KABBALAH MARKETS

Reading the markets with the eyes of Kabbalah

THE GRID AND THE LIGHT

A Kabbalistic Reading of Europe's Energy Infrastructure

— Through the Four Worlds —

Atziluth · Briah · Yetzirah · Asiyah

From the civilizational covenant to the substation —
a sober reading of where Europe stands in 2026,
and what the four worlds are asking of us.

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Kabbalah acts from love, not from fear.

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Foreword

This paper is not an investment recommendation, nor a political pamphlet, nor a religious text. It is an attempt to read what the European electric grid is asking of us in 2026 — through a frame older than any market: the four worlds of Kabbalah. **Atziluth** (Emanation), **Briah** (Creation), **Yetzirah** (Formation), and **Asiyah** (Action).

In Lurianic Kabbalah, light descends through the four worlds before it can land in our world. Atziluth holds the pure law. Briah builds the architecture. Yetzirah gives it form. Asiyah is where it touches the body — the lamp that turns on, the fridge that keeps cold, the train that runs, the operating room that lights up.

When Asiyah goes dark, the whole descent is interrupted.

On **April 28, 2025 at 12:33 CEST**, the Iberian Peninsula experienced a complete loss of synchronism. Within roughly 90 seconds, **31 GW of load** disconnected, **15 GW of generation vanished in 5 seconds**, and tens of millions of people in Spain and Portugal entered the longest blackout Europe has seen in over twenty years (ENTSO-E). At least eight people died. Economic damage estimates range from **€1.0 to €2.25 billion** (Wikipedia).

Almost a year later, on **April 20, 2026**, the United States President invoked **Section 303 of the Defense Production Act** to declare grid infrastructure — *"transformers, transmission lines and conductors, substations, high-voltage circuit breakers, power control electronics, protective relay systems, capacitor banks, electrical core steel, and related raw materials and manufacturing tools" — "essential to the national defense"* (The White House).

These are not unrelated events. They are the same event read in two languages.

The American DPA invocation is Atziluth speaking in the language of national defense. The Iberian blackout is Asiyah speaking in the language of darkness. In between sit Briah — the global supply chain of transformers, copper, and electrical steel — and Yetzirah — the formation of the European and Spanish grids as we actually have them, with all their inherited geometry and missing interconnections.

Kabbalah Markets reads this from love, not fear. The point is not catastrophe. The point is to see clearly. When the Tree of Life is read through the Tree of the Grid, the question is always the same: *what is the light asking of us?*

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Part I — Atziluth: The World of Emanation

> *"In Atziluth nothing has been made. There are only intentions, principles, pure laws."*

In Atziluth, electricity is not yet wires. It is a covenant.

Modern civilization made an implicit promise during the twentieth century: that a flick of a switch would always produce light, that a refrigerator would always be cold, that an operating room would never go dark. This is not an engineering promise. It is a civilizational covenant — Atziluth-level — that underwrites every other promise. Schools, hospitals, payment systems, water pumps, telecom networks, internet, traffic lights, food cold chains, public safety, air traffic control, border control, banking, refrigeration of insulin and vaccines: all of them assume electricity, continuously.

In 2026 this covenant has three archetypal pressures emanating from the highest world.

1.1 The Electrification Archetype

The first pressure is that the share of life that depends on electrons keeps rising. Electric vehicles, heat pumps, data centers, AI training clusters, electrified industry, green hydrogen, electric heating: the modern transition is not "more energy." It is **more *electric* energy as a share of total final energy**. Every joule that moves from gas to electricity, from petrol to electricity, from coal to electricity, raises the political and civilizational weight of the grid.

The grid was a utility. It is becoming the central nervous system.

1.2 The Decarbonization Archetype

The second pressure is that the supply side of that nervous system is being rebuilt in real time. Synchronous machines (coal, large gas, hydro, nuclear) are being retired. Asynchronous, inverter-based resources (solar PV, wind, batteries) are taking their place. By the end of 2025, Spain reached **150.8 GW of installed capacity, of which 68.9% was renewable** (Red Eléctrica). Spain crossed the **50 GW solar milestone in February 2026** (REE). Across the Continental European synchronous area, the **system inertia constant H is declining from over 5 seconds in 2019 toward less than 3 seconds projected for 2030**.

Inertia is what gives a power system time to react. When inertia drops, the time available for protection systems to respond shrinks. The system becomes "faster" — not in a good way. It becomes less forgiving.

The decarbonization archetype is right and necessary at the level of Atziluth. The question is whether Briah, Yetzirah, and Asiyah have been allowed to keep up.

1.3 The Geopolitical Archetype

The third pressure is that grid infrastructure has been re-classified — globally — as a **defense category**.

On April 20, 2026, the U.S. President signed a **Presidential Determination under Section 303 of the Defense Production Act** finding that *"America's aging and constrained electric grid infrastructure poses an increasing threat to national defense. The Nation's capacity to design, produce, and deploy large-scale grid infrastructure ... is dangerously limited"* (The White House). It explicitly listed transformers, transmission lines, substations, high-voltage circuit breakers, power control electronics, protective relays, capacitor banks, **and electrical core steel** as items essential to national defense (Utility Dive).

Two days earlier, NATO had completed the **Baltic synchronization** disconnect from the post-Soviet IPS/UPS system in November 2025 (ENTSO-E). Undersea cables in the Baltic — **EstLink-2 cut on Christmas Day 2024**, **C-Lion1 and BCS East-West severed in November 2024** — have made the grid a kinetic warfare surface, not a metaphorical one. Denmark's energy sector experienced its largest cyberattack in May 2023. By 2025, ENISA recorded **23 cyberattacks on EU energy infrastructure since 2022**. In December 2025, a Polish grid penetration was disclosed.

Atziluth in 2026 says: **the grid is no longer a utility. It is a strategic asset, a defense category, and the platform on which everything else rests.** The civilizational covenant has been re-priced.

These three archetypes — electrification, decarbonization, geopolitics — are emanating downward into Briah simultaneously, for the first time.

Part II — Briah: The World of Creation

> "Briah is the realm of the Divine Throne, where the substance of existence first acquires form, where the Idea precedes its formation."

If Atziluth is pure law, Briah is the first translation: laws taking the shape of structures. In the language of the grid, Briah is the **global manufacturing architecture** that turns the abstract demand for "more electrons, faster" into actual transformers, cables, converters, breakers, relays, and steel. And in 2026, Briah is in crisis.

2.1 The Transformer Crunch

Before 2020, ordering a large power transformer (LPT) took **12 to 14 months**. By Q2 2025, average LPT lead times had reached **128 weeks (≈2.5 years)**, with generator step-up units (GSUs) at **144 weeks (≈2.8 years)** (Electrical Trader). Some Hitachi Energy units carry waits **over 30 months** as of Q1 2026. Wood Mackenzie estimates a **30% U.S. supply deficit** for power transformers in 2025 (Wood Mackenzie). Transformer prices are up **60–80%** since 2020; distribution transformers up **78–95%**.

The two largest manufacturers' order books reflect the tension:

- **Siemens Energy** — record **€146 billion** order backlog as of December 31, 2025 (Morningstar), driven by data centers, electrification and grid. This is the highest in the company's history.
- **Hitachi Energy India** — **INR 29,872 crore (~$3.6 billion)** order backlog at end-December 2025, the **highest ever recorded** (TND India).

Three forces are converging in Briah. First, the simultaneous AI/data-center build-out is consuming transformer capacity that was already insufficient. Second, electrification (heat pumps, EVs) raises distribution-transformer demand. Third, the renewables build-out demands new substations, new GSUs, new collector transformers.

2.2 Grain-Oriented Electrical Steel: The Hidden Bottleneck

Inside every large power transformer is a magnetic core made of **grain-oriented electrical steel** (GOES). Without GOES, a transformer is a paperweight. The world makes about **5–6 million tonnes of GOES per year**, and the geometry of supply has shifted decisively to Asia.

Producer	Country	Notes
Baowu / Baosteel	China	Largest single producer; ultra-high-grade expansion ongoing
Nippon Steel	Japan	#2 globally; acquired US Steel late 2024

Producer	Country	Notes
POSCO	South Korea	~16.8% global share
JFE Steel	Japan	India JV with JSW
ThyssenKrupp	Germany	European supplier
Stalprodukt	Poland	European specialist
Cleveland-Cliffs	**United States**	**Only domestic U.S. GOES producer**

China's GOES output reached **3.37 million tonnes in 2025, +14.3% YoY**, and exports hit **757,717 tonnes, +18% YoY** (Fastmarkets). U.S. GOES prices are up **60–70% since 2020**. Asia-Pacific captured **40.25% of 2024 global GOES shipments** (Mordor Intelligence).

The painful irony: GOES is **not classified as a Critical Raw Material** under the EU's CRMA framework — it is treated as a processed steel product rather than a raw material. The EU's most consequential transformer-supply input thus sits outside the EU's most aggressive supply-chain protection law. **This is a Briah-level architecture gap.**

2.3 HVDC Converters: A Three-Manufacturer World

When two AC grids must be connected over long distances or across the sea, HVDC (high-voltage direct current) is the bridge. HVDC converter stations are even more concentrated than transformers. Three manufacturers — **Hitachi Energy, Siemens Energy, and GE Vernova** — held roughly **60–65% of 2025 HVDC converter station order intake** (Mordor Intelligence). The global HVDC converter market was **~$7.73 billion in 2026**, projected to grow at **7% CAGR** to ~$10.85 billion by 2031.

Chinese players (NR Electric, C-EPRI, Xian XD) offer 20–30% discounts but face market-access restrictions in Europe and the United States.

2.4 Comparative Table — Major Blackouts and What They Teach

To understand 2025 in Iberia, we must understand the lineage of grid failures.

Event	Year	Scope	Trigger	Time to Restore	Was Root Cause Fixed?
U.S. Northeast	1965	30M people	Tripped relay at Sir Adam Beck	13 hours	Partially — created NERC
Northeast US/Canada	2003	55M; **$6B** cost	Software bug + tree contact, FirstEnergy	~16 hours	Improved monitoring, partial

Event	Year	Scope	Trigger	Time to Restore	Was Root Cause Fixed?
Italy	2003	56M	Swiss line fault, cascading import loss	~12 hours	Partial — connection rules updated
UCTE Europe	2006	15M, 3 synchronous areas	Planned line opening + cascading	~2 hours	Partial
San Diego	2011	7M	Single-employee error at substation	~12 hours	Partial
Argentina	2019	50M (≈national)	Failure on 500 kV line	Hours-days	Partial
Iberian Peninsula	**2025**	**~60M; €1.0–2.25B**	**Voltage cascade in 90 seconds**	**10–16 hours**	**In progress**

The lesson is structural. Major blackouts are almost never caused by a single failure. They are caused by **multiple low-probability events arriving simultaneously in a system whose reserves have been silently consumed**. Each blackout teaches a generation of operators something. The 2025 Iberian event is teaching a hard one: **a grid built for synchronous, slow physics cannot rely on the same protection logic when more than 70% of its instantaneous generation is inverter-based.**

2.5 The European Grid Action Plan

In October 2023, the European Commission published the EU Action Plan for Grids:

- **€584 billion** of grid investment needed this decade
- **40%** of European distribution grids are **over 40 years old**
- **64 GW of new cross-border capacity** needed by 2030
- **85 Projects of Common Interest** identified
- Connection requests at distribution level grew **19% in a single year** in 2021
- Cross-border infrastructure could save **€9 billion/year** in generation cost until 2040

Against this need, the European Macro Policy Network (December 2025) estimated:

- Investment gap of **~€190 billion for transmission** and **~€400 billion for distribution** by 2040
- About **half of needed cross-border capacity by 2030 (~41 GW) remains unaddressed**

- ◆ **1,700 GW of renewable projects across 16 EU countries are stuck in connection queues** — over three times the capacity needed for 2030 climate targets (Global Society Earth)
- ◆ In 2024, **€7.2 billion of clean power was curtailed** in seven European countries because the grid could not absorb it

In Briah-language: the architecture being built does not match the architecture being asked for. The shape of Briah lags the shape of Atziluth. This is precisely where the Iberian blackout was waiting to happen.

Part III — Yetzirah: The World of Formation

> "Yetzirah is the world of mind and form, where archetypes take individual shape."

Yetzirah is where the European and Spanish grids actually live — with all their inherited geometry, their specific bottlenecks, their political constraints, and their corporate structures. If Briah is the global supply chain, Yetzirah is the actual mosaic of substations, lines, converters, frequencies, balancing zones, and operators that you would see if you flew over Europe at night.

3.1 Spain's Grid in 2025–2026: Headline Numbers

Metric	Value	Source
Total installed capacity	**150.8 GW** end-2025	REE
Renewable share of installed	**68.9%**	REE
Solar PV milestone	**50 GW crossed February 2026**	REE
2025 curtailment (Jan–Nov)	**~9 TWh** (40× the 2022 level)	Linkedin / SREP
Battery storage installed	**96 MW** (vs **22.5 GW** PNIEC 2030 target)	PNIEC
Saturated grid nodes	**83.4%**	REE
Spain–France interconnection	**3.11%** of installed capacity	(vs 15% EU target)
REE Capex 2025	**€1.626B (+47% YoY)**	Redeia
REE Capex plan 2026–2029	**>€6.5 billion**	Redeia
CNMC regulated return 2026–2031	**6.58%** (up from 5.58%)	CNMC
Connection queue / installed ratio	**170%** — highest in W. Europe	LinkedIn analysis

These numbers describe a system that has, in less than a decade, become one of the most renewable-rich and most renewable-stressed grids in Europe. Yetzirah took the form of a grid running ahead of its own backbone.

3.2 The April 28, 2025 Iberian Blackout: A Yetzirah-Level Event

The ENTSO-E final report, published March 20, 2026, was the result of nearly a year of work by a 49-member expert panel. Its central conclusion: the blackout was **voltage-driven and protection-driven, not a cyberattack and not "caused by renewables" in any simple sense**. Specifically:

- ◆ **First trip: Granada substation, 12:32:57 CEST**, after a sequence of voltage oscillations and reactive power gaps observed in the days before
- ◆ **Cascade:** under 90 seconds from first trip to full Iberian collapse
- ◆ **Generation lost:** ~15 GW within 5 seconds (~60% of supply at that moment)
- ◆ **Load disconnected:** 31 GW
- ◆ **Restoration:** Portugal grid fully restored 00:22 CEST April 29; Spain transmission grid by ~04:00 CEST April 29; some areas up to 16 hours
- ◆ **Casualties:** 7 in Spain, 1 in Portugal — fires from candles, carbon monoxide from misused generators
- ◆ **Damages:** €1.0–2.25 billion (CNN)

The Comillas IIT report (September 2025) and the AELEC testimony of September 18, 2025, identified contributing causes:

- ◆ Insufficient dispatch of synchronous generation with dynamic voltage control on April 28
- ◆ RES plants operating in **fixed power-factor mode** rather than voltage control
- ◆ Manually-switched shunt reactors operating too slowly for sub-second cascade dynamics
- ◆ Protection thresholds at some plants set **below grid-code limits**, causing premature trips
- ◆ The fragile state of the transmission network on that day; insufficient security margin
- ◆ Voltage surges already observed on April 16, 22, and 24, 2025 — preceding warnings not converted into action

ENTSO-E explicitly noted: *"even with significantly higher inertia values, the loss of system synchronism would not have been avoided, considering the sequence of events."* This is the most important sentence in the report. **Inertia alone is not the fix. The architecture of voltage control and protection is.**

On June 12, 2025, Spain updated **Operational Procedure 7.4** to enable renewables to contribute to voltage control. Full implementation completed **March 17, 2026** (Solar Power Europe). This is Yetzirah, healing.

3.3 The 17 Comunidades Autónomas — A Grid Geography

Spain's grid does not behave the same in every region. Wind and solar are concentrated in some CCAA; demand is concentrated in others; transmission corridors connecting them are saturated. A simplified picture:

CCAA	Role in the Grid	2025–2026 Issue
Castilla y León	Wind hub (largest installed wind capacity nationally)	Curtailment + corridor saturation
Castilla-La Mancha	Solar PV expansion	Connection queue saturation
Aragón	Wind + emerging hydrogen / data-centre demand	Need for new transmission
Extremadura	Large-scale solar, **two of three Spanish nuclear units**	Nuclear retirement schedule + solar curtailment
Andalucía	Solar PV + significant population demand	Curtailment + heat-driven peak demand
Galicia	Wind + hydro	Slack relative to renewables potential
Cataluña	Demand center; **one nuclear (Vandellós II)**	Vulnerable to cross-border flow disruption
Madrid	Pure demand center; minimal generation	Long-distance import reliance
C. Valenciana	Solar + significant industry demand	Heat-driven peak demand
País Vasco	Industry demand center	High electrification potential
Murcia	Solar + pumped storage potential	Curtailment in summer

The picture is not "renewables vs nuclear" — it is **a grid that needs a much stronger, much smarter backbone**. Until the backbone is reinforced, every CCAA experiences a different version of the same constraint.

3.4 Connection Queues, Curtailment, Negative Pricing: The 2025 Symptoms

Three quiet emergencies were already running across Europe in 2025 before the blackout:

- ◆ **Connection queues:** 1,700 GW backlog across 16 countries; **Spain's queue ratio of 170% is the highest in Western Europe**. Germany's Q2 2025 solar curtailment was 237% above Q2 2023, with Bavaria alone accounting for 55% of national curtailment.
- ◆ **Curtailment:** Spain curtailed **11% of renewable generation in July 2025** — the highest monthly loss ever recorded. Germany curtailed a record **1,749.7 GWh in 2025 (+25% YoY)**. €7.2 billion of EU clean power was curtailed in 2024 (Global Society Earth).

- **Negative pricing: 6% of all hours in Spain and Germany in 2025** were negative-priced. The Netherlands recorded **584 negative-price hours**; UK had 149 in day-ahead.

Negative prices are the market screaming that it has more electricity than the grid can move. This is Yetzirah, oversaturated.

3.5 The Inertia and Voltage-Control Question

Across the Continental European synchronous area, the grid inertia constant H is declining from over 5 seconds in 2019 toward less than 3 seconds projected for 2030. **Germany is launching an inertia market product in 2026.** This is a piece of market design that did not exist five years ago. In Spain, post-blackout regulatory work is shifting toward **mandatory grid-forming inverter capability, mandatory voltage control from RES, and mandatory power system stabilizers** for large units.

Yetzirah is being re-formed by the blackout. This is the real legacy of April 28, 2025.

3.6 Undersea Cables: Yetzirah Going Submarine

A growing share of Europe's "grid Yetzirah" lives under water:

- **NordLink** (Norway–Germany, 1,400 MW, operational 2021)
- **IFA2** (UK–France, 1,000 MW, operational 2021)
- **Viking Link** (Denmark–UK, 1,400 MW, operational 2024)
- **Bay of Biscay** (Spain–France, **2 × 1,000 MW upgraded toward 5,000 MW total exchange capacity**, target **2028**)

The Bay of Biscay project received **€1.6 billion in EIB financing in June 2025**, plus a **€578 million CEF grant** (EIB). At 400 km total length (300 km submarine), it will nearly **double Spain–France exchange capacity from 2,800 MW to 5,000 MW**. Prysmian is the preferred cable supplier.

But undersea Yetzirah is also where kinetic risk is highest. **EstLink-2** was severed Christmas Day 2024. **C-Lion1** and **BCS East-West** cut November 2024. The European Council is now drafting protocols to harden cable defense. This is Yetzirah meeting Atziluth's geopolitical archetype face-to-face.

Part IV — Asiyah: The World of Action

> "Asiyah is the world of doing — the level where light becomes the lamp."

Asiyah is where electricity touches life. It is the elevator that stops on a Monday morning. It is the heart-monitor that goes silent. It is the carrera taxi-station credit-card terminal that goes dead. It is the fridge in a Lavapiés apartment where insulin sits.

On April 28, 2025, Asiyah went dark for ten to sixteen hours across an entire peninsula. Asiyah is therefore where action has to live now. This part of the paper is the **action map** — the seven hardening steps Spain and Europe can take, mirroring the food-paper structure, framed as neutral analysis.

4.1 The Seven-Step Hardening Map

The seven steps are listed in order from most foundational (closest to Atziluth) to most operational (closest to Asiyah). None of them solves the problem alone. Together, they constitute the body of a grid that can withstand 2026's pressures.

Step 1 — Voltage and frequency control modernization. Mandate that all utility-scale renewable plants (solar, wind, batteries) operate with **dynamic voltage control** (not fixed power-factor) and that the largest plants install **grid-forming inverters** capable of providing synthetic inertia. Mandate **power system stabilizers (PSS)** on synchronous units. Align protection thresholds across operators. This is the **direct lesson of April 28, 2025**. Spain's Operational Procedure 7.4 (June 2025, fully implemented March 17, 2026) is the first piece of this. The European-level extension is now under work via ENTSO-E.

Step 2 — Interconnection. Spain at **3.11% of installed capacity** vs an EU 15% target is the structural fragility that turned a Spanish protection issue into an Iberian event. The Bay of Biscay link (€1.6B EIB, 5,000 MW total target, 2028) is the single most important infrastructure project in the southern European grid. Three additional Pyrenees corridors are under planning. Until they exist, the Iberian Peninsula remains an **electrical island**.

Step 3 — Storage scale-up. Spain's installed battery storage at the end of 2025: **96 MW**. PNIEC 2030 target: **22.5 GW**. The gap is 230×. Storage is the only technology that simultaneously absorbs renewable curtailment (currently ~9 TWh/year wasted in Spain) and provides frequency response. Pumped hydro, BESS (batteries), green hydrogen, and demand-side flexibility together compose the storage stack. Lazard's 2025 LCOS for 2-hour BESS sits in **$129–277/MWh** — still high, but the cost is falling and the public value is enormous.

Step 4 — Domestic and European manufacturing of critical grid equipment. The U.S. DPA invocation of April 20, 2026 names the inputs: transformers, transmission cables, substations, HV breakers, power electronics, protective relays, capacitor banks,

electrical core steel (GOES). The European parallel is the **Net-Zero Industry Act**, which classifies grid technologies as strategic and (since June 18, 2025) applies "resilience criteria" in renewable auctions. Two specific EU-level gaps remain to be closed: (a) **GOES is not currently classified under the CRMA** despite being the keystone input for transformers, and (b) **HVDC converter manufacturing is concentrated in 2–3 firms** (Siemens, Hitachi, GE Vernova) — Europe needs at least one additional sovereign player at scale.

Step 5 — Demand response and prosumer integration. Spain's self-consumption boom and the wider European prosumer transition mean millions of small assets (rooftop PV, batteries, EVs, heat pumps) are now grid-connected. Germany's Section 14a of the Energy Industry Act (in force January 2024) requires new residential devices >4.2 kW to be controllable by distribution operators — a shift toward "connect now, manage dynamically." Spain's flexibility roadmap is moving in this direction. **The grid of 2030 is not bigger pipes — it is smarter dispatch.**

Step 6 — Cyber and physical hardening. The 23 cyberattacks on EU energy since 2022, the EstLink-2 cable cut, the Polish grid penetration of December 2025: these are not theoretical risks. ENISA's energy-sector framework, NIS2 implementation, mandatory penetration testing for TSOs and major DSOs, and **submarine cable protection** (sensors, repair vessels, naval cooperation) constitute the security stack. The European Council launched undersea-cable protection work in 2025; Spain is co-signatory.

Step 7 — Regulatory architecture and capex permission. The CNMC's decision to raise REE's regulated return from **5.58% to 6.58% for 2026–2031** acknowledges that the previous remuneration suppressed grid investment. REE's new strategic plan targets **>€6.5 billion in 2026–2029 capex**, up sharply. The European Commission's **Electrification Action Plan and European Grids Package** (priority initiatives for 2026 in the Competitiveness Compass) will set the EU-level framework. Without permission to invest at the right level of return, Yetzirah cannot keep up with Atziluth.

4.2 Comparative Side-by-Side: U.S. vs Europe

Dimension	United States (April 2026)	European Union (April 2026)
Defense framing	DPA Section 303 invoked; grid = national defense	Critical Raw Materials Act + NZIA; resilience criteria active since June 18, 2025
GOES coverage	Cleveland-Cliffs (single domestic producer); Section 232 tariffs	**Not classified as CRM**; treated as processed steel — gap
HVDC capacity	Siemens, Hitachi, GE Vernova manufacturing	Same three firms — Europe-headquartered, Asia-supplied

Dimension	United States (April 2026)	European Union (April 2026)
Investment plan	DPA financing + One Big Beautiful Bill	EU Grid Action Plan: €584B by 2030; EIB €11B in 2025
Public framing	"National emergency" (EO 14156, Jan 20, 2025)	"Competitiveness Compass" (Jan 2025) — softer language
Speed	DPA = wartime authorities; permitting waivers	NZIA strategic project status — faster but not wartime
Cybersecurity framework	DOE + DHS + CISA	NIS2, ENISA

The two regions are converging on the same conclusion through different vocabularies. The U.S. is using **defense language** explicitly. Europe is using **competitiveness language**. The substance is the same: **the grid is now a strategic platform, not a regulated utility.**

4.3 A Neutral Investment Map — Seven Baskets

This section is **neutral mapping, not investment recommendation**. Kabbalah Markets does not advise to buy or to sell. We map. The reader retains all responsibility for any allocation decision.

In Asiyah, capital must go somewhere. In 2026, the relevant grid-and-energy-infrastructure investment categories sit in seven baskets:

4.3.1 Grid OEMs and Power Equipment

The core manufacturers of transformers, switchgear, HVDC converters, and grid automation. Public listings include **Siemens Energy** (XETRA: ENR — €146B record backlog), **Hitachi** (TYO: 6501 — Hitachi Energy parent), **Schneider Electric** (PA: SU), **GE Vernova** (NYSE: GEV), **Eaton** (NYSE: ETN), **ABB** (SIX: ABBN), **Mitsubishi Electric** (TYO: 6503). The structural tailwind here is multi-year backlog visibility.

4.3.2 HVDC and Cable Specialists

Submarine and underground cable for HVDC links. **Prysmian** (BIT: PRY — Bay of Biscay supplier), **Nexans** (PA: NEX), **NKT** (CPH: NKT). The Bay of Biscay, NeuConnect (UK-Germany), GreenLink, and similar projects represent multi-billion-euro orderbooks.

4.3.3 Spanish Grid Pure-Play

Redeia / Red Eléctrica (BME: RED) — the Spanish TSO, ~20% SEPI-owned, with a >€6.5 billion 2026–2029 capex plan and a regulated return raised by CNMC to 6.58% for 2026–2031. **Iberdrola** (BME: IBE) — distribution + generation. **Endesa** (BME: ELE) — distribution + generation. **Naturgy** (BME: NTGY).

4.3.4 Storage and Batteries

Grid-scale BESS, pumped hydro, long-duration storage. Listed exposures include **Tesla** (NASDAQ: TSLA — Megapack), **Fluence Energy** (NASDAQ: FLNC), **Form Energy** (private). Pumped hydro investments are typically inside utilities (Iberdrola, Endesa). Battery cells: **CATL** (SHE: 300750), **LG Energy Solution** (KRX: 373220), **Samsung SDI** (KRX: 006400).

4.3.5 Electrical Core Steel (GOES) and Critical Materials

The transformer-keystone basket. **Cleveland-Cliffs** (NYSE: CLF — only U.S. domestic GOES producer), **Nippon Steel** (TYO: 5401), **POSCO Holdings** (KRX: 005490), **JFE Holdings** (TYO: 5411), **ThyssenKrupp** (XETRA: TKA). For copper and rare earths: **Freeport-McMoRan** (NYSE: FCX), **Antofagasta** (LSE: ANTO), **MP Materials** (NYSE: MP).

4.3.6 Software, Sensors, and Digital Grid

Grid management software, asset monitoring, SCADA. **Schneider Electric** (PA: SU — also OEM), **Siemens** (XETRA: SIE — parent), **AVEVA** (private), **Itron** (NASDAQ: ITRI — smart meters), **Bentley Systems** (NASDAQ: BSY). Cybersecurity: **Dragos** (private), **Claroty** (private). The digital layer is where curtailment savings are eventually realized.

4.3.7 Renewables-with-Storage and Utility Yieldcos

The downstream beneficiaries: utilities and yieldcos building solar+storage and wind+storage assets. **Iberdrola**, **Endesa**, **Acciona Energía** (BME: ANE), **EDP Renováveis** (Euronext Lisbon: EDPR), **Solaria** (BME: SLR), **NextEra Energy** (NYSE: NEE), **Brookfield Renewable** (NYSE: BEPC). These names absorb the renewable curtailment pain when the grid lags — and benefit most when the grid catches up.

These baskets are neutral coordinates. They are not endorsements. **Capital flows where the grid asks it to go.** In 2026 the grid is asking very loudly.

Part V — The Tree in 2026: An Integrated Reading

The four worlds are not separate. They are stages of a single descending light.

The light enters as Atziluth — the civilizational covenant of electrification, the decarbonization imperative, the geopolitical reclassification of grid as defense. It descends into Briah — the global manufacturing architecture, dominated by three HVDC firms, gated by GOES, gripped by 48–60-month transformer lead times. It takes form in Yetzirah — the European grid mosaic with its 1,700 GW connection queue, its 3.11% Iberian interconnection, its 96 MW of Spanish batteries against a 22.5 GW target, its inertia constant falling toward 3 seconds. And it lands in Asiyah on April 28, 2025 at 12:33 CEST, where 31 GW of load detached and tens of millions of people sat in the dark for ten to sixteen hours.

Read as one descent, the picture clarifies.

5.1 What the Grid Is Saying — Seven Lessons

1. **The grid is now a defense category, not a utility.** The DPA Section 303 invocation of April 20, 2026 makes this explicit in the U.S. The NZIA and CRMA are doing the same work in Europe in softer language. Capital, regulation, and political attention will continue to migrate toward grid infrastructure.

2. **Inertia is necessary but not sufficient.** ENTSO-E's central conclusion from the Iberian event was that even higher inertia would not have prevented the cascade. The architecture of voltage control, protection settings, and grid-forming inverter capability is the deeper layer.

3. **Transformer and GOES bottlenecks set the speed limit.** Lead times of 48–60 months and a 30% U.S. supply deficit mean the energy transition's actual pace is currently constrained by Briah-level manufacturing capacity, not by Atziluth-level intent.

4. **Connection queues are the silent crisis.** 1,700 GW of EU renewables stuck waiting for grid permission represents more than three years of new build clogged behind capital that has already been deployed.

5. **Curtailment and negative pricing are bills the public is already paying.** €7.2B of EU clean power was curtailed in 2024. 6% of 2025 hours in Spain and Germany were negative-priced. This is a transfer from the public to the inefficiency of an under-built grid.

6. **The Iberian Peninsula is structurally a grid island.** At 3.11% interconnection vs a 15% EU target, every domestic shock — voltage cascade, generation loss, weather — has nowhere to dilute itself. The Bay of Biscay link in 2028 is the most important southern European infrastructure project of this decade.

7. **No single shock breaks Europe.** What bears watching is the **compound effect**: transformer scarcity plus HVDC concentration plus interconnection deficit plus inertia decline plus cyber/cable kinetic risk plus AI-data-center demand surge. The grid in 2026 is not weak. It is asked to do more than its current architecture allows.

5.2 What Kabbalah Asks of Us

Not to predict. To see clearly.

Not to forecast doom. To name what is here.

Not to act from fear. To act from love.

Acting from love, in this terrain, means: **build the backbone before the next blackout.** Connect the peninsula. Mandate voltage control on every utility-scale plant. Open EU-level GOES classification. Fund European HVDC competition. Treat undersea cables with the dignity of national borders. Permit utilities and TSOs to invest at the return their work deserves. Understand that **the grid is the platform on which every other promise rests** — and that every euro spent strengthening it is a euro that protects every other social contract downstream.

The Tree of Life in 2026 is asking us to build a grid that holds the light it carries. The April 28, 2025 darkness was a lesson, not a verdict. The U.S. DPA invocation is a call, not a threat. The European Grid Action Plan is a covenant, not an aspiration.

The shelves of Kabbalah Markets' first paper are now connected to the wires of this one. The food chain runs on electricity. The digital economy runs on electricity. Hospitals run on electricity. Democracy, in its modern form, runs on electricity. **The grid is not infrastructure beneath the economy. It is the economy's spine.**

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Kabbalah acts from love, not from fear. The Tree is speaking. The grid is translating.

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Sources

The April 28, 2025 Iberian Blackout

1. ENTSO-E — Final Expert Panel Report (March 20, 2026)
2. Solar Power Europe — Joint Statement on ENTSO-E Final Report
3. GO15 — ENTSO-E Releases Final Report
4. Wikipedia — 2025 Iberian Peninsula Blackout
5. CNN — Iberian Blackout Not a Cyberattack (June 17, 2025)
6. Power Magazine — Anatomy of a Blackout
7. ENTSO-E — Comprehensive Factual Report (October 3, 2025)

U.S. Defense Production Act on Grid Infrastructure

8. The White House — Presidential Determination on Grid Infrastructure (April 20, 2026)
9. Utility Dive — What Trump's Wartime Powers Mean for Transformers
10. GovPing — DPA Determination Summary (April 21, 2026)

Spain — Red Eléctrica, CNMC, PNIEC

11. Red Eléctrica de España (REE)
12. Redeia — Corporate
13. REE — Bay of Biscay Press Release (April 2025)
14. CNMC — Comisión Nacional de los Mercados y la Competencia

European Grid Architecture

15. European Commission — EU Action Plan for Grids (October 2023)
16. EIB — Bay of Biscay Financing (June 2025)
17. EIB Project — Bay of Biscay Interconnection
18. Inelfe — Bay of Biscay Project
19. European Macro Policy Network — Europe's Grid Reckoning (Dec 2025)
20. Global Society Earth — Grid Queuing in Europe (1,700 GW)
21. LinkedIn — Spain Trails Europe in Grid Reform

Transformer Crisis and GOES

22. Electrical Trader — Transformer Shortages (2025)
23. Berlin CWIEME — New Normal Component Suppliers

24. Wood Mackenzie — Power Transformers Supply Deficit (Aug 2025)
25. Hitachi Energy — $250M Investment (March 2025)
26. Morningstar — Siemens Energy €146B Backlog
27. TND India — Hitachi Energy India INR 29,872 Crore Backlog
28. LinkedIn — Hitachi Energy Lead Times
29. Fastmarkets — Chinese GOES Output and Exports
30. Mordor Intelligence — GOES Market
31. Mordor Intelligence — HVDC Converter Stations
32. Fact.MR — GOES Market Report
33. Phillips Lytle — Section 232 Tariffs Restructured (April 2026)

EU Sovereignty Frameworks

34. European Commission — Critical Raw Materials Act
35. European Commission — Net-Zero Industry Act

Cyber and Physical Threats

36. European Council — Undersea Cable Protection

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