

# Binance Coin (BNB)

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

Indicator Code	Field Name	Content
S.1	Name	Payhound Limited
S.2	Relevant legal entity identifier	9845001DD90AF543DC90
S.3	Crypto-Asset Name	Binance Coin (BNB)
S.4	Consensus Mechanism	Proof-of-Staked Authority (PoSA)
S.4	Incentive Mechanisms and Applicable Fees	<p>Binance Coin (BNB) operates within the BNB Chain (formerly Binance Smart Chain) ecosystem, which is designed to provide fast block processing while maintaining robust network security through economic incentives structured around BNB. At the core of this system are validators, who must stake substantial amounts of BNB to participate in consensus. Validators are selected dynamically, rotating regularly to ensure decentralization, and receive compensation through transaction fees and block rewards, creating direct financial incentives for accurate transaction validation and efficient block production. BNB holders who do not operate nodes themselves can participate as delegators by staking their tokens with trusted validators, increasing validators' staking power and earning proportional reward shares. To maintain network resilience, a candidate pool of pre-qualified nodes awaits validation duties, and slashing mechanisms penalize validators for malicious behavior or operational failures, while the opportunity cost of staking further incentivizes honest participation. On the exchange side, BNB provides users with roughly a 25% discount on spot trading fees when paying in BNB, with additional reductions available through VIP tiers based on trading volume and BNB holdings. Transaction fees on BNB Chain are very low—typically \$0.005–\$0.02 per transaction—while smart contract deployment and interactions incur additional computational-based fees, all paid in BNB, encouraging developer activity. Futures trading fees are lower still, at roughly 0.02% maker and 0.05% taker. Combined with its deflationary tokenomics through quarterly and automatic token burns, this dual-layer incentive structure aligns user, validator, and developer behavior to support network security, efficiency, and ecosystem growth.</p>
S.6	Start of Reporting Period	2025-01-01
S.7	End of Reporting Period	2025-12-31
S.8	Energy Consumption (kWh/year)	~30,000
S.9	Energy consumption sources and Methodologies	<p>Binance Coin (BNB) operates on the BNB Chain, which uses a Proof-of-Staked Authority (PoSA) consensus mechanism designed for energy efficiency. Unlike energy-intensive Proof-of-Work blockchains, BNB Chain's primary energy</p>

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		consumption comes from a limited number of validator nodes that run server hardware to process transactions and produce blocks. Validators stake substantial amounts of BNB tokens to participate in consensus, and their operation consumes electricity typical of standard data center servers rather than specialized mining rigs. Token holders who delegate their BNB to validators do not run hardware themselves and thus have negligible energy footprints. Energy consumption estimates for BNB Chain typically calculate the total power usage by multiplying the number of active validators by the average server power draw and annual operating hours, resulting in an estimated annual consumption in the range of tens of thousands of kilowatt-hours—significantly lower than Proof-of-Work networks.
S.10	Renewable Energy consumption (percentage of the total amount of energy used per calendar year)	Not publicly disclosed. It is low-energy, and energy usage occurs per validator. No aggregated estimates available.
S.11	Energy Intensity (energy used per validated transaction in kWh)	Not publicly disclosed. BNB Chain uses a lightweight PoSA consensus drastically reduces energy usage compared with Proof-of-Work networks and means its energy footprint per transaction is <i>very low</i> , but specific per-transaction kWh metrics are <i>not published</i> .
S.12	Scope 1 DLT GHG emissions – Controlled (in t CO2eq per year)	Not publicly disclosed.
S.13	Scope 2 DLT GHG emissions – Purchased (in t CO2eq per year)	Not publicly disclosed.
S.14	GHG Intensity (emissions per validated transaction in kg CO2eq)	Not publicly disclosed.
S.15	Key energy sources and methodologies	BNB Coin operates on the BNB Chain, which uses a Proof of Staked Authority (PoSA) consensus mechanism designed to be far more energy-efficient than traditional Proof of Work networks. While the network consumes electricity to power validator nodes and supporting infrastructure, no official, audited figures on total energy consumption, renewable energy share, or greenhouse gas (GHG) emissions are publicly available. BNB Chain's lightweight consensus and low-energy infrastructure are intended to minimize environmental impact compared to more energy-intensive blockchains.
S.16	Key GHG sources and methodologies	BNB Coin operates on the BNB Chain using a Proof of Staked Authority (PoSA) consensus, which is designed to be energy-efficient. The primary sources of greenhouse gas (GHG) emissions are the electricity powering validator nodes and supporting infrastructure. No official, audited emissions data are publicly available, so any estimates rely on assumptions about validator energy use, electricity grid carbon intensity, and renewable energy adoption. PoSA's low-energy design keeps per-transaction emissions significantly lower than energy-intensive Proof-of-Work blockchains.