



Whitepaper

SDA Token Whitepaper

Abstract

The **Renewable Energy Token (SDA)** is a Solana-based security token enabling global investors to finance and fractionally own large-scale renewable energy assets (tokenization of Real World Assets). A transparent three-phase roadmap links on-chain capital formation to real-world deployment:

- **Phase 1** – Initial Token Offering (ITO) and DEX listing, Token functions as Utility Token at this Phase.
- **Phase 2** – Once the market capitalisation reaches USD 100 million, up to 20 million reserve tokens are sold and prudently leveraged (maximum 1:5) to finance up to USD 100 million of clean-energy infrastructure investment; the first voluntary token-to-equity conversion (tokens can be used to purchase shares at 100:1 fixed rate) window opens; CEX listing targeted. As regulatory licenses are obtained token starts to function as Security Token from this Phase forward.
- **Phase 3** – Company reserves the option to convert remaining 20 million company held tokens (Project Development Reserve) into development funds towards our next sustainable energy project. Token holders will be also invited to utilize the conversion opportunity to become fractional owners in the parent company. Tokens that are used as payment for equity will be burned in the process, thus increasing the theoretical value of remaining tokens through reduced supply. Unconverted tokens shall continue to be traded, both token and equity holders shall receive equal profit-sharing payments annually from this phase forwards.

Key Token Features

- Governance rights via on-chain voting regarding investment projects, profit sharing and director positions after gaining Security Token status (Phases 2 and 3)
- Equity conversion opportunities in phases 2 and 3
- Profit-sharing from tokenized real world operating assets in Phase 3

Executive Summary

Sustainable Digital Assets is a pioneering project on the frontier of blockchain and real world producing assets. We offer public participation in our vision to create abundant energy through sustainable and clean energy projects. In the first phase we are launching a utility token, which at Phase 2 becomes a true RWA-backed security token. At phase 2 it can also be converted into equity in the parent company (fixed rate 100:1) and finally at phase 3 participate in annual profit sharing payments.

Introduction

- Borderless fund-raising — No geographic silos
- Real-time ownership registry and transferability
- Low-cost, auditable governance
- Partial, auditable governance at low coordination cost

Legal & Regulatory Framework

SDA follows a progressive compliance path, starting with a private Initial Token Offering (ITO) in Nevis and advancing to full EU MiFID II Security Token status in Phase 2, while also aligning with U.S. Reg D/Reg S requirements.

- Phase 1 – Public Token Offering (Sustainable Digital Assets Inc., Nevis).
- KYC/AML threshold — token purchases up to €1 000 voluntary KYC, otherwise full KYC required (Art. 17(1) AML (EU) 2024/1624 and Art. 4(3) Transfer-Rule (EU) 2023/1113).
- Phase 2 – Token starts to function as Security Token after regulatory clearance; EU Prospectus & MiFID II licence; mandatory KYC/AML; regulated custody whitelist.
- Tokens confer no equity until holders opt-in during conversion windows.
- Legal base: Nevis Business Corporation Ordinance (NBCO), Nevis Financial Services Regulatory Commission (NFSCR) and applicable international legislation; Smart-contract auditor to be announced

Platform Overview

Comprehensive blockchain platform with integrated technical components.

- Solana blockchain (>2 000 TPS, sub-second finality, < USD 0.001 fees).
- Smart-contract suite: capped-supply mint, vesting, dividend vault, governance, conversion registry.
- AI optimisation engine for bidding, load forecasting and battery dispatch.
- ESG oracle publishing on-chain CO₂-avoided proofs.
- Investor portal with wallet-connect and KPI dashboard.

System Architecture

Stateless Solana programs enforce a 100 M supply cap, time-based vesting and automatic stage-gate logic. Hardware-signing multi-sig governs upgrades; ISO 27001 processes and quarterly pen-tests mitigate cyber risk.

- Core contracts secure supply cap (100 M), vesting, and stage-gate logic.
- Integration layer connects with ISO/RTO markets and bilateral PPA platforms.
- Security – hardware-signing by multi-sig board; quarterly penetration tests; ISO 27001 processes.
- Scalability – stateless program design allows >1 M holders without re-deployment.

Tokenomics

Fixed 100 million supply; no emissions or burns outside the published schedule.

- Token Name – SDA Token
- Symbol – SDA
- Standard – Solana SPL Token-2022
- Function - Phase 1 Utility Token - Phase 2 Security Token after regulatory clearance
- Initial Price – USD 1.00
- Distribution
 - 40 % Public Sale
 - 40 % Development Reserve (released 50 % at each of Phases 2 & 3)
 - 10 % Team (18 month lock)
 - 3 % Advisors & Partners
 - 3 % Affiliate Marketing
 - 4 % Legal & Operations
- Utility
 - On-chain governance
 - Profit-sharing
 - Equity conversion option
 - Community benefits access
- Smart-contract audits – TBA
- Tokens held at project development reserve: total 40 M tokens (40 %)
 - Public sale (Phase 1): up to 20 M tokens (20 %), no vesting.
 - Public sale (Phase 2): up to 20 M tokens (20 %), no vesting.
- Founding team: 10 M tokens (10 %), 18-month lock then 12-month linear vest.
- Advisors & partners: 3 M tokens (3 %), vesting schedule TBD (board approval).
- Affiliate Marketing: 3 M tokens (3 %), released as incurred (board-approved).
- Legal & operations: 4 M tokens (4 %), released as incurred (board-approved).
- Phase 2 – Sell up to 20 million reserve tokens; proceeds + senior debt (60-80 % LTV) deploy up to USD 100 M.
- Phase 3 – Sell remaining reserve tokens under same leverage caps; unsold tokens after 24 months may be burnt.

- Economic flows – Revenue from PPAs, merchant sales, grid services, credits; target $\geq 65\%$ EBITDA; 70 % FCF as on-chain dividends post-COD.
- Fund Allocation (Phase 1 proceeds) – Project investments 80 %, operating expenses 10 %, legal & compliance 5 %, marketing & community 5 %.
- Pre-sale rounds: Round 1 (up to 5% supply, 50% discount, €0.50 each) | Round 2 (up to 5% supply, 40% discount, €0.60 each) | Round 3 (up to 10% supply, 30% discount, €0.70 each)
- Capital raised in Pre-sale and private offerings up to 20 million euros with up to 20% of tokens sold. If less than 1% of target sales is achieved project will be suspended until further notice and investors will be offered a return of their investment. In Phase 1 up to 20 million reserve tokens are offered to public and combination of token sales and appreciation in the secondary market will enable the project to reach a 100 million market cap triggering transition to Phase 2.
- Liquidity Allocation (DEX) – USD 100,000 to USD 200,000 from Phase 1 capital raise reserved for initial liquidity on DEX platforms.
- Phase 1 public sale: 20M tokens (20% total supply).

Sustainable Energy Investments Overview

From Phase 2 onward the parent company Sustainable Digital Assets Corporation (based in Nevis) converts token capital into tangible assets and from Phase 3 onward distributes returns; project pipeline spans solar, wind, energy storage and nascent green-tech.

Investment Strategy

Sector allocation targets diversified, high-impact assets.

- **Technology Focus**
 - Solar – utility-scale, commercial roofs, community gardens
 - Wind – onshore, offshore, distributed micro-wind
 - Storage – battery, pumped-hydro, thermal
 - Emerging Tech – green hydrogen, biofuels, grid digitalisation
- **Strategic Criteria**
 - Projected IRR exceeding 15 %.
 - Clear path to regulatory approval.
 - Scalable technology with proven implementation.
 - Strong local partnerships.
 - Environmental & social-governance alignment.

Three-Phase Implementation

Clear, measurable gates align risk, liquidity and capital deployment.

- Phase 1 – Token Issuance & DEX Listing
 - Public sale up to 40 % supply on website & DEX.
 - Reg-light participation token; quarterly reporting.
- Phase 2 – \$100 M Market-Cap Threshold
 - Sell 20 M reserve tokens → through debt financing (80% LTV) finances up to \$100 M investment in assets.
 - First equity-conversion window; MiFID II & CEX listing.
- Phase 3 – Portfolio Expansion
 - Sell remaining 20 M reserve; second conversion window.
 - Scale to >500 GWh annual generation.

Financial Roadmap

Pre-sale with a minimum of €200,000 raised funds (1% of offering) has to be met in order to proceed. Funds will be used to create the legal structures needed for the project to advance through Phases 1 to 3 and to finance project development. In particular an alternative investment fund (AIF) will be established for administering the capital and directing it into productive sustainable energy and infrastructure projects. Until the physical construction of sustainable energy projects starts the funds shall be deposited into energy funds and government bonds and their derivatives through open financial market operations. In Phase Two funds shall be directed into the construction of producing sustainable energy assets and finally in Phase Three the operations are further expanded and profit sharing payments from the sale of energy produced by the assets the company now owns and operates.

- Phase-1 proceeds fund project origination, permits, and early-stage equity.
- Phase-2/3 proceeds + debt finance construction (capex ≈ USD 1.0-1.2 M/MW solar; USD 1.3-1.5 M/MW wind).
- Target portfolio – 150 MW solar, 120 MW wind, 80 MWh storage by 2028.
- IRR sensitivity – base 16 %; –200 bps if PPA price falls 10 %; +300 bps with carbon-credit upside.
- Reporting – audited IFRS financials & asset-level dashboards every quarter.

Roadmap & Milestones

Key deliverables through 2030.

- Q3 2025 – Pre-sale rounds; legal structure finalized; smart-contract audit; private sale 1 (10 M tokens).
- Q4 2025 – 1.12.2025 Official Token Launch, DEX listing
- 2026 – Token sales and fund raising, deploying capital to build needed systems and preparatory work towards real world projects
- 2027 – Capital raised exceeds 20 million enabling Phase 2 and financing of Real World asset building as voted by token holders,
- 2028 - First RWA project under construction, CEX listing explored, regulation compliance: MiFID II (EU), Securities Act (US)
- 2030 – First project completed and producing revenue enables Phase 3 → expansion of portfolio and profit sharing payments as voted by token holders

Conversion Mechanism

Token can be used to purchase shares in the parent company (Sustainable Digital Assets Inc.), with conversion rate 100:1. When the token is burned after conversion into equity, thus reducing the supply of tokens circulating in the market place. Both owners of tokens and owners of shares in the company are eligible for profit sharing of the produced profits at Phase 3 of the project.

- Conversion windows – specific periods announced at each phase.
- Minimum 10,000 SDA-Tokens required for conversion.
- Verification – KYC/AML and investor-accreditation checks prior to conversion.
- Tax implications – detailed guidance provided during each window.
- Remaining tokens – unconverted tokens keep all original rights and remain tradable.

Governance Model

On-Chain governance with transparent voting process.

- Voting weight: 1 token = 1 vote
- Voting Issues available to token holders:
 - Capital allocation regarding project selection
 - Projects to be built (type and location)
 - Distribution of Dividends vs Compounding Investments for Growth
 - Director Elections
 - General Policy Issues
 - Other issues presented by Directors or requested by Token holders
- Process:
 - Proposal posted
 - 30 days discussion
 - OnChain vote (voting open 48 hours)
- Delegation: Token holders may delegate votes to accredited stewards

Dividend Strategy

The profit sharing strategy defines how profits generated by real world energy assets are allocated to reserves, operations, re-investment and profit sharing to both token and stock holders. The size and specific focus areas of the reinvestment plan are determined through an on-chain governance process, allowing token and stock holders to collectively decide (=vote) the optimal balance between immediate monetization of the asset and reinvesting for future growth.

Community & Incentive Programmes

5 % of supply reserved for community initiatives. Community council publishes quarterly spending reports and KPIs (wallet growth, engagement score).

- Liquidity mining – early DEX LP incentives.
- Bug-bounty rewards – up to USD 250 k.
- Educational grants – renewable-tech hackathons & university research.

Security & Risk Management

Dual smart-contract audits, formal verification, treasury diversification and all-risk insurance combine with layered cyber-defence.

- Smart-contract audits – two independent firms + formal-verification tooling.
- Treasury policy - Idle funds (i.e. before construction of physical projects) shall be deposited into energy funds and government bonds through open financial market and derivative operations.
- Insurance – construction all-risk, cyber cover, and D&O liability.
- Operational controls – SCADA segmentation, zero-trust VPN, incident-response playbook.

Use Cases & Applications

Token capital unlocks a pipeline of high-yield, climate-positive projects.

- Utility-scale solar farms (≥ 50 MWp).
- Commercial rooftop solar installations.
- Community solar gardens.
- Onshore wind clusters (20-150 MW).
- Offshore wind developments.
- Battery storage (≥ 50 MWh) co-located or standalone.
- Pumped-hydro and thermal-energy storage.
- Green hydrogen pilots powering heavy transport hubs.
- Advanced bio-fuels & next-gen grid technologies.
- Grid-service aggregation – frequency & demand response via AI Stack.

Leveraged Financing Strategy

Bank debt 60-80% LTV amplifies equity while capping downside; lender DD provides external validation; project-finance structures ring-fence risk.

- Expanded project capacity – enables up to USD 100 M of assets through leveraged sale of first 20 million SDA-tokens.
- Institutional validation – bank participation adds due-diligence layer.
- Optimal capital structure – balances equity and debt for better returns.
- Accelerated growth – faster deployment into revenue-generating assets.
- Risk management – project-specific financing isolates individual risks.
- Decision factors – prevailing interest rates, project pipeline quality, individual project risk, company cash-flow position.

Risk Factors (Summary)

Comprehensive disclosure of regulatory, market, technology, construction, leverage, dilution and liquidity risks. Full matrix available in Appendix A.

- Regulatory – global crypto legislation is rapidly evolving so regulatory issues may arise; mitigation: multi-jurisdictional legal counsel.
- Market – power-price volatility; 70 % contracted revenues target.
- Technology – smart-contract bugs; dual audits + bug bounty.
- Project – development delays, cost overruns, technology failures.
- Construction – delay/cost overrun; EPC fixed-price contracts.
- Leverage – debt amplifies downside; max LTV 80 %.
- Dilution – reserve sales; transparent schedule + optional burn.
- Liquidity – exchange-listing risk; multiple venues, market-making budget.
- Conversion – tax/legal complexity; dedicated help-desk, advance guidance.
- Cybersecurity – grid or treasury attack; layered defence, insurance.
- Market-cap milestone – delay/failure to reach USD 100 M postpones Phase 2; mitigation: transparent progress reporting & market-maker support.
- Exchange-listing – no guarantee of CEX acceptance/continuity; mitigation: multi-venue strategy & ongoing compliance audits.

Conclusion

SDA bridges digital capital and tangible climate impact, offering phased liquidity, optional equity upside and a credible path to >500 GWh of annual clean generation by 2028.

Team & Governance

- CTO – Mikko Rautiainen, M.Sc. Tech. in Biomedical Engineering & Signal Analysis. Chief Technology Architect responsible for cybersecurity and seamless integration of all on-chain and off-chain systems. Scientific career at the Ragnar Granit Institute, founded Helsinki's Bitcoin-Corner in 2015, with 20+ years delivering mission-critical software. Co-inventor on three international patents covering data-communication and RF networking.
- CSO – Antti Jussila, M.Sc. Econ. Chief Strategy Officer responsible for administrative, legal, and real-world sustainable energy project development. Multi-decade background in financial sector as capital manager and trader. 10 years experience developing energy, mining and infrastructure projects as CEO of his Colombia-based company.
- CXO – Robert Ramstedt. Chief Experience Officer responsible for marketing and public relations.
- Advisory board – Energy economist, ex-utility COO, blockchain lawyer. Board is the on-chain multi-sig; independents elected once Phase 2 converts ≥ 10 % equity.

ESG & Impact Framework

- Measurement – Tons of CO₂ avoided, jobs created, community-benefit-fund spend.
- Reporting – real-time dashboard; assurance by accredited ESG auditor.
- Alignment – UN SDGs 7, 9, 13.
- Community fund – 1 % of net profit earmarked for local education & retraining.

Appendices & Legal Disclaimers

- Appendices: See updated information at www.sdafintech.com/documents