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		E.37 Offer Expenses E.38 Conflicts of Interest E.39 Applicable law E.40 Competent court **Part F – Information about the Crypto-Assets** F.1 Crypto-Asset Type F.2 Crypto-Asset Functionality F.3 Planned Application of Functionalities F.4 Type of white paper F.5 The type of submission F.6 Crypto-Asset Characteristics F.7 Commercial name or trading name F.8 Website of the issuer F.9 Starting date of offer to the public or admission to trading F.10 Publication date F.11 Any other services provided by the issuer F.12 Identifier of operator of the trading platform F.13 Language or languages of the white paper F.14 Digital Token Identifier Code F.15 Functionally Fungible Group Digital Token Identifier F.16 Voluntary data flag F.17 Personal data flag F.18 LEI eligibility F.19 Home Member State F.20 Host Member States **Part G – Information on Rights and Obligations Attached to the Crypto-Assets** G.1 Purchaser Rights and Obligations G.2 Exercise of Rights and obligations G.3 Conditions for modifications of rights and obligations G.4 Future Public Offers G.5 Issuer Retained Crypto-Assets G.6 Utility Token Classification G.7 Key Features of Goods/Services of Utility Tokens G.8 Utility Tokens Redemption G.9 Non-Trading request G.10 Crypto-Assets purchase or sale modalities G.11 Crypto-Assets Transfer Restrictions G.12 Supply Adjustment Protocols G.13 Supply Adjustment Mechanisms G.14 Token Value Protection Schemes

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01	Date of notification	17/06/2025
02	Statement in accordance with Article 6(3) of Regulation (EU) 2023/1114	This crypto-asset white paper has not been approved by any competent authority in any Member State of the European Union. The person seeking admission to trading of the crypto-asset is solely responsible for the content of this crypto-asset white paper.
03	Compliance statement in accordance with Article 6(6) of Regulation (EU) 2023/1114	This crypto-asset white paper complies with Title II of Regulation (EU) 2023/1114 and, to the best of the knowledge of the management body, the information presented in the crypto-asset white paper is fair, clear and not misleading and the crypto- asset white paper makes no omission likely to affect its import.

04	Statement in accordance with Article 6(5), points (a), (b), (c) of Regulation (EU) 2023/1114	The crypto-asset referred to in this white paper may lose its value in part or in full, may not always be transferable and may not be liquid.
05	Statement in accordance with Article 6(5), point (d) of Regulation (EU) 2023/1114	FALSE
06	Statement in accordance with Article 6(5), points (e) and (f) of Regulation (EU) 2023/1114	The crypto-asset referred to in this white paper is not covered by the investor compensation schemes under Directive 97/9/EC of the European Parliament and of the Council. The crypto-asset referred to in this white paper is not covered by the deposit guarantee schemes under Directive 2014/49/EU of the European Parliament and of the Council.
SUMMARY		
07	Warning in accordance with Article 6(7), second subparagraph of Regulation (EU) 2023/1114	Warning This summary should be read as an introduction to the crypto-asset white paper. The prospective holder should base any decision to purchase this crypto-asset on the content of the crypto- asset white paper as a whole and not on the summary alone. The offer to the public of this crypto-asset does not constitute an offer or solicitation to purchase financial instruments and any such offer or solicitation can be made only by means of a prospectus or other offer documents pursuant to the applicable national law. This crypto-asset white paper does not constitute a prospectus as referred to in Regulation (EU) 2017/1129 of the European Parliament and of the Council (36) or any other offer document pursuant to Union or national law.
08	Characteristics of the crypto-asset	XPL is the native token of Plasma, a high-performance blockchain purpose-built for stablecoins. The XPL token secures the PlasmaBFT consensus mechanism, powers execution through the Reth-based EVM, and underpins the trust-minimized Bitcoin bridge. 10% of the total XPL supply will be sold in a public sale at a $500 million fully diluted network valuation, matching the valuation from the recent equity raise led by Founders Fund. Prior to the sale, participants deposit stablecoins into DeFi protocols

		to earn time-weighted allocation rights while maintaining full custody of their funds. The actual public sale occurs after a lock-up period, with separate payment required for XPL purchases.
09	Services to which the Utility Tokens Give Access, Restrictions on Transferability	US Person Restrictions: XPL tokens purchased by US persons are subject to a 12-month lock-up period following the conclusion of the public sale, during which such tokens cannot be transferred or traded. This restriction is implemented to comply with US securities regulations.
10	Key information about the offer to the public or admission to trading	The offeror is seeking to raise $50 million (10% of total XPL supply) at a $500 million fully diluted valuation through a unique two-phase structure. Participants first deposit USDT, USDC, USDS, or DAI into the Plasma Vault during the deposit period to earn time-weighted allocation units, then separately purchase XPL tokens during the combined public sale and lock-up phase (minimum 40 days). The offering accepts payments in major stablecoins with an initial vault cap of $100 million, includes oversubscription opportunities for unallocated tokens, and provides compliance infrastructure through Sonar by Echo for KYC verification and BitGo Europe GmbH for crypto-asset safeguarding. XPL tokens will be distributed on September 1, 2025, to international participants, while US accredited investors face a 12-month lock-up period from the conclusion of the public sale. Vault deposits remain locked during the 40-day sale/lock-up phase and will be bridged to Plasma at Mainnet Beta launch. EU residents receive 14-day withdrawal rights under MiCA Article 13 prior to token admission to trading. The offering targets general public and institutional investors interested in stablecoin infrastructure, operates under British Virgin Islands law, and carries risks including allocation mechanism complexity, deposit lock-up periods, early-stage blockchain technology, and market volatility.
Part I – Information on risks		

I.1	Offer-Related Risks	**1. Allocation Mechanism Complexity**: The two-phase structure (deposit period for allocation followed by separate token purchase) may be confusing for participants. Misunderstanding the distinction between vault deposits (for allocation rights) and actual token purchases could lead to participant confusion or unintended outcomes. **2. Lock-up Impact on Deposits**: The minimum 40-day lock-up period following the public sale prevents withdrawal of deposited stablecoins, potentially causing liquidity constraints for participants who may need access to their funds during this period. Units-Based Allocation Risk: The time-weighted allocation system means early or larger depositors receive proportionally more allocation rights. Late participants may receive minimal allocation relative to their deposits, particularly if vault caps are reached. **3. Vault Conversion Risk**: All deposits are converted to USDT during the lock-up phase, exposing participants to potential value fluctuations between their original deposit currency (USDC, USDS, DAI) and USDT during the conversion process. **4. US Person Lock-up Risk:** US participants face an additional 12-month lock-up period for XPL tokens, significantly extending their investment horizon and reducing liquidity compared to other participants. **5. Increased Market Volatility:** XPL tokens are subject to significant price fluctuations, influenced by speculation, market sentiment, and broader industry trends. External factors, such as regulatory announcements, technological developments, or changes in the stablecoin market, may further contribute to volatility, potentially leading to financial losses for holders. **6. Liquidity Risks**: The ability to buy and sell XPL tokens depends on trading activity on decentralized exchanges (DEXs) and centralized exchanges (CEXs). Limited liquidity may result in difficulties executing large trades without significant price impact, increasing the risk of loss. **7. Risk of Trading Platforms**: When token holders trade

		on exchanges, the issuer does not act as a contractual party to these transactions. All legal relationships regarding these trading platforms are subject to their respective terms and conditions, with no responsibility assumed by the issuer for their operations, services, or outcomes. **8. Risk of Delisting:** There is no guarantee that XPL tokens will remain listed on any exchange. Delisting could significantly hinder the ability to trade tokens, reducing liquidity and market value. **9. Exchange Insolvency Risk**: The exchanges or trading platforms where XPL tokens are listed may become insolvent or cease operations, potentially resulting in a loss of access to funds or tokens.
I.2	Issuer-Related Risks	**1. Early-Stage Entity Risk**: Although well-funded, the issuing entity has only been recently established, and does not yet have any reviewed financial records. **2. Regulatory Compliance Risks**: Although XPL tokens are designed to comply with existing regulations (such as MiCA), evolving regulatory landscapes could impact their classification, trading status, or market acceptance. Changes in regulatory requirements may necessitate modifications to the project's operation, structure, or governance. **3. Operational Risks**: Risks associated with the issuer's internal processes, personnel, and technologies may impact the ability to manage token operations effectively. Failures in operational integrity could lead to disruptions, financial losses, or reputational damage.

		4. Financial Risks: The issuer may face financial risks, including liquidity shortages, credit risks, or market fluctuations, which could affect its ability to continue operations, meet obligations, or sustain the development and maintenance of the Plasma network. **5. Legal Risks**: Uncertainties in legal frameworks, regulatory changes, potential lawsuits, or adverse legal rulings could pose significant risks, affecting the legality, usability, or value of XPL tokens. **6. Reputational Risks**: Negative publicity, whether due to operational failures, security breaches, or associations with illicit activities, could damage the issuer's reputation and, by extension, impact the value and acceptance of XPL tokens.
I.3	Crypto-Assets-related Risks	**1. Technology and Development Risks**: XPL operates on Plasma blockchain technology that is currently under active development, with core components including PlasmaBFT consensus protocol still being finalized and tested. The blockchain's specialized features for stablecoins, including custom gas tokens and zero-fee USDT transfers, are planned implementations that may face technical challenges or delays. Early-stage blockchain technology carries inherent risks of bugs, security vulnerabilities, or performance issues that could affect token functionality or value. **2. Market and Adoption Risks**: The value of XPL depends heavily on adoption of the Plasma blockchain by stablecoin issuers, financial institutions, and the broader cryptocurrency ecosystem. The long-term success of XPL is dependent on widespread adoption of the Plasma network. Adoption is influenced by various external factors, including user demand, competitive market conditions, and organic community-driven expansion. If adoption of the network fails to grow as expected, XPL's value may be significantly impacted. **3. Speculative Nature**: No assurances of future value, performance, or rewards are made regarding XPL tokens. The token's valuation depends entirely on network utility, validator participation, user adoption, market demand, and community engagement. The value is highly speculative

		and subject to fluctuations based on external perceptions and market conditions. **4. Blockchain Dependency Risks**: XPL operates exclusively on the Plasma blockchain network. Any disruptions, such as network congestion, downtime, or security vulnerabilities, could impact the ability to transfer, store, or trade tokens. Changes to blockchain infrastructure, governance, or transaction fees may also influence token usability and cost-effectiveness. **5. Security Risks**: *a) Smart Contract Vulnerabilities*: Despite planned security audits by Spearbit and Zellic, unforeseen vulnerabilities in smart contracts could lead to security breaches, impacting token security, staking mechanisms, governance functions, or vault operations during the offering process. *b) Private Key Management*: Token holders are solely responsible for safeguarding their private keys and recovery phrases. Loss of wallet credentials will result in the permanent loss of tokens, as blockchain transactions are irreversible. **6. Scam and Fraud Risks**: Token holders are exposed to risks associated with scams, phishing attacks, fake giveaways, impersonation of the issuer or its team, counterfeit tokens, and fraudulent airdrops. Engaging with unverified third-party platforms or unofficial communications increases the risk of fraud. **7. Cybercrime and Theft Risks:** Blockchain-based assets may be exposed to cyberattacks, including hacking, phishing, or malware threats. Compromised wallets, exchanges, or smart contracts could lead to asset theft, loss of funds, or disruptions in token functionality. **8. Data Corruption Risks:** The reliability of blockchain data could be compromised due to software bugs, human error, or deliberate tampering, affecting transaction records, network integrity, and user confidence. **9. Wallet and Storage Risks**: Token holders must use blockchain-compatible wallets, and incompatibility with specific wallet software, network malfunctions, or wallet

		provider shutdowns may affect access to and usability of tokens. **10. Regulatory and Compliance Risks**: *a) Evolving Legal Frameworks*: Regulations governing crypto-assets differ across jurisdictions and are subject to change. New legal requirements may impact XPL's classification, availability, or functionality. *b) Jurisdictional Restrictions*: Some jurisdictions may impose restrictions or prohibitions on the trading or use of XPL tokens, limiting accessibility for certain users. *c) Regulatory Enforcement Risks*: Government agencies may take enforcement actions if XPL tokens are deemed unregistered securities or if other financial laws are found to have been violated. *d) AML & CTF Risks:* Crypto transactions may be scrutinized for potential links to illicit activities, affecting the ability of token holders to use or trade their assets. **11. Technological Obsolescence Risks**: The blockchain and crypto industries evolve rapidly. The emergence of new technologies, changes in market demand, or advancements in competing protocols could render XPL tokens or the underlying Plasma blockchain infrastructure less competitive, reducing adoption and utility.

I.4	Project Implementation-Related Risks	**1. Technical Development Risks:** *a) Smart Contract Issues*: Despite robust security measures, unforeseen vulnerabilities or bugs in smart contracts could disrupt token distribution, staking mechanisms, or governance functions. *b) Blockchain Dependency:* XPL tokens operate exclusively on the Plasma blockchain. Any network congestion, downtime, or security breaches could impact the project's implementation and functionality. *c) PlasmaBFT Consensus Risks*: The custom consensus mechanism is still under development and testing. Unknown bugs may exist in the consensus protocol, potentially leading to disruptions, incorrect transaction processing, or security vulnerabilities. **2. Regulatory and Compliance Risks:** *a) Regulatory Actions*: XPL tokens and the underlying Plasma network could be impacted by regulatory inquiries or actions, which may restrict further development, implementation, or usage. *b) Evolving Laws*: New and changing laws related to financial securities, consumer protection, data privacy, and cybersecurity could impact the project. **3. Market Adoption Risks:** *a) Competitive Environment*: The blockchain market is highly competitive. There is a risk that Plasma may fail to capture sufficient interest from stablecoin issuers and users, limiting adoption. *b) Community Engagement Risks*: Success depends heavily on community-driven adoption and validator participation. Failure to build or sustain an active community could hinder growth. **4. Ecosystem Risks:** *a) Dependence on External Partners*: The project relies on partnerships with stablecoin issuers, infrastructure providers, exchanges, and other third-party service providers. Any failure or delay from these partners could disrupt implementation plans. *b) Bitcoin Bridge Dependencies*: The trust-minimized Bitcoin bridge introduces additional technical and operational dependencies that could affect cross-chain functionality.

I.5	Technology-Related Risks	**1. Blockchain Dependency Risks:** *a) Network Downtime and Congestion*: XPL tokens rely entirely on the Plasma blockchain network, which may experience outages, congestion, or downtime affecting token transfers and trading. *b) Scalability Challenges*: As transaction volume grows, the network may face scaling limitations, leading to slower processing times and higher fees. *c) Settlement and Transaction Finality Risks*: Under exceptional circumstances such as network forks or consensus failures, there remains a theoretical risk that transactions could be reversed. **2. Smart Contract Risks:** *a) Vulnerabilities*: Undiscovered vulnerabilities or exploits may impact token security, staking mechanisms, or governance functions. *b) Immutability Risks*: Once deployed, some smart contracts cannot be altered. Errors or security flaws could result in operational failures without possibility of corrections. **3. Network Security Risks**: *a) Consensus Attacks*: The Plasma blockchain may be susceptible to consensus-related attacks, such as validator collusion, censorship attacks, network partitioning, or Byzantine failures that could affect token transactions and network integrity. *b) Cybercrime and Theft Infrastructure Risks:* Beyond individual wallet risks, the broader network infrastructure may be exposed to cyberattacks, including distributed denial-of-service (DDoS) attacks, that could disrupt network operations and compromise security. **4. Validator and Staking Risks**: *a) Validator Participation*: PlasmaBFT consensus requires sufficient validator participation. Insufficient validator numbers could compromise network security and liveness. *b) Slashing Risks*: Validators face slashing penalties for misbehavior, which could result in loss of staked XPL tokens. *c) Economic Attack Vectors*: Wealthy attackers could potentially acquire sufficient XPL tokens to compromise network security through stake concentration.

		5. Bitcoin Bridge Risks: *a) Cross-chain Security:* The trust-minimized Bitcoin bridge introduces additional security considerations and potential attack vectors. *b) Bridge Dependency:* Failures in the Bitcoin bridge infrastructure could affect cross-chain asset transfers and state anchoring. **6. Software and Infrastructure Risks:** *a) Bugs in Core Code*: Despite testing, undiscovered bugs in the Plasma blockchain protocol could lead to network failures or security vulnerabilities. *b) Technological Disruption*: Emerging technologies, such as quantum computing, could potentially compromise blockchain encryption. *c) Dependency on Underlying Technology:* The network relies on internet connectivity, computing hardware, and cryptographic algorithms, all subject to potential failures.
I.6	Mitigation measures	**1. Technical and Security Mitigation:** *a) Comprehensive Audit Program*: Planned security audits by Spearbit and Zellic to identify and address potential vulnerabilities before mainnet launch. *b) Proven Architecture Components:* Building on established technologies like Reth execution engine and Fast HotStuff consensus principles. *c) Gradual Rollout:* Phased implementation starting with Mainnet Beta to identify and address issues before full feature deployment. **2. Regulatory and Compliance Mitigation**: *a) MiCA Compliance Framework*: Proactive compliance with EU regulations through comprehensive white paper disclosure and regulatory notification process. *b) Safeguarded Offering Process:* Use of BitGo Europe GmbH as authorized CASP for safeguarding offered

		crypto-assets. *Legal Framework*: Clear legal structure under British Virgin Islands law with defined jurisdiction for dispute resolution. **3. Operational and Governance Mitigation:** *a) Experienced Team*: Development team with backgrounds from leading technology and financial institutions. *b) Institutional Backing*: Strategic investments from Framework Ventures, Bitfinex/USDT0, and Founders Fund providing operational support. *c) Strategic Partnerships*: Established relationships with key stablecoin ecosystem participants. **4. Market and Adoption Mitigation:** *a) Purpose-Built Design*: Specific optimization for stablecoin use cases addresses clear market need. *b) Industry Relationships*: Strong connections with stablecoin issuers and infrastructure providers. *c) Multi-Jurisdictional Offering*: Broad geographic distribution reduces concentration risk. **5. Limitations of Mitigation:** *a) Early-Stage Technology:* No mitigation can fully address risks inherent in novel blockchain technology. *b) Market Volatility*: External market forces remain largely outside issuer control. *c) Regulatory Evolution*: Changing regulatory landscape may require operational adjustments despite current compliance efforts. *d) Adoption Uncertainty*: Network success ultimately depends on market adoption beyond issuer control.
Part A - Information about the offeror or the person seeking admission to trading		
A.1	Name	Plasma Inc.
A.2	Legal form	BVI Business Company
A.3	Registered address	Rodus Building, P.O. Box 3093, Road Town, Tortola, VG1110, British Virgin Islands.

A.4	Head office	Rodus Building, P.O. Box 3093, Road Town, Tortola, VG1110, British Virgin Islands.
A.5	Registration Date	25/04/2025
A.6	Legal entity identifier	Not applicable
A.7	Another identifier required pursuant to applicable national law	2175392
A.8	Contact telephone number	+1 284 394 4030
A.9	E-mail address	legal@plasma.to
A.10	Response Time (Days)	Fourteen (14) days
A.11	Parent Company	Plasma Foundation
A.12	Members of the Management body	Marc Piano - Director
A.13	Business Activity	Plasma Inc. is the entity responsible for the issuance, offering, and sale of the XPL token.
A.14	Parent Company Business Activity	Overseeing the growth and development of the XPL token, including token distributions.
A.15	Newly Established	Yes
A.16	Financial condition for the past three years	Plasma Inc. has been newly established on the 25th of April 2025, and therefore no financial records exist yet.
A.17	Financial condition since registration	While Plasma Inc. has been newly established, the company is well-funded after raising $24 million across Seed and Series A funding rounds, led by Framework Ventures and Bitfinex/USD₮0, and an additional strategic investment round by Founders Fund. *Financial Position*: Plasma Inc. holds *circa* $24,000,000 in liquid assets and has sufficient funds to cover expenses over the coming 24 months, including the estimated expenses related to the offer amounting to $500,000, and ongoing monthly operational costs of approximately $25,000. *Operational Performance*: Key milestones achieved include raising successful funding rounds, engaging with professional service providers for the purpose of executing the offer to the public, initial research and development of PlasmaBFT consensus protocol, and technical architecture

		design and specification completion. All regulatory requirements have been met on schedule, demonstrating effective project execution and risk management.
Part D- Information about the crypto-asset project		
D.1	Crypto-asset project name	Plasma
D.2	Crypto-assets name	XPL
D.3	Abbreviation	XPL
D.4	Crypto-asset project description	Plasma is a high-performance, scalable, and secure blockchain purpose-built for stablecoins, featuring PlasmaBFT consensus protocol, EVM-compatible execution layer, and native Bitcoin bridge.
D.5	Details of all natural or legal persons involved in the implementation of the crypto-asset project	The legal person involved in the implementation of the crypto-asset project is Chain Technologies Research, an exempted company with limited liability incorporated under the laws of the Cayman Islands with registration number 412800. Its registered office address is: CO Services Cayman Limited, P.O. Box 10008, Willow House, Cricket Square, Grand Cayman, KY1-1001, Cayman Islands.
D.6	Utility Token Classification	FALSE
D.7	Key Features of Goods/Services for Utility Token Projects	Not applicable
D.8	Plans for the token	**Past Milestones:** a) Team formation and establishment of core development team b) Initial research and development of PlasmaBFT consensus protocol c) Strategic partnerships established with key industry players d) Technical architecture design and specification completion **Current Development:** a) PlasmaBFT consensus protocol development (in progress) b) Testnet deployment and testing phase c) Core infrastructure development **Future Milestones:** a) Completion of PlasmaBFT consensus protocol b) Mainnet Beta launch c) Full mainnet deployment

D.9	Resource Allocation	The project has raised $24 million across Seed and Series A funding rounds, led by Framework Ventures and Bitfinex/USD₮0, with participation from leading institutional investors including DRW/Cumberland, Bybit, Flow Traders, 6th Man Ventures, IMC, Nomura, and Karatage, alongside strategic angel investors and advisors including Paolo Ardoino (CTO at Bitfinex), Peter Thiel, Cobie, and Zaheer Ebtikar. An additional strategic investment was secured from Founders Fund, founded by Peter Thiel, to accelerate team growth, ecosystem expansion, and adoption across key global regions.
D.10	Planned Use of Collected Funds or Crypto-Assets	The collected crypto-assets will be used for the further development of the Plasma protocol, including the launch of mainnet (beta), the Bitcoin bridge, releasing core features, and native tooling.
Part E - Information about the offer to the public of crypto-assets or their admission to trading		
E.1	Public Offering or Admission to trading	OTPC
E.2	Reasons for Public Offer or Admission to trading	To distribute XPL tokens to users, developers, and institutions to help scale the Plasma network from the ground up.
E.3	Fundraising Target	$50,000,000
E.4	Minimum Subscription Goals	Not Applicable
E.5	Maximum Subscription Goal	$50,000,000
E.6	Oversubscription Acceptance	Yes
E.7	Oversubscription Allocation	If any participants with guaranteed allocations fail to purchase their allocated tokens, those tokens will be made available for purchase pro rata to participants who have committed additional funds beyond their guaranteed allocation.
E.8	Issue Price	$0.05 per XPL
E.9	Official currency or any other crypto- assets determining the issue price	USD ($)
E.10	Subscription fee	Not applicable

E.11	Offer Price Determination Method	Fixed price based on $500 million fully diluted network valuation at launch.
E.12	Total Number of Offered/Traded Crypto-Assets	1,000,000,000 XPL (10% of total supply)
E.13	Targeted Holders	ALL - both retail investors and professional investors.
E.14	Holder restrictions	US participants must verify their accredited investor status to participate in the sale. The sale is open only to users in eligible jurisdictions subject to Sonar by Echo's compliance infrastructure including KYC verification, jurisdictional screening, and wallet association checks. Any XPL purchased by US persons will be locked for 12 months after the public sale concludes.
E.15	Reimbursement Notice	**For Vault Deposits**: Participants can withdraw their deposits at any time during the deposit period, though doing so will reduce their units proportionally to the amount withdrawn. During the lock-up phase, no withdrawals are permitted until Mainnet Beta launch when vault positions become withdrawable on Plasma. The deposited crypto-assets (USDT, USDC, USDS, DAI) are used for allocation purposes in determining sale participation and are not part of the XPL token offer itself. Users retain full and sole control over these deposited crypto-assets at all times. These deposited assets will be bridged to Plasma Mainnet Beta and can be withdrawn onto the Plasma mainnet at any time after the network launch, maintaining full liquidity and transferability independent of the XPL token purchase. **For XPL Token Purchase**: Any purchaser of XPL tokens who is an EU resident will be permitted to be reimbursed for the token purchase within 14 calendar days of their purchase agreement or until the tokens are admitted to trading, whichever occurs sooner, in accordance with Article 13 of MiCA. Under Article 13, retail holders may withdraw from their agreement to purchase crypto-assets without incurring any fees or costs and without being required to give reasons. Additionally, purchasers will be entitled to full reimbursement in the event of sale cancellation by the issuer.

E.16	Refund Mechanism	**For Vault Deposits**: Users retain full and sole control over their deposited crypto-assets at all times. Deposits can be withdrawn during the deposit period through the same wallet used for deposits in the same crypto-asset deposited (USDT, USDC, USDS, or DAI). Once the vault enters the lock-up phase (minimum 40 days following the public sale), no withdrawals are permitted and all deposits are converted to USDT for bridging preparation. At Mainnet Beta launch, vault positions are bridged to Plasma and USDT becomes withdrawable directly on the Plasma network. **For XPL Token Purchase**: EU residents exercising their Article 13 withdrawal rights must notify the offeror or crypto-asset service provider of their decision to withdraw. All payments received from the retail holder, including any charges, shall be reimbursed without undue delay in accordance with MiCA requirements. Reimbursement will be made in the same payment method used for the original purchase. **For Sale Cancellation**: In the event of sale cancellation by the issuer, all purchasers will be automatically reimbursed using the same payment methods employed for their original purchases, with refunds processed within 14 days of the cancellation announcement.
E.17	Refund Timeline	**For Vault Deposits**: Immediate during deposit period for voluntary withdrawals in the same crypto-asset deposited (USDT, USDC, USDS, or DAI). During lock-up phase (minimum 40 days following public sale), no withdrawals permitted and all deposits are converted to USDT for bridging preparation. At Mainnet Beta launch, vault positions are bridged to Plasma and USDT becomes withdrawable directly on Plasma. **For XPL Token Purchase**: Withdrawal requests under Article 13 must be exercised within 14 calendar days of the XPL token purchase agreement, until the tokens are admitted to trading, or until the end of the XPL token sale subscription period, whichever occurs soonest. Once a withdrawal request is made, reimbursement must be processed within 14 calendar days from the date the offeror is informed of the withdrawal decision, as required by MiCA.

		For Sale Cancellation: Refunds processed within 14 days of the cancellation announcement.
E.18	Offer Phases	**Deposit Period (Allocation Phase):** Participants deposit USDT, USDC, USDS, or DAI into the Plasma Vault on Ethereum mainnet with an initial cap of $100 million that increases over time. Units are earned based on each participant's time-weighted share of total vault deposits, which will determine their future sale allocation rights. Users retain full and sole control over their deposited assets and may withdraw at any time during this period, though withdrawals will reduce their units proportionally. No XPL tokens are purchased during this allocation phase. **Lock-up Phase**: Following the public sale, there is a minimum 40-day lock-up period during which the vault is locked and all deposits are converted to USDT for bridging preparation. No withdrawals are permitted during this phase. **Public Sale (Token Purchase Phase)**: Participants' earned units determine their guaranteed XPL token allocation size, with tokens priced at a $500 million fully diluted valuation. Participants must pay separately for their allocated tokens using USDT, USDC, USDS, or DAI. Additional funds can be committed to gain pro-rata access to any unallocated tokens. This phase represents the actual XPL token purchase, with payment entirely separate from the vault deposits. **Mainnet Beta**: Vault positions are bridged to the Plasma network and USDT becomes withdrawable directly on the Plasma blockchain. **XPL Token Distribution (September 1, 2025)**: XPL tokens are distributed to purchasers on this specific date.
E.19	Early Purchase Discount	None
E.20	Time-limited offer	Yes
E.21	Subscription period beginning	17/07/2025
E.22	Subscription period end	28/07/2025

E.23	Safeguarding Arrangements for Offered Funds/Crypto-Assets	Crypto-asset safeguarding services for the offered XPL tokens are provided by BitGo Europe GmbH, an authorised crypto-asset service provider under MiCA. BitGo Europe GmbH is registered in Germany, with LEI 391200IJ3B1IP7993O16 and its registered address at Neue Rothofstrasse 13-19 60313 Frankfurt Main, Germany. BitGo Europe GmbH was granted a CASP license by the Federal Financial Supervisory Authority (BaFin). This arrangement ensures that offered XPL tokens are safeguarded in accordance with MiCA requirements throughout the offer process.
E.24	Payment Methods for Crypto-Asset Purchase	USDT, USDC, USDS, or DAI
E.25	Value Transfer Methods for Reimbursement	**For Vault Deposits**: During the deposit period, withdrawals are processed in the same stablecoin originally deposited (USDT, USDC, USDS, or DAI) and transferred directly to the participant's original deposit wallet address. Post-sale, all vault positions are converted to USDT and bridged to the Plasma network, where they become withdrawable directly on the Plasma blockchain. **For XPL Token Purchase**: EU residents exercising Article 13 withdrawal rights will receive reimbursement in the same payment method used for their original XPL token purchase (USDT, USDC, USDS, or DAI). Reimbursements are processed through BitGo Europe GmbH as the authorised CASP and transferred to the purchaser's verified wallet address. **For Sale Cancellation**: In the event of issuer-initiated sale cancellation, all purchasers will be automatically reimbursed using the same stablecoin payment method employed for their original token purchases, with transfers executed through the same safeguarding infrastructure used for the initial transactions.
E.26	Right of Withdrawal	Participants have the right to withdraw deposits at any time during the deposit period. For XPL token purchases, EU residents have withdrawal rights under Article 13 of MiCA within 14 calendar days of their XPL token purchase agreement, until the tokens are admitted to trading, or until the end of the XPL token sale subscription period, whichever occurs soonest. After vault lock-up, no deposit withdrawals are permitted until Mainnet Beta launch when positions become withdrawable on Plasma.

E.27	Transfer of Purchased Crypto-Assets	**XPL Token Distribution**: Purchased XPL tokens will be distributed to purchasers on September 1, 2025. For EU residents and other non-US participants, XPL tokens will be transferred directly to their designated wallet addresses on this date. For US participants, XPL tokens will remain in custody and be distributed 12 months after the conclusion of the public sale to comply with US securities regulations. **Vault Position Transfer**: The timing of vault position bridging to the Plasma network will be announced separately and may not coincide with XPL token distribution. All vault positions containing deposited stablecoins (converted to USDT during the lock-up phase) will be automatically bridged from Ethereum mainnet to the Plasma network upon Mainnet Beta launch. Once bridged, participants will have immediate access to withdraw their USDT directly on the Plasma blockchain using their connected wallet addresses. **Transfer Mechanism**: XPL token transfers will be executed through smart contract automation on September 1, 2025, ensuring secure distribution without requiring individual participant action. Vault bridging will occur separately upon Mainnet Beta launch.
E.28	Transfer Time Schedule	01/09/2025
E.29	Purchaser's Technical Requirements	**For Participation in Deposit and Sale Phases**: Participants must possess a Web3-compatible wallet (such as MetaMask, WalletConnect-supported wallets, or hardware wallets like Ledger/Trezor) capable of interacting with Ethereum mainnet. A stable internet connection and basic understanding of wallet management, including seed phrase security and transaction signing, are essential. Participants must also be able to connect their wallets to decentralized applications and hold sufficient ETH to cover Ethereum network transaction fees during the deposit and purchase phases. **For Post-Launch Token Access**: Following Mainnet Beta launch, participants will require Plasma network compatibility in their chosen wallet software to interact with XPL tokens and withdraw USDT on the Plasma blockchain. Most major Web3 wallets can be configured to support new networks through RPC endpoint addition. Participants should ensure their wallet software supports

		custom network configuration or plan to transfer assets to a compatible wallet before attempting to access their bridged funds on Plasma. **Minimum Technical Competency:** Basic familiarity with blockchain transaction concepts, wallet backup procedures, and the ability to safely store and manage private keys or recovery phrases is required for secure participation.
E.30	Crypto-asset service provider (CASP) name	Not applicable (no CASP engaged for placement services)
E.31	CASP identifier	Not applicable
E.32	Placement form	NTAV
E.33	Trading Platforms name	Not applicable
E.34	Trading Platforms Market Identifier Code (MIC)	Not applicable
E.35	Trading Platforms Access	Not applicable
E.36	Involved costs	Participants will incur Ethereum mainnet gas fees for all transactions during the deposit and public sale phases, including deposit transactions, withdrawal transactions (if exercised during the deposit period), and XPL token purchase transactions. Gas fees are variable and depend on network congestion at the time of transaction execution. The token sale itself does not impose any additional fees, charges, or commissions on participants beyond the Ethereum network transaction costs. Following Mainnet Beta launch, participants will incur minimal Plasma network transaction fees for any on-chain activities. Participants are responsible for any costs associated with their chosen wallet software and internet connectivity.
E.37	Offer Expenses	The offer expenses are estimated to be around $500,000, covering legal expenses, the development of the offering platform, and compliance-related costs.
E.38	Conflicts of Interest	The offeror is not aware of any conflicts.
E.39	Applicable law	The XPL crypto-assets and all rights and obligations attached thereto are governed by the laws of the British Virgin Islands.
E.40	Competent court	Any disputes arising from or in connection with the XPL tokens shall be subject to the exclusive jurisdiction of the courts of the British Virgin Islands.
Part F - Information about the crypto-assets		
F.1	Crypto-Asset Type	Crypto-asset other than an asset-referenced token or e-money token.

F.2	Crypto-Asset Functionality	XPL serves three primary functions within the Plasma ecosystem: **(1) Network Security:** XPL tokens are required for validator staking to participate in the PlasmaBFT consensus mechanism, with staked tokens subject to slashing penalties for malicious behavior or extended downtime, thereby securing the network through economic incentives; **(2) Transaction Fees**: XPL is used to pay for transaction execution, smart contract deployment, and computational operations on the Plasma network, though the blockchain's specialized stablecoin features include provisions for custom gas tokens in certain circumstances; and **(3) Governance Participation:** XPL holders may participate in protocol governance decisions, including parameter adjustments, protocol upgrades, and ecosystem development proposals, though specific governance mechanisms are subject to future implementation.
F.3	Planned Application of Functionalities	All core functionalities will be implemented upon Plasma Mainnet Beta launch, including transaction fee payment and basic network operations. Validator staking functionality will be activated soon after mainnet launch, allowing XPL holders to participate in network consensus and earn staking rewards. Governance mechanisms are planned for implementation in subsequent protocol upgrades following mainnet stabilization, with specific timelines and governance structures to be announced as development progresses. The custom gas token functionality, enabling fee payment in stablecoins like USDT, represents a future enhancement planned for implementation after the core network achieves operational stability and sufficient adoption.
A description of the characteristics of the crypto-asset, including the data necessary for classification of the crypto-asset white paper in the register referred to in Article 109 of Regulation (EU) 2023/1114, as specified in accordance with paragraph 8 of that Article		
F.4	Type of white paper	OTHR
F.5	The type of submission	NEWT

F.6	Crypto-Asset Characteristics	XPL is the native utility token of the Plasma blockchain network, implemented as a digital asset on the purpose-built Plasma distributed ledger. The token is characterized by its integral role in network security through validator staking mechanisms, transaction fee payment functionality, and governance participation rights within the Plasma ecosystem. XPL tokens are fungible, divisible, and transferable digital assets that derive their utility from the operational requirements of the Plasma blockchain infrastructure. The token operates within a deflationary or controlled supply model designed to align validator incentives with network security and performance objectives.
F.7	Commercial name or trading name	XPL
F.8	Website of the issuer	https://www.plasma.to/
F.9	Starting date of offer to the public or admission to trading	17/07/2025
F.10	Publication date	Effective or intended publication date of the white paper or of the modified white paper
F.11	Any other services provided by the issuer	The Issuer does not provide any crypto-asset services covered by Regulation (EU) 2023/1114.
F.12	Identifier of operator of the trading platform	Not applicable
F.13	Language or languages of the white paper	English
F.14	Digital Token Identifier Code used to uniquely identify the crypto-asset or each of the several crypto assets to which the white paper relates, where available	Not applicable
F.15	Functionally Fungible Group Digital Token Identifier, where available	Not applicable
F.16	Voluntary data flag	FALSE
F.17	Personal data flag	TRUE

F.18	LEI eligibility	Not available
F.19	Home Member State	Malta
F.20	Host Member States	The offer to the public is passported in the following countries: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden.
Part G - Information on the rights and obligations attached to the crypto-assets		
G.1	Purchaser Rights and Obligations	XPL token holders have the right to participate in the Plasma network's consensus mechanism by operating validator nodes, provided they meet the minimum staking requirements and technical specifications. Holders may use XPL to pay for transaction fees across the network and participate in governance decisions that shape the protocol's future development. Additionally, validators earn rewards through block production and transaction fee collection. Token holders are obligated to comply with all network rules and protocols, maintain the minimum stake requirements if operating as validators, and ensure proper security of their private keys and wallet infrastructure.
G.2	Exercise of Rights and obligations	Token holders exercise their validation rights by staking XPL tokens and operating nodes that meet the hardware requirements (minimum 2 CPU cores, 4GB RAM for consensus participation). Governance participation is conducted through on-chain voting mechanisms where voting power is proportional to token holdings. Transaction fee payment occurs automatically when users interact with the network, with fees denominated in XPL and potentially other tokens through the planned custom gas token feature. Validators must maintain continuous operation to avoid missing block production opportunities, though the network's no-slashing policy means they will not lose staked tokens for downtime, only potential rewards.
G.3	Conditions for modifications of rights and obligations	Any modifications to token holder rights and obligations require approval through the Plasma governance mechanism. Proposals for changes must be submitted on-chain and undergo a defined voting period where XPL holders can express their support or opposition. Successful

		proposals require meeting quorum thresholds and achieving majority support from participating voters. The governance framework ensures that no single entity can unilaterally alter fundamental token rights, protecting holders from arbitrary changes while allowing the protocol to evolve based on community consensus.
G.4	Future Public Offers	None planned at the time of publication of this whitepaper.
G.5	Issuer Retained Crypto-Assets	950,000,000 XPL
G.6	Utility Token Classification	FALSE
G.7	Key Features of Goods/Services of Utility Tokens	Not applicable
G.8	Utility Tokens Redemption	No redemption
G.9	Non-Trading request	TRUE
G.10	Crypto-Assets purchase or sale modalities	XPL can be acquired through the initial public sale or subsequently through secondary markets. Trading will be available via decentralized exchange (DEX) protocols using automated market makers (AMMs) or order book mechanisms, and potentially through centralized exchange (CEX) platforms that list the token. Users will need Plasma-compatible wallets to hold and transfer XPL, with transactions subject to network fees. Cross-chain bridges may enable trading on other blockchain networks, expanding accessibility and liquidity options.
G.11	Crypto-Assets Transfer Restrictions	XPL tokens have no protocol-level transfer restrictions and function as standard blockchain-based tokens with full transferability on the Plasma network. However, centralized exchanges and crypto-asset service providers (CASPs) may impose their own restrictions including but not limited to: geographic limitations, minimum/maximum transfer amounts, KYC/AML requirements, wallet whitelisting, or temporary holds for security purposes. US Person Restrictions: XPL tokens purchased by US persons are subject to a 12-month lock-up period following the conclusion of the public sale, during which such tokens cannot be transferred or traded. This restriction is implemented to comply with US securities regulations.

G.12	Supply Adjustment Protocols	None - the supply is fixed.
G.13	Supply Adjustment Mechanisms	None.
G.14	Token Value Protection Schemes	Not applicable
G.15	Token Value Protection Schemes Description	FALSE
G.16	Compensation Schemes	FALSE
G.17	Compensation Schemes Description	Not applicable
G.18	Applicable law	Any dispute relating to the XPL crypto-assets and/or the rights and obligations attached thereto shall be governed by and construed and enforced in accordance with the laws of the British Virgin Islands without regard to conflict of law rules or principles (whether of the British Virgin Islands or any other jurisdiction) that would cause the application of the laws of any other jurisdiction, irrespective of whether the Tokens qualify as right or property under the applicable law.
G.19	Competent court	The courts of the British Virgin Islands shall have exclusive jurisdiction over any disputes arising from or related to XPL Tokens, their purchase, ownership, transfer, or use. Token holders consent to the jurisdiction of these courts and waive any objection to venue or *forum non conveniens*.
Part H – information on the underlying technology		
H.1	Distributed ledger technology	XPL operates on the Plasma blockchain, which utilizes a custom distributed ledger architecture combining PlasmaBFT consensus with EVM-compatible execution and Bitcoin anchoring.
H.2	Protocols and technical standards	The Plasma network implements EVM compatibility standards for smart contracts and transactions, PlasmaBFT consensus protocol based on Fast HotStuff architecture, Bitcoin interoperability protocols for state anchoring and bridge operations, and standard cryptographic primitives for transaction signing and validation.
H.3	Technology Used	Plasma blockchain is built on a multi-layered architecture featuring PlasmaBFT consensus protocol for rapid finality and low-latency transaction processing, Reth-based execution engine providing full EVM compatibility for smart contracts and decentralized applications, native Bitcoin bridge infrastructure for trust-minimized interoperability and periodic state anchoring, and specialized stablecoin features including custom gas token

		mechanisms and zero-fee transfer capabilities. The system is designed as a Bitcoin sidechain that maintains its own consensus while leveraging Bitcoin's security model through cryptographic state commitments.
H.4	Consensus Mechanism	Plasma utilizes PlasmaBFT, a custom consensus protocol inspired by Fast HotStuff that achieves rapid finality through a two-chain commit process in optimal conditions. The protocol operates under classic BFT security assumptions where the network remains secure with up to 33% Byzantine validators ($n \geq 3f+1$, where n is total validators and f is Byzantine nodes). PlasmaBFT uses Quorum Certificates (QCs) for block validation and supports pipelining to improve throughput while maintaining linear message complexity. The consensus mechanism enables immediate block finalization when consecutive quorums certify block correctness, significantly reducing latency compared to traditional BFT protocols.
H.5	Incentive Mechanisms and Applicable Fees	Validators earn block rewards and collect transaction fees without slashing penalties, using reward-based incentives only. The network is exploring staking without lock-up requirements. Transaction fees are dynamic based on demand, with planned features including custom gas tokens (allowing USDT/BTC fee payment) and zero-fee USDT transfers for simple transactions.
H.6	Use of Distributed Ledger Technology	FALSE
H.7	DLT Functionality Description	Plasma operates as a distributed blockchain where validators maintain synchronized copies of the ledger through PlasmaBFT consensus. New transactions are broadcast to the network, collected into blocks by designated validators, and confirmed through a voting process requiring agreement from at least two-thirds of validators. Once confirmed, blocks are permanently added to the chain and state changes are applied across all nodes. The system processes thousands of transactions per second with near-instant finality. Smart contracts execute deterministically on the Reth-based EVM, ensuring identical results across all nodes. The network maintains security through cryptographic signatures, merkle trees for data integrity, and economic incentives that reward honest behavior.
H.8	Audit	FALSE
H.9	Audit outcome	Audits by Spearbit and Zelilc to be completed and published before launch.

J – Information on the sustainability indicators in relation to adverse impact on the climate and other environment-related adverse impacts		
J.01	Name	Plasma Inc., as the issuer of the XPL token, is providing information on principal adverse impacts on the climate and other environment-related adverse impacts of the consensus mechanism of the Plasma network.
J.02	Relevant legal entity identifier	Not Applicable
J.03	Name of the crypto-asset	XPL
J.04	Consensus Mechanism	The XPL token will operate on the Plasma blockchain, which utilizes PlasmaBFT, a custom consensus protocol inspired by Fast HotStuff and based on Proof of Stake (PoS) principles with Byzantine Fault Tolerance. In PlasmaBFT's consensus mechanism, validators are selected through a cryptographically secure random process, weighted by their stake in XPL tokens. To participate as a Plasma validator, operators must stake XPL tokens as collateral and run dedicated hardware meeting the minimum requirements (2 CPU cores, 4 GB RAM, SSD-based persistent storage). The consensus operates under classic BFT security assumptions where $n \geq 3f+1$ (where n is the number of replicas and f is the number of Byzantine nodes), meaning the network remains secure when no more than 33% of validators are malicious. The protocol achieves rapid finality through a two-chain commit process in optimal conditions, using Quorum Certificates (QCs) for block validation and supporting pipelining to improve throughput while maintaining linear message complexity. Validators are compensated through block rewards and transaction fees, with their compensation sourced from network fees and token emissions. Malicious validators face slashing penalties involving loss of part of their staked XPL tokens.

J.05	Incentive Mechanisms and Applicable Fees	Validators in the Plasma network are compensated with XPL tokens in exchange for participating in consensus, proposing blocks, and validating transactions. Their compensation derives from transaction fees collected from network users and potential block rewards distributed according to the network's tokenomics design. If validators misbehave or exhibit extended downtime, they face slashing penalties involving the loss of part of their staked XPL tokens, creating strong economic incentives for honest behavior. Every Plasma transaction requires payment of base fees, though the network's specialized stablecoin features include provisions for custom gas tokens, allowing fees to be paid in whitelisted assets such as USDT or BTC through an automated swap mechanism. The network also plans to implement zero-fee USDT transfers for simple transactions through a split block architecture and adaptive prioritization mechanisms.
J.06	Beginning of the Period to which the Disclosed Information Relates	17/06/2025
J.07	End of the Period to which the Disclosed Information Relates	17/06/2026
Mandatory key indicator on energy consumption		
J.08	Energy Consumption	Based on comparable Proof of Stake networks analyzed by the Crypto Carbon Ratings Institute (CCRI), the estimated annual energy consumption for the Plasma network is projected to be approximately 200,000 kWh during its first year of operation. This estimate is derived from the expected validator set size, hardware requirements, and operational parameters specific to PlasmaBFT consensus. The calculation accounts for the minimum hardware requirements (2 CPU cores, 4 GB RAM, SSD storage) for basic validator operations, with additional provisions for validators running the full infrastructure stack including Reth execution client and optional Bitcoin node components.
Sources and methodologies		

J.09	Energy Consumption Sources and Methodologies	**1. Methodology Overview** The estimated energy consumption has been calculated using the CCRI (Crypto Carbon Ratings Institute) methodology for Proof of Stake networks, adapted for the specific characteristics of the Plasma blockchain and PlasmaBFT consensus mechanism. Since the Plasma network has not yet launched, projections are based on comparable PoS networks analyzed in the CCRI 2023 PoS Benchmark Study and adjusted for Plasma's specific technical parameters. **2. Hardware Configuration Analysis** Based on CCRI's hardware classification system, Plasma validators fall into the "Specific hardware requirements" category with relatively modest specifications. Using CCRI's hardware configurations as reference points: Minimum Validator Configuration (Configuration 2 equivalent): *2 CPU cores (Intel i3-8109U equivalent)* *4 GB RAM* *SSD-based persistent storage* *Estimated power consumption: 15-25 watts* Recommended Full Infrastructure Configuration (Configuration 4 equivalent): *4+ CPU cores (Intel i5-1135G7 equivalent)* *16+ GB RAM* *8+ TB NVMe SSD* *Estimated power consumption: 35-45 watts* **3. Validator Set Projections** For the first year of operation, the Plasma network is projected to operate with approximately 150-300 active validators, based on: *Minimum viable consensus requirements (≥4 validators for BFT assumption of f=1)* *Economic staking parameters and expected adoption* *Comparable early-stage PoS networks analyzed by CCRI* *Network security requirements for institutional stablecoin adoption* **3. Single Node Power Demand Calculation** Using CCRI's binomial distribution methodology for hardware allocation: *Lower Bound Configuration (Configuration 2): 20 watts*

		Upper Bound Configuration (Configuration 4): 40 watts *Best Guess Weighted Average: 28 watts per validator node* Hardware Distribution Assumption: *Configuration 2 (Minimum): 25%* *Configuration 3 (Mid-tier): 50%* *Configuration 4 (Recommended): 25%* This distribution reflects expected validator behavior where most operators choose mid-tier hardware that exceeds minimum requirements while remaining cost-effective. 4. **Network Energy Consumption Calculation** Conservative Estimate (200 validators): *Best guess per validator: 28 watts* *Total network power: 5,600 watts* *Annual consumption: 49,056 kWh* Projected Estimate (250 validators): *Best guess per validator: 28 watts* *Total network power: 7,000 watts* *Annual consumption: 61,320 kWh* Growth-Adjusted Estimate (accounting for network expansion): *Year 1 average: 300 validators* *Total network power: 8,400 watts* *Annual consumption: 73,584 kWh* <u>Additional Infrastructure Overhead:</u> Accounting for validators running full infrastructure stacks (Reth + Bitcoin nodes), an additional 35% energy overhead is estimated, bringing the total projected annual consumption to approximately 99,338 kWh. <u>Final Conservative Estimate:</u> To account for network growth, varying hardware configurations, and infrastructure diversity, the final estimate uses a more conservative projection of **200,000 kWh** annual consumption for the first year of operation, representing approximately a 2.7x multiplier from the base calculation to account for network expansion, infrastructure diversity, and conservative safety margins.

		5. Transaction Processing Efficiency Based on CCRI's marginal power demand analysis, PlasmaBFT is expected to achieve: *Base Power Demand: 26-30 watts per validator (consensus operations without transactions)* *Marginal Power per TPS: 0.05-0.15 watts (estimated based on comparable BFT protocols)* This efficiency profile positions Plasma competitively within the range of energy-efficient PoS protocols analyzed by CCRI, particularly given its optimization for high-throughput stablecoin transactions. **6. Comparison with CCRI Benchmark Networks** Plasma's projected energy consumption of 200,000 kWh annually positions it between: *Polkadot Platform: 154,202 kWh/year (baseline comparison)* *Cosmos Platform: 581,677 kWh/year (upper comparison range)* This reflects Plasma's focused scope as a purpose-built stablecoin blockchain with a more constrained validator set compared to general-purpose platforms. **6. Carbon Intensity Application** Carbon emissions are calculated using: *Global Average Carbon Intensity: 459 gCO2e/kWh (International Energy Agency standard)* *Projected Annual Emissions: 91.8 tonnes CO2e (200,000 kWh × 459 gCO2e/kWh ÷ 1,000,000)* For enhanced accuracy, once the Plasma network launches and validator geographic distribution becomes known, location-specific carbon intensity factors will be applied following CCRI's methodology for regional emission calculations. **7. Methodology Validation and Updates** This methodology aligns with CCRI's established framework for PoS network analysis while adapting for Plasma's unique characteristics: *Bitcoin Bridge Operations: Additional energy for Bitcoin state synchronization (estimated 5% overhead)* *Stablecoin Optimization: Potentially lower computational overhead due to specialized transaction types*

		Future Monitoring: Real-world measurements will replace estimates upon network launch The energy consumption estimates will be updated quarterly during the first year of operation using actual validator counts, hardware surveys, and measured power consumption data to refine the assessment accuracy. **8. Environmental Impact Context** The projected annual energy consumption of 200,000 kWh equals approximately: *19 average US households (10,600 kWh per household annually)* *15 roundtrip flights from Munich to San Francisco (6.1 tCO2e per flight)* *0.000145% of Bitcoin's estimated annual consumption (137.79 TWh)* This positions Plasma as an energy-efficient blockchain solution optimized for its specific stablecoin-focused use case while maintaining the security and decentralization properties essential for financial infrastructure. ***9. Data Sources and References*** CCRI PoS Benchmark Study 2023: "Energy Efficiency and Carbon Footprint of PoS Blockchain Networks and Platforms" International Energy Agency (IEA) emission factors for global carbon intensity - https://carbon-ratings.com/dl/pos-report-2023 Plasma technical documentation for hardware requirements and consensus parameters Comparable PoS network analysis for validator set size projections

J.10	Environmental Impact	**Carbon Footprint Analysis:** The annual carbon footprint of 91.8 tonnes CO2e represents minimal environmental impact for financial infrastructure processing trillions in stablecoin transactions. *Real-World Equivalents:* a) 20 economy cars driven for one year b) 15 roundtrip flights Munich to San Francisco c) 4,600 smartphones manufactured d) 46 tonnes of steel produced e) Single bank branch annual emissions (150 tonnes CO2e vs Plasma's 91.8 tonnes) *Financial Infrastructure Comparison:* a) SWIFT Network: 70,000 tonnes CO2e annually (761× larger) b) Visa Network: 1,500 tonnes CO2e annually (16× larger) c) Plasma: 91.8 tonnes CO2e annually **Hardware Environmental Profile:** a) Modest Requirements: Standard consumer-grade hardware (2-4 CPU cores, 4-16GB RAM) b) No Specialized Mining Equipment: Eliminates e-waste from ASIC manufacturing and disposal c) Existing Infrastructure: Validators can repurpose standard servers, reducing new hardware demand d) Lower E-waste: Longer hardware lifecycles due to minimal computational requirements e) Supply Chain Impact: Reduced demand for rare earth minerals compared to high-performance mining rigs