Lux Network Tokenomics

A Comprehensive Framework for Deflationary Economics,
ve-Governance, and Validator Incentives

Lux Industries
https://lux.network

Version 2.0 – December 2025

Abstract

LUX is a **deflationary coin** used to pay for transactions on Lux Network. No more LUX can ever be minted—**half of every transaction fee is burned**. This whitepaper presents the complete tokenomics of the Lux Network, including token distribution, validator tiers, NFT membership passes, liquidity provider rewards, and the vote-escrowed governance system. With a fixed supply of 2 trillion tokens and a launch price of $0.0001, Lux creates sustainable long-term alignment between validators, stakers, and the broader ecosystem.

Contents

1 Introduction

1.1 The Lux Network Vision

The Lux Network is a next-generation Layer-1 blockchain designed for high performance, post-quantum security, and sustainable economic design. Central to Lux's architecture is a **deflationary tokenomics model** where half of all transaction fees are permanently burned.

1.2 Key Economic Properties

- **Fixed Supply**: 2,000,000,000,000 LUX (2 trillion) — no additional minting possible
- **Deflationary**: 50% of all transaction fees are burned
- **Launch Price**: $0.0001 USD per LUX
- **Fully Diluted Valuation**: $220,000,000 at launch
- **Community Governance**: DAO controls 50% of total supply

2 Token Distribution

2.1 Total Supply

The LUX token has a fixed total supply of **2 trillion tokens** (2,000,000,000,000 LUX). This supply is fully minted at genesis and can never be increased.

2.2 Initial Allocation

Category	%	Tokens (LUX)	Notes
Lux DAO	50%	1,000,000,000,000	Locked, controlled by DAO
Public Sale	20%	400,000,000,000	369 daily auctions, 10-20% discount
Private Sale	5%	100,000,000,000	25-50% discount, 366d lock + 10%/mo
Lux Team	5%	100,000,000,000	366d lock + 10%/mo release
Lux Developers	5%	100,000,000,000	366d lock + 10%/mo release
Network Treasury	5%	100,000,000,000	Market making & liquidity only
Network Rewards	5%	100,000,000,000	Customer acquisition
Network Partners	5%	100,000,000,000	Partner incentives

Table 1: LUX Token Initial Distribution

Metric	Value
LUX Total Supply	2,000,000,000,000 LUX
LUX Price (Launch)	$0.0001 USD
Fully Diluted Valuation	$220,000,000 USD
Available for Public Purchase	$55,000,000 USD

Table 2: Token Metrics at Launch

2.3 Key Metrics

2.4 Vesting Schedules

Private Sale, Team, and Developers:

- 366 days initial lock from acquisition
- 10% released monthly thereafter (10 months to full unlock)

Public Sale:

- Not locked — immediate liquidity
- 369 daily auctions spread over 1 year

Network Treasury, Rewards, Partners:

- Locked — only used for designated purposes
- Requires DAO governance approval for any distribution

3 Deflationary Mechanics

3.1 Fee Burning

Unlike traditional blockchains, Lux implements aggressive deflation:

> *"Half of every transaction fee is burned permanently."*

$$\text{Burn Rate} = 0.5 \times \text{Total Transaction Fees} \tag{1}$$

3.2 Supply Reduction Over Time

With consistent network usage, the circulating supply decreases:

$$\text{Supply}(t) = \text{Supply}_0 - \int_0^t 0.5 \times F(s)\, ds \tag{2}$$

where $F(s)$ represents transaction fees collected at time s.

3.3 Remaining Fee Distribution

The 50% of fees not burned are distributed via governance:

Recipient	Default Weight
Validators	48%
DAO Treasury	1%
Protocol-Owned Liquidity	1%

Table 3: Distribution of Non-Burned Fees

4 Validator Economics

4.1 Validator Tiers

Lux supports multiple validator tiers to enable broad participation while maintaining network security:

Tier	USD Value	LUX Required	Max Count
Genesis Validator	$1,000,000	1,000,000,000	100
Validator	$100,000	100,000,000	1,000
Mini Validator	$10,000	10,000,000	10,000
Nano Validator	$1,000	1,000,000	100,000

Table 4: Validator Tiers and Requirements

4.2 Validator Counts Summary

Category	LUX Allocation	Validator Count
Genesis (1B each)	100,000,000,000	100
Standard (100M each)	100,000,000,000	1,000
Mini (10M each)	100,000,000,000	10,000
Nano (1M each)	100,000,000,000	100,000
Total Validators	**400,000,000,000**	**111,100**

Table 5: Validator Network Distribution

5 NFT System

5.1 NFT Types

Lux offers three NFT types, each with matching tiers aligned to validator economics:

1. **Validator NFTs**: Represent validator positions with permanently locked LUX
2. **Card NFTs**: Membership cards with network benefits and governance rights
3. **Coin NFTs**: Collectible coins representing network participation

5.2 NFT Tiers

All three NFT types share the same tier structure:

Tier	USD Value	LUX Locked	Max Supply
Genesis	$1,000,000	1,000,000,000	100
Validator	$100,000	100,000,000	1,000
Mini	$10,000	10,000,000	10,000
Nano	$1,000	1,000,000	100,000

Table 6: Unified NFT Tier Structure

5.3 Ethereum Genesis Collection

The original Lux Genesis NFT collection was minted on Ethereum at:

`0x31e0f919c67cedd2bc3e294340dc900735810311`

Migration Rules:

- **Total Supply**: 50 NFTs (47 existing, 3 non-existent)
- **Test NFTs (IDs 1-13)**: Assigned to treasury (0x9011...)
- **Genesis NFTs (IDs 14-49)**: Minted to current Ethereum holders
- **LUX Locking**: Each NFT has 1 billion LUX permanently locked

5.4 Permanent LUX Locking

Genesis NFTs have a unique economic property:

> *"The LUX backing each Genesis NFT can NEVER be unlocked."*

- **1B LUX per NFT**: Permanently locked in the NFT contract
- **Staking Rewards**: Flow to the current NFT holder
- **Claimable**: Holders can claim rewards via `claimRewards()`
- **Transferable**: NFT can be sold/transferred; new holder receives future rewards
- **Total Locked**: 47B LUX across all Genesis NFTs

5.5 NFT Holder Benefits

6 Staking Rewards

6.1 Liquidity Provider Rewards

LP rewards incentivize deep liquidity pools:

Note: Liquidity Rewards are paid at the end of the period in a lump sum. Users have a toggle option to automatically compound staked tokens to the next period. Rates are estimates based on pool rewards allocation.

Tier	Benefits
Genesis	Premium validator priority, 10x governance multiplier, exclusive events, highest staking rewards
Validator	Validator queue priority, 5x DAO voting boost, early access to features
Mini	Reduced transaction fees, staking bonuses, premium support
Nano	Community access, basic staking rewards, network participation

Table 7: NFT Tier Benefits

Lock Duration	APY
1 month	5%
3 months	20%
6 months	50%
12 months	111%

Table 8: Liquidity Provider Reward Rates

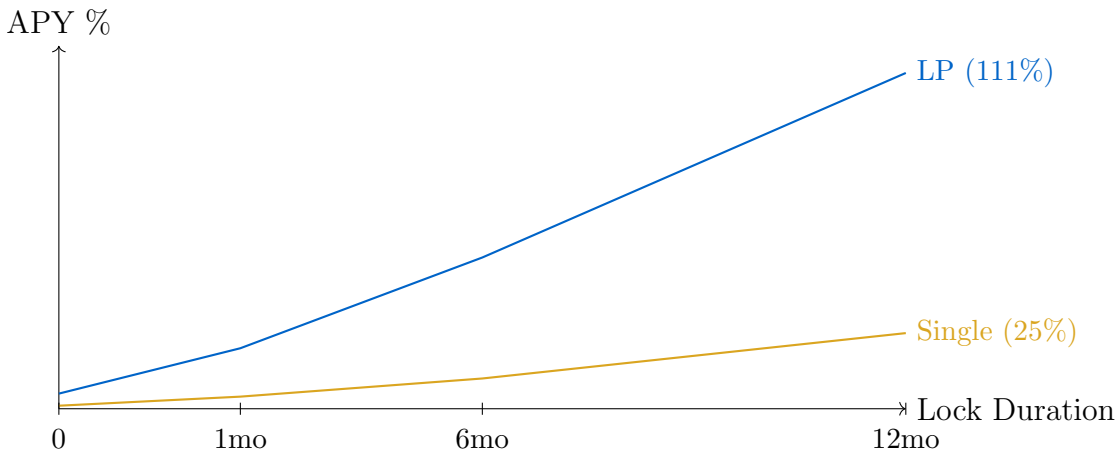
6.2 Single-Sided Staking

Single-sided staking allows LUX holders to earn yield without impermanent loss:

Lock Duration	APY
1 month	1%
3 months	4%
6 months	10%
12 months	25%

Table 9: Single-Sided Staking Rates

6.3 Staking vs LP Comparison



7 Vote-Escrowed Tokenomics (vLUX)

7.1 Lock Mechanism

The vLUX system enables token holders to lock LUX for a period between 1 week and 4 years, receiving non-transferable voting power in return.

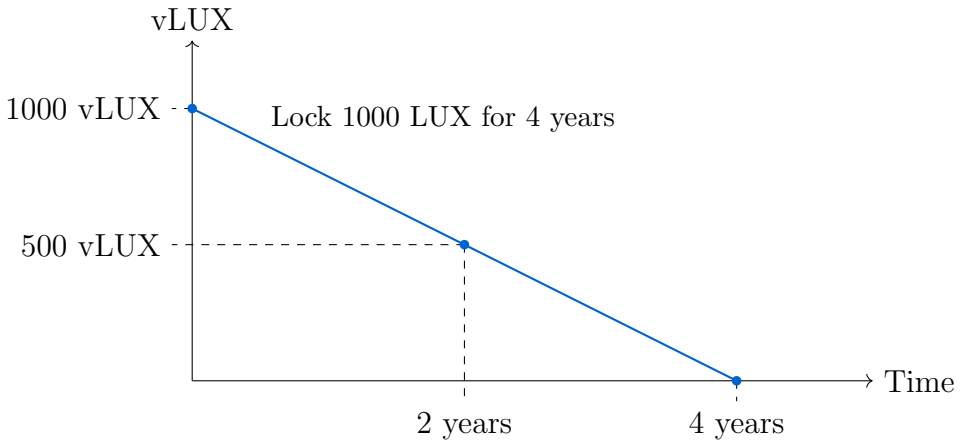
$$\text{vLUX}(t) = \text{LUX}_{\text{locked}} \times \frac{t_{\text{end}} - t_{\text{current}}}{\text{MAX\_LOCK}} \tag{3}$$

where:

- $\text{LUX}_{\text{locked}}$: Amount of LUX locked
- t_{end}: Lock expiration timestamp
- MAX_LOCK: Maximum lock duration (4 years = 126,144,000 seconds)

7.2 Voting Power Decay

Voting power decays linearly over time:



7.3 Gauge Voting

vLUX holders vote on gauge weights to direct fee distribution:

Gauge	Default Weight	Purpose
Burn	50%	Deflationary pressure via token destruction
Validators	48%	Validator and delegator rewards
DAO Treasury	1%	Governance and development funding
Protocol Liquidity	1%	DEX liquidity provision

Table 10: Default Fee Distribution Gauges

8 Staked LUX (sLUX)

8.1 Overview

sLUX is a liquid staking token representing staked LUX plus accrued yield. Unlike vLUX (governance), sLUX is transferable and can be used as collateral in DeFi protocols.

8.2 Exchange Rate

The sLUX exchange rate increases over time as rewards accrue:

$$\text{ExchangeRate} = \frac{\text{TotalLUX} + \text{AccruedRewards}}{\text{TotalSupply}_{\text{sLUX}}} \tag{4}$$

8.3 Cooldown Period

- **Stake**: Deposit LUX, receive sLUX at current exchange rate
- **Unstake**: Start 7-day cooldown, then withdraw

9 Synthetic Assets

9.1 The Synth Protocol

Lux features an Alchemix-style synthetic asset protocol:

1. Deposit yield-bearing collateral (e.g., sLUX, yvWETH)
2. Mint synthetic assets (xUSD, xETH, xBTC, xLUX)
3. Debt self-repays as collateral accrues yield

9.2 Supported Synths

- **xUSD**: Synthetic USD, pegged to $1
- **xETH**: Synthetic Ethereum
- **xBTC**: Synthetic Bitcoin
- **xLUX**: Synthetic LUX (leveraged exposure)
- **xSOL**: Synthetic Solana
- **xTON**: Synthetic Toncoin
- **xADA**: Synthetic Cardano
- **xAVAX**: Synthetic Avalanche
- **xBNB**: Synthetic Binance Coin
- **xPOL**: Synthetic Polygon

- **xZOO**: Synthetic Zoo Token
- **xAI**: Synthetic AI Token

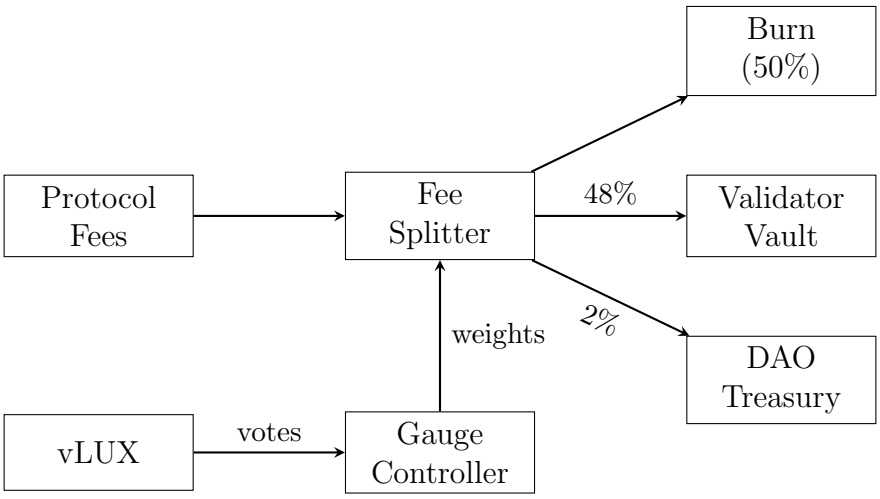
10 Smart Contract Architecture

10.1 Core Contracts

Contract	Purpose
`WLUX`	Wrapped LUX (ERC20)
`vLUX`	Vote-escrowed LUX
`GaugeController`	Gauge weight voting
`FeeSplitter`	Protocol fee distribution
`ValidatorVault`	Validator/delegator economics
`sLUX`	Liquid staking token
`SynthFeeSplitter`	Synth protocol fees

Table 11: Core Smart Contracts

10.2 Contract Interactions



11 Security Considerations

11.1 Economic Security

- **Vote Delay**: 10-day delay between votes prevents manipulation
- **Flash Loan Protection**: vLUX requires time-locked LUX
- **Weekly Epochs**: Gauge weights update weekly only

11.2 Slashing Protection

The ValidatorVault maintains a 5% slashing reserve to protect delegators from validator misbehavior.

12 Governance and DAO

12.1 DAO Structure

The Lux DAO controls the 50% treasury allocation (1 trillion LUX) and can:

- Add/remove gauges
- Adjust fee splitter parameters
- Fund development initiatives
- Manage protocol-owned liquidity

12.2 SubDAOs

- **Grants DAO**: Developer funding
- **Security DAO**: Audit coordination
- **Validator DAO**: Validator set management
- **Treasury DAO**: Investment strategy

13 Conclusion

The LUX tokenomics system creates a sustainable deflationary ecosystem:

- **Fixed Supply**: 2 trillion LUX, no inflation possible
- **Aggressive Deflation**: 50% of all fees burned
- **Aligned Incentives**: Validators, stakers, and DAO share remaining fees
- **Tiered Access**: Four tiers from $1K nano to $1M genesis
- **Genesis NFTs**: Permanent LUX locking with staking rewards to holders
- **High Yield**: Up to 111% APY for liquidity providers
- **Community Governance**: vLUX holders control fee distribution

As network usage grows, deflation accelerates while remaining fees fund validators and development. This creates a virtuous cycle where increased adoption benefits all stakeholders.

Parameter	Value
Total Supply	2,000,000,000,000 LUX
Launch Price	$0.0001 USD
FDV at Launch	$220,000,000 USD
Burn Rate	50% of transaction fees
Max Validators	111,100
Max Lock Period	4 years
Cooldown Period	7 days
Vote Delay	10 days

Table 12: LUX Token Summary

A Appendix: Token Summary

B Appendix: References

1. Curve Finance. "Vote-Escrowed CRV." https://curve.fi
2. Alchemix. "Self-Repaying Loans." https://alchemix.fi
3. Lido Finance. "Liquid Staking." https://lido.fi
4. Lux Network. "Technical Documentation." https://docs.lux.network