C100 Methodology Whitepaper

Carbon Index Protocol · v1.0 · July 2026

Executive Summary

The C100 is an integrity-first benchmark of publicly traded companies materially exposed to the global carbon economy. It combines registry data, MRV reports, corporate climate disclosures, and AI-driven controversy signals into a single 0–100 composite score. Constituents are re-ranked weekly and the index is rebalanced quarterly. A company retiring millions of low-quality offsets while emissions rise is *penalised*, not rewarded.

1. Universe & Eligibility

The C100 universe is drawn from the Carbon Company Universe of 300–500 listed issuers across carbon-material sectors: energy, utilities, materials, industrials, transport, agriculture, forestry, climate-tech, and carbon-market infrastructure. Eligibility requires: (a) primary listing on a major exchange, (b) minimum 12-month trading history, (c) audited financial disclosures for the trailing fiscal year, and (d) at least one material link to the voluntary or compliance carbon market — either as a producer, consumer, retirer, financier, or enabling infrastructure provider.

2. Scoring Pillars & Weights

The composite CIP Score is the weighted sum of seven pillars:

Pillar	Weight	Description
Carbon Market Activity	25%	Credits produced, consumed, retired, held, financed, or enabled.
Credit Quality Exposure	15%	Registry, vintage, methodology, removals vs avoidance, permanence, additionality, CCP alignment.
ESG & Climate Compliance	20%	SBTi, CDP, emissions reporting, net-zero target quality, board oversight, ISSB / TCFD.
Transition Execution	15%	Actual emissions reduction, intensity improvement, capex alignment, renewable adoption.
Financial & Market Strength	10%	Market cap, liquidity, revenue quality, profitability, public float.
Sentiment & Controversy Integrity	10%	News, litigation, greenwashing risk, NGO flags, regulatory scrutiny (inverted).
Innovation Premium	5%	AI, MRV, tokenization, climate-tech infrastructure, new methodologies.

Each pillar is normalised to a 0–100 percentile within the universe cohort before weighting. Missing data is imputed using sector medians with a transparency penalty applied to the Sentiment Integrity pillar.

3. Ranking & Selection

All eligible issuers are scored and ranked. The top 100 by composite score form the C100. Sector caps limit any single GICS sector to a maximum of 25 constituents, ensuring cross-sector representativeness. In the event of ties, higher-integrity Sentiment scores break the tie.

Constituents that fall below rank 130 at quarterly rebalance are removed; new entrants must rank 90 or above and pass a two-week observation window before inclusion.

4. Risk & Integrity Signal

Risk is a separate axis from the CIP Score, surfaced as Low / Medium / High / Severe. It folds into the composite through the Sentiment Integrity pillar (10%) — higher risk pulls the score down, never additive. Companies with an active regulatory investigation have their Risk component locked at the higher of the model output or a manual override until the matter resolves.

5. Rebalancing Cadence

Weekly score refresh · Quarterly constituent rebalance (Mar / Jun / Sep / Dec, third Friday) · Ad-hoc removals for delisting, bankruptcy, or unresolved severe controversies.

Transparency & Governance

All score changes are logged to the append-only Vault (see /vault). Methodology updates require publication of a redline at least 30 days before taking effect. Quarterly rebalancing decisions are published with full constituent-level attribution. No constituent — public or private — pays for inclusion; the index is not a certification and does not constitute investment advice.

Data Sources

Berkeley Voluntary Registry Offsets Database, Verra, Gold Standard, ACR, ART TREES, Climate Action Reserve, Puro.earth, Isometric, SBTi, CDP, corporate 10-K / 20-F / annual filings, ISSB / TCFD disclosures, EU ETS registry, national emissions inventories, and licensed news signals for controversy detection.

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