

TWINSTAKE RESEARCH

Solana's Emissions Reform: Approved, and What Happens Next

Impact on staking rewards, validator economics and SOL supply

September 2026



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Executive summary

Solana's stake-weighted vote on two economic proposals closed at the end of epoch 1023 on 28 August 2026. SIMD-0550, which doubles the rate at which network inflation falls, passed with 67% For against a 66.67% threshold. SIMD-0553, which would have restructured transaction fees, was rejected with 53.90% For.

For institutional stakers, the practical consequence is that nominal staking rewards will fall once SIMD-0550 is activated, and not before, since no activation date has yet been set. Under the assumptions used in this analysis, annual rewards on a 10,000 SOL stake, net of commission, would reduce from approximately 454 SOL to 404 SOL in the first year after activation, and from 328 SOL to 210 SOL in the third (a reduction in reward rate from approximately 4.54% to 4.04% in year one, and from 3.28% to 2.10% in year three). The long-term inflation floor of 1.5% is unchanged and will be reached around three years sooner than under the current schedule.

A separate protocol change, SIMD-0525, is shortening epochs from around 48 hours to around 36 hours now, and eventually to around 24. That changes how quickly stake activates and deactivates. Because SIMD-0553 was rejected, it also raises the cost validators pay to submit on-chain votes.

Twinstake produced this analysis for clients ahead of the vote. Stake delegated to our validator was voted according to each client's own preference. We are monitoring the feature-gate schedule and will confirm the activation epoch when it is set.

August 2026 governance vote outcomes

Both votes closed at the end of epoch 1023, 28 August 2026

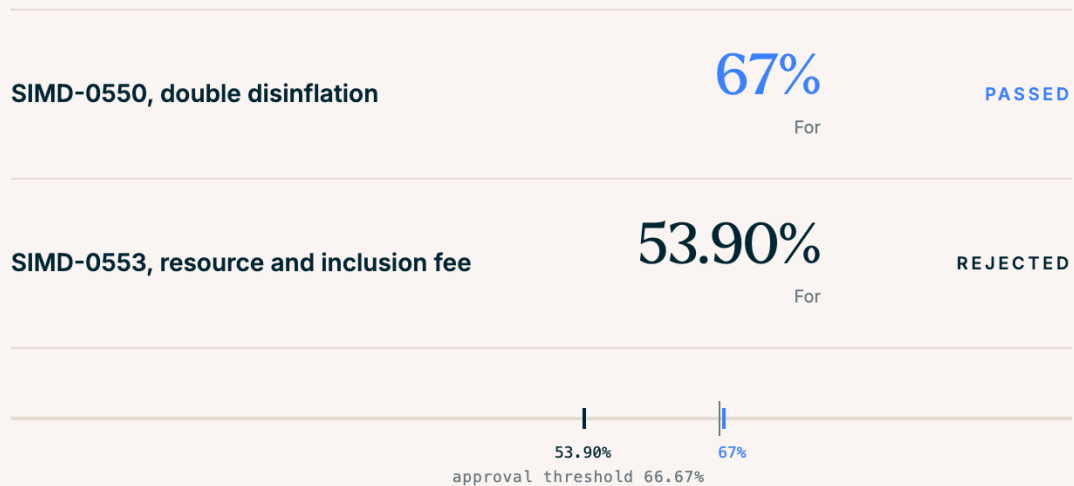


Figure 1: Vote outcomes against the 66.67% approval threshold.

Institutional implications

- Nominal staking rewards will be lower under SIMD-0550 once it is activated, particularly from the second year onwards.
- Lower issuance will reduce dilution and slow Solana's supply growth.
- Validator operating efficiency becomes more important as inflationary rewards reduce.
- Transaction-fee economics are unchanged following the rejection of SIMD-0553.
- Shorter epochs under SIMD-0525 change the cadence of stake activation, deactivation and reward accrual.

SIMD-0550: accelerated disinflation

Solana's inflation rate currently reduces by 15% each year until it reaches a permanent floor of 1.5%. SIMD-0550 doubles this annual rate of reduction to 30%, accelerating the transition to lower issuance without changing the long-term floor. The proposal is designed to avoid an immediate step down in inflation. Instead, the schedule will be re-anchored at implementation, such that the inflation rate remains continuous and subsequently reduces more quickly from that point onwards. Based on current estimates, Solana will reach the 1.5% floor in approximately 2.8 years rather than 5.7 years, bringing the expected date forward from around 2032 to around 2029.

Inflation schedules compared

INFLATION SCHEDULE	ANNUAL RATE OF REDUCTION	ESTIMATED TIME TO 1.5% FLOOR	ESTIMATED SIX-YEAR ISSUANCE
Current schedule	15%	Approximately 5.7 years, around 2032	Baseline
SIMD-0550	30%	Approximately 2.8 years, around 2029	Approximately 18.9 million fewer SOL, or 2.6% below the current schedule

Figure 2: Current and proposed inflation schedules.

Under the assumptions used in this analysis, rewards would be approximately 11% lower in year one and 36% lower in year three than under the current schedule, measured from activation. Annual staking rewards are unchanged at implementation, lower during years one to five, and converge by year six, once the current schedule would also have reached the 1.5% terminal rate.

Gross staking reward rate under each schedule

Illustrative reward rate, per cent per year. Assumes a 68% network staking rate. The shaded area is the reward rate given up.

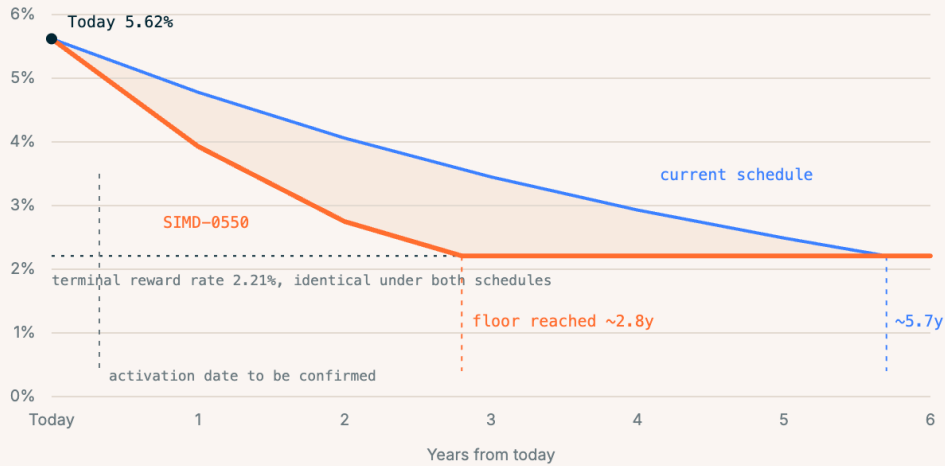


Figure 3: Illustrative gross staking reward rate, with and without SIMD-0550, assuming a 68% network staking rate. The shaded area is the reward rate given up.

Activation

A yes vote signals that the network should proceed. Nothing changes on-chain until the proposal is implemented in validator client software and enabled through a feature gate, and there is no confirmed date for that at the time of writing.

Staking reward rates are therefore unchanged until the gate activates. The modelling in this report is anchored to activation, so year one begins at the gate and not at the vote. Once the activation epoch is announced, that is the point from which institutional stakers should expect reward rates to begin stepping down.

Twinstake is monitoring the feature-gate schedule and will confirm the activation epoch to clients when it is set.

Staking participation and reward sensitivity

A lower staking reward rate could, in principle, reduce the incentive to stake. The historical record, however, suggests that the relationship between staking reward rates and participation is not one-for-one. Between April 2021 and August 2026, protocol inflation roughly halved from about 7.8% to about 3.7%, while staking participation remained broadly stable, moving from around 69% to around 68.5%.

That does not mean rewards do not influence the incentive to stake at all. Staking participation also reflects liquidity needs, custody arrangements, institutional mandates, liquid-staking adoption and expectations for SOL, while the inflation reduction over this period was gradual and widely anticipated rather than sudden. Historically, the limited opportunity cost to staking may also have weakened this relationship. As Solana matures, it is expected that more advanced use cases will emerge which may trigger the correlation that theory would predict. The evidence therefore does not support assuming that participation will fall in direct proportion to rewards.

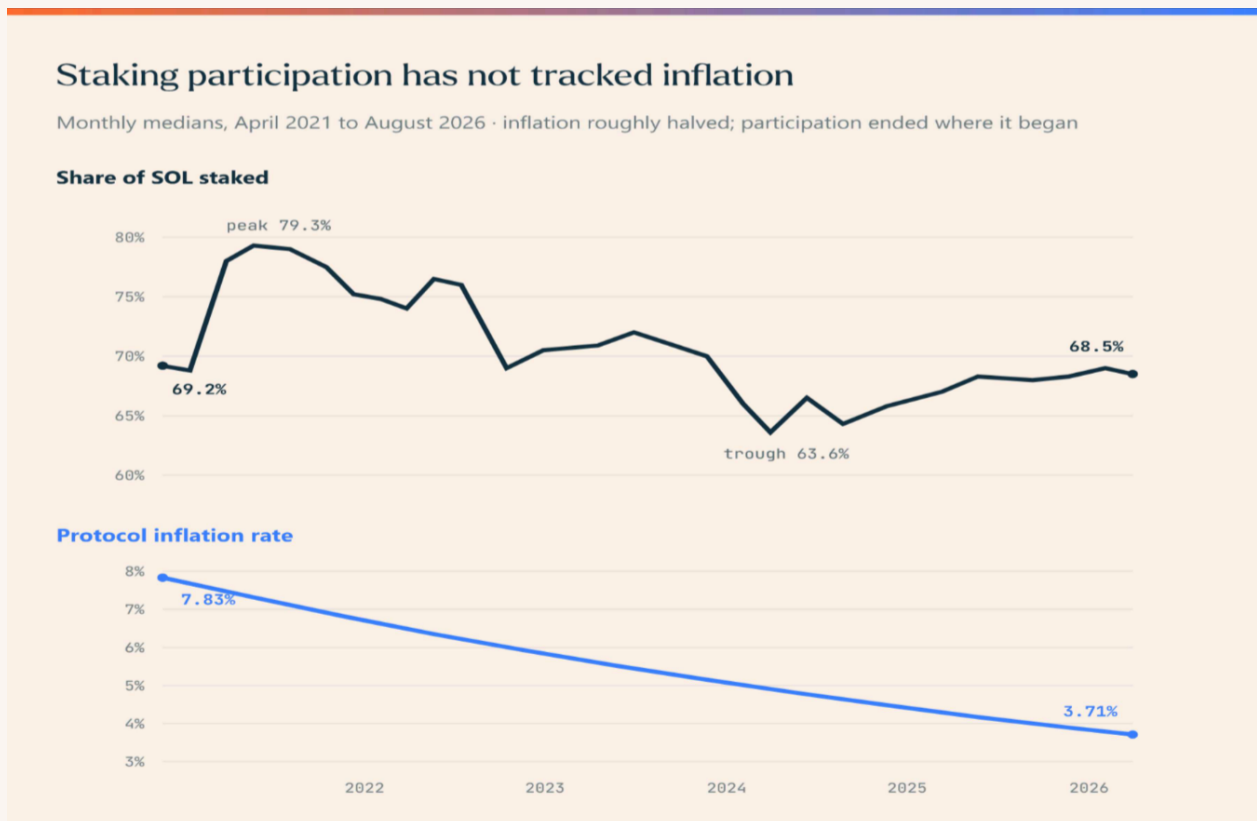


Figure 4: Estimated Solana staking participation and modelled protocol inflation, monthly medians, April 2021 to 7 August 2026.

For modelling purposes, the base case retains the current 68% staking-rate assumption used elsewhere in this report, with lower participation treated as a sensitivity rather than the central expectation. This assumption matters more now that the disinflation path is confirmed, and it should be revisited if participation moves materially after activation.

Gross reward rate at the 1.5% terminal inflation rate

Illustrative, by share of supply participating in staking

STAKING PARTICIPATION	ILLUSTRATIVE GROSS REWARD RATE
55%	2.73%
60%	2.50%
65%	2.31%
70%	2.14%
68% BASE CASE	2.21%

Calculated as the 1.5% terminal inflation rate divided by the assumed staking-participation rate. Excludes validator commission, validator performance and other operational factors.

Figure 5: Illustrative gross reward rate at the 1.5% terminal inflation rate, by staking participation.

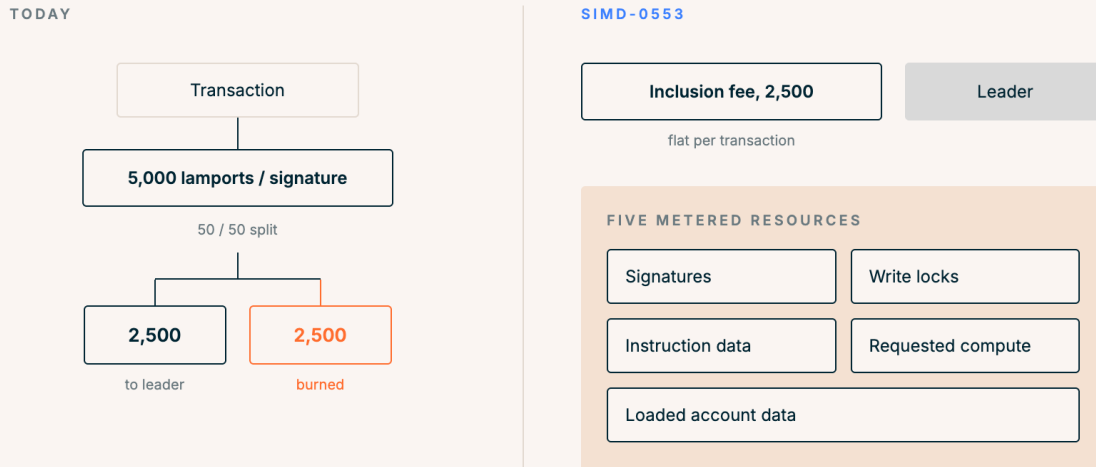
SIMD-0553: resource and inclusion fee

SIMD-0553 received 53.90% For, below the 66.67% approval threshold, and will not be activated. Solana's transaction-fee structure is therefore unchanged: a base fee of 5,000 lamports per required signature, half paid to the block leader and half burned, alongside unchanged priority fees.

The analysis below is kept because it is based on direct measurement of Solana mainnet, so it describes the network as it operates today, and because 53.90% is a substantial minority. Signature pricing had already been flagged for further review and an amendment to the base inclusion fee was open at the time of the vote. The question is likely to return in some form.

The proposal

Solana currently charges a base fee of 5,000 lamports for each signature included in a transaction. Half is paid to the block leader and half is burned. Beyond the number of signatures, this fee does not reflect the amount of compute, account data or other network resources requested by the transaction. SIMD-0553 would have replaced this structure with three components: a flat inclusion fee paid to the leader, a resource fee that would have been burned, and priority fees, which would have remained unchanged.



Adapted from an original figure by Temporal.

Figure 6: Solana's current transaction-fee structure and the structure proposed under SIMD-0553. Adapted from an original figure by Temporal.

Sample findings

In Twinstake's sample of 37,365 transactions across 24 finalised mainnet blocks, collected 7 August 2026, transactions averaged 1.0412 required signatures. At the current payment of 2,500 lamports per signature, this implies a sample-weighted leader payment of 2,603 lamports per transaction. Under the proposed flat fee of 2,500 lamports per transaction, this would have fallen by 103 lamports, or 3.96%. Multi-signature transactions were 3.19% of the sample, so the change would have applied to a small share of network activity. For scale, the base fee pays leaders on the order of 650 SOL a day against daily issuance of approximately 60,000 SOL, making a reduction of that size equivalent in scale to roughly 4 basis points of staking rewards.

A large change on a small share of transactions

Under SIMD-0553 the leader would have been paid once per transaction rather than once per signature

Leader inclusion payment, lamports per transaction

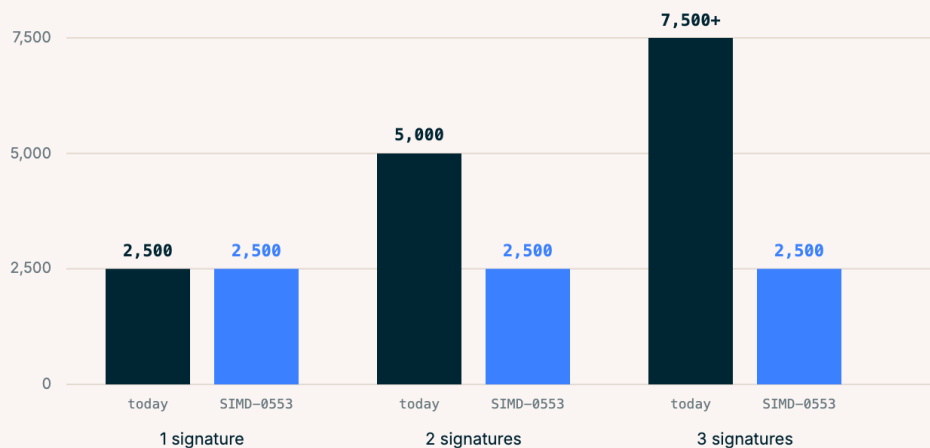


Figure 7: Leader inclusion payment per transaction, today and under SIMD-0553, by number of required signatures.

SIMD-0525: shorter slot and epoch times

Separately from the two governance votes, Solana is reducing its target slot time through a staged technical rollout.

SIMD-0525 slot-time rollout

Target slot time and resulting epoch length, by stage

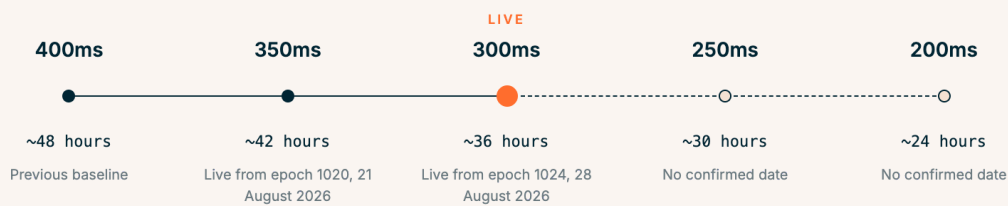


Figure 8: SIMD-0525 rollout stages and resulting epoch lengths.

The network is currently running a 300ms target slot time, so epochs are approximately 36 hours. For institutional stakers the immediate consequence is cadence. Stake activation and deactivation are measured in epochs, so with a shorter epoch, the average time for stake to start earning rewards, or to be available following an unstake, is reduced. At the 200ms stage an epoch would be approximately 1 day, half its former length, though neither that stage nor the 250ms stage has a confirmed mainnet date.

Vote-transaction costs

Validators continue to pay 5,000 lamports for each on-chain vote transaction, because SIMD-0553 was rejected and on-chain voting remains in place until Alpenglow. SIMD-0525 increases the number of slots per day, and with it the number of vote transactions each validator submits.

On that basis, vote-transaction costs rise at each slot-time stage. At a 400ms target slot time, approximately 216,000 slots per day cost a validator around 1.08 SOL a day, or approximately 394 SOL a year. At the 300ms stage now live, approximately 288,000 slots cost around 1.44 SOL a day, or approximately 526 SOL a year. At 250ms this rises to approximately 631 SOL a year, and at 200ms to approximately 788 SOL a year.

This is a validator operating cost rather than a change to staking rewards. It would change form once Alpenglow moves consensus voting off-chain, since validators would instead pay a Validator Admission Ticket, initially set at 1.6 SOL per epoch. At current epoch lengths that is close to today's annual vote cost, but because it is charged per epoch, it would also rise as epochs shorten.

Effect on SOL supply

The original report modelled the combined effect of both proposals. With SIMD-0553 rejected, only the issuance side applies. There is no additional burn, so the supply effect comes entirely from reduced issuance under SIMD-0550.

The combined figures published previously, approximately 32 million SOL lower by 2032 and net annual supply growth settling near 1.05%, no longer apply, because both assumed the two proposals would pass together. On the revised modelling, total supply in 2032 would be approximately 19 million SOL lower under SIMD-0550 than under the current schedule, assuming activation around the fourth quarter of 2026. That figure sits close to the approximately 18.9 million SOL six-year issuance reduction stated in the proposal itself, so the modelled supply path and the proposal's own parameters agree.

Net annual SOL supply growth under SIMD-0550

Issuance less burn, per year. Assumes activation on 1 October 2026

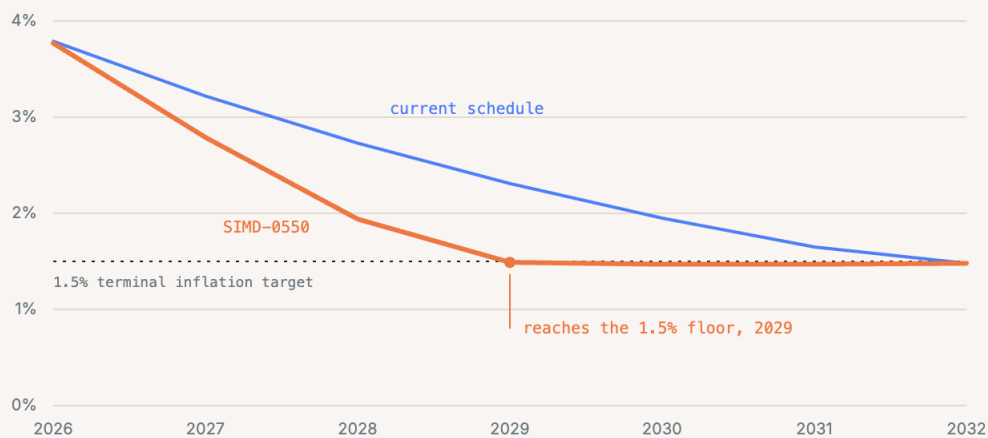


Figure 9: Net annual SOL supply growth under the current schedule and SIMD-0550. Source: Twinstake modelling. Both schedules converge on the 1.5% terminal rate, which SIMD-0550 reaches around 2029.

Projected total SOL supply under SIMD-0550

Millions of SOL. Assumes activation on 1 October 2026

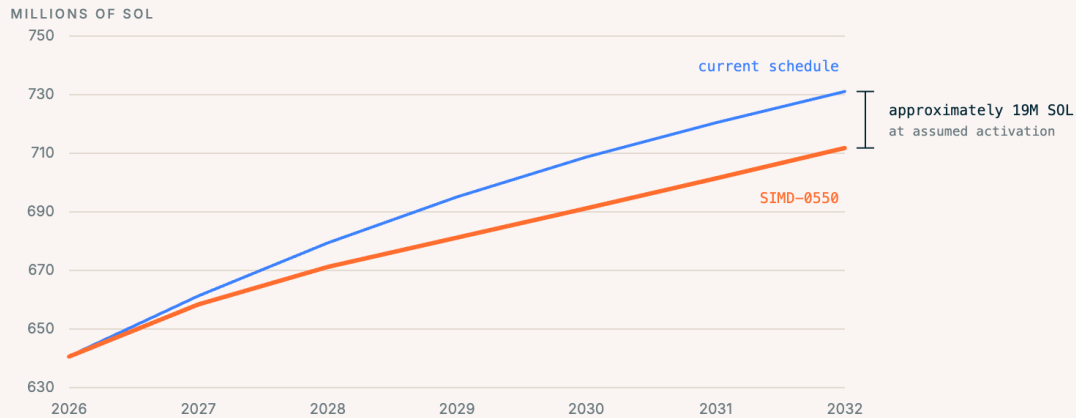


Figure 10: Projected total SOL supply under the current schedule and SIMD-0550. Source: Twinstake modelling. Assumes SIMD-0550 activates on 1 October 2026. No feature-activation epoch has been assigned, so this date is an assumption. The shape of the curves does not change with it, but the size of the 2032 gap does, falling to approximately 17M SOL for a January 2027 activation and approximately 14M SOL for July 2027.

Why this matters for Solana

SIMD-0550 reduces the rate at which new SOL enters supply. The rejection of SIMD-0553 means the amount removed from supply through fee burn stays roughly where it is. The net effect on supply therefore depends on issuance alone.

At current network activity, fee burn runs at approximately 648 SOL a day against daily issuance of approximately 60,000 SOL, or around 1.1% of issuance. SIMD-0553 would have linked burn more directly to network activity and raised that share materially. With the proposal rejected, that route is closed for the time being, and burn stays small relative to issuance.

The more significant consequence is for validator economics. Reduced inflationary rewards could place greater pressure on validator margins, particularly for smaller operators or those with limited alternative revenue. Validator efficiency and non-inflationary revenue sources may therefore become more important as issuance reduces.

Two of the other changes add to that pressure. The rejection of SIMD-0553 leaves on-chain vote transactions priced as they are today, and the staged reduction in slot times under SIMD-0525 increases the number of those transactions a validator submits each day. Operators therefore face a lower inflationary reward pool and a higher fixed operating cost over the same period, until Alpenglow removes on-chain voting.

For institutional stakers this matters indirectly, because changes in the composition of the validator set, and in the operating margins of the validators within it, bear on the reliability and performance of the infrastructure their stake sits behind. The direction and scale of that response cannot be predicted with confidence and will depend on activation timing, network activity and the pace of the Alpenglow rollout.

Governance and implementation status

Both proposals were reviewed through Solana's technical process as SIMDs, with separate Solana Governance Proposals providing a stake-weighted signal on whether the network should proceed. SGP-0002 covered double disinflation and SGP-0003 covered the resource and inclusion fee. Support from at least 15% of active stake was required to trigger a community vote, which was reached on 5 August 2026. Approval then required at least two thirds, or 66.67%, of the stake voting For or Against, with abstentions excluded.

SIMD-0550 passed by approximately a third of a percentage point above the threshold. Implementation still requires compatible validator-client releases, testing and feature activation before the change takes effect on mainnet, and no activation date has been confirmed.

Twinstake's participation

A validator's vote carries the stake delegated to it. Delegators who wish to vote differently can override that position through the governance interface, and delegators who take no action have their stake counted with the validator.

Twinstake did not vote a single house position across its delegation. Client preferences were established ahead of the vote, and stake was allocated in proportion to what each client held with the validator and how that client wished it to be voted.

This report was produced for clients ahead of the vote so that those decisions could be made with the analysis in hand, and not from the specification alone. Twinstake did not hold or express a view on the merits of either proposal.

Methodology and limitations

Reward estimates in this report are illustrative and are based on the commission, network staking rate and inflation assumptions stated alongside the relevant figures. Actual staking rewards will depend on validator performance, network participation, commission, activation timing and future protocol conditions.

SIMD-0550 has been approved but is not yet active. All reward and supply estimates are anchored to the point of feature-gate activation, which has not been confirmed. The supply modelling in the section on SOL supply assumes activation on 1 October 2026. Because no activation epoch has been assigned, that date is an assumption. The shape of the modelled curves does not change with it, but the size of the 2032 supply gap does. Both the sample analysis and the supply modelling remain scenarios rather than forecasts.

SIMD-0553 was rejected, so the fee analysis is kept as a description of the current fee structure and of what was proposed, not as a forward-looking estimate.

The vote-cost figures are a Twinstake derivation from published slot-time parameters and are pending internal verification.

Sources

Primary protocol sources: SIMD-0550 Double Disinflation Rate; SGP-0002 Double Disinflation.

SIMD-0550 vote result:

governance.solana.com/proposal/7QJD8MzheHWJLHS39NkoAbFCGFKg5d9QbVviRqD4YExp

SIMD-0553 vote result:

governance.solana.com/proposal/AGHDQ6gjRFJPoyEcHuc4X7sbxJwyJfeKTb3UrGFzFNZD

SIMD-0525 specification: github.com/solana-foundation/solana-improvement-documents/blob/main/proposals/0525-reduce-slot-times.md

External analysis: Temporal; Solana Compass staking statistics; Solana staking and inflation FAQ; Helius.

Twinstake analysis of 24 approximately hourly finalised Solana mainnet blocks, collected 7 August 2026 using the Solana getBlock JSON-RPC method. Twinstake internal analysis of delegator and ecosystem impacts.

About Twinstake

Twinstake is an institutional-grade, non-custodial validator infrastructure provider, designed and built in collaboration with leaders in both traditional finance and the digital assets space. We serve a range of institutions including the largest crypto ETFs, VCs, asset managers and exchanges. Twinstake operates validator infrastructure across multiple proof-of-stake networks and supports institutional staking through secure, resilient and high-performance infrastructure.

Get in touch with our team to hear more about how Twinstake can support your institutional staking.

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