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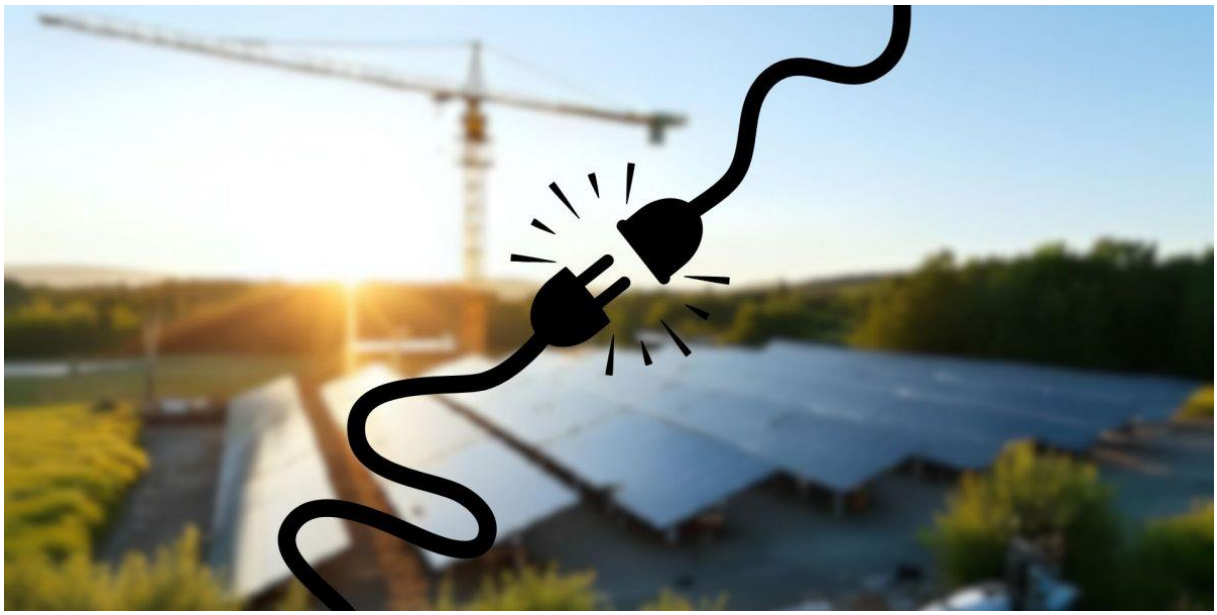

WHEN GRID CONNECTION PROCEDURES DERAIL

A TECHNICAL BOTTLENECK FOR THE ENERGY TRANSITION

That grid connection procedures in Germany don't always run smoothly is no secret in the industry. But recently, there has been a growing number of cases in which DSOs (distribution system operators) and developers become entangled in technical micromanagement—often at the expense of planning security, investment confidence, and progress in the energy transition.

One particularly critical example: the recent practice of rejecting grid connection due to minimal short-circuit power (Kurzschlussleistung) on the medium-voltage level (Ebene 5). Increasingly, DSOs are refusing project commissioning at the grid connection point (Netzverknüpfungspunkt) because they consider the available short-circuit power too low—a parameter that typically only becomes visible late in the process, when the E.9 form is submitted. In practice, this means: transformer stations have already been ordered or built, and key components delivered—yet suddenly the grid connection is in jeopardy.

From a purely technical perspective, the concern is understandable. However, projects that have already been approved or even constructed cannot be expected to meet requirements that were not known or communicated at the time of planning. In today's process, DSOs receive all relevant technical information well before the E.9 stage—typically as early as the E.4 or E.2 submissions, along with detailed technical datasheets and grid compatibility assessments (Netzrückwirkungsnachweise). Still, feedback often comes too late—or not at all. In one high-profile case, commissioning was denied only after the entire project had been completed, due to a grid parameter issue that could have been identified months earlier.

Kumandra Energy GmbH & Co. KG
Herzog-Friedrich-Str. 8a – 83278 Traunstein
info@kumandra-energy.de
+49 861 230 835 20

A growing number of DSOs are also demanding additional technical verifications beyond the normative scope. One example: the assessment of voltage changes caused by transformer switching. According to certifiers, these are non-operational switching events, and under VDE-AR-N 4110 (the applicable German grid code for medium-voltage connections), such events do not require testing within the plant certificate. Official interpretations of the standard confirm: for rare and irregular switching operations, a simple note in the certificate is sufficient. No additional coordination with the DSO or technical mitigation (e.g. special switching limiters) is required.

Nonetheless, some DSOs are now demanding technical solutions retroactively—and it remains unclear who will bear the cost for project delays or the installation of such components (e.g. inrush current limiters). This practice is creating a serious accountability gap in the grid connection process:

- Who decides on special requirements—the certifier or the DSO?
- When do such requirements become binding—at E.8, E.9, or only upon certification?
- Who covers the cost if a plant is fully built but cannot be commissioned?

From the developer's perspective, it is unacceptable that critical issues only arise shortly before commissioning—not during the planning or coordination phases. DSOs, on the other hand, rightly point to their duty to ensure grid stability. The core issue appears to be a lack of process clarity and role definition. A grid connection that was previously approved should never be retroactively revoked unless there are exceptional and justified grounds.

Accusation: Technical Objectivity as Strategic Ambiguity?

Developers are increasingly accusing DSOs of using technical objectivity as a smokescreen. What seems to be meticulous engineering scrutiny often turns out to be a deliberate injection of uncertainty—with intransparent, inconsistent, and late-stage requirements that disregard planning timelines, procurement cycles, and investor confidence. Behind this supposedly neutral stance lies a more strategic motive: maintaining influence, control—and in some cases, obstructing the energy transition for political or institutional reasons.

DSOs continue to emphasize the importance of grid reliability and insist on a purely technical perspective. But in our opinion, for this delicate balancing act to succeed, we urgently need mutual understanding and a shared energy transition mindset on all sides:

- Early and reliable communication of key grid parameters (e.g. short-circuit power)
- Consistent application of technical norms, without DSO-specific exceptions
- Clear division of roles between certifiers and DSOs
- Legally binding and standardized grid connection procedures
- And last but not least: digitalization, fast and reliable grid expansion, and streamlined approval workflows

The industry is ready. The technology is ready. Let's tackle it together.

Note: This article reflects our practical experience and does not constitute legal advice.

Do you want to move your project forward? Get in touch—we support you with hands-on expertise and real-world experience.

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Kumandra Energy GmbH & Co. KG
Herzog-Friedrich-Str. 8a – 83278 Traunstein
info@kumandra-energy.de
+49 861 230 835 20