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:
<table>
<thead>
<tr>
<th>Allocation</th>
<th>Weight</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lockdrop to EQ holders</td>
<td>45%</td>
<td>Initial distribution to EQ holders pro rata their holdings</td>
</tr>
<tr>
<td>EQ staking bonus</td>
<td>5%</td>
<td>Additional rewards for those who participated in a lockdrop</td>
</tr>
<tr>
<td>Liquidity farming</td>
<td>15%</td>
<td>Reward liquidity providers in the Genshiro network.</td>
</tr>
<tr>
<td>Kusama IPO rewards</td>
<td>20%</td>
<td>Incentivize KSM holders to vote for Genshiro in parachain auctions.</td>
</tr>
<tr>
<td>Treasury</td>
<td>15%</td>
<td>Cover extreme losses in case of &quot;Black Swan&quot; events.</td>
</tr>
</tbody>
</table>

**Lockdrop to EQ holders on Polkadot**

Every user (account_id) who has a 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 \( (250 + 0.25 \times 500) \times 10 = 3750 \) 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](image)

**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:
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 firs 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):
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 ~5 to 10 times “cheaper” than Polkadot in aggregate. We take an average of 7.
- Valuation in Polkadot = 120M EQ * 0.07 DOT/EQ * 25 DOT / USD = 210M
- Valuation in Kusama ~ Valuation in Polkadot / 7 = 30M
- GENS/USD price = Valuation in Kusama / GENS initial supply = 0.025

This calculation gives us an initial price estimate for the GENS tokens.
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 48 weeks long (8 periods, 6 weeks each). Genshiro will aim to win a slot for the entire 8 periods and will reward users accordingly.

Initial distribution

2000 GENS : 1 KSM

Allocation bonus

Users who contribute >50 KSM will receive a 20% bonus or 2400 GENS for 1 KSM in total.

Other bonuses

Whitelisted users will enjoy another 1% bonus on their allocation, while referral bonus will be 5% of the total amount referred.

Distribution mechanics:

10% of tokens will be distributed immediately upon a successful crowdloan campaign, the rest of the GENS will be vested linearly over the course of slot lease duration (48 weeks).