

[CVV006] Proposal: Implement Minimum Validator Fee Mechanism

Summary

Currently, validators on the Casper Network can set their validator fee to **0%**. While this may appear attractive to delegators, it creates unhealthy competition that undermines validator sustainability. Running validator machines requires significant costs, and validator fees are the **only source of income** for operators. With fees at 0%, validators are forced to spend without earning, threatening the stability and security of the network.

To address this, I propose that the Casper codebase be updated to support a **minimum validator fee parameter on the chainspec**.

Problem

- **Inflation distribution:** Around 8% of new CSPR is distributed annually through staking rewards.
- **Validator rewards:** Delegators earn from inflation, while validators rely on a self-set commission fee (the validator fee) as their only income.
- **0% fee competition:** Because validators can set their fee to 0%, delegators naturally prefer them. This creates a race-to-the-bottom dynamic that leaves validators without revenue.
- **Sustainability risk:** If validators cannot cover costs, they will leave the network, reducing decentralization and security.

Proposed Change

1. **Introduce chain-level minimum validator fee as a chainspec parameter** in the Casper protocol.
 - Validators will not be able to set their fee below this minimum.
 - This ensures all validators have at least a baseline income stream.
 - It doesn't impact/limit the reservation delegation rate.
 - It doesn't work retroactively, i.e. there is no migration needed, and the new limit only applies to new calls to `add-bid`.

2. **Phase approach:**

- **Step 1 (this proposal):** Implement the code logic for a minimum validator fee, making it possible to enforce such a rule.
- **Step 2 (future governance proposal):** Decide the actual minimum percentage (e.g., 2%, 5%, etc.) through community discussion and vote.

Benefits

- Protects validator sustainability.
- Ensures fair competition (delegators still have choice, but not at the expense of validator survival).
- Strengthens network decentralization and long-term security.

Next Steps

- Approve implementation of the minimum fee parameter in the Casper blockchain code.
- After the feature is merged, open a new proposal to decide the exact minimum fee value.

Proposal Lifecycle

- **Stage:** Pre-voting
- **Voting Options**
 - **For:** Support the proposal.
 - 011de3a86cd71d98a83bddf57384e1a0c3b4ea5be696fcbd6fa9a80b3cdcf396de
 - **Against:** Oppose the proposal.
 - 0118c145c88386f6cf0dd12c30702742013ab23260253e8748f620dd31c27ccadb
 - **Abstain:** No opinion.
 - 015dc16c2072eaf747f559385ee0ac277fbf91ab87b536da8c5bb6177940e833ac
- **Voting Starts:** ~10:19 UTC, September 18, 2025 (at block height 5503579)
- **Voting Ends:** ~10:19 UTC, September 21, 2025 (at block height 5519779)

How to vote:

- A voting token, with a total supply of 100.00, for the proposal will be created, and distributed to Mainnet validators based on their network weights as of era 19506.
- Voting token contract: TBD
- Make your decision and send all (recommended) voting tokens to one of the corresponding addresses below.
 - For: 011de3a86cd71d98a83bddf57384e1a0c3b4ea5be696fcbd6fa9a80b3cdcf396de
 - Against: 0118c145c88386f6cf0dd12c30702742013ab23260253e8748f620dd31c27ccadb
 - Abstain: 015dc16c2072eaf747f559385ee0ac277fbf91ab87b536da8c5bb6177940e833ac

Evaluation of the results:

- Quorum ratio: +50% network weight (>50.00 tokens, including the abstains)

- Decision threshold: Simple majority (+50% of participating weight, excluding the abstains)
 - Example:
 - For:35.00, Against: 25.00, Abstain: 15.00
 - Quorum reached with 75.00%, proposal accepted with ~58.33%
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- The feedback collection & discussion topic: <https://forum.casper.network/t/proposal-enable-minimum-validator-fee-mechanism/1524> (<https://forum.casper.network/t/proposal-enable-minimum-validator-fee-mechanism/1524>)
- The final proposal topic: <https://forum.casper.network/t/cvv006-proposal-implement-minimum-validator-fee-mechanism/1539> (<https://forum.casper.network/t/cvv006-proposal-implement-minimum-validator-fee-mechanism/1539>)
- Proposal on IPFS for reference: TBD