Sustainable Digital Assets - SDA-Token

Renewable Energy Security Token Whitepaper

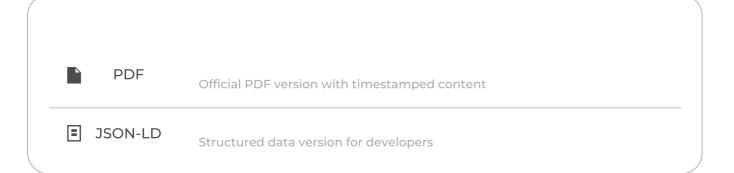|	PDF	Official PDF version with timestamped content
	JSON-LD	Structured data version for developers

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

- – Initial Security Token Offering (STO) and DEX listing.

-          – Company will convert remaining company held tokens (Project Development Reserve) into funds for next infrastucure project. Token holders will be invited to use this opportunity to become a part of the energy producing company. Tokens used as payment for equity will be burned as result. Unconverted tokens shall continue to be traded, both token and equity holders shall receive equal dividend payments annually from this phase forwards.

- Governance rights via on-chain voting.
- Profit-sharing from operating assets through annual dividends (Phase 3).
- Equity conversion opportunities at phases 2 and 3.

Sustainable Digital Assets is a pioneering project on the frontier of block-chain and real world producing assets. We offer public participation in our vision to create abundant energy through sustainable and clean energy projects. At fist phase we create a participation token, which can later at Phase 2, be converted into an equity position in producing assets with block-chain ownership and finally planned expansion with annual dividends at Phase 3.

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

SDA follows a progressive compliance path, starting with a private STO in Nevis and advancing to full EU MiFID II security-token status at Phase 2, while mirroring U.S. Reg D/Reg S requirements.

- Phase 1 – Public Participatory Token Offering (Sustainable Digital Assets Inc., Nevis); KYC/AML optional; unrestricted P2P transfer.

- Phase 2 – Convertible Security Token (Sustainable Digital Assets Oy, Finland); EU Prospectus & MiFID II licence; mandatory KYC/AML; regulated custody whitelist.

- Tokens confer no equity until holders opt-in during conversion windows.

- Company starts working towards European MiFID II requirements in Phase 2.

- Legal base: Nevis legislation; Smart-contract auditor: To be announced

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 CO_2-avoided proofs.

- Investor portal with wallet-connect and KPI dashboard.

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.

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

- Token Name – Renewable Energy Security Token

- Symbol – SDA

- Standard – SOL

- 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)

    - 5 % Advisors (vesting TBD)

    - 5 % Legal & Ops

- Utility
    - On-chain governance

    - Profit-sharing

    - Equity conversion option

    - Community benefits access

- Smart-contract audits – TBA

- Public sale (Phase 1): 40 M tokens (40 %), no vesting.

- Project-development reserve: 40 M tokens (40 %), 50 % released at each of Phases 2 & 3.

- Founding team: 10 M tokens (10 %), 18-month lock then 12-month linear vest.

- Advisors & partners: 5 M tokens (5 %), vesting schedule TBD (board approval).

- Legal & operations: 5 M tokens (5 %), released as incurred (board-approved).

- Phase 2 – Sell 20 M reserve tokens; proceeds + senior debt (≤60 % LTV) deploy up to USD 100 M.

- Phase 3 – Sell remaining 20 M 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 ≥65 % EBITDA; 70 % FCF as on-chain dividends post-COD.

- Fund Allocation (Phase 1 proceeds) – Project investments 70 %, operating expenses 15 %, legal & compliance 10 %, marketing & community 5 %.

- Pre-sale rounds: Round 1 (up to 10% supply, 50% discount, €0.50 each) | Round 2 (up to 10% supply, 35% discount, €0.65 each) | Round 3 (remaining up to 20% supply, 20% discount, €0.80 each)

appreciation in the secondary market will enable the project to reach a 100 million market cap that triggers 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).

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.

Sector allocation targets diversified, high-impact assets.

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    - 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

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    - Projected IRR exceeding 15 %.
    - Clear path to regulatory approval.
    - Scalable technology with proven implementation.
    - Strong local partnerships.
    - Environmental & social-governance alignment.

- Phase 1 – Token Issuance & DEX Listing
  - Public sale 40 % supply on website & DEX.
  - Reg-light participation token; quarterly reporting.
- Phase 2 – $100 M Market-Cap Gate
  - Sell 20 M reserve tokens; debt ≤60 % LTV finances up to $100 M 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.

Pre-sale funds (minimum €275k target has to be met in order to proceed) 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 through open financial market and derivative 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 dividend payments are initiated from the sales 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.

- Q3 2025 – MiFID II licence application; token re-licensing; DEX listing; Public STO (30 M tokens).

- Q4 2025 – First project SPVs signed; First asset NTP*; governance portal v1; audited Q4 report.

- Q1 2026 – COD* for 10 MW pilot solar plant; profit-share begins; market-cap oracle live.

- Phase 2 – Trigger when 30-day VWAP ≥ USD 100 M; reserve sale 1 (20 M); CEX listing application; debt term sheet.

- 2026-2027 – Build to 250 GWh annual generation; open first equity-conversion window.

- Phase 3 – Second reserve sale; scale to 500 GWh; second conversion window; portfolio scaling.

- 2028 – Steady-state dividend programme; explore new jurisdictions.

NTP = Notice to Proceed; COD = Commercial Operation Date.

Token can be used to purchase shares of the producing company, with conversion rate 1:1, in order to become a direct co-owner in the producing real world energy assets. When token is used to convert into equity the token is burned, thus reducing the supply of tokens circulating in the market place. Both owners of tokens and shares in the company are eligible for dividends of the producing assets at Phase 3 of the project.

- Conversion windows – specific periods announced at each phase.

- Minimum holdings – no minimum amount 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.

On-Chain governance with transparent voting process.

- Voting weight: 1 token = 1 vote

- 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

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.

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.

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.

Bank debt ≤60 % 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.

- 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.

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

- Regulatory – security-token regimes may tighten; mitigation: multi-jurisdictional legal counsel.

- Construction – delay/cost overrun; EPC fixed-price contracts.

- Leverage – debt amplifies downside; LTV cap ≤ 60 %.

- 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.

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.

- CTO – Mikko Rautiainen, M.Sc. 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.

- CFO – Antti Jussila, MSc. 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.

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- Measurement – Tons of CO_2 avoided, jobs created, community-benefit-fund spend.
- Reporting – real-time dashboard; annual assurance by accredited ESG auditor.
- Alignment – UN SDGs 7, 9, 13.
- Community fund – 1 % of net profit earmarked for local education & retraining.

- Appendix A – Detailed Risk Disclosure.
- Appendix B – Smart-Contract Technical Specification.
- Appendix C – Financial Model Assumptions & Sensitivities.
- Appendix D – Legal Opinions & Regulatory Maps.
- Appendix E – ESG Methodology.