CRYPTOASSET SUSTAINABILITY INDICATOR REPORT

Introduction

1. Information about the provider of cryptoasset-related services.

   Business name: Invity Finance s.r.o.

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   LEI: 64880741U1SN9TUWJ897

2. In the event of any discrepancy between the Czech, English or other language versions of this document, the Czech version shall prevail.

Information about the statement

3. This statement serves to demonstrate Invity's compliance with the regulatory requirements arising from Article 66(5) of Regulation (EU) 2023/1114 of the European Parliament and of the Council of 31 May 2023 on markets in crypto-assets. This provision imposes an obligation on providers of crypto-asset services to disclose information on sustainability in relation to adverse climate impacts and other adverse environmental impacts. In particular, this disclosure is required and in accordance with the requirements of Commission Delegated Regulation (EU) 2025/422 of December 17, 2024, supplementing Regulation (EU) 2023/1114 of the European Parliament and of the Council (EU) 2023/1114 as regards regulatory technical standards specifying the content, methodology, and presentation of information relating to sustainability indicators in relation to adverse climate impacts and other adverse environmental impacts.

4. This statement is valid until there are material changes in the data contained in the statement that would lead to adjustments to the information below.

5. Capitalized terms have the meanings assigned to them in Article 2 (Definitions) of the General Terms and Conditions ("**Terms**"), unless expressly stated otherwise.

Introductory Overview

6. This is an introductory overview of the energy consumption of crypto assets in relation to which Invity provides crypto asset-related services.

#	Name of Crypto Asset	FFG Crypto Asset	Energy Consumption (kWh per calendar year)
1	Bitcoin (BTC)	V15WLZJMF	196,066,492,112.39
2	Ethereum (ETH)	D5RG2FHH0	2,390,166.00

Cryptoasset Sustainability Indicators

Bitcoin (BTC)

Quantitative information

Area	Value	Unit
S.1. Name	Invity Finance s.r.o.	/
S.2 Legal entity identification code	64880741U1SN9TUWJ897	/
S.3 Name of cryptoasset	Bitcoin	/
S.6 Start of the period to which the published information relates	1.1.2026	/
S.7 End of the period to which the published information relates	31.12.2026	/
S.8 Energy consumption	196066492112.3952	kWh/a
S.10 Renewable energy consumption	15.1161113934	%
S.11 Energy intensity	11.15828	kWh
S.12 Greenhouse gas emissions DLT framework 1 – controlled	0.0000	tCO2e
S.13 Greenhouse gas emissions DLT framework 2 – purchased	80778622.50927	tCO2e
S.14 Greenhouse gas intensity	4.59717	kgCO2e

Qualitative information

S.4 Consensus mechanism

1. Bitcoin exists on the following networks: bitcoin, lightning_network.

2. The Bitcoin blockchain uses a consensus mechanism called Proof of Work ("**PoW**") to achieve consensus among its network nodes. Detailed description of how the PoW mechanism works:

3. Basic concept of PoW:

   Nodes and miners:

Nodes: computers with Bitcoin software installed that participate in the network by verifying (validating) transactions and blocks

Miner: a special network node that performs the work of creating blocks by solving cryptographic tasks (called proof of work); when the correct solution is found, it creates a new block containing validated transactions ("**Miner**")

4. Blockchain: is a public ledger on which all Bitcoin transactions are recorded in the form of a time sequence of blocks. Each block contains a list of transactions, a reference to the previous block (called a hash), a timestamp, and a nonce – a one-time random number used when mining a new block.

5. Hash function: Bitcoin uses the SHA-256 cryptographic hash function. This function takes any input (e.g., the contents of a block) and converts it into a fixed-length string of characters that appears random at first glance. Hashing ensures the security, immutability, and integrity of the entire blockchain – even a minor change in the input would result in a completely different hashed output.

PoW in the Bitcoin network:

6. Transaction validation: Transactions are sent to the network and miners collect them into a block. Each transaction must be verified by nodes to ensure that it complies with network rules, such as correct signatures and sufficient funds.

7. Mining and block creation:

   Nonce and hash task: Miners compete to find a nonce that, when combined with the block data and passed through the SHA-256 hash function, produces a hash less than the target value. This target value is adjusted periodically to ensure that blocks are mined approximately every 10 minutes.

   Proof of work: The process of finding this nonce is computationally intensive and requires a significant amount of energy and resources. Once a miner finds a valid nonce, they send the newly mined block to the network.

8. Block verification and addition: Other nodes in the network verify the new block to ensure that the hash is correct and that all transactions in the block are valid. If the block is valid, the nodes add it to their copy of the blockchain, and the process starts again with the next block.

9. Chain consensus: The longest chain of blocks is considered valid—that is, the one that contains the most proof of work (PoW). All nodes in the network try to connect to this chain. If a fork occurs and there are multiple valid versions of the chain, the network continues mining on multiple branches. However, once one of the branches becomes longer and gains dominance, the other nodes accept it as the main chain and all connect to it.

10. Additional energy consumption and Lightning Network transactions were also taken into account in calculating the relevant indicators, as this reflects the Digital Token Identifier Foundation's categorization for the relevant functionally fungible group ("**FFG**") relevant to this report. If these transactions were excluded, the relevant estimates for the number "per transaction" would be significantly higher.

S.5 Incentive mechanisms and relevant fees

11. Bitcoin exists on the following networks: bitcoin, lightning_network.

12. The Bitcoin blockchain operates on a PoW consensus mechanism, which ensures the security and integrity of transactions. This mechanism includes economic incentives for miners and a fee structure that promotes network sustainability:

Incentive mechanisms:

13. Block rewards:

Newly mined Bitcoins: Miners are motivated by rewards for each block processed, consisting of newly created Bitcoins that are awarded to the miner who successfully mines a new block. Initially, the block reward was 50 BTC, but every 210,000 blocks (approximately every four years), it is reduced by half in a process known as "halving," which is built into the Bitcoin protocol source code.

Halving and limited availability: The halving mechanism ensures that the total supply of Bitcoins is limited to 21 million, creating scarcity and potentially increasing value over time.

14. Transaction fees:

User fees: Each transaction includes a fee paid by the user that incentivizes miners to include their transaction in a block. These fees are essential, especially as the block reward decreases over time due to halving.

Fee market: Transaction fees are determined by the market, where users compete to have their transactions processed quickly. Higher fees typically result in faster inclusion in a block, especially during periods of network congestion.

S.9 Sources and methodologies for the energy consumption indicator

15. A top-down approach is used to calculate energy consumption, based on the economic assumptions of miners. Miners are considered the main source of energy consumption in the network. The mining hardware used is predetermined based on the hashing algorithm of the consensus mechanism, in this case SHA-256.

16. The current profitability threshold is determined based on the revenue and cost structure of mining operations. Only hardware that exceeds this threshold is taken into account when calculating energy consumption. The resulting energy consumption of the network can then be determined by considering the distribution of the hardware used, its operational efficiency, and on-chain information regarding the mining yield potential. If significant use of merge mining is known to occur, this factor is also taken into account. When calculating energy consumption, the digital token identifier of functionally fungible groups ("**FFG DTI**") was used, where available, to identify all implementations of a given asset. The scope of this mapping is regularly updated based on data provided by the Digital Token Identifier Foundation.

17. To determine the energy consumption of a specific crypto asset, the total energy consumption of the relevant network (e.g., Lightning Network) is first determined. Subsequently, the share of this consumption that can be attributed to the asset in question is determined. In this case, too, the FFG DTI identifier was used, where available, to ensure complete coverage of all implementations of the asset in question.

S.15 Key sources and methodologies for energy consumption indicators

18. To determine the share of energy from renewable sources, the geographical location of the nodes must first be determined. This is done using publicly available information pages, open-source crawlers, and other developed tools. If no data on the geographical distribution of nodes is available, reference networks that are comparable in terms of incentive structure and consensus mechanism used.

19. The geoinformation obtained is then combined with publicly available data from the European Environment Agency ("**EEA**") to determine the share of renewable energy use. Energy intensity is then calculated as the marginal cost of energy per additional transaction.

S.16 Key sources and methodologies for greenhouse gas emission indicators

20. To determine the share of renewable energy use, the geographical location of nodes is first identified using publicly available information sites, open-source crawlers, and other tools. If no data on the geographical distribution of nodes is available, reference networks with a similar incentive structure and the same consensus mechanism are used.

21. The geoinformation obtained is then linked to publicly available EEA data, which is used to determine the share of renewable sources. Energy intensity is then determined as the marginal emissions associated with one additional transaction.

Ethereum (ETH)

Quantitative information

Area	Value	Unit
S.1. Name	Invity Finance s.r.o.	/
S.2 Legal entity identification code	64880741U1SN9TUWJ897	/
S.3 Name of cryptoasset	Ethereum	/
S.6 Start of the period to which the published information relates	1.1.2026	/
S.7 End of the period to which the published information relates	31.12.2026	/
S.8 Energy consumption	2390166.00000	kWh/a
S.10 Renewable energy consumption	17.4057653342	%
S.11 Energy intensity	0.00011	kWh
S.12 Greenhouse gas emissions DLT framework 1 – controlled	0.0000	tCO2e
S.13 Greenhouse gas emissions DLT framework 2 – purchased	795.47849	tCO2e
S.14 Greenhouse gas intensity	0.00004	kgCO2e

Qualitative information

S.4 Consensus mechanism

1. The Ethereum network uses a Proof-of-Stake ("PoS") consensus mechanism to validate new transactions on the blockchain.

Basic components:

2. Validators: are responsible for proposing and verifying new blocks. To become a validator, a user must "stake" 32 ETH in a "smart contract." This deposit serves as collateral and can be withdrawn if the validator violates network policies or acts dishonestly.

3. Beacon Chain: is the backbone of Ethereum 2.0. It coordinates the network of validators and manages the consensus protocol. It is responsible for creating new blocks, organizing validators into committees, and finalizing blocks.

Consensus process in the Ethereum network:

4. Block proposal: Validators are randomly selected to propose new blocks. This selection is based on a weighted random function ("**WRF**"), where the weight is determined by the amount of ETH staked.

5. Verification: Validators who are not proposing a block participate in verification. They confirm the validity of the proposed block by voting on it. These verifications are then aggregated to form proof of block validation.

6. Committees: Validators are organized into committees to streamline the validation process. Each committee is responsible for validating blocks within specific parts of the network or the Beacon Chain itself. This ensures decentralization and network security, as a smaller group of validators can reach consensus more quickly.

7. Finality: Ethereum 2.0 uses a mechanism called Casper FFG (Friendly Finality Gadget) to achieve finality. Finality means that a block and its transactions are considered irreversible and confirmed. Validators vote on the finality of blocks, and once a majority is reached, the block is finalized.

8. Incentives and penalties: Validators receive rewards for participating in the network, including proposing blocks and confirming their validity. Conversely, validators can be penalized (slashed) for dishonest behavior, such as double-signing or prolonged inactivity. This ensures fair participation and network security.

<u>S.5 Incentive mechanisms and associated fees</u>

9. After transitioning to Ethereum 2.0 (Eth2), the Ethereum network uses a PoS consensus mechanism for security. Validator incentives and fee structures play a key role in ensuring the security and efficiency of the blockchain.

Incentive mechanisms:

10. Staking rewards

    Validators, who are the fundamental elements of the PoS mechanism, propose and verify new blocks. To participate, they must "deposit" a minimum of 32 ETH. In return, they receive rewards paid in ETH, which consist of newly generated tokens and transaction fees.

    The amount of the reward is dynamic—the more ETH is staked overall, the lower the reward per validator. This model balances the incentive to participate and the security of the network.

11. Transaction fees

    Following the implementation of EIP-1559, the transaction fee structure has changed. Fees now include: Base fee: This fee is automatically "burned" (i.e., removed from circulation), thereby reducing the total supply of ETH. Its amount changes dynamically depending on the demand for space in blocks and contributes to the stabilization of fees.

Priority fee (tip): Users can add an additional fee that is paid directly to validators as an incentive to process their transaction faster.

12. Penalties for dishonest behavior

Slashing: Validators who commit serious violations of the rules (e.g., double-signing a block or confirming false data) may lose part of their deposited ETH. This mechanism serves as a deterrent to dishonest behavior and ensures the integrity of the network.

Penalties for inactivity: Validators who do not participate in verification for a long period of time are also penalized. The aim is to keep them actively involved in the operation and security of the network.

Fees in the Ethereum network:

13. Network usage fees ("**Gas fees**")

Calculation: Gas fees are determined based on the computational complexity of transactions and operations within a "smart contract." Each operation on the Ethereum Virtual Machine (EVM) is assigned a specific amount of Gas fees.

Dynamic adjustment: The base fee introduced by EIP-1559 varies according to network load, increasing when there is high demand for transactions and decreasing when there is low demand.

14. Smart contract fees

Deployment and interaction: Deploying a smart contract to the Ethereum network and any interaction with it (e.g., function calls, token transfers) requires the payment of gas fees, the amount of which depends on the complexity and size of the operation.

Optimization: Developers are motivated to design their contracts efficiently to reduce Gas fees and thus user costs.

15. Asset transfer fees

Token transfers: Transactions with tokens (e.g., ERC-20) are also subject to gas fees. The amount of these fees depends on both the specific implementation of the token's contract and the current network load.

S.9 Sources and methodologies for energy consumption indicators

16. A bottom-up approach is used to calculate the energy consumption of the blockchain network, based on an analysis of the energy requirements of individual nodes (node operators), which are considered a key factor in overall consumption. The basic inputs for this model are obtained from public information sources, using open-source crawlers and other tools. The main guideline for estimating the specific hardware used in the network is the technical requirements for running client software, as these requirements largely determine what type of device is capable of operating the network.

17. The energy consumption of individual device types was measured in certified testing laboratories, ensuring the validity of the values used. Where possible, the FFG DTI identifier was used in the calculation to accurately identify all relevant implementations of a given digital asset within the monitored infrastructure. Where possible, the FFG DTI identifier was used in the calculation to identify all implementations of a given asset. The scope of the mapping is regularly updated based on data from the Digital Token Identifier Foundation.

S.15 Key sources and methodologies for energy consumption indicators

18. To determine the share of renewable energy use, it is first necessary to determine the geographical location of the nodes. This is done using publicly available information sources, open-source crawlers, and other tools. If specific data on node distribution is not available, reference networks that are comparable to the given network in terms of incentive structure and consensus mechanism type are used.

19. The geoinformation obtained is then combined with publicly available EEA data to determine the share of renewable energy sources. Energy intensity is calculated as the marginal energy consumption per additional transaction.

S.16 Key sources and methodologies

20. To determine the share of renewable energy use, the geographical location of nodes must be identified using publicly available information sources, open-source crawlers, and other tools. If data on the geographical distribution of nodes are not available, reference networks that are comparable in terms of incentive structure and consensus mechanism used.

21. The geoinformation obtained is then combined with publicly available EEA data to determine the share of renewable energy sources. The intensity is then expressed as marginal emissions per additional transaction.