Hestia: a deflationary store of value on the Base Chain

The Hestia Whitepaper

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https://ultraroundmoney.com/hestia

Overview

Ultraround Money - Circle created a spark in February 2024. It pioneered a new approach to deflationary crypto currencies by embracing the Base chain, popular for its low cost, and the Uniswap v3 pool fees as fuel for the deflationary pressure. One year later, it survived the hype, the bear and is still supported by a core community of holders. The CIRCLE contracts have been forked many times. Some attempts have failed or rugged while others have brought worthwhile innovation to the approach.

This whitepaper presents an in-depth overview of a new deflationary crypto currency on the Base chain: the HESTIA token supported by the Hestia Chaos Engine (HCE). Though inspired by Circle's foundational principles, HESTIA implements several distinct architectural improvements. The goals of this new token are to offer holders a highly deflationary store of value and act as a reinforcing mechanism to the Circle Chaos Engine (CE). The Hestia Chaos Engine boosts the following characteristics which will be further described in the document:

1. **Deflationary pressure**: Creates deflationary pressure by decreasing liquidity in the pool: burning the sell-side (HESTIA) and buying & burning with the buy side (USDC)

2. **USDC Reserve**: Captures and utilizes buy-side liquidity and pool fees to build protocol-owned USDC reserves

3. **Liquidity Injection**: Increase liquidity in the pool by combining the USDC reserve and collected HESTIA fees

4. **Price Support**: Leverages accumulated USDC reserves to support price floors

5. **Volume Generation**: Deploys USDC reserves strategically to generate volume and trading fees (Cause Chaos)

6. **Ecosystem Integration**: Shares pool fees with the Circle Chaos Engine and Circle's Multi-sig wallet

7. **AI-Ready**: Features a configurable smart contract designed for future artificial intelligence integration

8. **Hybrid Appeal**: Combines serious DeFi mechanics with engaging memetic elements, broadening market appeal

The Circle-Hestia synergy

The CIRCLE token's primary deflationary pressure comes from Uniswap v3 pool fees generated through sell transactions. In simple terms, for every 100 CIRCLEs sold, 1 CIRCLE is burned. The Circle Chaos Engine enhances this burn rate by collected buy-side pool fees (WETH). When the Cause Chaos function is called on the contract, the Circle Chaos Engine swaps its WETH reserve back-and-forth multiple times (WETH to CIRCLE, then CIRCLE to WETH, and so on). This increases the sell volume which will generate new CIRCLE fees in the pool that can be collected and burned.

During extended periods of low market activity, the Circle Chaos Engine cannot generate fees and the deflationary pressure ceases. The Hestia Chaos Engine can provide support in those situations, by making sure the Circle Chaos Engine wallet has enough WETH to keep the « Circular Burn Loop » turning.

The Hestia Chaos Engine (HCE)

Differences between Circle and Hestia Chaos Engines

The selection of USDC as HESTIA's primary liquidity pair, rather than ETH, serves multiple strategic purposes. As a stablecoin pairing, it enhances HESTIA's potential as a deflationary store of value over extended periods. It will also open interesting plays for reinforcing CIRCLE. In bear phases, when CIRCLE and ETH price are low vs USDC, Hestia can achieve greater impact by acquiring larger amount of ETH to send to Circle's Chaos Engine wallet. In bull phases, when CIRCLE volume grows and price gains on ETH, HESTIA can pivot her focus toward regenerating her own liquidity pool.

Reserve accumulation represents a fundamental distinction between Hestia and Circle. Hestia doesn't need to collect trading fees in the pool to generate a reserve, she can use her own liquidity pool. This process occurs through the **Hestia's Rage** function. The Hestia Chaos Engine reduces the liquidity in the pool by a ratio (maximum of 1%, minimum of 0.001%). The HESTIA tokens collected will be burned while the USDC token fill up the contract's reserve. If the reserve is at capacity, the excess USDC tokens buy & burn HESTIA directly through the contract. This process will partially refill the buy-side liquidity in the pool that was just decreased. The default interval for **Hestia's Rage** is one call per day.

The Hestia Chaos Engine handles fee collection and dispatching through the **Smoke Fees** function which can be called hourly. The first step is to Cause Chaos: Hestia uses a portion of her USDC reserve to generate volume and additional trading fees, by swapping USDC to HESTIA and then HESTIA to USDC repeatedly (default is 3 loops, maximum is 5). The pool fees are then collected and the HESTIA tokens are market sold (swapped to USDC). This allows sell-side fees to re-enter the pool. Finally, the gained USDC is swapped in WETH and sent to Circle's Chaos Engine wallet. The engine can also be configured to send USDC directly to Circle's Multi-sig wallet.

Another major architectural distinction lies in the Hestia Chaos Engine's reliance on an Automator wallet. Although both the **Smoke Fees** and **Hestia's Rage** can be accessed publicly, only the Automator wallet is able to change their configurations. In a later phase of the project, ownership of the Automator role will be transferred to an AI agent.

Security-wise, both the **Smoke Fees** and **Hestia's Rage** functions have reentrancy, slippage and and time-lock protection. The public access to these functions can be revoked if issues are detected after the launch. The Hestia Chaos Engine has been audited by CTDSEC. Liquidity will be locked within the contract 24 to 72 hours after launch.

Hestia's Regenerative Mechanisms

The sustainability of the Hestia Chaos Engine depends on its ability to replenish and expand its liquidity pool. This regenerative process, known as **Hestia Feeding**, is implemented through both primary protocol functions.

The **Smoke Fees** function can be configured to maximize liquidity increase in the pool. In this mode, the Cause Chaos mechanism remains dormant to preserve USDC reserves. Upon collection of pool trading fees, the contract executes precise calculations to determine optimal USDC-to-HESTIA ratios for full-range pool liquidity expansion. Any residual tokens that cannot be added into the liquidity pool remain

secured within the contract. During **Hestia Feeding**, the Hestia Chaos Engine limits contributions to both the Circle Chaos Engine and Circle Multi-sig wallet.

The **Hestia's Rage** function can also be configured to maximize liquidity increases. The process starts with an assessment of available HESTIA balances within the contract. When HESTIA tokens are present, the function orchestrates liquidity increases using these tokens in conjunction with a configurable portion of the total USDC reserve. During **Hestia Feeding**, the **Hestia's Rage** function does not attempt to decrease liquidity in the pool. The protocol maintains deflationary pressure by directing any remaining HESTIA tokens to the burn address upon function completion.

Reserve Management and Capacity

The Hestia Chaos Engine maintains an USDC reserve with adaptable capacity, managed through the Automator's ability to implement incremental adjustments. These adjustments are bounded by a maximum of $5000 USDC per modification. The reserve functions as a multi-purpose utility within the protocol:

- Powers the Cause Chaos mechanism within **Smoke Fees**, deploying a portion of USDC reserves to stimulate volume and fee generation
- Enables liquidity increases in the pool through **Hestia's Rage** by pairing reserve USDC with existing HESTIA contract holdings

Reserve accumulation occurs through two pathways:

- Incrementally via **Smoke Fees** through retention of collected trading fees
- Primarily through **Hestia's Rage** by capturing strategic portions of USDC liquidity released during pool contraction events

Reserve capacity can also be decreased by the Automator. The effect of this manifests in **Hestia's rage**, as the excess USDC in the contract is used to buy & burn HESTIA.

The reserve's game theory centers on slowly increasing capacity as the price of HESTIA goes up against USDC. And then decrease capacity when the price of HESTIA falls. In essence, the reserve will act as price support - increasing reserve capacity is similar to borrowing buy-side liquidity from the pool, with a promise to give it back when the Hestia Chaos Engine can buy & burn more HESTIA for each USDC.

Project Implementation Timeline

Hestia Token Presale

The project includes a two-week presale with a $200,000 cap. The token will launch fully-diluted with no team allocation. If the sale reaches the cap, funders will own 30% of the project with a market cap at launch of $660,000 ($0.66 per token). Initial supply is 1 million tokens.

Phase 0: Hestia Feeding

Phase 0 spans one to two months, during which approximately 30% of HESTIA total supply will be either burned or added to the liquidity pool. The Hestia Chaos Engine will retain most trading fees collected within **Smoke Fees** to fill the USDC reserve. Before each **Hestia's Rage** call, the Automator will send HESTIA tokens to the Chaos Engine

wallet. The **Hestia's Rage** function will increase liquidity using these HESTIA tokens and the USDC reserves collected from the trading fees. Remaining HESTIA tokens will be sent to the burn address. Phase 0 minimizes liquidity reduction operations, focusing on establishing an ideal liquidity-to-market cap ratio before Phase 1 initiation.

Phase 1: Hestia Burning

Phase 1 spans six to twelve months, during which approximately 20% of HESTIA total supply will be burned through daily usage of the **Hestia's Rage** function. Liquidity reduction parameters start at 1% daily, gradually decreasing to 0.1% by phase conclusion. A significant portion of the buy-side liquidity collected will be used to buy & burn additional HESTIA tokens. The Hestia Chaos Engine will increase its USDC reserve capacity as price rises, while the Circle Chaos Engine receives significant funding. By Phase 1's conclusion, potential developments include new liquidity pools, bridges to other chains and an AI marketing agent, all contingent upon market conditions and strategic opportunities.

Phase 2: Hestia AI (Post 50% Supply Burn)

Phase 2 begins when 50% of the initial HESTIA supply is burned. This phase aims to transfer control of the Automator wallet to an AI agent, establishing programmatic governance over HESTIA and CIRCLE deflationary mechanisms.

The Automator

The Automator is a wallet designated by the Hestia Chaos Engine deployer. It is the only wallet with access to the **setConfigs** function which controls the mechanics of **Smoke Fees** and **Hestia's Rage**.

The Hestia Chaos Engine deployer must retain ownership of the contract as changing the Automator address may be necessary in the future. Security measures will be implemented to ensure the deployer's hardware wallet is stored securely.

Set Configs overview

These are the configurations available to the Automator Wallet. There is a time lock of 1 hour between each call to the privileged function. In phase 2, the Automator wallet will be assigned to an AI agent.

Name	Description	Default	Range
USDC_CAPACITY	Amount of total USDC that should be kept as reserve in contract	5000 USD	0:off, each increment or decrement must be a maximum of $5000
LIQUIDITY_SLIPPAGE	Slippage protection for swaps, increase and decrease liquidity calls	1000	0:off, range is 50:0.5% to 2500:25%
SMOKE_PUBLIC	Whether the smokeFees function can be accessed without Automater privilege	True	True or false
SMOKE_INTERVAL	Minimal interval between smokeFees	1 hour	Range is 1 to 6 hours
SMOKE_CHAOS_RATIO	Amount of the USDC reserve that Hestia's Rage will use for causeChaos volume generation	1000 USD	0:off, max: $5000, increase must be increment of $1000
SMOKE_CHAOS_LOOP	Amount of back and forth swaps to do in Cause Chaos	3	0:off, range is 1 to 5
SMOKE_FEED	Ratio of the USDC collected fees that Smoke Fees will attempt to use when injecting liquidity	0	0:off, range is 1:100% to 100:1%
SMOKE_USDC_TARGET	Defines the action to do with USDC in Smoke Fees	0	0 -> keep in contract, 1 -> swap to WETH and transfer to CCTP, 2 -> transfer to Multisig, 3 -> swap to Yorpy
SMOKE_HESTIA_TARGET	Defines the action to do with HESTIA in Smoke Fees	0	0 -> keep in contract, 1 -> swap to USDC, 2 -> swap to WETH and transfer to CCTP, 3 -> transfer to 0 address, 4 -> transfer to Multisig
RAGE_PUBLIC	Whether the Hestia's rage function can be accessed without Automater privilege	True	True or false
RAGE_INTERVAL	Minimal interval between Hestia's rage	24 hours	Range is 6 hours to 24 hours
RAGE_FEED	Amount of the USDC reserve that Hestia's Rage will attempt to use when injecting liquidity	5000 USD	0:off, max: $25000, increase must be increment of $5000
RAGE_LIQUIDITY_RATIO	Divider used to reduce liquidity from liquidity pool	250	0:off, range is 100:1% to 10000:0.01%

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Hestia Website: https://ultraroundmoney.com/hestia

Hestia Whitepaper: https://ultraroundmoney.com/hestia/whitepaper.pdf

Hestia Token Contract: 0xbc7755a153e852cf76cccddb4c2e7c368f6259d8

Hestia Chaos Engine Contract: 0x4e5524e08fee52cef973380fdbea8909361887b8

Circle Website: https://ultraroundmoney.com/circle

Circle Whitepaper: https://ultraroundmoney.com/circle/whitepaper.pdf

Circle Token Contract: 0x5babfc2f240bc5de90eb7e19d789412db1dec402

Circle Chaos Engine Contract: 0x87af913718f73168d4566bbf51683792ac2680eb