TRON (TRX)

Mandatory information on principal adverse impacts on the climate and other environment-related adverse impacts of the consensus mechanism, published under Article 66(5) of Regulation (EU) 2023/1114 (MiCA) and Commission Delegated Regulation (EU) 2025/422.

Mandatory information

- V2.0 Last updated on: 20th October 2026
- Whitepaper link: https://tron.network/static/doc/white_paper_v_2_1.pdf

Code	Field	Content	Source
S.1	Name	Payhound Limited	
S.2	Relevant legal entity identifier	9845001DD90AF543DC90	
S.3	Name of the crypto-asset	TRON (TRX)	
S.4	Consensus mechanism	TRON uses Delegated Proof-of-Stake (DPoS). TRX holders stake TRX to obtain TRON Power and vote for Super Representative (SR) candidates. Every 6 hours, the 27 candidates with the most votes become the active SRs and take turns producing a block every 3 seconds. A block becomes irreversible once at least 19 of the 27 active SRs have produced blocks at or above its height, typically within about a minute.	R1

S.5	Incentive mechanisms and applicable fees	The SR that produces a block earns 8 TRX. A further 128 TRX per block is shared among the top 127 candidates (the 27 active SRs and 100 SR Partners) in proportion to their votes. Each SR keeps a self-set brokerage share (20% by default) and passes the rest to its voters. There is no protocol slashing: an SR that misses its slot simply loses that block's rewards and risks losing votes. Users pay for transactions with two resources, Bandwidth and Energy, obtained by staking TRX or by burning TRX. Transactions are included first-in, first-out, with no priority-fee bidding. Reward and fee values are chain parameters that SRs can change by on-chain proposal.	R1, R2
S.6	Beginning of the period to which the disclosure relates	2025-01-01	—
S.7	End of the period to which the disclosure relates	2025-12-31	—
S.8	Energy consumption (kWh per year)	88,249	R1, R3, R4
S.9	Energy consumption sources and methodologies	Bottom-up estimate: 27 active SRs × 2 machines (a block-producing node plus the standby node TRON recommends for maintenance) at TRON's	R1, R3, R4

		recommended SR specification of 32 cores, 64 GB memory and 3 TB SSD. Power is estimated with the open-source Cloud Carbon Footprint coefficients, counting 32 cores as 64 vCPUs: 64 × 2.12 W + 64 GB × 0.392 W/GB + 3 TB × 1.2 W/TB = 164.4 W, × 1.135 data-centre PUE = 186.6 W, or 1,634.2 kWh per machine per year. 54 machines = 88,249 kWh. Scope: block-producing SR infrastructure only. SR Partner nodes and public full nodes, which no public source counts, are not included.	

Supplementary key indicators on energy and GHG emissions

Code	Field	Value	How Derived	Source
S.10	Renewable energy consumption (% of total energy used per year)	33.8%	SR locations and energy contracts are not published, so the 2025 global average renewables share of electricity generation is used.	R6
S.11	Energy intensity (kWh per validated transaction)	0.0000273	88,249 kWh ÷ 3,232,144,958	R5

			transactions in 2025	
S.12	Scope 1 DLT GHG emissions – controlled (t CO2eq per year)	0	SRs run on purchased electricity; no on-site generation is reported	—
S.13	Scope 2 DLT GHG emissions – purchased (t CO2eq per year)	40.4	88,249 kWh × 0.458 kg CO2e/kWh (2025 global average grid intensity)	R6, R7
S.14	GHG intensity (kg CO2eq per validated transaction)	0.0000125	40,418 kg ÷ 3,232,144,958 transactions in 2025	R5, R7

Sources and methodologies

Code	Field	Content
S.15	Key energy sources and methodologies	The SR count and consensus design come from TRON's developer documentation [R1], and the SR hardware specification and standby-node practice from TRON's node deployment guide [R3]. Power draw uses the Cloud Carbon Footprint methodology [R4]: AWS average CPU power of 0.74 W idle and 3.5 W at full load per vCPU at 50% utilisation, 0.392 W per GB of memory, 1.2 W per TB of SSD and a PUE of 1.135. The 2025 transaction count is the sum of Coin Metrics' daily TxCnt for TRON [R5]. Because SR locations are not public, S.10 uses Ember's 2025 global renewables share [R6]. No offsetting or market-based instruments are applied.
S.16	Key GHG sources and methodologies	Emissions (S.13) apply the 2025 global average grid emissions intensity of 458 g CO2e per kWh reported from Ember's Global Electricity Review 2026 [R6][R7] to the S.8 energy estimate. This is a location-based estimate. Renewable-energy purchases by SRs or their hosting providers are not taken into account. All emissions are reported as Scope 2 because SRs use purchased electricity. GHG intensity (S.14) divides S.13 by the 2025 transaction count [R5].

References

1. **R1** – TRON Developer Hub, Consensus and DPoS (27 active SRs, 3-second blocks, 6-hour maintenance period, solidification, rewards, no slashing).
2. **R2** – TRON Developer Hub, Resource Model (Bandwidth and Energy).
3. **R3** – TRON Developer Hub, Deploy a node (SR fullnode: 32 cores, 64 GB RAM, 3 TB+ SSD; standby node for upgrades).
4. **R4** – Cloud Carbon Footprint, Methodology (Apache License 2.0).
5. **R5** – Coin Metrics, Community Data, file trx.csv, daily metric TxCnt summed from 2025-01-01 to 2025-12-31: 3,232,144,958 transactions (retrieved 23 September 2026).
6. **R6** – Ember, Global Electricity Review 2026 (renewables 33.8% of global electricity in 2025).
7. **R7** – Down To Earth, Clean energy meets all global power demand growth as renewables overtake coal: Ember report 2026, April 2026 (global average 458 g CO2e/kWh in 2025, from Ember).