

Energy Web Architecture Upgrade Proposal

Reimagining tokenomics for a multi-chain, multi-token future ensuring Energy Web remains at the forefront of Web3 innovation in energy

Executive Summary for EWC Validators

We invite you to vote on a pivotal upgrade that will transform Energy Web's network and unlock its full potential. The proposed implementation shifts our architecture from a membership-based Proof of Authority to a permissionless Proof of Stake system, fundamentally evolving our tokenomics in line with a new consensus algorithm. Key measures include:

- **Multi-Chain Enablement:** Implementing features that serve builders on Polkadot, Ethereum, and other chains, while enabling solution builders to charge fees in any tokens (e.g., USDT or BTC). Such fees could be distributed upon the discretion of the solution builder among the various network participants such as solution builder, worker node provider, and stakers—a model we call the Bring Your Own Token (“**BYOT**”) model (see Appendix A).
- **ERC-20 Migration:** Transitioning EWT to the ERC-20 standard on Ethereum mainnet to enhance token access, liquidity and interoperability.
- **On-Chain Treasury:** Transforming the legacy Community Fund into a dynamic on-chain treasury guided by decentralized on-chain voting.
- **Enabling Multiple Permissionless Staking Options:** Stake on PoS Collators to enhance chain security and increase total value locked (TVL), with the envisaged ability to restake into Liquid EWT (stEWT). Additionally, the Worker Node Network should allow participation using stEWT, providing security and TVL growth for decentralized energy solutions while maintaining high capital efficiency.

These measures shall collectively drive further decentralization, bolster network security, and empower both builders and token holders. Your vote is crucial to propel Energy Web forward into a more robust, scalable, and innovative future. Please

review and cast your vote on this proposed implementation.

Background & Rationale

The Energy Web Chain, launched in 2019, began as a platform for learning node operation and building proof-of-concepts, eventually evolving to support decentralized applications, green proofs, and enterprise use cases in production. While the initial membership-based Proof of Authority (“PoA”) model laid a strong foundation, it has now reached its [limitations in scalability, governance, and interoperability](#). This model’s heavy reliance on centralized coordination poses security concerns as we expand to run critical energy sector applications on the chain and broader Energy Web technology stack.

In parallel, the Energy Web Foundation, as a steward of the Energy Web ecosystem, has advanced its technology by developing state-of-the-art worker node network solutions on the substrate framework and launching several applications on Energy Web X—a parachain on Polkadot. Recognizing the need to merge robust security with these innovative solutions, we have concluded that evolving from a membership-based PoA model to a permissionless Proof of Stake (“**PoS**”) system is both necessary and timely. This upgrade shall allow existing PoA validators to transition to EWX validators, open the network to new nodes, and enable metrics like Total Value Locked (“**TVL**”) to better reflect the chain’s security. Additionally, shifting to inflation-based staking rewards should eliminate reliance on a limited Community Fund, while a dynamic, KPI-driven governance framework will actively involve all network stakeholders, with slashing penalties in place to ensure integrity.

Why This Upgrade is Important:

- **Enhanced Governance & Participation:** Transitioning governance under the Energy Web Foundation to a stakeholder-driven model should improve overall network governance and participation.
- **Improved Scalability & Adoption:** Migrating EWT to an ERC-20 token on Ethereum mainnet should enhance token access, liquidity, facilitate wallet integrations, and boost enterprise adoption
- **Future-Proofing the Ecosystem:** Embracing interoperability with Ethereum,

Polkadot, and other chains should ensure the long-term sustainability and adaptability of the network.

- **Enhanced Security & Tokenomics:** New inflation-based staking rewards and KPI-driven security measures should provide predictable, sustainable network incentives while reinforcing overall network security.
- **Phased Staking & Inflation Strategy:** To ensure a smooth transition and sustainable staking incentives, token supply growth will initially be capped at a fixed total annual volume, before later transitioning to a dynamic supply model. In either phase, Energy Web's staking reward mechanism will only mint and distribute the remaining tokens as per the original supply plan of 100m.
 - Start with fixed total annual supply growth:
 - Initially, token supply growth will be capped at a fixed annual volume
 - The majority of the rewards will be distributed to collators and nominators as staking rewards, with a minor share going to the community fund.
 - Governance may adjust this inflation as needed before transitioning to the dynamic model
 - Transition to a Dynamic Supply Model
 - Rather than following a rigid schedule, the shift to dynamic supply will depend on real-time staking metrics.
 - Once staking participation reaches a healthy level, we will transition to a demand-driven inflation mechanism.
 - Inflation will no longer follow a fixed rate but will adjust dynamically based on real-time staking metrics and worker nodes network activity.

By keeping the system flexible yet constrained within the 100m supply ceiling, we can ensure that inflation is used only as needed, maximizing participation while preventing unnecessary token dilution. This adaptive approach allows the market to determine the optimal staking balance, ensuring long-term economic sustainability without forcing inflation if the network doesn't need it.

- **Decentralization & Inclusivity:** Moving to a non-permissioned PoS model allows for open participation by new nodes, with TVL metrics more accurately reflecting the chain's security and value.
- **Streamlined On-Chain Treasury:** Replacing the limited Community Fund with a dynamic treasury directed by DAO governance receiving a share of the dynamic token supply and thus scaling with network growth. This will ensure long-term

sustainability without relying on membership fees.

This upgrade is a critical step forward in ensuring that Energy Web not only meets today's challenges but is also well-positioned for future innovations and market demands.

Proposed Upgrade & Technical Execution (indicative)

Core Upgrades:

- **Energy Web X Transition:**
 - **Consensus Shift:** Migrate from the membership-based Proof of Authority (PoA) to non-permissioned Proof of Stake (PoS) system, targeting a maximum Total Value Locked (TVL) to support network security.
 - **Collator Model:** Replace traditional validators with collators, who secure the network and earn staking rewards.
 - **Security Enhancements:** Implement slashing penalties for inactive or malicious collators, thereby improving network resilience.
 - **Worker Network Integration:** Allocate a portion of EWT rewards to worker network solutions that handle decentralized compute, governance participation, and solution execution.
 - **Treasury Transformation:** Transform the legacy Community Fund into a on-chain treasury guided through DAO governance, funded by transaction fees and Inflation.
- **Energy Web Chain (PoA) Legacy:**
 - **Continued Support:** The PoA chain shall persist as a standalone, EVM-based chain to support existing applications for at least two years.
 - **Limited Scope:** It shall not integrate with exchanges or adopt new governance and tokenomic models.
 - **Transition Focus:** All active staking, governance, and exchange-listed EWT activities shall migrate to Energy Web X.

- **EWT as an ERC-20 Token:**
 - **Token Migration:** Transition EWT to the ERC-20 standard token on Ethereum mainnet.
 - **Enhanced Integration:** This migration enables access to DeFi, liquidity pools, and broader integrations, leading to improved adoption, and enterprise accessibility.
 - **Decentralised Governance:** All governance and staking activities will be consolidated on Energy Web X, while the PoA chain remains a legacy option for enterprise use cases.
- **Bring Your Own Token (BYOT):**
 - **Flexible Fee Models:** Enable solution builders to charge fees in any tokens (e.g., BTC, ETH, USDT), with these fees being shared among solution builders, worker node providers, and stakers.
 - **Core Utility:** EWT remains the backbone for transaction fees and overall chain and application security and governance activities.

This structured upgrade is designed to merge enhanced security and decentralized governance with increased flexibility for builders and stakeholders, ensuring that Energy Web remains at the forefront of innovation in the energy blockchain space.

Implementation Timeline (indicative)

- **Q1 2025 - Governance Vote:** Stakeholders cast their votes on the proposed upgrade, signaling their decision to move forward with the transition.
- **Q2 - Q3 2025 - ERC-20 & Tokenomics Upgrade:** Initiate smart contract updates, comprehensive audits, and the migration of EWT to ERC-20 standard token on Ethereum mainnet, alongside the integration of the new tokenomics and governance model.
- **Q3 - Q4 2025 - Liquid Staking Launch:** Introduce Liquid EWT (LEWT) to facilitate staking within DeFi applications and enable incentivized restaking options, further enhancing network security, token access and liquidity.
- **Q4 2025 - Multi-Token Worker Node Networks:** Deploy worker networks that support multi-token operations. Staking rewards shall be allocated to decentralized compute operators, incorporating the Bring Your Own Token (BYOT) model for flexible fee charging.

- **2026+ - Full Decentralization & Treasury Governance:** Transition to complete decentralization with a DAO-guided on-chain treasury, implement inflation control measures, expand decentralized governance, and integrate AI-enhanced energy solutions through open proposals for grant funding and reinvestments.

We shall regularly update the Energy Web community about the progress and / or deviations from the above-referred timeline.

Governance & Voting

All current validators with active Energy Web memberships—who have not submitted an official termination request by the voting date—are eligible to cast their vote.

Key Benefits of the Upgrade

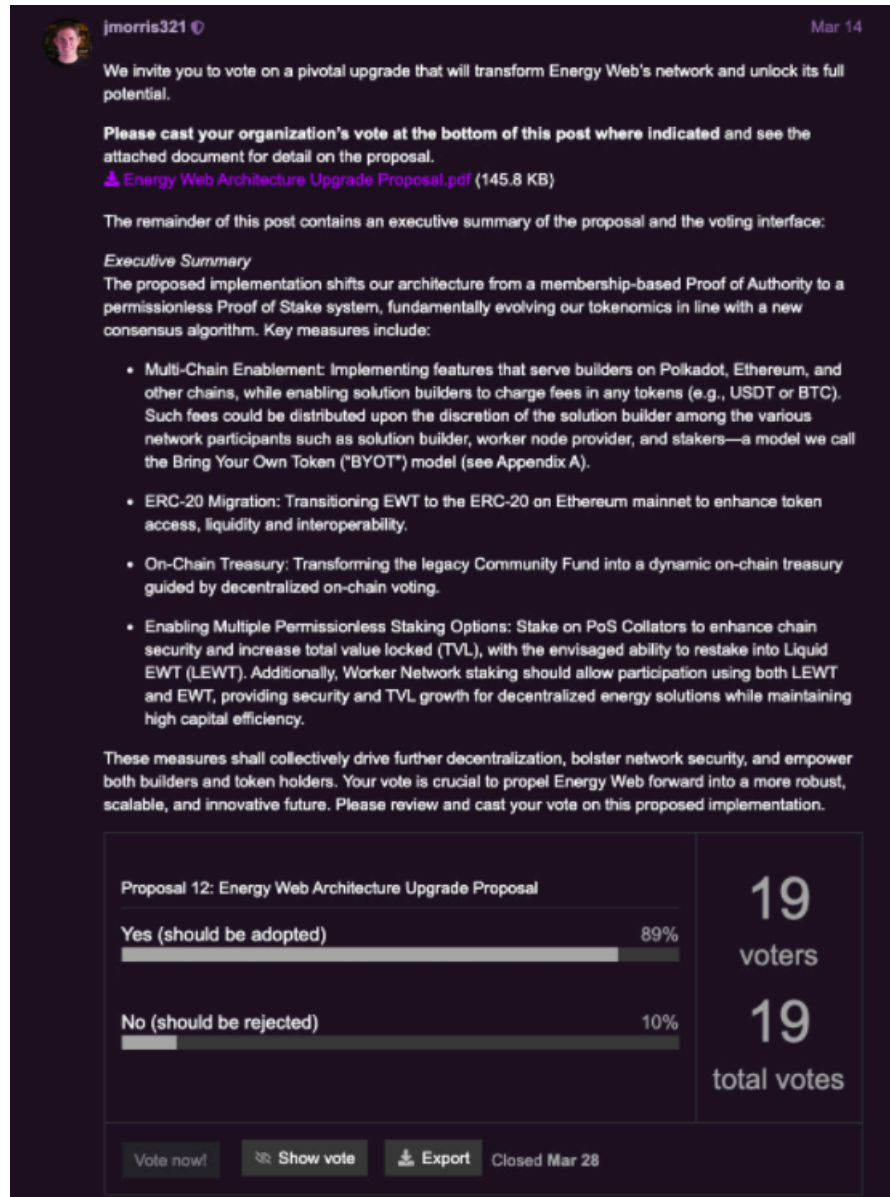
- **Governance & Compliance:**
 - **Enhanced Security:** EWT collator staking bolsters network security.
 - **Sustainable Treasury:** The legacy Community Fund is transformed into a DAO-guided on-chain treasury, ensuring long-term sustainability.
 - **Adoption through Innovation:** Worker networks paired with the Bring Your Own Token (BYOT) model drive real-world adoption by enabling multi-token rewards and staking incentives.
 - **Economic & Market Impact:**
 - **Increased Token Access and Liquidity:** Migrating EWT to the ERC-20 standard token on Ethereum mainnet expands liquidity and facilitates greater adoption.
 - **Enterprise Integration:** The BYOT model encourages broader enterprise adoption through flexible, multi-token rewards and payment systems.
 - **Technical & Performance Enhancements:**
 - **Decentralized Governance:** A seamless transition to a non-permissioned Proof of Stake system supports robust decentralized governance and staking rewards.
 - **Multi-Chain Scalability:** Enhanced scalability across multiple chains ensures that Energy Web remains at the forefront of Web3 innovation.
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Call to Action

Your vote is crucial in propelling Energy Web into its next phase of innovation and decentralization. Cast your vote starting 14th March 2025 until 28th March 2025, and be a part of Energy Web's most significant transformation yet! For any questions or further information, please contact the Energy Web team.

Appendices:

Appendix A: Final result of the governance vote on Proposal 12



Appendix B: Bring Your Own Token (BYOT) Fee Distribution Model (example):

1. Fee Collection Mechanism

- a. Solution builders (i.e., developers or companies building on Energy Web X) charge users fees for using their applications or services.
- b. These fees can be paid in any token, such as USDT, BTC, ETH, or other supported

assets, rather than being limited to EWT.

2. Fee Distribution Breakdown: Once collected, the fees are automatically split among key stakeholders (subject to the design considerations of the solution builder):

a. Solution Builder (Service Provider): The builder (company or individual creating the app or solution) receives a share of the fees as revenue. This incentivizes developers to create applications and services on Energy Web X.

b. Worker Node Provider

i. Worker nodes execute tasks related to decentralized compute, governance participation, and solution execution (e.g., verifying transactions, running energy-related workloads).

ii. They receive a share of the fees as compensation for providing infrastructure and computing power.

c. Stakers (Validators & Collators)

i. Users who stake their EWT or stEWT (Liquid EWT) tokens to secure the network receive a portion of the fees as staking rewards.

ii. This creates an incentive for users to participate in securing the network while earning a return.

3. Example of Fee Sharing:

a. Imagine an EV Charging App built on Energy Web X:

i. A user pays US-\$10 worth of USDT to verify and certify their green EV charging session. The fee is split as follows:

- US-\$5 (50%) goes to the app developer (solution builder).
- US-\$3 (30%) goes to worker nodes that verified the transaction.
- US-\$2 (20%) is distributed to stakers securing the network.