

BTC

Madrid, January 2025

Mandatory information on the main adverse effects on the climate and other environment-related adverse effects of the consensus mechanism.

N	Field	Contents
General information		
S.1	Name	Banco Bilbao Vizcaya Argentaria, S.A
S.2	Identifier of the relevant legal entity	K8MS7FD7N5Z2WQ51AZ71
S.3	Name of the cryptoasset	Bitcoin
S.4	Consensus mechanism	Bitcoin uses Proof of Work (PoW), a consensus mechanism where miners solve cryptographic problems to propose new blocks. PoW ensures decentralized consensus and protects the network by requiring significant computational effort, making malicious activities such as double-spending more difficult. The first miner to find a valid block hash is entitled to propose a block, which is verified and added to the blockchain. This mechanism aligns incentives and maintains confidence without a central authority.
S.5	Incentive mechanisms and applicable fees	<p>Bitcoin miners are incentivized through the block reward, which consists of the block subsidy (new bitcoins issued) and transaction fees. The block subsidy is halved every 210,000 blocks, approximately every four years, until the total supply of 21 million bitcoins is reached.</p> <p>Transaction fees are the dynamic component of the block reward, determined by user demand for space on the block. Miners prioritize mempool transactions with the highest rates per byte to maximize their revenues.</p>
S.6	Start of the period to which the information disclosed refers	2024-01-01
S.7	End of the period to which the information disclosed refers	2024-12-31

Mandatory key indicator on energy consumption		
S.8	Power Consumption	Amount in kilowatt-hours (kWh) 158715600000.00000
Sources and methodologies		
S.9	Sources of energy consumption and methodologies	Source: Cambridge Centre for Alternative Finance. Cambridge Bitcoin Electricity Consumption Index (CBECI). Notes: The methodology is based on a top-down hybrid approach that combines network activity hashrate data with assumptions about overall hardware usage based on a break-even point. Complete description of the methodologies available at: https://ccaf.io/cbnsi/cbeci/methodology

Supplementary information on the main adverse effects on the climate and other environment-related adverse effects of the consensus mechanism.

Key supplementary indicators on energy and GHG emissions		
S.10	Consumption of renewable energies	Percentage 26.28%
S.11	Energy intensity	Amount in kWh 825.83652
S.12	GHG DLT emissions (scope 1): controlled	Amount in tons (t) of CO2 equivalent (CO2e) 6,100,880.74100
S.13	GHG DLT emissions (scope 2): purchased	Amount in tCO2e 74,322,119.26000
S.14	GHG intensity	Amount in kilograms (kg) CO2e (Tx) 418.46075

Sources and methodologies			
S.15	Key energy sources and methodologies	Sources and methodologies used in connection with the information reported in fields S.10 and S.11.	<p>Source: Cambridge Centre for Alternative Finance. Cambridge Bitcoin Electricity Consumption Index (CBECI).</p> <p>Note: The energy mix and intensity figures reported in S.10 and S.11 are derived using the CBECI methodology. The CBECI Mining Map provides the geographic distribution of Bitcoin mining activity by aggregating geolocated data from participating mining pools based on the IP addresses of miners. These data are linked to regional electricity generation profiles to account for the different carbon intensities of energy sources. Complete description of the methodologies available at:</p> <p>https://ccaf.io/cbnsi/cbeci/mining_map/methodology https://ccaf.io/cbnsi/cbeci/ghg/methodology</p>
S.16	Key GHG sources and methodologies	Sources and methodologies used in relation to the information reported in fields S.12, S.13 and S.14.	<p>Source: Cambridge Centre for Alternative Finance. Cambridge Bitcoin Electricity Consumption Index (CBECI).</p> <p>Note: GHG emissions and intensity figures (fields S.12, S.13 and S.14) are estimated using the CBECI methodology, integrating data from the CBECI Mining Map and the forthcoming Cambridge Digital Mining Industry Report (2025).</p> <ul style="list-style-type: none"> • Scope 1 emissions: these reflect direct on-site emissions generated by owned power generation infrastructure, such as generators used for off-grid power production. • Scope 2 emissions: these include indirect emissions from electricity purchased by mining companies, calculated by applying regional emission intensity factors. • GHG intensity: this is the sum of Scope 1 and 2 issues divided by the total number of Bitcoin transactions validated during the disclosure period. <p>Complete description of the methodologies available at: https://ccaf.io/cbnsi/cbeci/mining_map/methodology https://ccaf.io/cbnsi/cbeci/ghg/methodology</p>