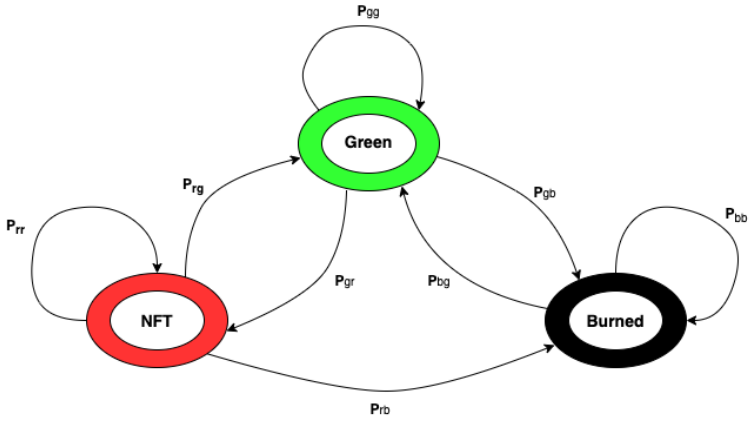


Figure 1: xxx

# CARBON RENAISSANCE PROPOSED DESIGN

A PREPRINT

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**ABSTRACT**

EIP-1559 is a new proposed pricing mechanism for the Ethereum protocol developed to mitigate short-term volatility in demand for transactions. To properly understand this as a stochastic process, it is necessary to develop the mathematical foundations to understand under what conditions the base fee gas price outcomes behave as a stationary process, and when it does not. We believe understanding these mathematical fundamentals is critical to engineering a well-designed system.

***Keywords*** EIP 1559 · Base Fees · Stochastic Processes · Stationarity

## 1 Introduction

xxx

## 2 Token Model

## 3 Conclusion

xxx

| | | Next State | | |
|---|---|---|---|---|
| | | Green | NFT | Burned |
| Current State | Green | $P(X_{n+1} = g \mid X_n = g)$ | $P(X_{n+1} = r \mid X_n = g)$ | $P(X_{n+1} = b \mid X_n = g)$ |
| | NFT | $P(X_{n+1} = g \mid X_n = r)$ | $P(X_{n+1} = r \mid X_n = r)$ | $P(X_{n+1} = b \mid X_n = r)$ |
| | Burned | $P(X_{n+1} = g \mid X_n = b)$ | $P(X_{n+1} = r \mid X_n = b)$ | $P(X_{n+1} = b \mid X_n = b)$ |

Table 1: Comparing PoW to PoS consensus mechanism; plus sign (+) indicates vulnerability; see [**?**]. As shown, PoW system has the least number of vulnerabilities

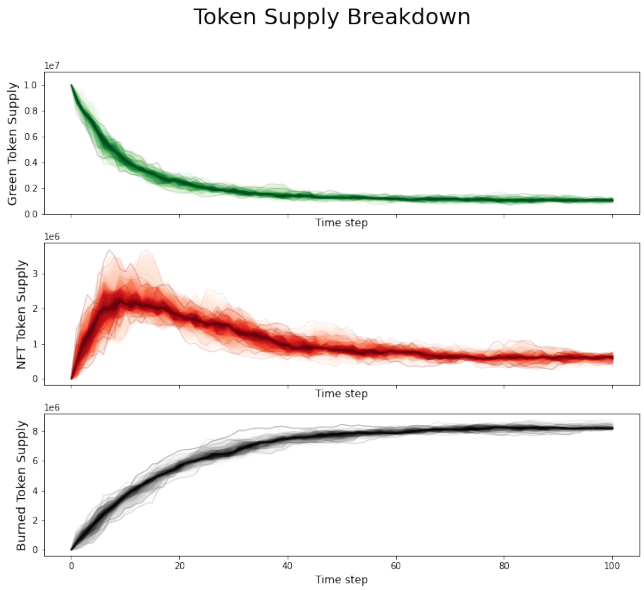


Figure 2: xxx

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