



Bitcoin ESG Data Sheet

ESG data sheet with mandatory, supplementary and optional MiCA-compliant indicators for Bitcoin.



The **MiCA Crypto Alliance** has prepared an ESG data sheet with mandatory, supplementary and optional MiCA-compliant indicators for Bitcoin (BTC).

The **MiCA Crypto Alliance** enables L1 and L2 crypto asset projects, exchanges, and other CASPs to produce state-of-the-art, uniform, MiCA white papers and MiCA sustainability indicators, setting and following best practices.



Exchanges and other CASPs members of the Alliance receive a downloadable, multi-crypto asset file with sustainability indicators with values as the below.

Article 3(1) CDR 2025/422

*"Information that crypto-asset service providers are to make publicly available on their website (...)
It shall be in form of a downloadable file and presented in a way that is easy to read, with characters of readable size and a style of writing that facilitates its understanding and that facilitates comparisons"*

Mandatory Information on principal adverse impacts on the climate

N	Field	Content
General Information		
S.1	Name	MICA Crypto Alliance OpCo Limited
S.2	Relevant legal entity identifier	984500CEB5773038LE40
S.3	Name of the crypto-asset	Bitcoin / BTC
S.4	Consensus Mechanism	Bitcoin uses Nakamoto consensus, a mechanism that combines the consensus algorithm of Proof of Work (PoW), as well as independent node verification and a chain-selection rule based on accumulated work. Miners bundle transactions into blocks and repeatedly vary the nonce until they find a hash satisfying the network's difficulty target, which adjusts to maintain an average block interval of approximately 10 minutes. Valid blocks are broadcast and independently verified by nodes, while temporary forks can occur when competing valid blocks are produced or different validation rules are followed. The network generally converges on the chain with the greatest accumulated work, and transaction finality becomes increasingly probable as additional blocks are added, with six confirmations commonly regarded as providing a high degree of finality.
S.5	Incentive Mechanisms and Applicable Fees	Miners are incentivised through block rewards consisting of the block subsidy and transaction fees, while full nodes generally participate without direct financial compensation in the base layer. Transaction fees are set by users themselves when sending transactions, and therefore determined through a market for scarce block space, with miners generally prioritising transactions offering higher fees. The block subsidy introduces new bitcoin and provides an additional mining incentive while the network develops, but decreases through scheduled halvings as transaction fees are expected to play a greater role in supporting network security. This structure is economically expected to encourage miners to follow the protocol because dishonest or unsuccessful mining can waste computational resources and forfeit rewards, while full nodes are incentivised by the practical or ideological benefits of independently verifying

N	Field	Content
General Information		
		the network. A full description of the incentive mechanisms can be found in the MiCA Crypto Alliance Bitcoin white papers.
S.6	Beginning of the period to which the disclosure relates	2026-01-01
S.7	End of the period to which the disclosure relates	2026-09-22
Mandatory key indicator on energy consumption		
S.8	Energy consumption	137,678,007,030.00000 kWh per calendar year
Sources and methodologies		
S.9	Energy consumption sources and methodologies	Data provided by the MiCA Crypto Alliance as a third party, with no deviations from the calculation guidance of Commission Delegated Regulation (EU) 2025/422, Article 6(5). As the base layer is a decentralised network, estimates on individual node power draw are used. Full methodology available at: www.micacryptoalliance.com/methodologies/esg

Supplementary Information on the principal adverse impacts on the climate and other environment-related adverse impacts of the consensus mechanism

N	Field	Content
Supplementary key indicators on energy and GHG emissions		
S.10	Renewable energy consumption	40.0948791816%
S.11	Energy intensity	319.16340 kWh per transaction
S.12	Scope 1 DLT GHG emissions – controlled	0 t CO ₂ eq per calendar year
S.13	Scope 2 DLT GHG emissions – purchased	49,618,671.77000 t CO ₂ eq per calendar year
S.14	GHG intensity	115.02537 kg CO ₂ eq per transaction
Sources and methodologies		
S.15	Key energy source and methodologies	Data provided by the MiCA Crypto Alliance as a third party, with no deviations from the calculation guidance of Commission Delegated Regulation (EU) 2025/422, Article 6(5). Full methodology available at: www.micacryptoalliance.com/methodologies/esg
S.16	Key GHG sources and methodologies	Data provided by the MiCA Crypto Alliance as a third party, with no deviations from the calculation guidance of Commission Delegated Regulation (EU) 2025/422, Article 6(5). Full methodology available at: www.micacryptoalliance.com/methodologies/esg

Optional information on the principal adverse impacts on the climate and on other environment-related adverse impacts of the consensus mechanism

N	Field	Content																								
Optional Indicators																										
S.17	Energy mix	<table><tr><th>Energy source</th><th>Percentage {DECIMAL-11/10}</th></tr><tr><td>Bioenergy</td><td>0.4632110434%</td></tr><tr><td>Coal</td><td>10.8947257717%</td></tr><tr><td>Flared Methane</td><td>3.4975607970%</td></tr><tr><td>Gas</td><td>35.1198920333%</td></tr><tr><td>Hydro</td><td>0.2633406571%</td></tr><tr><td>Nuclear</td><td>7.3904067822%</td></tr><tr><td>Other Fossils</td><td>1.9084739843%</td></tr><tr><td>Other Renewables</td><td>0.8120443724%</td></tr><tr><td>Solar</td><td>4.4421480887%</td></tr><tr><td>Vented Methane</td><td>1.0940614500%</td></tr><tr><td>Wind</td><td>8.0434099689%</td></tr></table>	Energy source	Percentage {DECIMAL-11/10}	Bioenergy	0.4632110434%	Coal	10.8947257717%	Flared Methane	3.4975607970%	Gas	35.1198920333%	Hydro	0.2633406571%	Nuclear	7.3904067822%	Other Fossils	1.9084739843%	Other Renewables	0.8120443724%	Solar	4.4421480887%	Vented Methane	1.0940614500%	Wind	8.0434099689%
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S.19	Carbon intensity	0.36040 kg CO ₂ eq per kWh																								
S.22	Generation of waste electrical and electronic equipment (WEEE)	29,860.49391 t per calendar year																								
S.23	Non-recycled WEEE ratio	65.8176290722%																								
S.24	Generation of hazardous waste	14.93025 t per calendar year																								

S.25	Generation of waste (all types)	29,860.49391 t per calendar year
S.26	Non-recycled waste ratio (all types)	65.8176290722%
S.27	Waste intensity (all types)	69.22222 g per transaction
S.29	Impact of the use of equipment on natural resources	Land use: 1,102,507,478.0000000000 m ²
S.31	Water use	344,711,322.70000 m ³ per calendar year
S.32	Non-recycled water ratio	76.5200800647%
Sources and methodologies		
S.33	Other energy sources and methodologies	Data provided by the MiCA Crypto Alliance as a third party, with no deviations from the calculation guidance of Commission Delegated Regulation (EU) 2025/422, Article 6(5). Full methodology available at: www.micacryptoalliance.com/methodologies/esg
S.34	Other GHG sources and methodologies	Data provided by the MiCA Crypto Alliance as a third party, with no deviations from the calculation guidance of Commission Delegated Regulation (EU) 2025/422, Article 6(5). Full methodology available at: www.micacryptoalliance.com/methodologies/esg
S.35	Waste sources and methodologies	Data provided by the MiCA Crypto Alliance as a third party, with no deviations from the calculation guidance of Commission Delegated Regulation (EU) 2025/422, Article 6(5). As the base layer is a decentralised network, estimates on individual node weight, hazardous components and depreciation rate are used. Full methodology available at: www.micacryptoalliance.com/methodologies/esg
S.36	Natural resources	Data provided by the MiCA Crypto Alliance as a third party, with no deviations from the calculation guidance of Commission Delegated Regulation (EU) 2025/422, Article 6(5). Usage of

	sources and methodologies	natural resources is approximated through land use metrics. Land use, water use and water recycling are calculated based on energy mix-specific estimates of purchased electricity land intensity, purchased electricity water intensity, and water recycling rates. Full methodology available at: www.micacryptoalliance.com/methodologies/esg
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