

Carbon Credit Pair Settlement

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Carbon Credit Market Structure

Voluntary carbon markets (Verra VCS, Gold Standard, CAR, ACR) and compliance markets (EU ETS, CARB, RGGI, emerging international compliance regimes) operate parallel registry systems. Cross-registry composition produces double-counting concerns and audit complexity.

Current registry-mediated transactions face structural lineage gaps; vendor-specific credit-tracking systems face cross-registry friction.

Pair Settlement as Substrate

Each credit transaction settles as a credentialed pair (credit-issuer authority and credit-purchaser authority) with credential carrying credit-vintage, geographic-region, methodology, and verification-authority lineage. Cross-registry composition admits through declared federation.

Double-counting becomes structurally detectable; credit-retirement operations enter audit lineage; cross-jurisdiction operations gain structural support.

Carbon Market Maturation

Article 6 of the Paris Agreement, emerging international carbon-market frameworks, and emerging tokenized-carbon platforms all benefit from architectural pair-settlement substrate.