Disclosure

on the principal adverse impacts on the climate and other environment-related adverse impacts of the consensus mechanism of the crypto-assets supported by Trustyfi

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The environmental impact of crypto assets has become a key area of concern, particularly regarding the energy consumption and sustainability of their consensus mechanisms. As part of the regulatory requirements under the Regulation (EU) 2023/1114 on Markets in Crypto-Assets ("MiCA"), crypto asset service providers ("CASPs") must disclose how these mechanisms affect the climate and environment. The following information outlines these impacts, providing transparency on the sustainability of various blockchain technologies.

Below you will find information on how the consensus mechanism of crypto assets impacts the climate and environment, as required to be disclosed by Trustyfi as requested in accordance with applicable legislation.

Types of Blockchain Consensus Mechanisms

- **Proof of Stake (PoS):** A Proof-of-Stake consensus mechanism incentivises validators to secure the network and validate transactions by staking their own crypto assets as collateral. Validators are selected to create new blocks based on the amount of cryptocurrency they hold and are willing to "stake", rather than through computational power. If validators act "honestly", they earn rewards through transaction fees; however, malicious behavior or proposing invalid blocks can lead to a reduction of their staked assets, creating an economic penalty that discourages misconduct and ensures network integrity.
- **Proof of Work (PoW):** A Proof-of-Work consensus mechanism incentivises miners to secure the network by publishing updates to the ledger in the form of blocks, containing newly submitted and verified transactions. Miners compete to solve cryptographic puzzles, and the first to succeed earns newly minted crypto-assets (block reward) and user-paid transaction fees. Misconduct, such as attempting to add invalid blocks or rewrite the history of the ledger, results in

wasted computational resources and opportunity costs, creating an economic penalty that discourages dishonest behavior.

- **Byzantine-Fault-Tolerant (BFT)**: Byzantine-Fault-Tolerant consensus mechanisms, such as Proof of Authority (PoA), Practical Byzantine Fault Tolerance (PBFT), Byzantine Agreement (BA) or similar mechanisms, secure the network through a predefined set of validators who are trusted to validate transactions and add blocks to the ledger. Unlike open networks where anyone can participate (as in Proof-of-Work or Proof-of-Stake), BFT and similar mechanisms operate with known and vetted participants, often selected by a governing entity. Validators are incentivised to maintain the network's integrity through monetary rewards or external motivations, such as institutional trust or regulatory obligations. Malicious actions, such as submitting invalid transactions or failing to participate in consensus, can result in penalties, removal from the validator set, or other repercussions, creating an economic and reputational deterrent to dishonest behavior. Validators reach a consensus by verifying transactions and proposing blocks, and, as long as a majority of validators act honestly, the network remains secure.
- **No Consensus Algorithm:** Tokens do not have their own consensus mechanism, but rely on the consensus mechanism of one or multiple underlying crypto-asset networks. Depending on the token design, incentive mechanisms arise from utility, scarcity, or governance rights.

Summary on energy consumption and Greenhouse gas ("GHG") Emissions for each token in respect of which Trustyfi provides services

#	Crypto Name	Consensus Mechanism	Energy consumption (kWh per year)	Non-renewable energy consumption (%)	Energy intensity (kWh per validated transaction)	Scope 1 – Controlled (tCO2eq per year)	Scope 2 – Purchased (tCO2eq per year)	GHG intensity (kg CO2eq per validated transaction)
1	ApeCoin	Token / No Consensus Algorithm	94.16518	Not available	Not available	Not available	Not available	Not available

2	Avalanche (AVAX)	Proof of Stake (PoS)	3358446.777629999	29.562063276	0.00026	0	1152.38613	0.00009
3	Axie Infinity	Token / No Consensus Algorithm	32.9902	Not available	Not available	Not available	Not available	Not available
4	Basic Attention	Token / No Consensus Algorithm	28.7135	Not available	Not available	Not available	Not available	Not available
5	Bitcoin	Proof of Work (PoW)	163805675624.21024	31.073723778	20.35477	0	69581620.3023	8.64633
7	BNB Chain	Proof of Stake (PoS)	16567.62164	Not available	Not available	Not available	Not available	Not available
8	Chainlink	Token / No Consensus Algorithm	294.5905	Not available	Not available	Not available	Not available	Not available
9	Curve DAO	Token / No Consensus Algorithm	106.06152	Not available	Not available	Not available	Not available	Not available

10	DAI	Token / No Consensus Algorithm	219.46364	Not available	Not available	Not available	Not available	Not available
11	DyDx (DYDX)	Byzantine-Fault Tolerant (BFT)	31839.27578	Not available	Not available	Not available	Not available	Not available
12	Ethereum	Proof of Stake (PoS)	5992349.25825	31.489952115	0.00032	0	1919.72794	0.0001
13	Everscale (EVER)	Proof of Stake (PoS)	Not available	Not available	Not available	Not available	Not available	Not available
14	Gala (GALA)	Token / No Consensus Algorithm	Not available	Not available	Not available	Not available	Not available	Not available
15	Internet Computer (ICP)	Proof of Stake (PoS) variant	275 tCO2e/year (from Carbon Crowd, not CCRI format)	Not available	0.003 Wh/tx	Not available	Not available	275 tonnes of CO2 emissions per year

16	Litecoin (LTC)	Proof of Work (PoW)	3949736935.0108699799	31.719176973	0.17144	0	1653082.97294	0.07183
17	Polygon (Matic) (POL)	Proof of Stake (PoS)	159483.79887	Not available	Not available	Not available	Not available	Not available
18	Near Protocol	Proof of Stake (PoS)	2047060.13783	28.9376	0.00007	0	831.095	0.00003
19	Pepe Coin (PEPE)	Token / No Consensus Algorithm	283.6507	Not available	Not available	Not available	Not available	Not available
20	Polkadot (DOT)	Proof of Stake (PoS)	1023947.38277	35.174057801	0.0004	0	310.70548	0.00012
21	Sandbox (SAND)	Token / No Consensus Algorithm	67.20091	Not available	Not available	Not available	Not available	Not available
22	Shiba Inu (SHIB)	Token / No Consensus Algorithm	6.58344	Not available	Not available	Not available	Not available	Not available
23	Solana (SOL)	Proof of Stake (PoS)	16342554.0850000009	39.936230016	0.00001	0	4899.38918	0

24	Stellar (XLM)	Byzantine-Fault Tolerant (BFT)	236511.11944	Not available	Not available	Not available	Not available	Not available
25	Tether USD	Token / No Consensus Algorithm	11806.45862	Not available	Not available	Not available	Not available	Not available
26	Tether EUR	Token / No Consensus Algorithm	11806.45862	Not available	Not available	Not available	Not available	Not available
27	THORChain (Rune)	Proof of Stake (PoS)	40773.32281	Not available	Not available	Not available	Not available	Not available
28	TON	Proof of Stake (PoS)	5747107.55818	31.25493779	0.00009	0	1676.58798	0.00003
29	TRON (TRX)	Proof of Stake (PoS)	3501168.74331	27.68768362	0.00005	0	1322.41714	0.00002
30	USDC	Token / No Consensus Algorithm	42113.43418	Not available	Not available	Not available	Not available	Not available

31	XCAD Network	Byzantine-Fault Tolerant (BFT)	Not available	Not available	Not available	Not available	Not available	Not available
32	Yield Guild Games	Token / No Consensus Algorithm)	Not available	Not available	Not available	Not available	Not available	Not available

Sources and methodologies

All information provided herein is based on the data published by the Crypto Carbon Ratings Institute ("CCRI") between 2025-01-14 and 2025-01-27; all indicators are based on a set of assumptions and thus represent estimates; methodology description and overview of input data, external datasets, and underlying assumptions available at: https://docs.mica.api.carbon-ratings.com/mica/#/ and https://carbon-ratings.com/dl/whitepaper-mica-methods-2024, and https://docs.mica.api.carbon-ratings.com/mica/#/currencies.

CCRI does not account for any offsetting of energy consumption or other market-based mechanisms as of today.