

# EVE Electricity Witness

Deterministic Evidence Layer for Nordic Power Markets

Organiq Sweden AB | February 2026 | v2.0.0-locked

## What EVE Is

EVE is a deterministic computational engine that transforms public energy data (ENTSO-E Transparency Platform, Open-Meteo ERA5, EEA emission factors) into cryptographically sealed, independently verifiable hourly datasets. EVE does not model, predict, or recommend. It computes and seals.

## Dataset Scope

**Coverage:** 14 bidding zones: SE1-4, NO1-2, FI, DE\_LU, PL, EE, LV, LT, FR, NL

**Period:** 2020-01 to present (hourly resolution)

**Records:** 756,336 hourly rows across 1,036 files

**Schema:** 24 fields per row including dataset\_eve\_id

**Methodology:** TS\_V2\_EEA\_2023\_DIRECT (direct combustion, EEA 2023)

**Emission scope:** Scope 1 only. No lifecycle, no marginal.

## Integrity Guarantees

**Determinism:** Same raw input always produces identical output (root\_hash verified)

**WORM Vault:** Append-only chain with SHA-256 linking. No retroactive mutation.

**Method Lock:** Registry hash 83CCEEB... anchors methodology. Changes require version bump.

**Audit Endpoint:** GET /api/audit/dataset/{id} returns root\_hash, chain, rebuild command

**Golden Tests:** 9/9 automated tests enforce schema, CO2 bounds, flow symmetry, field count

**Report Vault:** Generated evidence PDFs sealed in separate append-only chain linked to dataset root hashes

**Rebuild:** Any party can rebuild from public sources and verify hash match

## Architecture Principles

- The computational layer contains no probabilistic components. AI may translate queries; it never calculates.
- No external runtime dependencies. Runs fully offline in sovereign Docker container.
- No black-box inference. Every output traces to public source data via deterministic pipeline.
- Evidence reports (PDF) are SHA-256 hashed and sealed in a separate report vault chain.

## Deployment

Available as Docker container (Light edition for on-premise, Full edition with embedded data). No internet access required. Complete audit capability within isolated environment.

## Explicit Non-Claims

No marginal emissions. No lifecycle analysis. No demand attribution. No forecasting. No policy recommendations. No normative claims. EVE provides a reproducible computational reference, not regulatory guidance.