

Olive Branch Network (OBN) Whitepaper

Abstract

Olive Branch Network (OBN) is a decentralized staking and donation ecosystem built on Ethereum's Base Layer 2. It merges Proof-of-Stake tokenomics with a charity-focused revenue split to enable continuous support for nonprofits while rewarding participants. This whitepaper provides a comprehensive technical description of OBN's mechanics, inflation model, staking system, and governance, as well as a detailed explanation of how it solves inefficiencies in traditional philanthropic funding.

1. Purpose

Traditional charity models suffer from opacity, high overhead costs, and a lack of continuous funding. OBN solves this by:

- Creating **transparent, on-chain donations** from staking rewards.
- Allowing participants to **stake their tokens** to earn rewards while a portion is automatically redirected to nonprofits.
- Enabling **DAO-based governance** to allow community-driven decisions on future features, nonprofit selection, and treasury usage.

By integrating these mechanics into a single ecosystem, OBN transforms passive donations into a sustainable, scalable, and trustless mechanism for global impact.

2. Tokenomics

2.1 Initial Supply

- Initial fixed supply: **1,000,000,000 OBN tokens** minted at genesis.
- Distribution:
 - 50% reserved for DEX liquidity (Uniswap, BaseSwap).
 - 20% airdropped to early participants & mission-completers.
 - 10% reserved for nonprofit partnership incentives.
 - 10% reserved for the treasury for development.
 - 10% reserved for the team (vesting over 2 years).

2.2 Inflation Model

OBN introduces a controlled inflation schedule to sustain staking rewards and nonprofit contributions:

Year Range	Annual Inflation Rate	Distribution
Years 1-2	10% per year	80% stakers, 15% nonprofits, 5% treasury
Years 3-4	5% per year	same split
Years 5-6	2.5% per year	same split
Years 7-10	1.25% per year	same split

Formula:

$$\text{Supply}_t = \text{Supply}_0 * (1 + r)^t$$

Where Supply_t = total supply after t years, Supply_0 = initial supply (1B), r = annual inflation rate.

Example: After 2 years at 10% annual inflation:

$$\text{Supply}_2 = 1,000,000,000 * (1.10)^2 = 1,210,000,000 \text{ OBN}$$

Comparison with USD:

- Average historical USD inflation: ~3.5% annually.
- OBN starts higher (10%) but tapers to 1.25% by year 7.

Graph (conceptual): OBN inflation (green curve) starts steep but flattens, while USD inflation (blue curve) remains linear at ~3.5%. By year 5, OBN's effective annual inflation is below the USD's historical average.

3. Mechanics Under the Hood

3.1 Staking Contract Architecture

OBN uses audited ERC-20 contracts with staking logic:

- **OBNToken.sol:** ERC-20 implementation with mintable supply controlled by staking contract.
- **OBNStaking.sol:**

- Accepts stakes of OBN tokens.
- Calculates rewards per block based on inflation schedule.
- Splits rewards: 80% to stakers, 15% routed to charity vault, 5% routed to treasury.
- Rewards auto-compounded or claimed by users.

Key variables:

- rewardPerBlock dynamically adjusts based on epoch/year.
- charityVault address receives 15% of minted rewards.
- treasury address receives 5% of minted rewards, governed by DAO parameters.

3.2 Charity Vault Mechanics

- Nonprofit wallets are registered via DAO proposals.
- Staking contract routes 15% of each reward distribution into a multisig-managed vault.
- Vaults disburse funds to selected nonprofits quarterly, with all transactions on-chain for transparency.

3.3 DAO Governance

OBN token holders can vote on:

- Adding/removing nonprofit wallets.
- Adjusting reward splits within predefined bounds.
- Deploying new smart contracts or upgrades (via proxy pattern).

Voting power = staked OBN, ensuring long-term aligned participants have more influence.

3.4 Security and Auditing

- Contracts are written in Solidity ^0.8.x.
- Audited by independent firms prior to mainnet launch.
- Implements OpenZeppelin libraries and upgradeable proxy pattern.
- Time-locks on DAO treasury transactions to prevent malicious proposals.

4. Problem Solving

OBN solves the following core issues:

- **Lack of Transparency:** All reward distributions and vault transfers are recorded on-chain, auditable in real time.

- **High Overhead:** Smart contracts replace administrative layers, maximizing funds reaching nonprofits.
- **Lack of Incentives:** Stakers earn rewards while donating passively, creating a symbiotic growth cycle.

Technical Advantages:

- Layer 2 (Base) ensures low gas fees and high throughput.
 - Non-custodial staking: users maintain control of their private keys.
 - Automated reward distribution reduces operational costs.
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5. Roadmap Summary

- **Q3 2025:** Foundation, smart contract deployment, Base mainnet launch, Uniswap/BaseSwap listings.
 - **Q4 2025:** Staking contracts live, real-time dashboard, first nonprofit pools.
 - **Q1 2026:** Referral program, ambassador initiative, DAO voting integration.
 - **Q2 2026:** Mobile dApp, expanded partnerships, NFT badges, cross-chain exploration.
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6. Conclusion

Olive Branch Network leverages blockchain to build a sustainable and transparent mechanism for giving. With controlled inflation, on-chain governance, and real-time staking rewards, OBN aligns incentives for both individuals and nonprofits. As the ecosystem grows, OBN aims to become the backbone of decentralized philanthropy.

For more information, visit www.olivebranch.network