FVI Emissions Score – Precise Dataset & Field Mapping (v2)

This version analyzes your latest ZIP, maps exact fields to ES1–ES5, and specifies proxies where data are still thin. Use a single scoring year (e.g., 2023), tCO■e units, and ISO■3 keys.

Detected files (summary)

• coal-production-by-country.csv — coal_output

• electricity-generation_emissions_sources.csv — plant_gen

ES1 — Emissions Intensity

Fields to use

• From emissions table: scope1_tCO2e, scope2_tCO2e, scope3_tCO2e (optional), country/plant, year.

• From output table: net_generation_mwh (or gwh), or coal_production_tons (for mining).

Formula

```
ES1 = (scope1 + scope2 [+ scope3_fugitive]) / Output
```

Proxy if emissions missing: Emissions_proxy = NetGen_MWh × EF_CO2e_per_MWh_by_fuelgrade.

ES2 — Absolute Global Emissions Share

Fields to use: country, sector, emissions_tCO2e, year.

Formula: `ES2 = 100 × Sector_Emissions_global / Global_Emissions.`

ES3 — Policy■Exempt Emissions

Fields to use: country, coverage_pct, scope, year (from coverage/policy table).

Formula: `ES3 = 100 × (1 – coverage_pct/100).`

Proxy: small coverage_inputs.csv with Country, Year, coverage_pct.

ES4 — Lifecycle Emissions Coverage (Scopes 1–3)

Fields to use: entity/country, scope, covered_emissions_tCO2e, total_emissions_tCO2e, year.

Formula: `Coverage_% = 100 × Σ Covered_S1_3 / Σ Total_S1_3; ES4 = 100 – Coverage_% (if higher=worse).`

ES5 — Historical Emissions Debt

Fields to use: country/sector, year, emissions_tCO2e (time series).

Formula: `ES5_abs = Σ Emissions_t; ES5_norm = ES5_abs / Σ Output_t (optional).`

Notes

• Use data■quality columns (if present) as weights when aggregating. • Normalize each ES submetric to 0–100 and combine per FVI weights.