

Economy setup for Genshiros

(GENS, Kusama-based tokens)

Just like its older brother, EQ token of Equilibrium, Kusama-based GENS token will function as a multipurpose token within the Genshiro system. In particular, GENS plays a role of internal currency of Genshiro in several system components:

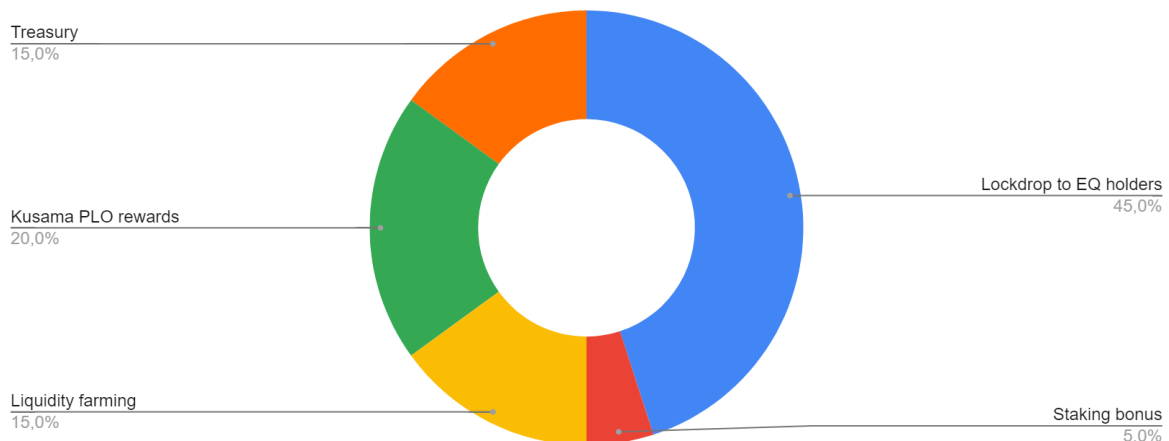
- GENS token is a governance token that allows its holders to express their opinions about the system state and enforce governance decisions via referendums.
- Validators/Collators receive rewards in GENS token for running blockchain nodes and performing parallel (e.g off-chain) work.
- Users pay transaction fees in GENS tokens.
- Borrowers pay interest fees in GENS tokens
- System distributes rewards in GENS tokens for liquidity that users bring.
- GENS can be used as bailout and collateral liquidity in Kusama-based liquidity pools once tokens obtain value

Initial token supply and token allocations

We fix the ratio of GENS tokens to EQ tokens at 10 to 1. This brings the total initial supply of GENS tokens to 1.2 billion tokens given the initial supply of EQ equals 120 million EQ.

We intend to distribute GENS to existing EQ token holders pro rata their EQ stakes via lockdrop. With currently 45% of all EQ token supply distributed (including vestings, PLO phase 1 and strategic investors), the corresponding GENS allocation in KUSAMA will look approximately the following way:

GENS token allocation



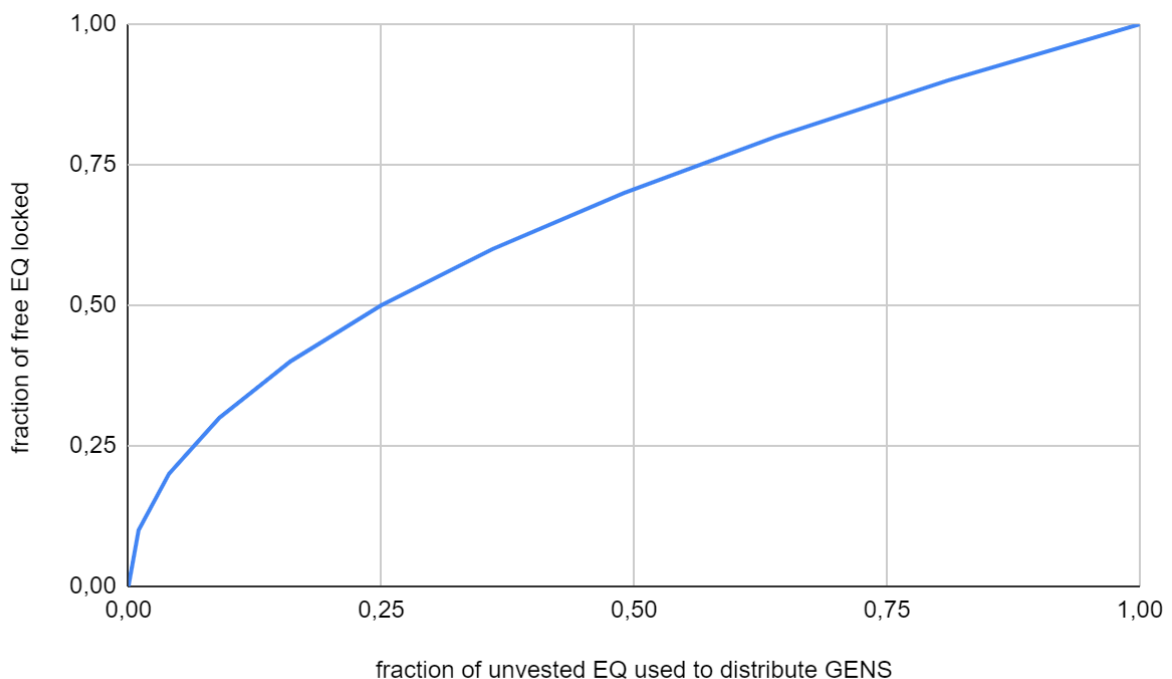
Allocation	Weight	Description
Lockdrop to EQ holders	45%	Initial distribution to EQ holders pro rata their holdings
EQ staking bonus	5%	Additional rewards for those who participated in a lockdrop
Liquidity farming	15%	Reward liquidity providers in the Genshiro network.
Kusama IPO rewards	20%	Incentivize KSM holders to vote for Genshiro in parachain auctions.
Treasury	15%	Cover extreme losses in case of "Black Swan" events.

Lockdrop to EQ holders on Polkadot

Every user (account_id) who has current allocation and vesting schedule in EQ tokens on polkadot will receive ten times more GENS tokens on Kusama.

Genshiro's goal is to allocate GENS tokens to active users of the protocol, who bring value to the community and participate in the protocol for the long term. Thus we want to distinguish long-term protocol supporters from speculators. Here's our solution: users who locked their EQ tokens inside a special-purpose Vault, which holds funds locked for 3 month, will be able to claim GENS tokens in Kusama.

For users who have ongoing vesting on their EQ allocations, respective allocations of GENS tokens will depend on an actual portion of freely circulating EQ tokens users will lock. If users lock a fraction of their free EQ balance into the Vault, they will get GENS tokens on diminishing fraction of their locked (unvested) EQ tokens. This is best illustrated on the following chart

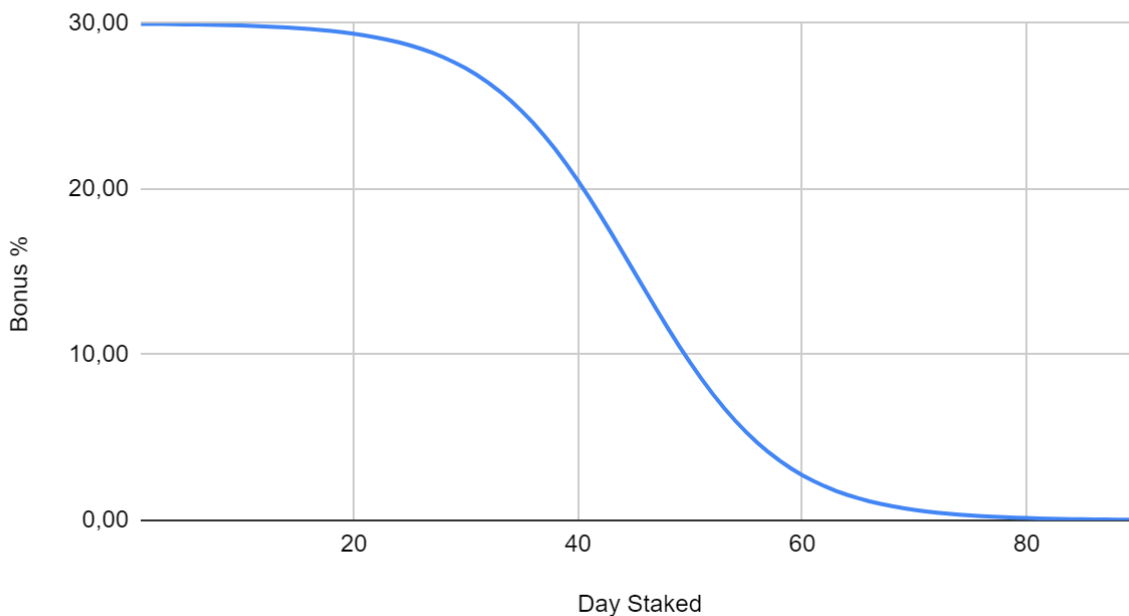


So, for example, if user has 1000 EQ tokens in total, 500 of which are free and 500 of which are still being vested, if he decides to lock 250 EQ tokens out of 500 available to him, he will receive $[250 + 0.25 * 500] * 10 = 3750$ GENS tokens.

Bonus for early participation in the lockdrop

Additionally we want to reward those users who have staked their EQ tokens as early as possible. Given that EQ tokens may be locked for a maximum of 90 days, the corresponding bonus curve will look like this: the graph shows bonus in % terms depending on the day number of lock since the beginning of the lockdrop.

Bonus% vs Day Staked

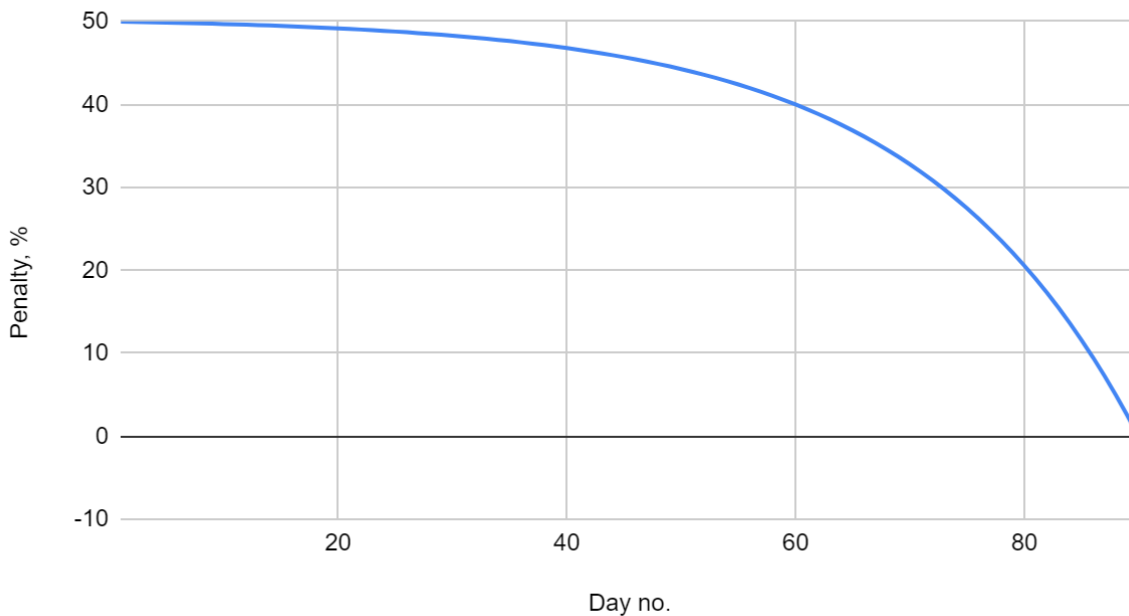


GENS vault and its claiming

In Kusama, in turn, GENS tokens will be allocated to a Vault from which users can always withdraw their tokens. If users quit immediately, they sacrifice part of their potential allocation to everybody who is left in the Vault.

The penalty will be limited to 50% initially and will gradually decrease to 0% over a 90-day period. The actual curve will look similar to the one below:

Penalty, % vs day number



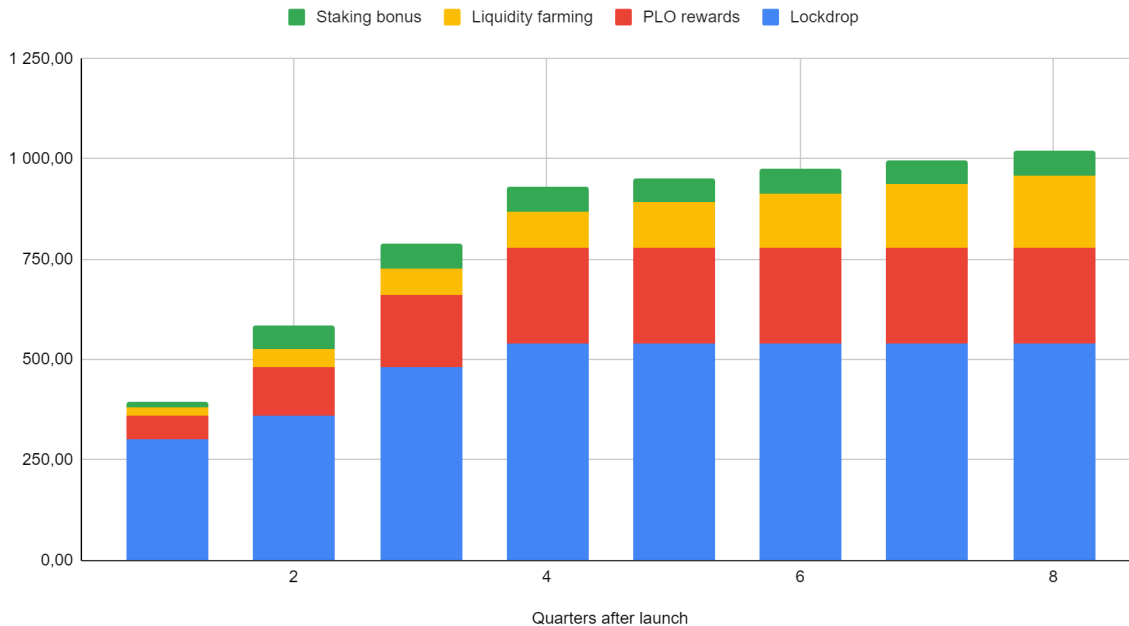
This mechanism will allocate much more tokens to users who stay relatively long or quit last. The penalty will decrease with time to give a fair distribution if everybody stays till the end. Let's consider an example:

- Let's say at the beginning Vault receives 1M GENS, suppose there are 1'000 people who are eligible to get rewards, 1000 tokens each.
- If I quit this pool on the first day, I can get my 500 tokens and sacrifice another 500 tokens to everybody who stayed. If a second user quits the same day, he will get more than 500 tokens because of 500 tokens sacrificed to everyone by me (the first quitter). The strongest holder gets the most significant stake!
- If everyone holds tokens till the end (all 90 days) everyone will get their full share of 1000 tokens.

GENS circulation

Given token allocations described above and the mechanics related to rewarding users via lockdrop and additional staking bonuses, as well as, our expectations that we will distribute Liquidity farming allocation approximately evenly throughout a course of 2 years, we may gauge the expected number of GENS tokens in circulation over a period of 2 years (8 quarters):

Expected token circulation



GENS valuation

We need an estimate of GENS's token price because it will be used throughout the system at least initially while there is no market for GENS: when borrowers pay interest, we need to know how much in GENS tokens they will be paying; when we reward liquidity providers, we need to know how much GENS tokens to give them; when we reward crowd loan stakers we need GENS token price as well. We will make following assumptions to get our estimate:

- The price of EQ token on Polkadot, reflects Equilibrium as part of the whole ecosystem and equals 0.07 DOT/EQ.
- The valuation of KSM based projects compared to the valuation of Polkadot based projects is proportional to the relative valuation of DOT and KSM tokens. e.g Kusama is ~10 times "cheaper" than Polkadot in aggregate.
- Valuation in Polkadot = 120M EQ * 0.07 DOT/EQ * 35 DOT / USD = 294M
- Valuation in Kusama ~ Valuation in Polkadot / 10 = 29.4M
- GENS/USD price = Valuation in Kusama / GENS initial supply = 0.0245
- GENS/KSM price ~ GENS/USD price / 350 = 0.00007

After we've estimated the GENS/KSM price we proceed with the same logic for KSM parachain auctions like we did in Polkadot.

Kusama auctions and Genshiro's PLO

20% of 1.2B GENS tokens goes towards PLO auctions. This is 240M tokens. Maximum parachain slot duration in Kusama is 6 month long (4 periods, 1.5 month each). Genshiro will aim to distribute GENS tokens for a period of 2 years, e.g. we want to participate in 4 auctions with maximum slot duration. Genshiro will reward stakers with GENS the following

way:

- 6 month (8 periods) - **5%** initial premium, **15%** maximum premium over the average KSM staking rate

As in the case of Polkadot the actual premium will depend on the amount staked:

Staking reward in % = current KSM staking rate + premium,

where

$$premium = 5\% + \min[0.5, staked / (staked + maxStake)] * 0.2$$

where

maxStake = 10K KSM tokens.

GENS tokens which will be left undistributed will go to KSM purchases to partially fund future parachain auctions ourselves.

To give you a concrete example, let's say Genshiro won a slot for 6 month, current KSM rate of return is 15% and you as a user has provided 1000 KSM tokens:

Your reward will amount to: $15\% + (5\% + \min [0,5; 1000 / (1000 + 10000)] * 0.2) \sim 21.82\%$ APR. The chart below shows the premium vs the stake size to further clarify the mechanics:

Premium vs Stake

