

Validator Digest

September 2026

Executive Market Lens



About the Digest

The Validator Digest is Twinstake's quarterly report for institutional stakers. Twinstake operates non-custodial validators for institutional clients. Historical reward rates are not forecasts; staking involves risk of loss and withdrawal delays. Each issue reports how those validators performed against the network, using the same data we monitor internally, and sets out the market and protocol changes that affect staking operations.

This Issue

This issue covers August and September 2026. The ETH entry queue has shortened by more than a third since late July, the exit queue is rebuilding, and Solana ETFs had one of their strongest weeks.

Inside: validator performance on Ethereum, Solana and TON for the six months to September, what long queues on both sides mean for institutional stakers, and a protocol calendar for the quarter ahead.

Numbers at a Glance

\$1.75bn

US spot ETH ETF net inflows in August, the strongest month in a year [1][3]

\$188.2m

US spot SOL ETF net inflows, 21 to 25 September, with all seven funds positive [2]

35.8%

Share of ETH supply staked, 6 October [4]

1.43m ETH

Entry queue, a wait of about 25 days, 6 October [4]

857k ETH

Exit queue, a wait of about 15 days, 6 October [4]

3.75–4.00%

Fed funds target range after the 16 September hike [5]

Numbers in square brackets refer to the Sources list in the References.

Macro Context (August to September 2026)

- ◆ **ETH ETF demand returned in August.** Spot Ethereum ETFs took in about \$1.75 billion in August, their strongest month in a year [1][3]. Most of it arrived in a \$1.42 billion run from 17 August, about 72% of it into BlackRock's ETHA. September was mixed. Funds saw outflows between 15 and 17 September [3], during the period of the reported Senate vote on the CLARITY Act and the Fed rate increase [5][7], followed by \$690 million of inflows the next week [1]. Flows turned negative again from 29 September, with about \$408 million leaving in the six trading days to 6 October [1].
- ◆ **SOL ETFs had one of their strongest weeks.** US spot Solana ETFs took in \$188.2 million between 21 and 25 September, one of the largest weekly totals since the products launched. All seven funds were positive, and Bitwise's staking ETF took about 68% of the week [2]. Cumulative net inflows stood at about \$1.59 billion on 6 October [2] and net assets reached about \$1.96 billion [3].
- ◆ **Both validator queues are moving again.** Ethereum's exit queue sat near zero through the summer, against a peak of about 2.67 million ETH in September 2025. The entry queue held about 2.5 million ETH and a 43-day wait at the end of July, and has shortened since: 2.19 million ETH and 38 days on 17 August, and 1.43 million ETH and 25 days on 6 October. By 6 October the exit queue had rebuilt to about 857,000 ETH and 15 days. Around 35.8% of ETH supply is now staked [4].
- ◆ **The Fed raised rates.** The Fed raised its target range to 3.75 to 4.00% on 16 September [5], after Chair Warsh's Jackson Hole remarks on 28 August were read as hawkish. Higher rates can increase cash yields and affect demand for risk assets; they do not establish the cause of cryptoasset flows. ETH ETF outflows around the decision lasted three days [3].
- ◆ **Banks moved further into digital asset custody.** BNY announced on 4 August that it will add staking to its digital asset custody offering, subject to a regulatory review with no timeline [9]. Deutsche Bank said on 16 September that it plans to launch digital asset custody for European institutional clients by the end of 2026, subject to regulatory approval [10]. Morgan Stanley's Ethereum ETF filings describe custodians holding the keys while third-party staking providers, chosen on performance, reliability, uptime and slashing history, run the validators [11].

Policy Watch

The CLARITY Act failed a Senate procedural vote 49 to 50 on 15 September [7], and attention has shifted to SEC and CFTC rulemaking. The SEC interpretation of 17 March 2026, accompanied by CFTC guidance [6], addresses specified protocol staking arrangements involving digital commodities. Its treatment depends on the arrangements satisfying the conditions described; it is not a blanket exemption for staking products or providers, or a determination under non-US law. Commissioner Hester Peirce, who led the SEC's Crypto Task Force, left on 2 October [8].

On the protocol side, EIP-8363 was discussed publicly as a draft on 4 August [13]. It proposed a tapered burn of consensus rewards, taking net issuance to zero at roughly a 50% staking ratio. Applied in full at once, it would have cut net consensus yield at the current staking ratio from about 2.6% to about 1.2%; the proposal phased its changes in over 18 months instead [13]. On 1 October its authors withdrew it from consideration for Ethereum's Hegotá upgrade, and plan a separate process on issuance policy running to EthCC in April [14].

Twinstake Validator POV: ETH | SOL | TON

- ◆ **ETH.** Consensus-layer APR was 2.50% in September against a network average of 2.48%, and was at or ahead of the network in five of the six months. Attestation rewards were ahead of the network in every month.
- ◆ **SOL.** Total APY, including MEV, was 5.91% in September against a network average of 5.78%. Inflation rewards, which depend on a validator being online and voting on time, were ahead of the network in 86 of 97 epochs. Uptime averaged 99.85% in September. Uptime is measured as vote credits earned against the maximum available.
- ◆ **TON (GRAM).** The Open Network's native token, Toncoin, was [renamed Gram \(ticker GRAM\) in June 2026](#) [12]. Network and Twinstake APR both rose from under 7% to above 20% after the Catchain 2.0 upgrade on 9 April, and have averaged about 16% on an annualised basis since July. Twinstake's APR was in line with the network through the period, as TON validators earn rewards at the same rate, assuming they receive no slashing penalties.

Why It Matters



INSTITUTIONAL STAKERS

Entry and exit queues are both long.

In 2025, the risk sat on the exit side, with clients waiting more than a month to unstake. From January 2026 that reversed. The exit queue sat near zero for most of the year, while the entry queue peaked at about 4.1 million ETH and a 71-day wait in February [4].

The entry queue has shortened steadily since then, from about 2.5 million ETH and a 43-day wait in late July to 1.43 million ETH and 25 days on 6 October. By 6 October the exit queue had also rebuilt, to about 857,000 ETH and 15 days [4]. Asset owners now face long waits on both entry and exit, as do exchanges that manage pooled staking against customer withdrawals.

More institutions will meet these queues as banks move into staking. BNY has said it plans to add staking to its custody offering, subject to regulatory review [9], and Morgan Stanley's Ethereum ETF filings describe third-party staking providers running the validators [11].

What This Means in Practice

- ◆ **New validator deposits do not earn protocol staking rewards before activation.** The 6 October entry-queue estimate was about 25 days; actual activation may differ. Forecasts should distinguish deposit, processing and activation dates.
- ◆ **Staked ETH may not meet near-term redemptions.** The 6 October exit-queue estimate was about 15 days, followed by the protocol withdrawal delay and a variable sweep time. Custodian processing may add time. Liquidity planning should allow for longer delays.
- ◆ **Worst-case waits are the limiting factor.** Entry and exit times have a long tail. The exit queue ran beyond a month in September 2025, sat near zero through this summer and was back to 15 days by 6 October. Liquidity planning should stress-test extended delays; historical waits do not establish a maximum.

Operational Considerations for Institutional Stakers

- ◆ Count rewards from the expected activation date, and allow for exit queue and sweep time when planning redemptions.
- ◆ Assess liquid reserves against redemption obligations and stressed exit scenarios, and review them as conditions change.
- ◆ Check current activation and exit estimates with your staking provider before each deposit or exit.
- ◆ Assess the March 2026 US interpretation against the specific staking arrangement and applicable jurisdictions; monitor subsequent legislation, guidance and rulemaking.

Where Twinstake Fits

[Twinstake's Activation & Exit Calculator](#) provides indicative ETH activation and withdrawal estimates using network data and stated assumptions. It can inform clients' own operational planning with their custodians, including for ETP subscriptions and redemptions. Estimates may change and do not guarantee rewards, execution timing or liquidity; clients remain responsible for staking and redemption decisions.

Validator Performance



September Snapshot

ETH CONSENSUS-LAYER APR

2.50%

Network 2.48%

ETH ATTESTATION APR

2.11%

Network 2.10%

SOL TOTAL APY INCL. MEV

5.91%

Network 5.78%

TON (GRAM) TOTAL APR

16.20%

Network 16.19%

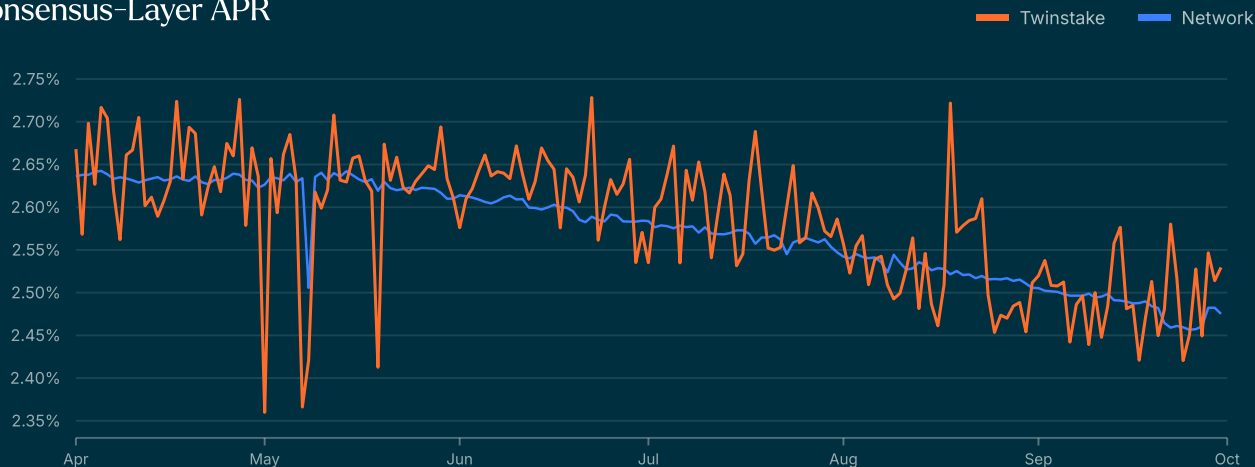
Six Months to 30 September 2026

Twinstake's headline reward rates were ahead of the network in September: 2.50% against 2.48% for Ethereum consensus-layer APR, and 5.91% against 5.78% for Solana total APY including MEV. TON was in line with the network. These are historical annualised validator metrics, not net client returns. All figures are validator-level and before commission and fees, and do not reflect slashing penalties. APR and APY use different calculation bases and are not directly comparable across chains. The sections below break each rate into its parts. The steadiest margins came from Ethereum attestation rewards and Solana inflation rewards, where Twinstake was ahead of the network in every month from April to September 2026.

— ETH

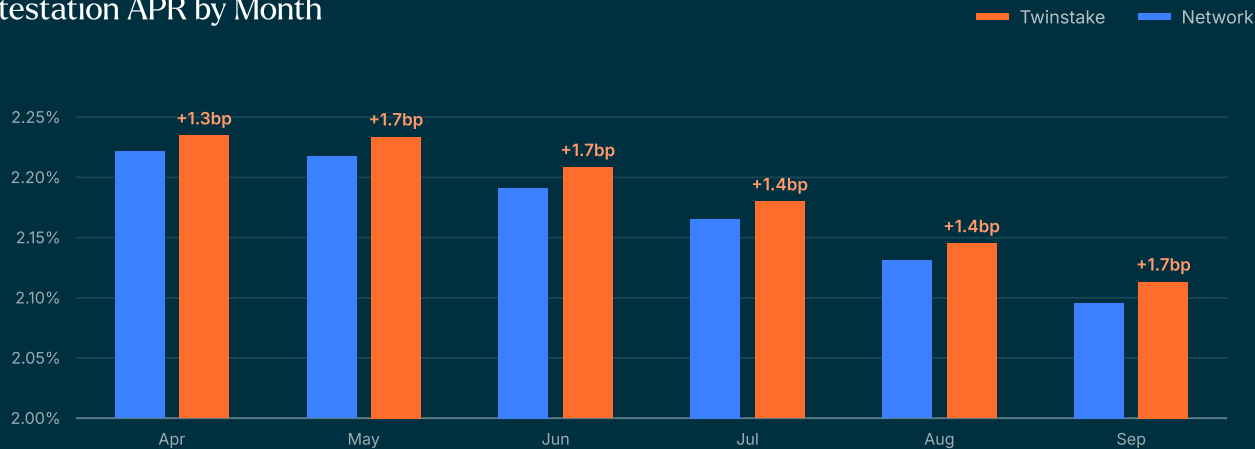
Twinstake's consensus-layer APR was 2.50% in September against a network average of 2.48%, and was at or ahead of the network in five of the six months. May was the exception, at 2.57% against 2.62%. Source data for four May dates is incomplete, which lowers both series on those days but Twinstake's more than the network's (see Data Notes). Block proposals and sync committee duties are assigned at random, so those rewards vary by chance from month to month. Attestation rewards are the only rewards paid to every validator in every epoch, which makes them more controllable and less driven by luck. There Twinstake was ahead of the network in every month, by 1.3 to 1.7 basis points.

Consensus-Layer APR



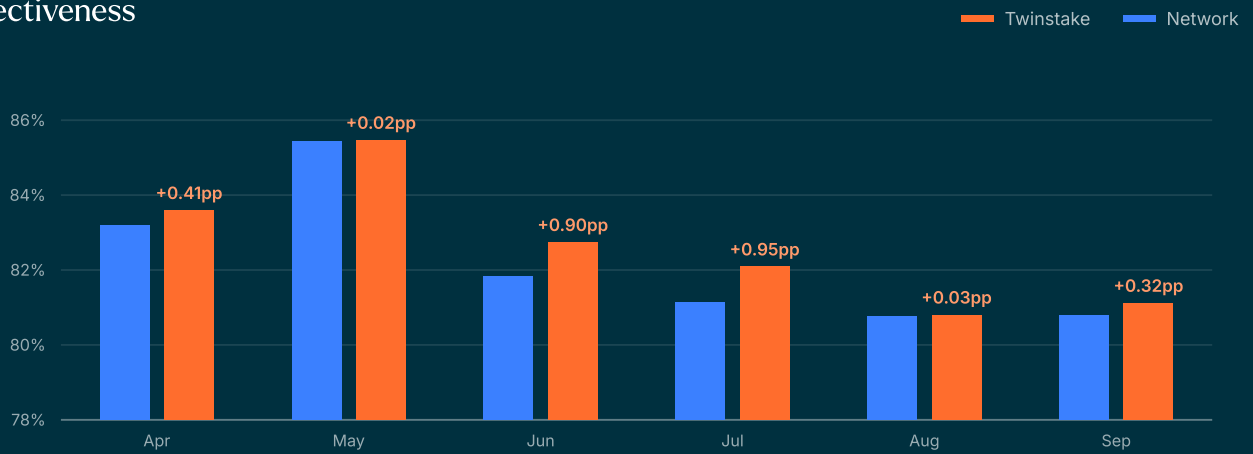
Consensus-layer APR, daily. Network = all Ethereum validators. Consensus-layer rewards only, MEV excluded.

Attestation APR by Month



Attestation APR by month, with the Twinstake margin over the network labelled. Network = all Ethereum validators.

Effectiveness



Effectiveness by month. Effectiveness = Twinstake's CL rewards as a percentage of what it would have earned at each day's highest CL APR among the 50 largest operators by stake, stake- and time-weighted. Because CL APR includes randomly assigned proposer and sync committee rewards, effectiveness is not a standalone measure of operational quality. Network = all Ethereum validators.

— SOL

Twinstake's total APY, which includes MEV tips and priority fees, was 5.91% in September against a network average of 5.78%, and was ahead of the network in every month, by 13 to 26 basis points. Almost all of that gap comes from MEV tips and priority fees, as the inflation component differs by under three basis points. Priority fees, which users pay for faster transaction inclusion, vary from epoch to epoch. Jito MEV tips are paid to delegators after the validator's commission. Priority fees are retained by the validator, and any share passed to clients depends on individual client arrangements. Total APY is therefore a validator-level measure, not a client return.

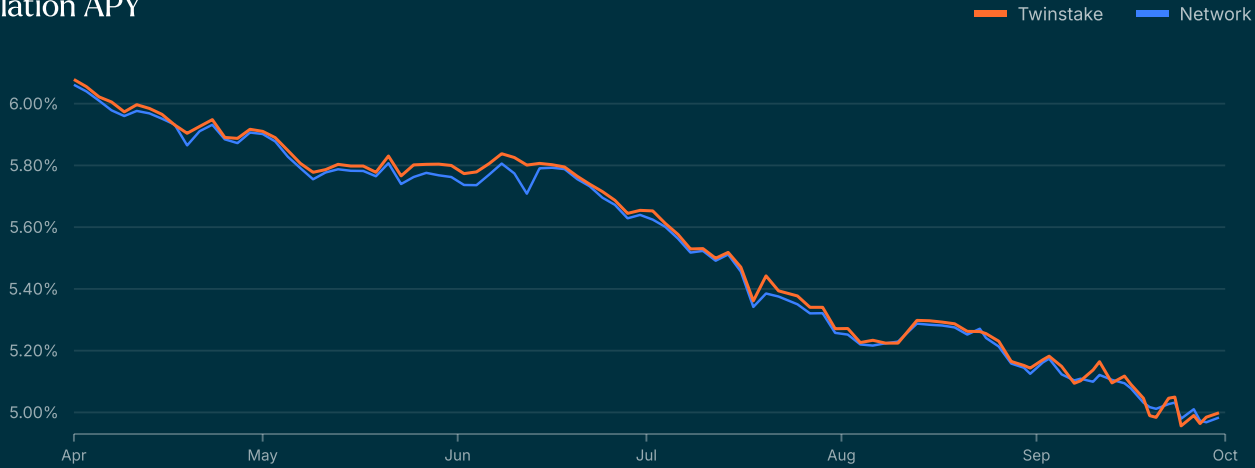
Inflation rewards depend on a validator being online and voting on time. Twinstake's inflation APY was ahead of the network in 86 of 97 epochs and in every month, by 0.5 to 2.7 basis points. The margin was narrowest in September, when Twinstake trailed the network in 8 of 20 epochs. Uptime, measured as vote credits earned against the maximum available in each epoch, averaged 99.85% across September's epochs and stayed above 99.6% as a monthly average throughout. No network uptime comparison is shown: the available network series is a simple average that includes delinquent validators, so it is not like-for-like. Inflation rewards, which are paid in proportion to vote credits, give the like-for-like comparison.

Total APY, including MEV



Total APY includes inflation rewards, Jito MEV tips and priority fees, which vary from epoch to epoch. Network = stake-time-weighted.

Inflation APY



Inflation APY per epoch. Network = stake-time-weighted.

Uptime

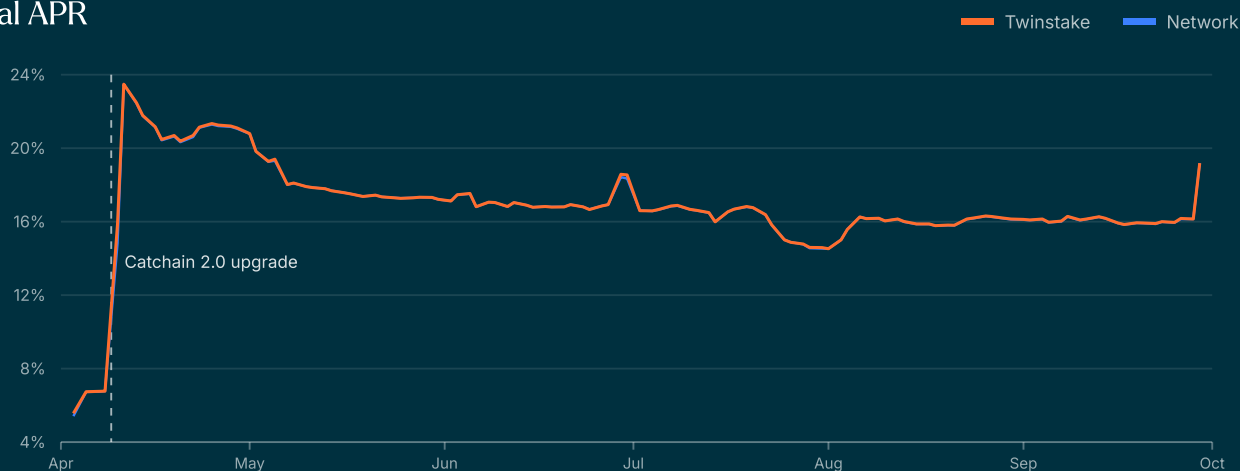


Twinstake uptime per epoch: vote credits earned as a share of the maximum available, averaged across Twinstake's validators.

— TON (GRAM)

APR on TON rose from under 7% to above 20% in April, after the Catchain 2.0 upgrade on 9 April sped up block production, and has averaged about 16% on an annualised basis since July. Twinstake's APR was in line with the network throughout, as TON validators earn rewards at the same rate, assuming they receive no slashing penalties.

Total APR



Total APR per reporting period. Network = all TON validators. Validators earn rewards at the same rate, assuming no slashing penalties, so the two lines overlap. Data is reported on roughly two days in three. The final reading, 29 September, is higher than the days before it for both Twinstake and the network, and is shown as reported.

Liquidity & Queue Tracker

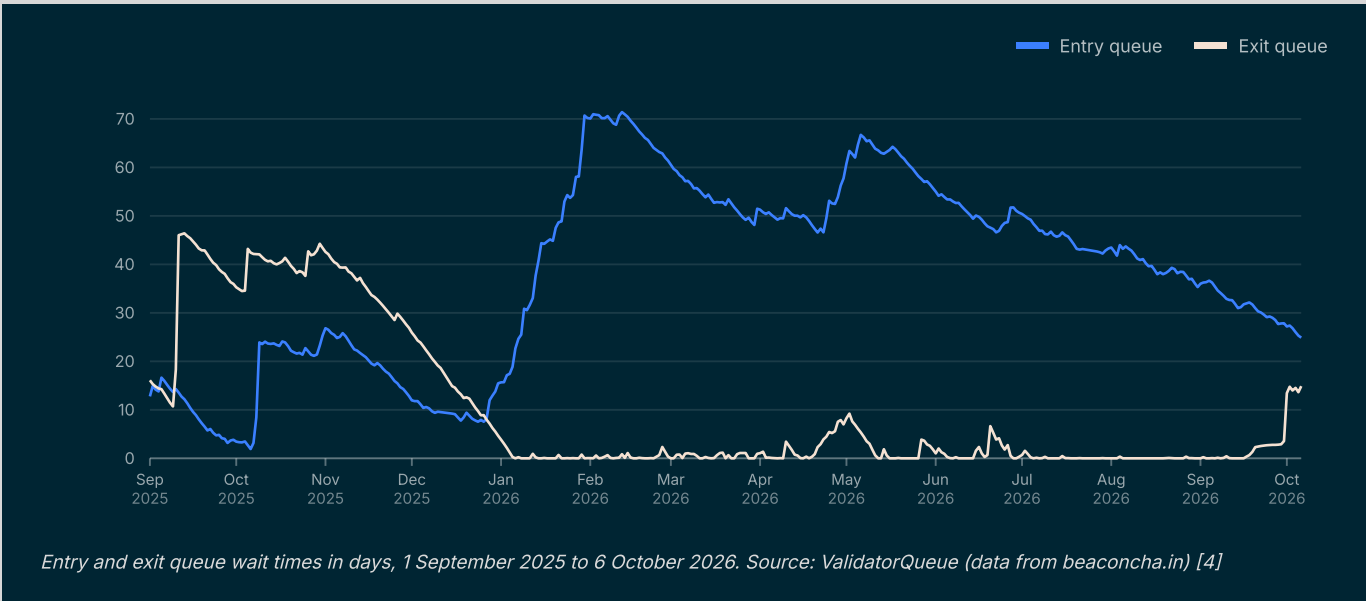


ETH Activation & Exit Queues (as of 06/10/26)

In September 2025 the exit queue peaked near 2.67 million ETH, resulting in an exit wait time higher than a month. From January 2026 it sat close to zero, while the entry queue peaked at about 4.1 million ETH and a 71-day wait in February. The entry queue still held about 2.5 million ETH and a 43-day wait at the end of July [4].

By 6 October the entry queue was about 1.43 million ETH (an estimated 25 days), and the exit queue about 857,000 ETH (an estimated 15 days) [4]. Full withdrawals also require the protocol withdrawal delay and a variable sweep time, with possible additional custodian processing. These are snapshots, not promised completion times; a near-zero exit queue does not mean immediate withdrawal. About 35.8% of ETH supply was staked.

	Length (time)	Length (size)	Trending (7d)
Entrance Queue	24 days 21 hours	1,432,630 ETH	↘
Exit Queue	14 days 21 hours	857,082 ETH	↗



Institutional Signals at a Glance

Segment	Actionable Insight
ETF and ETP issuers	Allow for activation, exit, withdrawal and custodian delays; queue snapshots are not redemption commitments
Digital asset treasury companies	Reflect the period before new validator activation in reward forecasts and reporting
Exchanges	Assess liquid ETH against customer withdrawals and stressed exit and withdrawal delays
Crypto-native funds	Check queue lengths before each deposit or exit. The exit queue went from near zero in August to 15 days by 6 October

Why This Matters Now

- Both entry and exit queues were elevated on 6 October: estimated waits were about 25 and 15 days respectively, with additional time required for withdrawal [4].
- ETH ETFs took in about \$1.75 billion in August, and Solana ETFs took in \$188.2 million in the week to 25 September [1][2][3].
- The March US interpretation is relevant to covered protocol staking arrangements; it does not resolve every product's or jurisdiction's regulatory treatment.

Protocol Calendar, as at 6 October 2026

Solana, Alpenglow (SIMD-0326). Live on testnet since 24 September and devnet since 25 September. Anza has not announced a mainnet-beta date; activation follows an observation period [15].

Ethereum, Glamsterdam. Activated on the Sepolia testnet on 6 October [16]. Mainnet activation has not been scheduled.

Ethereum, EIP-8363. Withdrawn from consideration for the Hegotá upgrade on 1 October. Its authors plan a separate issuance process, ending with a forum at EthCC in April [14].

Solana, SIMD-0550. Approved by validator vote on 28 August with 67% support [17]. Not yet activated, and no activation epoch assigned. See our report, [Solana's Emissions Reform: Approved, and What Happens Next](#).

Comparative Table: Twinstake vs. Network, September 2026

Chain	Measure	Twinstake	Network	Delta	Basis
ETH	CL APR	2.50%	2.48%	+1.0bp	All validators, MEV excluded
ETH	Attestation APR	2.11%	2.10%	+1.7bp	All validators
SOL	Inflation APY	5.07%	5.06%	+0.5bp	Stake-time-weighted
SOL	Total APY incl. MEV	5.91%	5.78%	+13.0bp	Stake-time-weighted
TON (GRAM)	Total APR	16.20%	16.19%	+1.2bp	Same rate for all validators

Deltas are calculated from unrounded figures, so they can differ from the gap between the rounded rates shown. All figures are validator-level and before commission.

References



Methodology and Data Notes

Twinstake and network performance figures are drawn from Twinstake's validator performance data model as at 7 October 2026, covering 1 April to 30 September 2026. Ethereum figures are consensus-layer rewards only and exclude MEV. The network comparison is all Ethereum validators. All figures are validator-level and before commission and fees. Slashing and inactivity-leak penalties are not reflected; Ethereum figures include missed-duty penalties. APR figures are total rewards annualised over stake and time, with no compounding. Effectiveness compares Twinstake's consensus-layer rewards with what it would have earned at each day's highest consensus-layer APR among the 50 largest operators by stake; monthly figures are stake- and time-weighted and capped at 100%. The top 50 hold 99.9% of attributed stake; membership is set from the trailing 30 days of stake at the latest data load and applied to the whole period.

Solana figures are per epoch for the 97 epochs starting in the window. They are shown as APY, assuming the full epoch return, including MEV tips and priority fees, is restaked every epoch. On-chain, only inflation rewards compound automatically, so this is a modelling convention, and component APYs do not sum to the total APY. Ethereum and TON figures are shown as APR. Solana figures are validator-level, before commission. The network APY comparison is stake-time-weighted. Uptime is vote credits earned as a share of the maximum attainable in each epoch, as a simple average across Twinstake's validators. Total APY includes MEV tips and priority fees and is labelled as such where shown. TON figures are total APR per reporting period, based on each staking pool's total elector reward before the operator's split with nominators, with the network comparison covering all TON validators. Toncoin, the TON network's native token, was renamed Gram (ticker GRAM) on 15 June 2026 [12]. TON validators earn rewards at the same rate, assuming no slashing penalties.

Monthly reward averages are stake- and time-weighted, except Solana inflation APY, which is a simple average of epoch values. Solana uptime is an unweighted average. Solana epochs are assigned to months by start date; Ethereum and TON data by end date. Percentages are rounded to two decimal places, and deltas are calculated from unrounded figures. Ethereum source data for 1, 7, 8 and 19 May 2026 is incomplete for some epochs, which depresses both series on those dates, Twinstake's more than the network's. Queue figures are taken from public trackers at the time shown and are not Twinstake data.

Sources

1. [Farside Investors, US spot Ethereum ETF flow data, August to October 2026.](#)
2. [Farside Investors, US spot Solana ETF flow data, September and October 2026.](#)
3. [SoSoValue, spot Ethereum and Solana ETF flow and net asset data, August and September 2026.](#)
4. [ValidatorQueue, Ethereum validator entry and exit queue data and history \(sourced from beaconcha.in\), 1 September 2025 to 6 October 2026.](#)
5. [Federal Reserve, FOMC statement, 16 September 2026.](#)
6. [SEC interpretation and accompanying CFTC guidance, Application of the Federal Securities Laws to Certain Types of Crypto Assets and Certain Transactions Involving Crypto Assets, Release 33-11412, 17 March 2026, section V.B.](#)
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8. [American Banker, reporting on Commissioner Peirce's departure from the SEC, September 2026.](#)
9. [BNY, announcement on staking in digital asset custody, 4 August 2026.](#)
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11. [Morgan Stanley Ethereum Trust, registration statement and prospectus filed with the SEC, 2026.](#)
12. [TradeInformer, reporting on the rebrand of Toncoin \(TON\) to Gram \(GRAM\), 16 June 2026.](#)
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15. [Solana Compass, reporting on Alpenglow's activation on Solana testnet and devnet, September 2026.](#)
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17. [The Defiant, reporting on the SIMD-0550 validator vote, August 2026.](#)
18. [Twinstake Research, Solana's Emissions Reform: Approved, and What Happens Next, September 2026.](#)
19. [UK Legislation, Financial Services and Markets Act 2000 \(Financial Promotion\) Order 2005 \(SI 2005/1529\).](#)

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