

## Capstone Letter of Intent (LOI)

### I. Project Overview

- **Capstone Project Name/Idea:** EcoMint -: Carbon-Credit Collateral Lending
- **Brief Project Description:** EcoMint is a Solana-based DeFi x ReFi lending protocol where users can unlock interest-free stablecoin loans by using tokenized carbon credits as collateral. Instead of charging interest, EcoMint uses a milestone-based loan release system, rewarding eco-conscious behavior and long-term holding of green assets. It's lending — reimaged for the climate era.
- **Reason for Choosing this Project:** I wanted to build something that aligns financial incentives with real-world impact. Carbon credit markets are growing, and tokenized assets like BCT and NCT are already here — but they lack deeper DeFi integration. By creating a protocol that treats carbon tokens as valuable collateral, EcoMint bridges the gap between DeFi and climate action — in a way that's not just profitable, but meaningful.

### II. Go-to-Market Strategy

- **Target Audience:**
  - ReFi users & eco-conscious crypto holders — People already holding BCT, NCT, or Regen assets.
  - DeFi users looking for ethical/impact-driven protocols
  - DAOs or eco projects with treasuries of carbon tokens or NFTs
  - Hackathon/early Web3 builders who want carbon-friendly building blocks.
- **Value Proposition:**
  - For Environment: Encourages long-term holding of carbon credits
  - For Users: No interest or liquidation stress — milestone unlocking instead, Get access to capital without selling green assets
- **Marketing and Distribution:**
  - Regular updates on Twitter, Lens, Farcaster
  - Share milestone-based loan mechanics through threads
  - Collaborate with ReFi projects like Toucan Protocol, Regen Network, Open Forest Protocol
- **Competitive Landscape:** There are existing decentralized lending platforms but EcoMint differentiates itself through:
  - Milestone-based unlocking instead of interest → inclusive, ethical finance
  - Carbon credit collateral → creates demand for climate-positive assets
  - Built on Solana → fast, low-cost, carbon-efficient chain
  - Gamified DeFi → makes borrowing fun and planet-friendly

### IV. Technical Details

- **Tech Stack:**
  - Blockchain Platform: Solana
  - Smart Contract Language: Rust
  - NFT Standard: Metaplex, SPL Token
  - Clock SysVar for time based lending mechanism
  - Oracle: Chainlink for secure and reliable data feeds (e.g., ad impressions, click-through rates) SwitchBoard to fetch price feeds for carbon credit, Helius or Triton for txn indexing.
- **Program(smart contract) Development:**
  - Rust + Anchor will be used for program development, ensuring compatibility with the solana ecosystem. Concepts like Escrow accounts, Time locks will be used.
  - Testing: Unit testing, integration testing will be conducted .Test every function for expected behavior, failure conditions, reentrancy, etc.
  - Formal verification for various components in the program.

## V. Conclusion

- **Project Timeline:** 1 month for MVP
- **Commitment:** I am fully committed to this project, dedicating my fulltime to launch this fully operational product.
- **Initials:** SarthakArora