LIP - Staking Implementation

Summary

This proposal aims to establish the base staking mechanism for holders of the Ethlizards Genesis V1: 100 NFT collection and the Ethlizards V2: 5050 NFT collection. Staked token holders receive a portion of the DAOs revenue distribution based on the length of time staked.

Abstract

At its core, staking is a new feature that has 2 main goals:

1. Revenue Distribution (Rev Dis) to staked NFT holders.
2. Reduce circulating supply and help stabilize the DAO and community.

The proposed new concept of staking builds off these core principles. Additional concepts will expand upon these values for different value creation for the Ethlizards community.

Changes from PRELIM

Our prelims discussions have resulted in 3 major changes to the LIP.

1. The community is to decide on what rewards system is to be used moving forward. Option 1 is the team-lead rewards system that is distribution-based, whilst Option 2 is another alternative presented by our valuable Librarian Lizard, Seagolem. Whilst the team prefers Option 1's functionality as it's aligned with our overall vision, we are happy to proceed with Option 2 if the community believes it's a more suitable choice. In the LIP voting, you'll be presented with 4 options
    - Proceed with Option 1 (Distribution-based)
    - Proceed with Option 2 (Time-based)
    - Proceed with staking, regardless of rewards mechanism (This means you'd like staking to proceed and do not care what rewards mechanism is selected)

- Reject staking proposal

2. Rewards have been changed so when distributions occur, users will need to undergo a claiming process. This allows you to claim your rewards whenever you like (assuming a “distribution” has been made).
3. Users are required to participate in governance voting in order to be eligible for staking rewards. The rationale behind this is requiring the user to make an effort to contribute to the DAO protocol in order to be eligible for staking rewards. Essentially, a staked user must vote on chain for a governance proposal on at least 1 occasion to unlock their ability to claim staking rewards.

Locked Lizard NFTs

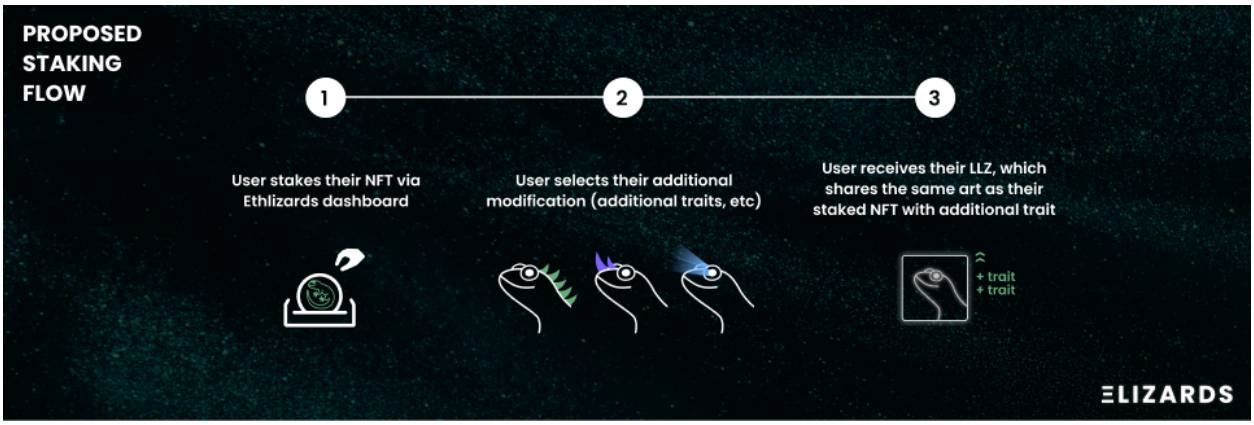
The Locked Lizard NFT (LLZ) has been built to allow wider integration of the Ethlizards, and improve upon current security concerns, whilst also adding a gamified aspect of staking for holders to enjoy.

LLZ is built off the ERC998 standard, which the popular collection Doodles also uses. In essence, it allows for ERC-721 tokens to own other ERC721s via solidity mappings. With this feature, users are essentially able to swap their NFTs via the contract, however, in this case, it’s adapted for staking.

LLZs also take inspiration from “On1 Frames”, allowing users to freely transfer their LLZs, allowing them more security from wallet breaches, while also retaining a tokenized proof of ownership. This is achieved as staking rewards are tied to the staked Ethlizards NFT Ethereum address, not the tokenID.

- Example: A user stakes an Ethlizards NFTs in their cold wallet and holds their LLZs in a separate hot wallet to sign messages. If that hot wallet gets hacked or compromised, the user can use their Ethlizards NFT in cold storage to recall the LLZ, resulting in no loss of the Ethlizards NFT.

Here’s an example of the proposed flow/architecture.



A user's LLZ will always be exchangeable for their original Ethlizards NFT via the staking contract.

Voting Mechanism

In order to adhere to DAO best practices, we are now requiring users to vote within the protocol to be able to claim staking rewards. To clarify:

- This does not mean that a user must be staked to vote, or that users must be staked to participate in governance. Governance remains open to all token holders regardless of whether they are staked or not.
- A user has to vote at least once to unlock their ability to claim staking rewards.
- A user will accrue rewards from the moment they are staked. Not voting means you will not be able to claim them, but you'll still be able to accrue rewards.
- Voting on any on chain Ethlizards governance proposal vote for protocol changes or improvements is considered valid in order to unlock claiming.

The Rewards Mechanism - Option 1

Our rewards mechanism takes into account two major factors.

1. Provide a benefit for early stakers.
2. Provide catalysts and opportunities to allow additional users to join the community and stake.

This is why we've chosen to go with a rebasing structure, with a daily rebasing of 0.5% and a soft reset on investment distributions. A user's rewards are calculated as a percentage of the entire pool. Their percentage pool ownership will be consistently

fluctuating due to stakers entering/leaving, daily rebases, as well as soft-resets based on investment distribution.

There are 2 key concepts that are important to the rewards distribution:

$X = NominalLizards$ - This is how many Ethlizards are staked

$Y = InflatedLizards$ - This is the total inflated value of Ethlizards, which considers the rebasing values.

$Z = UserInflatedLizardsValue$ -This is a user's total staked Ethlizards value, with inflation taken into account.

When users enter a pool, their Ethlizards NFT will always be assigned a Z value of 100, even if the Ethlizards NFT was previously staked.

For example, if there are 100 Ethlizards staked, a user owns 2 staked Ethlizards, and a rebase occurs, here is what the values would look like:

$$X = 100, Y = 10050, Z = 201$$

The complexity is as users will constantly stake and unstake at different times, which means their 0.5% rebases will translate to different values, rewarding early stakers with higher multipliers. To calculate one's percentage share of the pool, it's a simple formula:

$$Z/Y$$

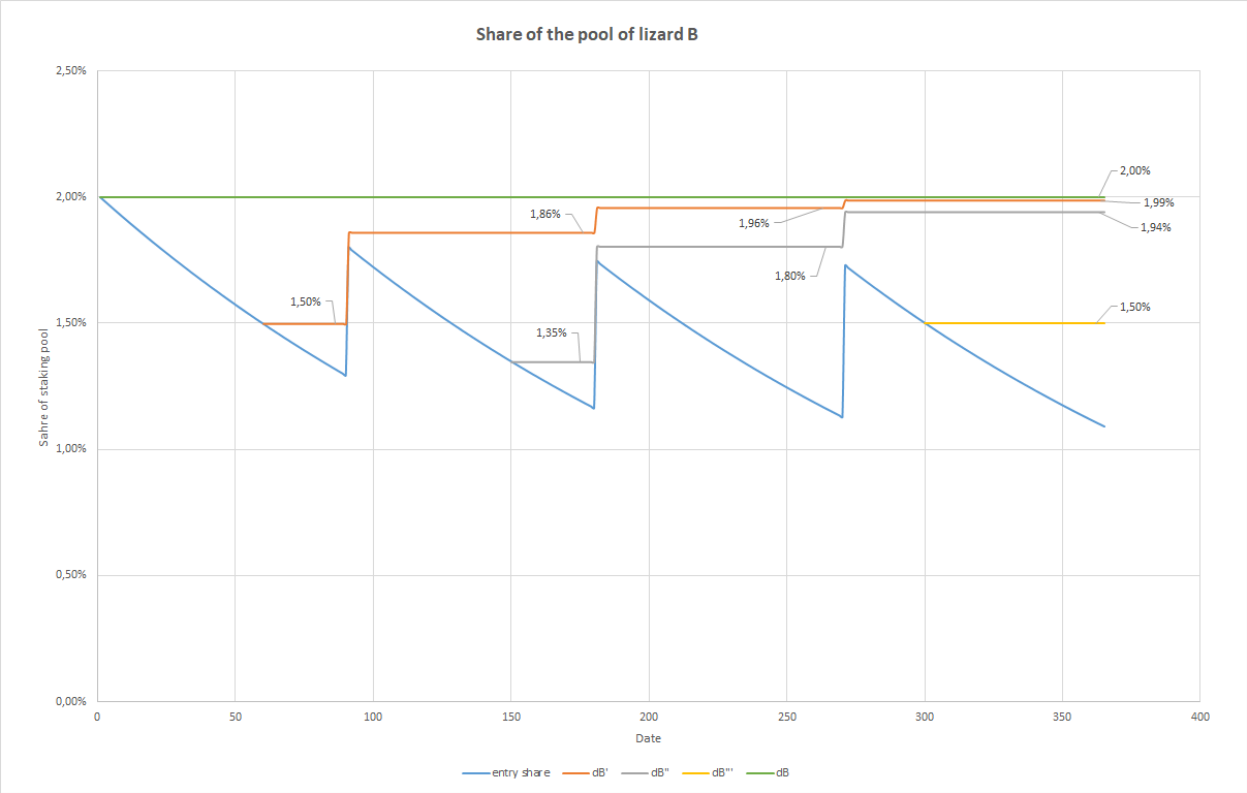
In order to allow new users a chance to enter the staking pool, whilst maintaining rewards for early stakers, when investment distributions are made, an 80% slash of inflation rewards is applied. Here is how we calculate it:

$$Y = Y - (Y - X * 100) * 0.8$$

For example, if there are 100 Ethlizards staked on day 1, with no more staked for 90 days, a user owns 2 staked Ethlizards, and a profit distribution occurs (in 90 days), here is what the values would look like:

$$X = 100, Y = 11148.78, Z = 222.98$$

Despite the example of ignoring additional stakers entering the pool from Day 1 for simplicity's sake, we can see the average staked Ethlizards NFT has around 111.49 Y points, while new stakers are worth 100. This illustrates how we can maintain support for long-term stakers whilst allowing new stakers to enter.



Example: Let's take a lizard holder called "B" entering the staking pool with 2 lizards. The pool size without him is 98 lizards staked since day 1. Lizard 2, therefore, owns 2% of the total lizards in the staking pool.
Because of the rebase mechanism, his share of the profits he is entitled to will vary, declining in time. But because of the soft reset, his share will go up after each distribution, trending toward his maximum share of 2%. In this example, we have 3 distributions spaced out 90 days apart.
The blue line shows: lizard B entry share of the pool depending on his entry date.
The green line shows: 2% if he stakes on the first day. In that case, it's already at its maximum and will not vary with a soft reset.
Orange, grey and yellow lines show: the share of lizard B or time at different entry points. Its share of each distribution is given by the value of the line just before each cliff (soft reset).

Here’s a tool made by our Libarian Lizard, Seagolem to simulate rewards! Give it a test:

https://app.powerbi.com/view?r=eyJrIjoiNTg3ZjY0N2EtZTUyZC00OWJhLThkMTQtYjg1OTJmOTkzODVhIiwidCI6ImYzOTY1ZWFiLTEzNGYtNDNlYi05NDUyLTM4YzdkMTI5YzFmOSJ9

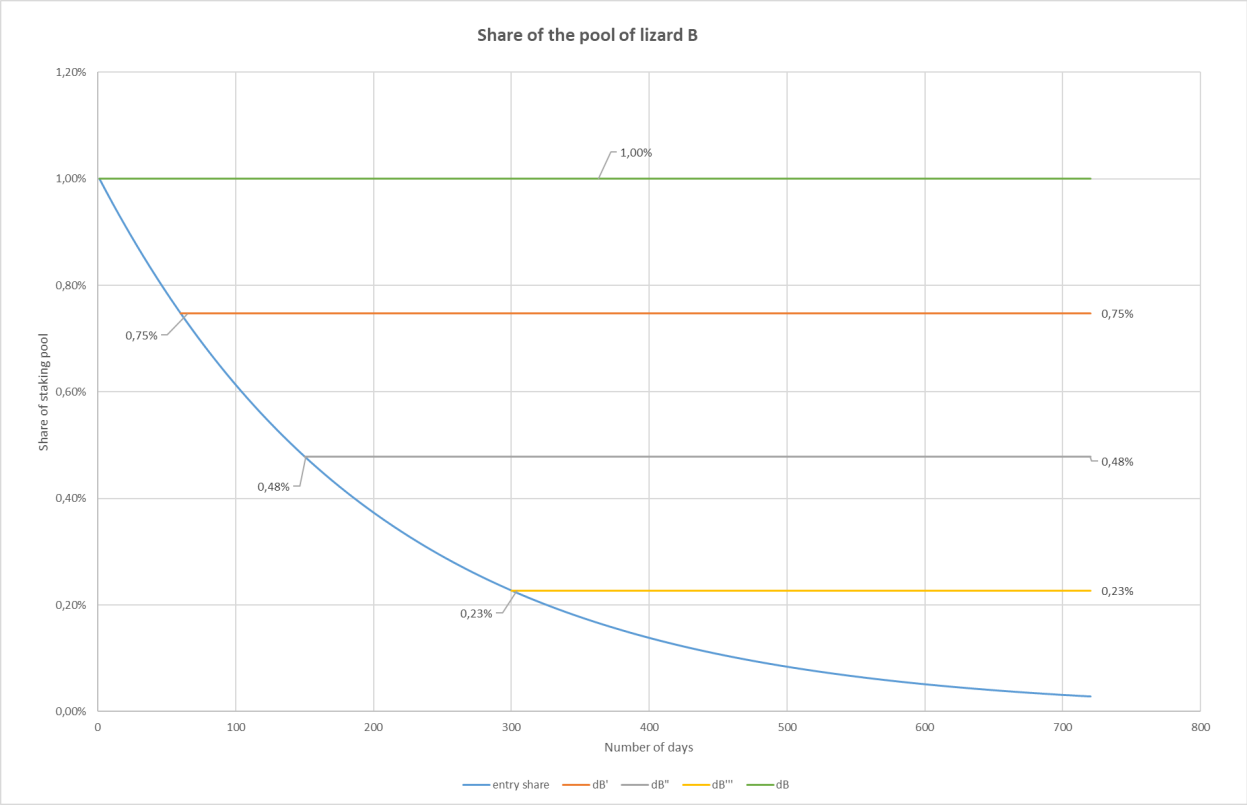
**The reason why the team prefers a distribution based mechanism is because it helps drive narratives once we reach a bull market stage. Having some form of unpredictability is great for overall traction and creates great windows for a user to buy an asset. Once a distribution is made, there is a significant upside on buying Ethlizards and the distribution mechanism helps create the perfect window of entry for future investors & community members.*

The Rewards Mechanism - Option 2

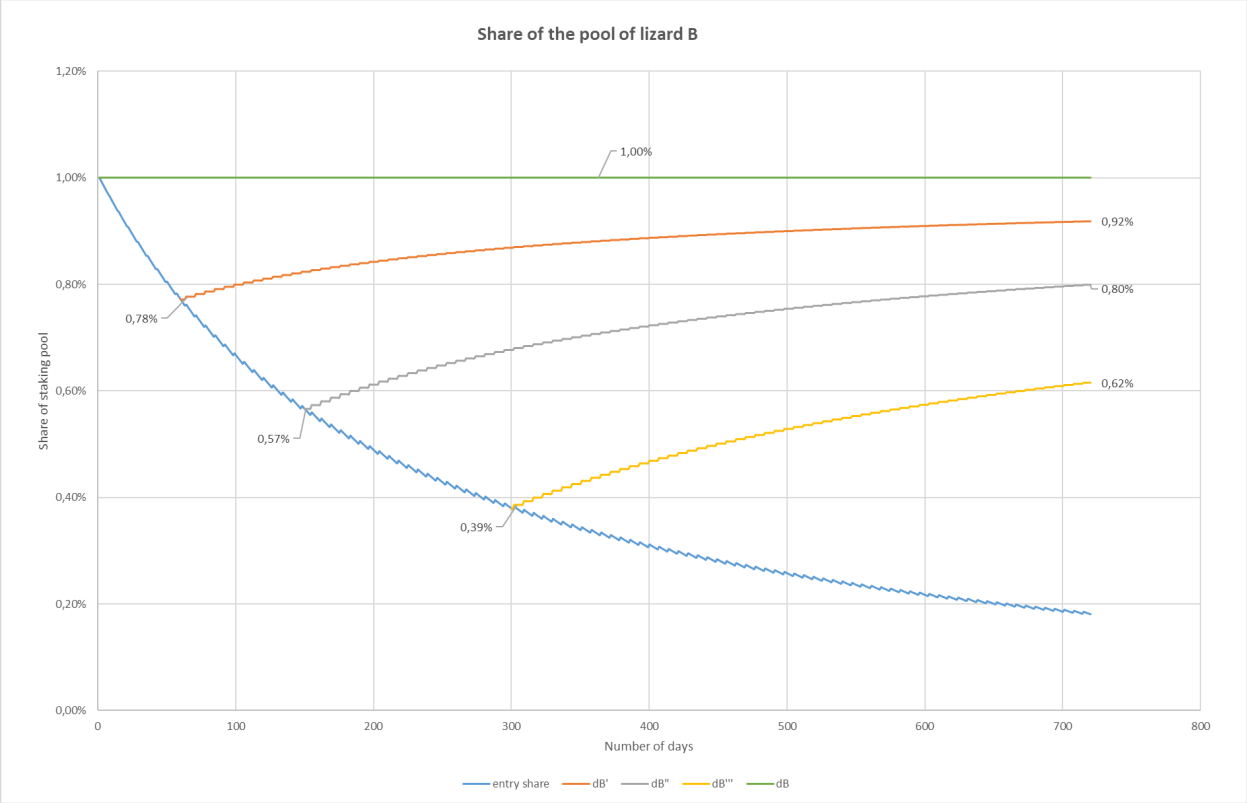
This alternative aims to add a time based component to the proposed reward mechanism. The math used are exactly the same one described earlier.

Although the resets can be of great power to drive narratives, create hype around the event and reward dedicated stakers, between them, your share of the pool (at constant pool size) will remain stagnant. This can create a feeling of frustration in newer and later stakers that could be detrimental to our system if no reset happen. Further more, this stagnation can push the DAO to feel obliged to press the mass reset button, taking away from the narrative strength. As we have no idea of both potential distribution and resets frequency in the future, it can be perilous to only rely on them to increase long term stakers share towards their nominal one (1x🦎 = 1x🦎)

By adding a high frequency, much smaller reset (example here: 3% reset every 7 days), a holder entering the staking pool late will see his share of the pool rising every week (at constant pool size). This alone should motivate holders to stay in the staking pool.

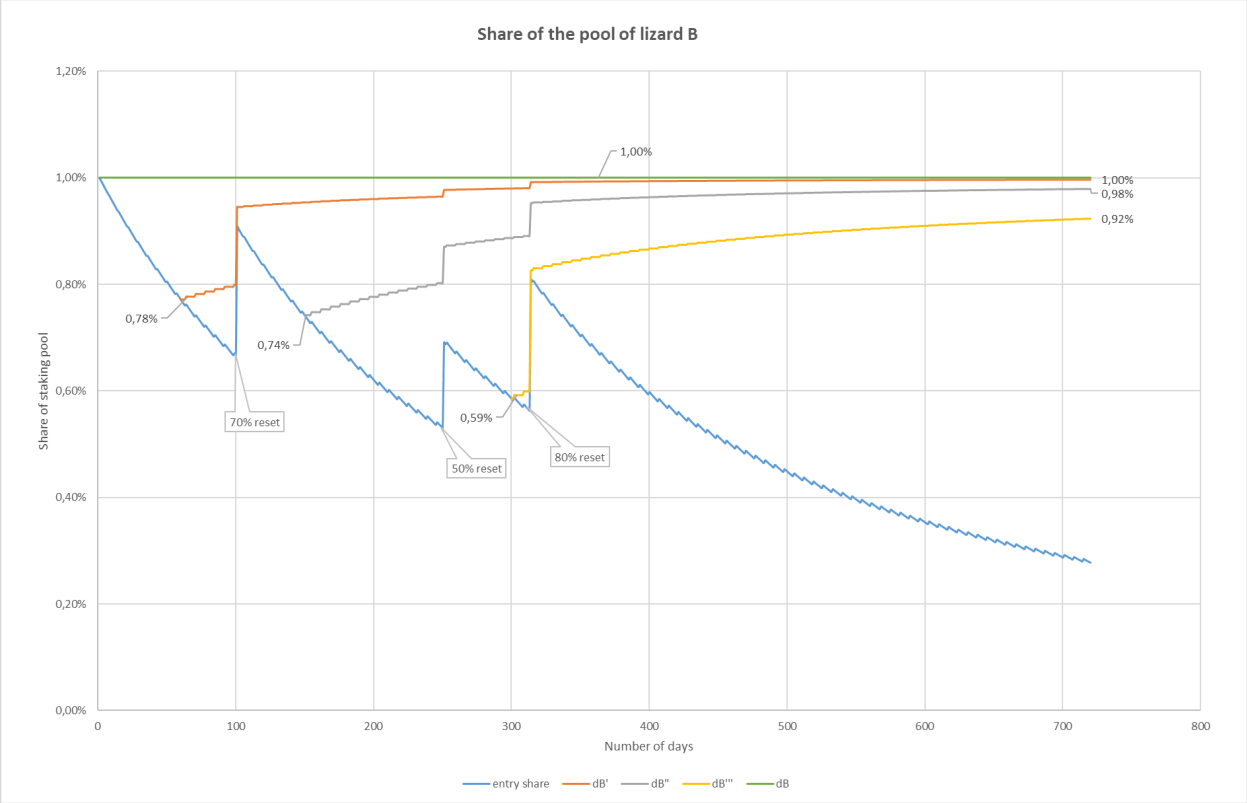


No resets - share of the pool in time owned by a holder staking 1 lizard in a pool of 99 lizards staked since day 1



High frequency resets (3%, every 7 days) - share of the pool in time owned by a holder staking 1 lizard in a pool of 99 lizards staked since day 1

On top of this, mass reset events can still be activated. Since a holder's share is naturally growing in time, a big part of the pressure to activate those events to equalize long term stakers is lifted. Mass resets can then be used as the powerful, narrative driven tool they are designed to be. Strong marketing can be coupled around them for better leverage to mark important turning points such as the first distribution of an investment, a game launch we are invested in or a community event. By allowing mass resets to be more scarce, this proposal make them even more impactful.



High frequency resets + mass reset events - share of the pool in time owned by a holder staking 1 lizard in a pool of 99 lizards staked since day 1

Note: because this solution uses the same math as the original one, all variables can be modified through governance on the fly, without breaking the system (resets value and frequency, rebase parameter etc…)

The Locking Mechanism

When it comes to locking one's tokens away, there's a popular sentiment around crypto that anything staked decreases supply, suddenly increases the value, and overall improves a project. However, a lot of the accrued value from staking is of an artificial nature, resulting from higher inflation rates or a lack of any actual locking structure.

Taking these issues into account, We want to introduce a forced locked period for stakers. Here's how it'll work:

- When users initially stake their NFT, they are locked for 90 days. This locked time period is non-negotiable.

- After this period, they are able to initiate an instant unlock. Upon unlock users will trade in their LLZ token for their original Ethlizards NFT token. They will also immediately be removed from the staking pool and lose Rev Dis eligibility.

Distributions Explanation

Revenue Distributions will occur according to the Investment Council's decisions based on token liquidations. Here's an example of how investment liquidations will occur in regard to staked users.

1. An investment is made.
2. The investment is unlocked.
3. Investment Council chooses to liquidate any number of tokens from an investment.
4. Rewards are "*distributed*" accordingly: 15% Team, 5% Investment Council, 40% DAO treasury, and 40% staked users.*
5. **Users participate in a governance vote in the Ethlizards DAO protocol (timelines for this are undecided on whether voting may occur right before or long before a distribution. As long as a vote is cast on chain, users will be able to claim rewards).**
6. **Users can claim their rewards. Following the discussion regarding the PRELIM, this functionality will allow users to claim their rewards whenever they want after a distribution has been made. Once a distribution is made, their balance will be updated allowing them to withdraw their funds, which will be held in a smart contract until claimed.**

**Only liquidations that total over 50,000 USD will be distributed instantly to the community, team & Investment Council members. If a liquidation is made totaling less than $50,000, the Investment Council will wait to execute the revenue distributions until the total sales are over $50,000 to save on transaction (gas) fees.*

Timeline

Here is the proposed flow for staking V1.

1. Release drafted concepts for prelim LIP staking V1.
2. 1 week of community discussion.

3. Release finalised concepts and official staking V1 final LIP (We are currently here); Once passed, release an official articling detailing the staking mechanisms.
4. Finalise development & perform audits.
5. Launch Staking V1.

Wanted to preface that although all community feedback has been considered, it is impossible to add every new feature or changes that are suggested. While we take feedback in high regard, at the end of the day, final decisions regarding technical limitations, implementation and other variables need to be handled by the developers.

Future Concepts

This is the first proposal in a skew of planned future proposals that aim to build additional value around Ethlizards and encourage staking. Staking V1 builds the basic infrastructure for revenue distribution. Other utilities, features or benefits may be introduced in future versions of staking.