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GRID BOTTLENECKS BEHIND THE SUMMER 2026 ELECTRICITY PRICE SPREADS

KEY MESSAGES

- Recurrent summer electricity price spikes in Hungary, Romania, Serbia and Croatia reflect tight supply–demand conditions and constraints in the European transmission network.[1] Across three weeks of high electricity prices in summer 2026 and a comparable reference week in July 2024, a small number of internal grid bottlenecks accounted for a substantial share of the Hungarian–German electricity price spread, which exceeded €50/MWh in the most critical hours.
- A single internal transmission line in Slovakia, V. Ďur–Levice 1, accounted for 50–80% of this spread in three of these four weeks.
- Since 2026, V. Ďur–Levice 1 complied with the EU's 70% rule. However, the Slovak grid operator subsequently reduced trading capacity by up to 60%, citing operational security needs.
- Constraints on trade imply welfare losses, and the purpose of the 70% rule – however arbitrary the threshold may be – was to require TSOs to make more interconnector capacity available for trade. The current case highlights the shortcomings of European transmission grid governance and suggests following policy priorities:
  - improving transparency around capacity adjustments,
  - strengthening ACER's oversight of high-impact bottlenecks,
  - using monitoring results to prioritise grid investment and funding,
  - aligning investment incentives with the cross-border benefits of internal grid reinforcement,
  - expanding storage and demand-side flexibility to provide complementary relief during critical hours.

WHY THIS MATTERS: THE SUMMER 2026 PRICE SPIKES

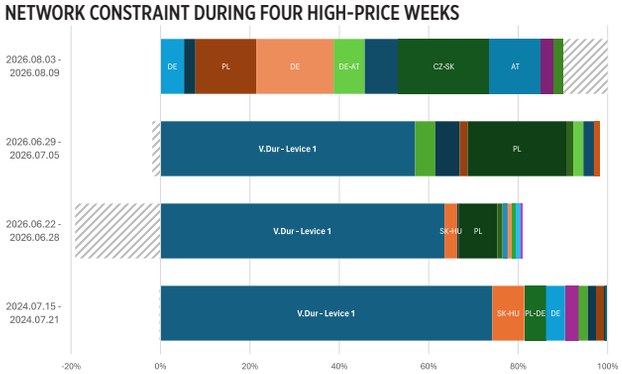
In summer 2026, Hungary and its neighbours again experienced periods of high wholesale electricity prices. Prices were particularly high during three weeks: 22–28 June, 29 June–5 July, and 3–9 August 2026. This briefing compares these three weeks with a reference week, 15–21 July 2024, when a comparable price spike occurred. Analysis of these periods shows that high prices cannot be explained by regional demand and limited domestic generation alone. Regional electricity prices are closely linked to conditions in Western European markets and, just as importantly, to bottlenecks within the region's own transmission grid. The focus is on these grid bottlenecks and how regulation and investment can help address them.

HOW NETWORK BOTTLENECKS SHAPE THE PRICE GAP: THE EVIDENCE

Cross-zonal capacity in the Core region is allocated through flow-based market coupling (FBMC). Transmission system operators identify critical network elements that can limit cross-border trade, taking specific contingency scenarios into account (CNECs). For each CNEC, they calculate the Remaining Available Margin (RAM), which represents the capacity available for trade. When this margin is fully used, the CNEC becomes a binding constraint and can cause prices to diverge between bidding zones.

1 For detailed analyses of grid bottlenecks in 2024-2025 see Selei, A., Horváth, G., Mezősi, A., Bartek-Lesi, M., & Szabó, L. (2026). What drives price divergence in Central and South-Eastern Europe? Evidence from flow-based market coupling. Energy Policy, 219, 115574. https://doi.org/10.1016/j.enpol.2026.115574

FIGURE 1. DECOMPOSITION OF THE GERMAN–HUNGARIAN PRICE SPREAD BY NETWORK CONSTRAINT DURING FOUR HIGH-PRICE WEEKS



Source: JAO database; REKK calculation

FIGURE 2: RELATIVE IMPORTANCE OF NETWORK CONSTRAINTS IN THE CORE REGION BASED ON SHADOW PRICES DURING THE FOUR HIGH-PRICE WEEKS

Source: JAO database; REKK calculation

We decomposed the German–Hungarian price spread into contributions from binding network constraints during four high-price weeks (Figure 1). In three of these weeks, the V. Ďur–Levice 1 line in Slovakia alone accounted for 50–80% of the spread. The August 2026 the bottlenecks shifted westward and involved the German internal grid and the DE-AT and CZ-SK borders.[1]

The marginal welfare gain from releasing a specific grid constraint confirms that V. Ďur–Levice (SK) network element plays a key role in 3 out of the critical weeks.

THE V. ĎUR–LEVICE CASE: MEETING THE 70% RULE DOES NOT MEAN LESS CONGESTION

Given its recurring role as a bottleneck, one might expect V. Ďur–Levice 1 to fall short of the EU's 70% minimum-capacity requirement. However, since 2026 the line has formally complied with this rule, offering 70% of its physical capacity for trade. In practice, however, the Slovak TSO continues to reduce the capacity actually released for trade by invoking a tool intended for case-by-case operational security needs, the Individual Validation Adjustment (IVA).

In all three high-price weeks examined in 2026, IVA was applied in every hour when the line was a binding constraint. Average capacity reductions in these hours ranged from 313 to 545 MW across the three weeks, reaching around 50–60% of the capacity available before IVA. This pattern was not limited to the selected high-price weeks. Over the full summer period analysed (1 June–26 August 2026), V. Ďur–Levice 1 was a binding constraint only in 8% of all hours but IVA was applied in 98% of those hours, reducing the capacity available for trade by an average of 49%. These findings show that capacity reductions were applied in almost all hours when the line constrained cross-border trade. Reducing available capacity on a binding constraint further limits trade and increases welfare losses.

POLICY RECOMMENDATIONS

- Make capacity adjustments transparent. TSOs should publish accessible, comparable data on RAM before and after Individual Validation Adjustments (IVAs), including the frequency and magnitude of these adjustments. They must be required to justify these adjustments and prove that alternative remedial actions were considered. This would help regulators and market participants distinguish recurring structural limitations from temporary operational security concerns.

- Strengthen ACER's monitoring of grid bottlenecks. ACER should regularly assess how often and why TSOs reduce trading capacity. It should also track binding constraints, their shadow prices and their contributions to price spreads to identify persistent and emerging bottlenecks across the Core region.

- Use monitoring results to guide comprehensive investment planning. In line with the European Grids Package, EU and national authorities should use ACER's findings to rank all transmission grid elements – not only those already covered by TSO project proposals – by their expected welfare benefits relative to costs, and should remain open to solutions proposed by actors other than TSOs. This ranking should guide project selection and public funding. TSOs should explain how their investment plans address the highest-priority bottlenecks and justify any omissions.

TABLE 1: ACTIVE-CONSTRAINT AND IVA INDICATORS FOR V. ĎUR–LEVICE 1

V. Ďur – Levice 1	15–21 Jul 2024	22–28 Jun 2026	29 Jun–5 Jul 2026	3–9 Aug 2026	1 Jun -26 Aug 2026
Share of binding hours with IVA applied	73%	100%	100%	100%	98%
Average IVA reduction (MW)	82	545	469	313	446

Source: JAO database; REKK calculation

- Align national investment incentives with cross-border benefits. Investment decisions and costs remain largely national, even when reinforcing an internal transmission line benefits several countries. Planning and cost-sharing should reflect these wider benefits, so that national priorities do not hold back investments that are valuable for the region as a whole.

- Use flexibility assessments to address grid bottlenecks. National flexibility needs assessments required under EU rules should identify where storage and demand-side response can relieve critical grid constraints. Their findings should guide national flexibility targets and grid development plans. Regulators should remove barriers to these resources and ensure that incentives reward flexibility where and when it helps reduce congestion. This would make flexibility a practical complement to grid reinforcement.