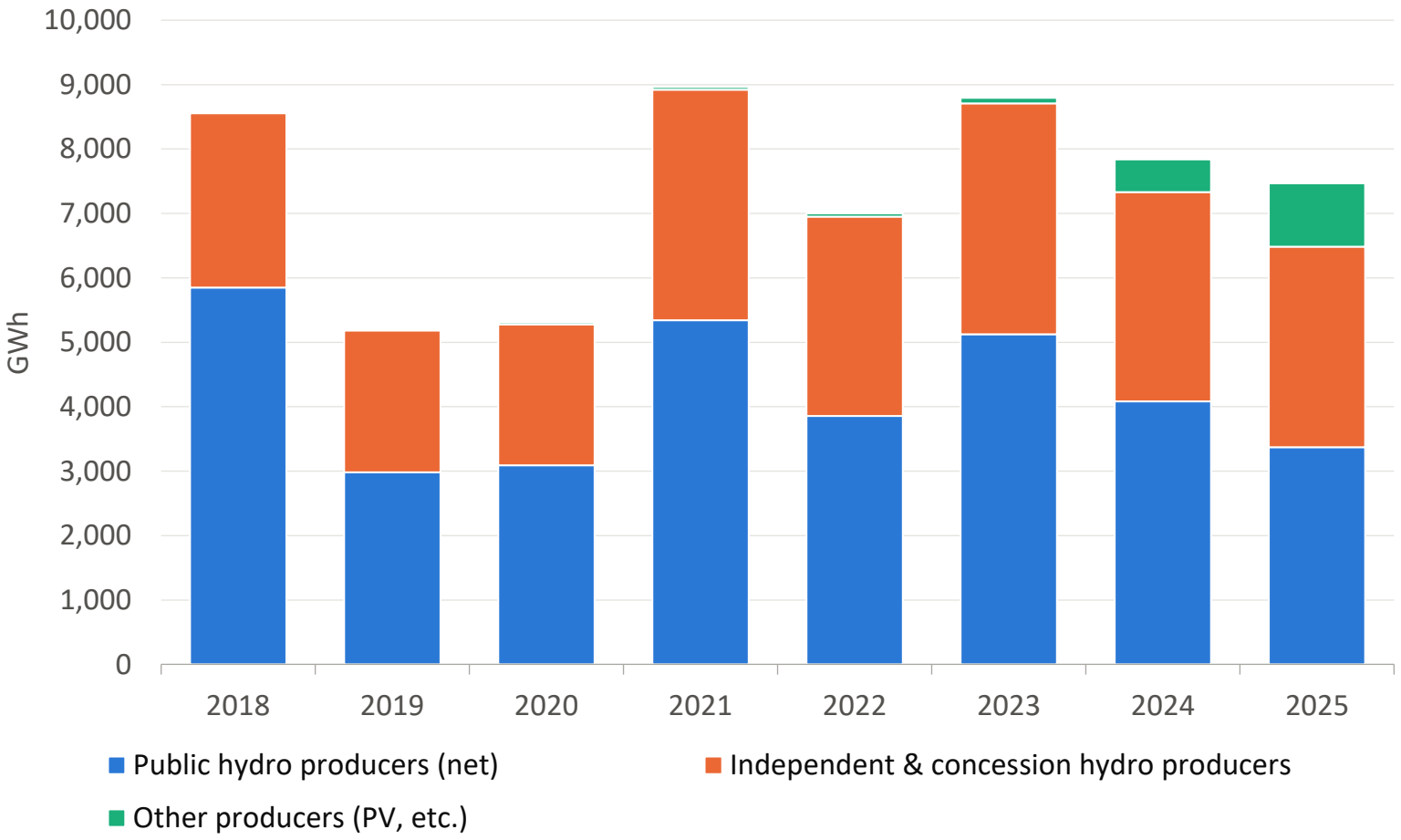
Annual output swings by up to 45% of consumption with the rain



5.2 → 9.0 TWh

Lowest (2019) and highest (2021) net production, 2018–2025

99–100%

Hydro share of production 2018–2023; about 87% in 2025 as solar grows

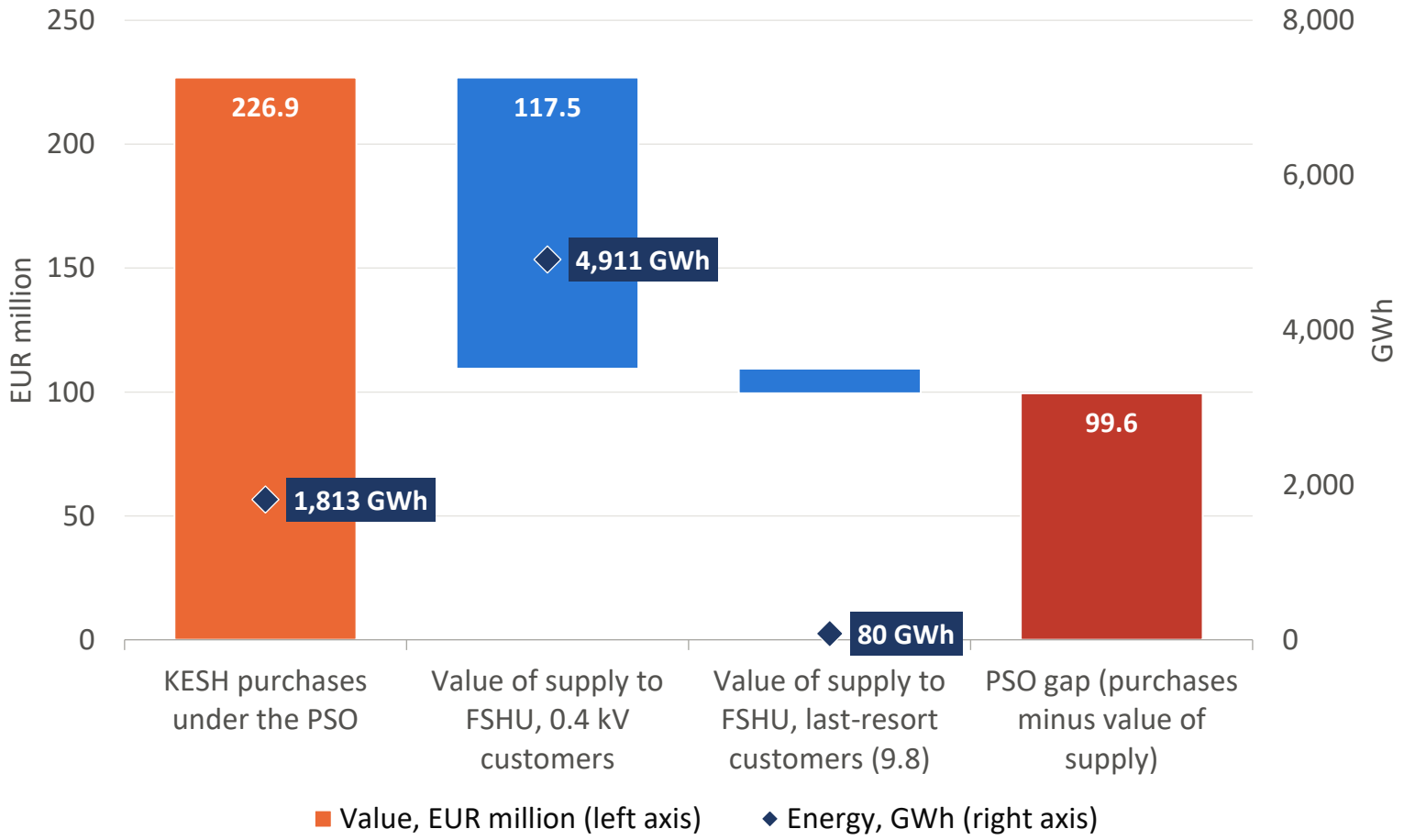
–15%

Possible fall in large-hydro output by 2050 (NDC 3.0)

Source: INSTAT, Balance of electric power 2018–2025; Albania NDC 3.0, p.32; author's calculations. Paper: Exhibit 1.

FSHU = Universal Service Supplier

KESH supplied FSHU with 5.0 TWh – 1.8 TWh of it bought at about €125/MWh – and received €25.5/MWh: a gap of about €100 million



3.2 + 1.8 TWh

KESH's 2025 supply to FSHU: 3.2 TWh from its own production (64%) and 1.8 TWh bought under the PSO (36%)

268 MW

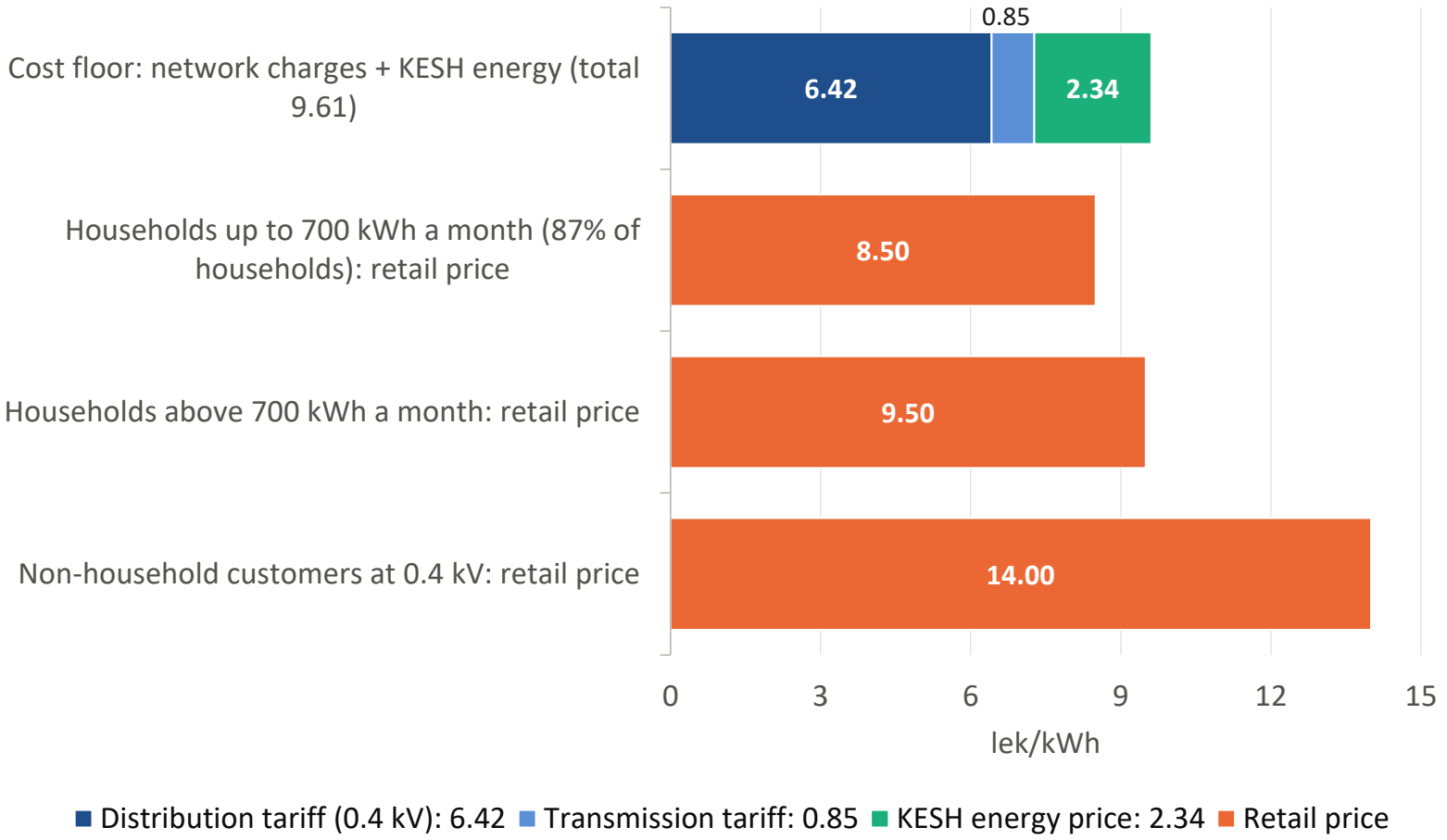
Average output of public hydro plants in Q3 2025, when KESH bought 961 GWh under the PSO (389 MW for the year)

"Whole quantity"

The 2026 contract still obliges KESH to supply all that FSHU needs

Source: ERE Annual Report 2025, Tables 21, 23–24 (pp.98–99); INSTAT quarterly balance; KESH; KESH–FSHU contract 2026; Eurostat; author's calculations (own production = supply − PSO purchases).
Paper: Section 2 table, Exhibits 3–4.

Households use 54% of the electricity delivered to customers and pay 8.5 lek/kWh, below the 9.61 cost floor



54%

Households' share of electricity delivered to customers, 2025: 3,641 of 6,752 GWh (44% of total use incl. network losses)

8.5 lek/kWh

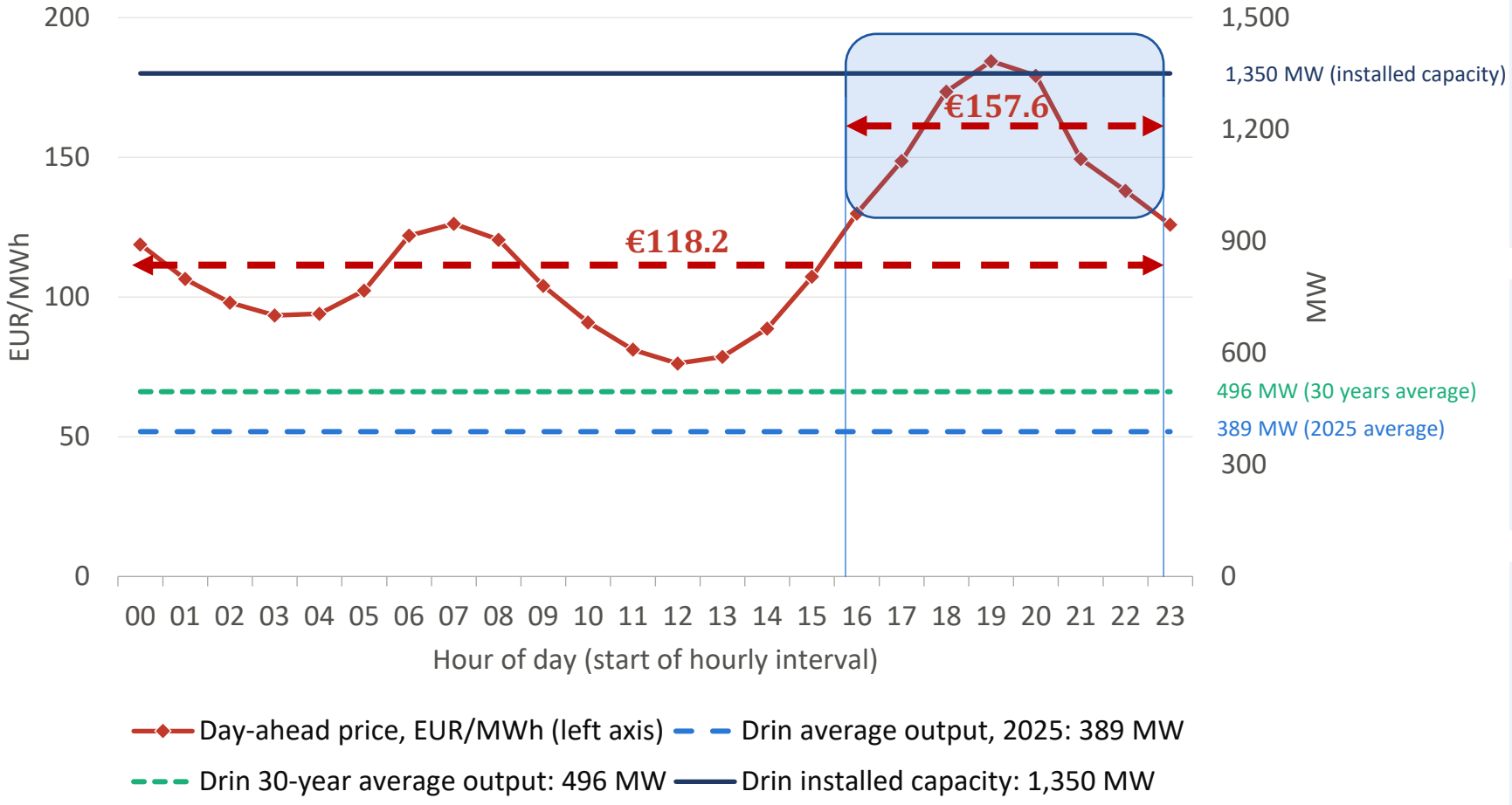
Price for households using up to 700 kWh a month: 87% of households

9.61 lek/kWh

Cost floor in 2025: distribution + transmission + KESH energy, before supply costs

Source: INSTAT, Balance of electric power 2018–2025, rows 21, 29–30; ERE Decision 10/2025, annex p.5 (extended to 31.12.2026 by Decision 322/2025); ERE Annual Report 2025, pp.99, 131–132; author's calculations. Paper: Exhibit 6.

The seven costliest hours are a third above average; the Drin cascade's daily output could fill them at full capacity



€157.6 vs €118.2

Per MWh in 2025: average of the seven most expensive hours of the day (16:00–23:00) and of all hours

389 MW = 29%

Average output of the Drin cascade in 2025, as a share of its 1,350 MW (37% in an average year)

≈ 7 hours

At full capacity, to produce the cascade's average daily output of 9.3 GWh. KESH does not publish hourly output

Source: ERE Annual Report 2025, Tabela 28, p.109; KESH, performance indicators and Drin cascade; author's calculations. Paper: Exhibit 11.

Coupling with Greece would link Albania to a market seven times its size – but it needs EU rules, 15-minute trading and KESH in the market

	Coupling with Kosovo (since February 2024)	Coupling with Greece (proposed)
Size of the partner market	Kosovo zone: 0.97 TWh traded day-ahead in 2025 (incl. cross-border flows)	Greek day-ahead market (participation mandatory): 61.7 TWh bought in 2025 – about 7 times Albania's electricity use (8.3 TWh) and 38 times ALPEX's day-ahead volume (1.64 TWh)
Price difference	Almost none: €118.24 vs €118.51/MWh; the same price in 99% of market time units	Greek average €103.60 vs €118.24/MWh in Albania; the Greek price was lower in 74% of cases
Interconnection	About 150 MW offered and sold in each direction	A 400 kV and a 150 kV line; capacity cut e.g. to 100 MW on 3–6 Oct 2026; second 400 kV line 2030–2031
Rules	Energy Community framework; hourly products	EU single day-ahead coupling, with 15-minute products since Oct 2025; EU verification of Albania's rules not started (June 2026); Albania: 15-minute balancing planned from Jan 2027
What Albania gains	A working exchange and clearing; volumes up 40% in 2025	Cheaper imports in dry months, better export prices, a deeper reference price for CfDs and storage – limited by interconnector capacity (author's view)

Author's view: Kosovo proved Albania can run a coupled market; the larger gains lie on the Greek border. Three preconditions: EU verification and capacity rules, 15-minute trading, and KESH's output in the market (PSO reform).

Source: ALPEX Annual Report 2025, pp.2–6; HEnEx Annual Report 2025, p.4; ERE Annual Report 2025, pp.96, 115; ERE Decision 177/2026; Energy Community; IPTO; INSTAT.

Three steps in plain words: cap the bill, insure households, then help those who need it

1 · 2027 — Cap the bill at KESH

- KESH no longer buys whatever FSHU needs: a fixed yearly amount
- Its price is set by the regulator from its real costs
- Accounts are published; wet-year savings pay for dry years

Like a household budget with a savings jar for bad years

2 · 2028–2029* — Insure households, free KESH

- KESH sells its power on the market, like any company
- A block of cheap hydro (2.5–3 TWh a year) stays reserved for households
- If market prices rise, KESH pays the difference; if they fall, FSHU pays KESH

Like a fixed-rate mortgage, reviewed every few years: a steady price whatever the market does

3 · from 2030 — Help those who need it

- Most customers move gradually to market-based prices
- Vulnerable families get direct, targeted support
- Paid from a fund fed by KESH's hydro profits and the dry-year reserve

Like a national "hydro dividend" for families in need

Alongside the three steps

Couple with Greece on a set date
Join the EU's daily electricity auction: cheaper imports in dry months, better export prices

Make storage bankable
Clear rules so banks lend for batteries and pumped storage

Cut losses to about 12% by 2030
From 17 to 12 of every 100 kWh: about €48 million a year

Publish KESH's hourly output
Show how the water is used, hour by hour

Source: Author's proposal. *Subject to ERE's market-readiness reassessment (Decision 156/2026). Details: backup slide and paper, Section 6.4 box and Exhibits 16–17.

Done badly, the reform could push the poorest into energy poverty: protection must come first, prices second

33.6%
of Albanians could not keep their home adequately warm in 2025 (EU: 8.8%)

213,000
families already receive monthly electricity compensation; state cost 1.76 bn lek a year

87%
of households use up to 700 kWh a month and pay 8.5 lek/kWh

Five safeguards (author's proposal)

1. **Protect before you raise:** expand targeted support through the existing registers before any price step
2. **A protected lifeline block:** EU rules, applied through the Energy Community, allow targeted price intervention for energy-poor and vulnerable households if limited and proportionate (Directive 2019/944, Art. 5(3)–(4))
3. **Small, announced steps:** a three-year path announced in advance (about 4.4% a year reaches today's cost floor); later steps also gradual
4. **Fund it openly:** doubling the compensation would cost about 1.76 bn lek a year (ERE, 2024) – less than half of the up to 4.0 bn lek a year by which the reform narrows the cost gap
5. **Cut bills, not only prices:** efficiency and rooftop solar for low-income homes; publish energy-poverty data every year and pause the path if they worsen

Resident population: 2.82 million (2011) → 2.40 million (2023). No official source links this to electricity prices; an unfair reform would add to the pressure to leave (author's view).

Source: Eurostat, ilc_mdes01; ERE (2024), vulnerable customers, p.26; ERE Annual Report 2025, p.132; Directive (EU) 2019/944, Art. 5; INSTAT Census 2023, p.7; author's calculations. Paper: Section 6.5.

Five findings: Albania's power problem is hydrological risk, and who pays for it

45%	**Output swings with the rain** Net production of 5.2 TWh (2019) to 9.0 TWh (2021); in dry 2025 the Drin cascade produced 22% below its 30-year average.
≈ €100m	**In dry 2025 the bill landed on KESH** KESH paid about €125/MWh for 1.8 TWh of PSO purchases and received €25.5/MWh for the 5.0 TWh it supplied to FSHU, 3.2 TWh of it from its own production.
8.5 < 9.61	**Households pay less than the cost of supply** Household price against network charges plus KESH's energy price, lek/kWh, 2025; households use 54% of the electricity delivered to customers.
17% → 12%	**Losses have more than halved, but remain high** Distribution losses in 2025 (45% in 2013; most of the region 7–12% in 2022) and a realistic 2030 target, worth ≈ €48m a year.
29%	**Reservoirs are worth most in the evening** Drin cascade average output against capacity, 2025 (389 of 1,350 MW); the seven dearest hours of the day cost a third more than the daily average.

Proposed answer (author's view): replace the blanket PSO in three steps, protecting the poorest first; couple with Greece on a set date; make storage bankable; cut losses to about 12% by 2030.

Source: INSTAT; KESH; ERE Annual Report 2025; ERE Decision 10/2025; CEER (2025); Eurostat; author's calculations. Details: background paper, Exhibits 1, 4, 6, 8, 10 and 11.

From cost to value

1. **Fix the PSO in three steps – protect the poorest first**
   Make the dry-year bill explicit, capped and paid before the drought; support aimed at those who need it

2. **Couple with Greece on a published date**
   Implicit allocation, closer prices and a market for Albanian flexibility

3. **Sell Albania’s reservoirs as flexibility**
   Evening hours cost a third more than the daily average; publish hourly output to show what is captured

4. **Cut distribution losses to about 12% by 2030**
   About one point a year; by 2030 about 410 GWh a year less lost, worth about €48 million at 2025 prices

Thank you!

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