carbon token

What is a CO2 Token?

Think of a CO2 token as a digital certificate that proves your company has reduced or offset a
specific amount of carbon emissions (usually 1 metric ton of CO2). Instead of a paper certificate, this proof lives on a blockchain—a secure, transparent digital ledger that anyone can verify but no one can tamper with.

Why does this matter?

Companies can buy, sell, and trade these tokens easily Every transaction is transparent and traceable. It helps combat climate change by incentivizing emission reductions. It opens new revenue opportunities for CloudTuner.ai.

Step 1 - Data collection

Gather emission data from all cloud platforms we monitor
Calculate exactly how much CO2 has been reduced or offset
Document everything with timestamps and evidence.

Compliance requirement: The data must meet international standards (like Gold Standard or Verra) that verify carbon reductions are real and measurable

Step 2 - Independent verification

What happens: An independent third-party organization reviews our carbon reduction data to make sure it's accurate and legitimate.

What we need to do: Choose a recognized verification body (Verra or Gold Standard)
.Submit our carbon reduction projects and data. Pass their audit and verification process.
Receive official certification

Compliance requirement: All carbon credits must be verified by a recognized international standard to be tradeable and credible.

Step 3 - Choose blockchain platform

What happens: We select which blockchain network will host our CO2 tokens. What we need to do: Pick a blockchain.
Decide on the token type: ERC-20 (like a currency—easy to trade in bulk) ERC-721 (like a unique certificate—each token is different) ERC-1155 (combination—allows both types)

Step 4- Develop Smart contracts

What we need to do: Write the smart contract code that defines all token rules Include security features to prevent fraud. Program automatic retirement when companies use tokens to offset emissions. Link each token to our verified carbon data.

Step 5- Store data

What happens: We store detailed information about each carbon offset project on a decentralized storage system. What we need to do: Upload project documentation, verification reports, and emission data Use IPFS or Arweave (decentralized storage systems) Link this data to each token so buyers can verify what they're purchasing

Step 6 - Minting tokens

What we need to do:

Use our smart contract to "mint" tokens
Each token represents 1 metric ton of verified CO2 reduction
Ensure tokens can only be created once (no duplicates)
Register them on the blockchain

Broadcast tokens to carbon market registries and trading platforms; integrate with existing carbon pools (e.g., KlimaDAO, Carbonmark, Toucan Protocol).
Build API endpoint to automate token minting as direct output of CloudTuner.ai’s emission data pipeline.

Step 7 - Register with Carbon Registries

What we need to do: Apply for registry account (Verra Registry, Gold Standard Registry)
Link our blockchain tokens to registry entries
Mark traditional credits as "tokenized" to prevent double use
Develop user flows for token owners to retire (burn) tokens on-chain and receive digital certificates proving emission offset.
Integrate public dashboards for emissions, token lifecycle, and environmental impact reporting.

Step 8- Build a trading platform

What happens: We create a user-friendly marketplace where people can buy, sell, and retire CO2 tokens.

What we need to do:
Design a simple website or app interface Integrate digital wallets for token storage
Connect to cryptocurrency exchanges if needed
Add features for token retirement (when companies offset emissions)
Generate digital certificates as proof of offset