



# WHITE PAPER

## TURNING SUNLIGHT INTO SAVINGS

South Africa's most innovative solar investment opportunity for South Africans  
by South Africans.

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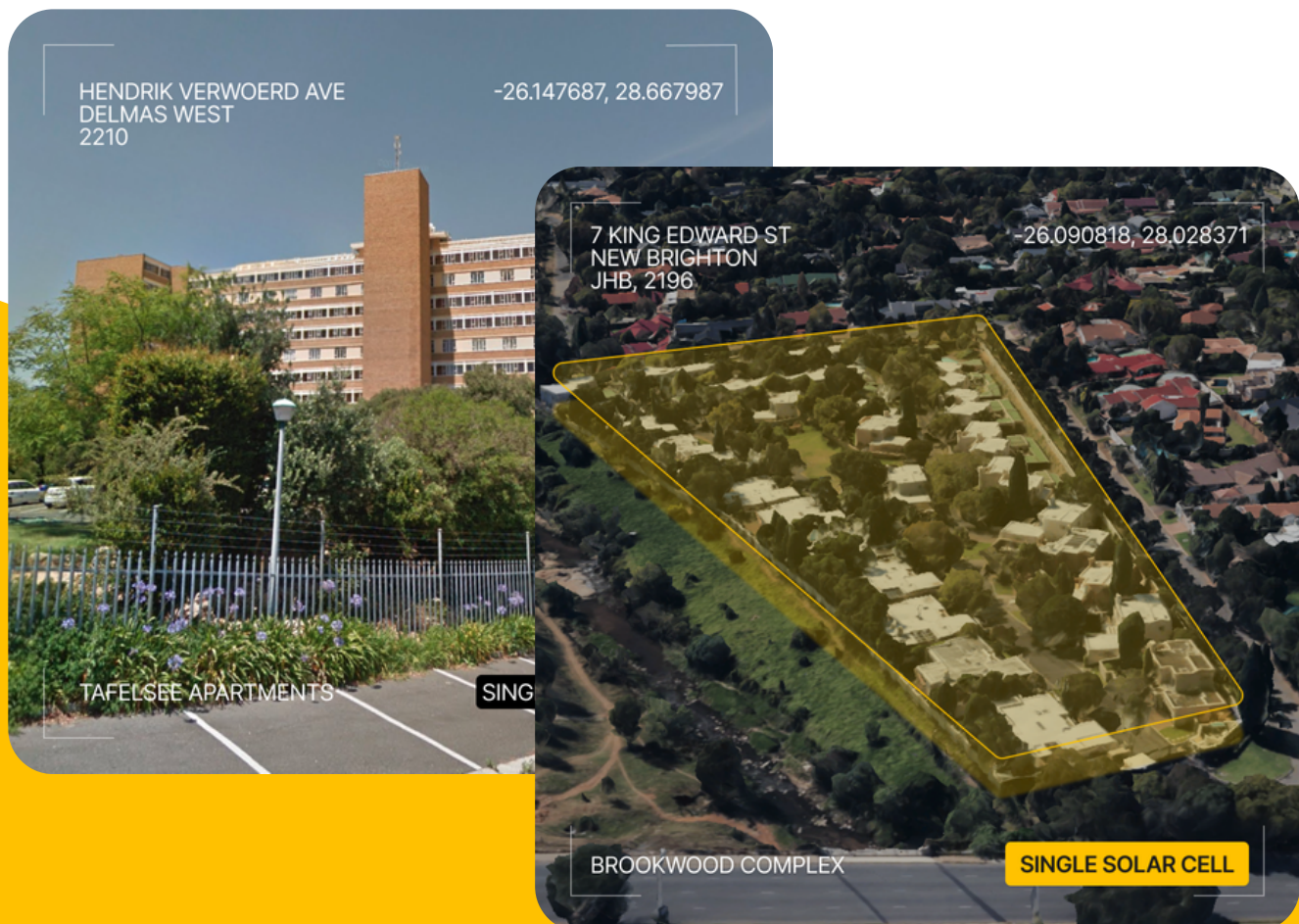


# ABSTRACT

The integration of solar energy and blockchain empowers individuals and communities to actively participate in the renewable energy revolution. By enabling fractional ownership and access to solar installations, individuals can become stakeholders in these clean energy projects, earn sustainable income, and contribute to the collective effort of combating climate change. This combination creates a paradigm shift, where individuals and communities are no longer passive consumers but active participants in the energy transition, fostering ownership, empowerment, and shared responsibility outside of the constraints of traditional finance and government systems.

SunCash is a product developed by Momint in January 2023 to apply blockchain to the ownership of renewable energy projects. In so doing, the initiative opens what was previously a closed, private investment model to anyone who wishes to benefit from the asset-backed, long-term yield properties of these projects and consequently play a part in addressing the international energy crisis.

This white paper provides an in-depth overview of the SunCash product, explaining its purpose, functionality, benefits, and the underlying blockchain infrastructure that powers it. By tokenizing solar projects and utilizing smart contracts, SunCash offers a transparent, innovative and secure method for individuals to invest in renewable energy and earn income from the electricity generated.



# WHO IS THIS WHITEPAPER FOR

A 'white paper' is a document meant to inform readers concisely about a complex issue. A white paper is the first document researchers should read to better understand a core concept or idea.

This document is expected to be analyzed by a fund manager, investment specialist, large institutional buyer, or a community member looking to gain more detailed insight into the nuance behind SunCash Solar Certificates.

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# INTRODUCTION

SunCash has democratized our collective access to renewable energy projects across South Africa by facilitating the purchase of fractionalized digital assets known as Solar Tokens. These tokens represent ownership of real-world physical solar hardware that have been installed in various locations, such as schools, businesses, hospitals, and farms. SunCash successfully leverages blockchain technology to ensure transparency, security, and immutability in tracking ownership, income generation, and payments associated with the solar hardware.

In this white paper, we will delve into the foundational elements that underpin the SunCash initiative, including its purpose, functionality, benefits, and underlying blockchain infrastructure. We will also address frequently asked questions (FAQs) to provide a comprehensive understanding of how SunCash works.

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## PURPOSE AND OBJECTIVES

The primary purpose of SunCash is to combat the global energy crisis by facilitating the funding and installation of solar panels in communities and businesses affected by energy insecurity and rolling blackouts.

By harnessing the power of blockchain technology, SunCash aims to achieve the following:

- 1 Provide a **secure and transparent platform** to support renewable energy projects.
- 2 Enable individuals and funders to **earn a meaningful income** from the electricity generated by the solar hardware they've purchased, over the lifespan of their solar asset (generally 20 years).
- 3 Reduce the strain on our national energy grid by generating independently funded **renewable energy**.
- 4 Foster transparency and **eliminate corruption** by utilizing the latest advancements in digital security technology for transaction tracking, ease of transferability and contract enforcement
- 5 Promote the widespread adoption of renewable energy and contribute to a greener and **more sustainable future**.

# HOW SUNCASH WORKS

## Overview

SunCash utilizes blockchain technology to tokenize solar hardware and enable secure ownership registration, income distribution, and transparent tracking of transactions. A step-by-step process is provided below:



### SOLAR CERTIFICATE CREATION

SunCash creates a digital asset, known as a 'Solar Certificate', on the blockchain.

This certificate represents each individual solar cell in a solar installation, or a bundle of cells on a panel. These certificates represent rights to the income generated by the cells to which they are connected, and every certificate contains all the relevant legal contracts;

this data is embedded into each SunCash certificate and can never be altered or removed (by Momint or otherwise).



### TRANSPARENT BLOCKCHAIN INFRASTRUCTURE

SunCash leverages public blockchains to provide an ultra-secure and transparent register of ownership.

All SunCash certificates contain embedded legal contracts, ensuring the legitimacy and enforceability of rights.



### PSEUDONYMOUS OWNERSHIP

While total income of certificates and individual payouts can be viewed by all, investor privacy is maintained.

If investors refrain from disclosing personal details or associating their accounts publicly, they can remain anonymous.



### OWNERSHIP AND INCOME

By purchasing Solar Certificates, owners are provided with rights and benefits associated with the solar project.

Owners are entitled to the income from the electricity generated by the solar hardware over a 20-year period. Income is paid out every three months in the stablecoin, USDC, through automated transactions.

These pay-out periods are expected to be reduced to a much higher frequency (weekly) in future.



### SOLAR HARDWARE LIFESPAN:

The solar installations are rated to operate at 90% efficiency for at least 25 years. SunCash enters into 15 to 20-year agreements (Lease, Loan and/or Power Purchase Agreements) with the sites hosting the solar installations.

Importantly, a maintenance contract for the term is also entered into whereby the installer will earn a percentage of revenue for maintenance over the term.

This aligns the incentives of the Certificate holder, the site and the installer. Because the installer's ongoing revenue is linked to the yield and performance of the system.



## Role of the Operational and Maintenance Services

SunCash utilizes blockchain technology to tokenize solar hardware and enable secure ownership registration, income distribution, and transparent tracking of transactions.

A step-by-step process is provided below:

**1** The “Offtaker” - this is the person or entity buying electricity every month. The offtaker needs a well maintained system to reliably produce electricity for their needs.

**2** The “Certificate Holders” - This represents all of the buyers who collectively own all the solar installations that produce energy. The certificate holders want the best possible solar yield, as this directly correlates with income.

**3** The “EPC” - EPC stands for Engineering and Procurement Company. These are the boots on the ground that get the systems installed, operating and maintained.

Generally with most solar models, the EPC is primarily incentivised to get the job done as quickly as possible in order to move on to the next job. This often leads to cutting corners as EPC’s are typically not responsible for an asset’s performance in the years following installation (ie. their revenues are not tied to the long term performance of the system as EPCs normally receive their income as a lump sum).

This is where the SunCash model differs substantially. Our EPC is paid a reduced lump sum, and in lieu thereof, placed onto a maintenance contract whereby their maintenance fee is tied to the ongoing output/revenue of the cells collectively. This means they are incentivized to conduct the best possible install and maintenance to ensure the system’s optimal performance over its entire lifespan. This ensures alignment between all the parties as a poorly performing system will negatively affect their income to the same degree it affects SunCash, the Offtaker and certificate holders.

Maintenance contracts will typically cover the following considerations:



## ROLE OF THE OPERATIONAL AND MAINTENANCE SERVICE

- Certified electricians & PV green cards
- Compliance with local regulations and National NRS 097-2 standards
- SHEQ file and compliance
- All other business regulatory requirements

## CONTRACT ADMINISTRATION

- Site inspection and administration
- Certificate of Compliance (CoC) and Final Completion issuing
- Metering and communication infrastructure
- Client liaison during installation phase
- System sizing and sign off on engineering performance

## COMPLIANCE

- Application of Small Scale Embedded Generation installation to local supply authority
- System and inverters compliance and approval by the local supply authorities
- Application incl. relevant documentation for commission approval including build drawings and Single Line Diagrams (SLD) from the installer
- Application for meters to AMI and administration of the metering application process
- Application for tariff changes (where necessary)
- Further studies required by authorities or regulators as well as any separate arrangements connected to those requirements (where necessary)

## ONGOING ASSET MANAGEMENT

- Application for tariff changes (where necessary)
- Smart meter readings and reporting on energy generation and sale to site (ensuring optimal efficiency of the system)
- Management of monthly energy accounts to clients including account statements and payment collection
- Management and monthly settlement of supply authority accounts (where applicable)
- Credit checking and rating for prospective clients

## WHAT IS NOT CATERED FOR IN THE MANAGEMENT CONTRACT AND COVERED BY BUILT IN FEES:

- Separate integration with building management systems (charged to building owner)
- Separate diesel generation metering (charged per building)
- Management of contractors and installers during warranty or insurance claims (incl. in replacement cost)
- New building ownership transfer of systems (charged to building owner)
- Disconnection and reconnection of supply for defaulters (3 phase, >100 Amp charged to offender)
- New or amended PPA on building ownership transfers (charged to Momint)
- Additional compliance and regulatory requirements (charged to Momint)

## Immutability and Security of Legal Agreements using IPFS and ERC-721 Tokens

SunCash leverages advanced technologies to ensure the immutability and security of the legal agreements associated with the ownership of Solar Certificates. Two key components utilized in this process are the InterPlanetary File System (IPFS) and the ERC-721 token standard.

IPFS, a distributed file system, plays a crucial role in storing the legal agreements securely and immutably. Each legal agreement is stored as a file on the IPFS network, which consists of a decentralized and globally distributed set of nodes. This ensures that the files are not stored on a single centralized server, making them resistant to censorship and tampering.

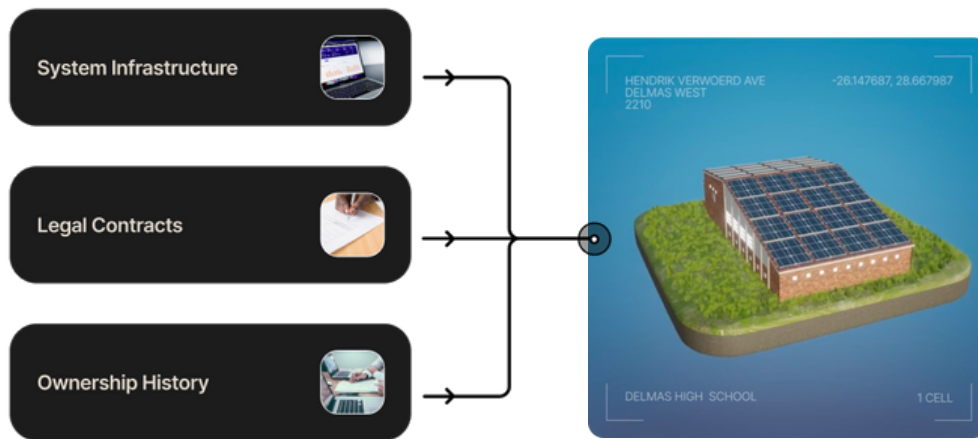
When an investor acquires a Solar Certificate, the associated legal agreements are "burned in" or embedded into the metadata of the ERC-721 token. The ERC-721 token standard is a non-fungible token standard on the Ethereum blockchain, allowing for unique digital assets to be represented and traded. The metadata of each ERC-721 token contains information about the token's attributes and characteristics.

In the case of SunCash, the metadata of each Solar Certificate includes references or links to the specific legal agreements stored on the IPFS network. These references are cryptographic hashes or unique identifiers that point to the location of the files on the IPFS network. By referencing the IPFS content identifier, the ERC-721 token effectively includes the legal agreements as part of its immutable data structure.

The combination of IPFS and ERC-721 tokens ensures that the legal agreements associated with Solar Certificate are securely stored, tamper-proof, and accessible to all stakeholders. The decentralized nature of IPFS prevents any single point of failure, while the ERC-721 token standard provides a standardized format for representing and transferring ownership of unique digital assets.



## Stored on IPFS



## Example Metadata (from an actual project live right now):

```
{
  "name": "100 Solar Cells at Tafelsee",
  "animation_url": "https://ipfs.io/ipfs/QmNdPnSRvHSDoyEnPrL59XNmCp5mB3oZMQqhQRSDxymFaC",
  "description": "This digital asset is linked to 100 solar cells at Tafelsee, in Cape Town, South Africa. \n\n This initiative_ gives you the opportunity to own 100 solar cells and earn a forecasted income of $60 per year from the electricity generated.",
  "attributes": [
    {
      "trait_type": "Address",
      "value": "Allen Dr, Loevenstein, Cape Town, South Africa"
    },
    {
      "trait_type": "Geo_tag",
      "value": "-33.8852647,18.6140968,15"
    },
    {
      "trait_type": "Panel_type",
      "value": "Crystalline Silicon"
    },
    {
      "trait_type": "Inverter",
      "value": " 2 x 100kW Inverter"
    },
    {
      "trait_type": "Standard_compliance",
      "value": "IEC-62103 (EN50171), IEC-62109, AS3100"
    },
    {
      "trait_type": "Installation_standard",
      "value": "To meet: NRS097 and SANS10142 codes"
    }
  ],
  "legal_contract": "https://ipfs.io/ipfs/QmdS51hAQ3UMhby7r3ViLM8KnRdjMx9xK9LxMfDyHnEzB",
  "image": "https://ipfs.io/ipfs/QmQDxqYUY8KnZnpifKufX3d28Ldp8UC7Mt8S5vFTbrhquv"
}
```

## This approach offers several benefits:



### IMMUTABILITY

The legal agreements stored on IPFS cannot be altered or modified without detection, providing a high level of immutability.

Once the agreements are stored and referenced in the metadata of an ERC-721 token, they become an integral part of the token's properties and cannot be separated.



### SECURITY

IPFS employs advanced cryptographic techniques to secure the files stored on its network.

By using cryptographic hashes to reference the legal agreements, the integrity and authenticity of the documents can be verified. Additionally, the decentralized nature of IPFS reduces the risk of data loss or tampering.

By integrating IPFS and ERC-721 tokens, SunCash ensures that investors have secure and immutable access to the legal agreements governing their ownership of solar certificates. This approach guarantees transparency, enhances security, and promotes an enhanced level of trust in the SunCash Initiative.



### TRANSPARENCY

As the metadata of ERC-721 tokens is publicly accessible on the blockchain, the references to the legal agreements stored on IPFS can be easily verified by anyone.

This transparency ensures that the terms and conditions of ownership are openly available for scrutiny.



### EFFICIENCY

Storing the legal agreements on IPFS allows for efficient retrieval and sharing of the documents. As IPFS utilizes a content-addressable system, the files can be retrieved based on their unique cryptographic hash, regardless of their location within the network.

This enables seamless access to the legal agreements associated with Solar Certificates.

## Legal Background and Personal Property Ownership

This section shall attempt to answer the following question: How does our tokenization model ensure that ownership of a solar certificate is actually acquired by a certificate purchaser, and that the rights and obligations surrounding the tokens and cells are legally valid and enforceable?

To answer this question, let us first look at the nature of a non-fungible token. An NFT is nothing more than a set of specific data entries, recorded on the blockchain. A typical retailer does the same thing in their own records with receipts to record sales transactions. Recording data on the blockchain ensures it is secure and accurate: the specifics of the data are captured and thereafter unchangeable, undeletable and irreplaceable. The NFT can also be transferred from person to person via their digital wallets, with each transfer creating a new record of ownership history and transfer of the NFT, and the relevant data - on the blockchain. The blockchain is also publicly accessible to everyone and thus completely transparent.

This makes an NFT the perfect certificate of ownership (accessible digitally).

Therefore, inserting NFTs as an extra layer in a sales transaction simply provides the following:

→ A secure and accurate digital certificate verifying the nature of what is being sold, the sales transaction that has taken place as well as any other essential information related to the sale (legal rights, old owner, new owner etc)

→ A secure and accurate way of effecting the transaction.

As this digital certificate represents an underlying asset of value - in our case solar assets - we call it a digital asset.

Thus, there is nothing about the creation of a digital asset that changes the fundamental or standard nature of any sales transaction. It merely adds extra provenance, and therefore value, to the transaction. Indeed, the Law Commission of England and Wales recently published a paper on digital assets, smart contracts and other related topics ([Digital Assets: Consultation Paper](#)) wherein the Commission came to the following conclusions:

→ The existing English common law framework is already flexible and iterative enough to accommodate digital assets without requiring a new legal regime.

→ NFTs, specifically, can be classified as property and thus recognised as such under English law.

→ Smart contracts are legally valid and binding if they meet the existing requirements for the creation of contracts.

As English and South African common law are closely aligned, our legal counsel has determined that the same conclusions would be reached by South Africa's legal institutions.

Nevertheless, in order to ensure that validity and enforceability of SunCash's tokenized model, every token (digital asset) contains a full sale agreement (with the necessary adjustments to accommodate the digital asset aspects of the structure and sale), known as a **Digital Asset Sale Agreement (DASA)**, to formalize common law positions (as is one of the points of any written contractual agreement).

Put another way, a DASA is as a standard contract of sale between two parties using an NFT representing a real-world asset as both the *method* of transferring ownership and the *record* thereof. Other relevant data is also recorded immutably on the blockchain transaction history



**Mitch**  
Legal and Compliance  
Officer, Momint

***"In other words, a DASA is nothing more than a standard contract of sale between two parties using an asset-backed, digital certificate."***

This agreement stipulates that the owner of the digital asset (in this case an ERC721 Token) is the legal owner and beneficiary of the underlying asset and the benefits it creates. In this case, the benefit is the revenues received from the sale to an off-taker of the electricity generated by the asset - solar cells (which is also covered in the agreement).

The DASA thus ensures the recognition, validity and enforceability of our entire tokenized solar model in line with the requirements of contract and common law. Investors and stakeholders can therefore rest assured that their rights and obligations receive the full recognition and protection of the law. This recognition and protection should extend to over 160 jurisdictions.

## SunCash, Wallets and Security

By default, SunCash Certificates are securely stored in a Momint Wallet. Upon purchasing the certificates through the SunCash website, owners receive an email to redeem their digital assets.

The redemption process involves creating a blockchain wallet - a 30 second process through the Momint platform. Any assets in this wallet can be freely transferred to any other EVM compatible wallet (Metamask, Trust Wallet, among other interfaces) or hardware wallet at any time.

When it comes to holding digital assets, like SunCash Certificates, in a blockchain wallet; the security of ownership is ensured through the use of **encryption keys**.

First, let's understand what encryption keys are. Encryption is a process that converts information into an unreadable format, known as ciphertext, using a mathematical algorithm. To decrypt or unlock the ciphertext and access the original information, you need a specific key, which is called an encryption key.

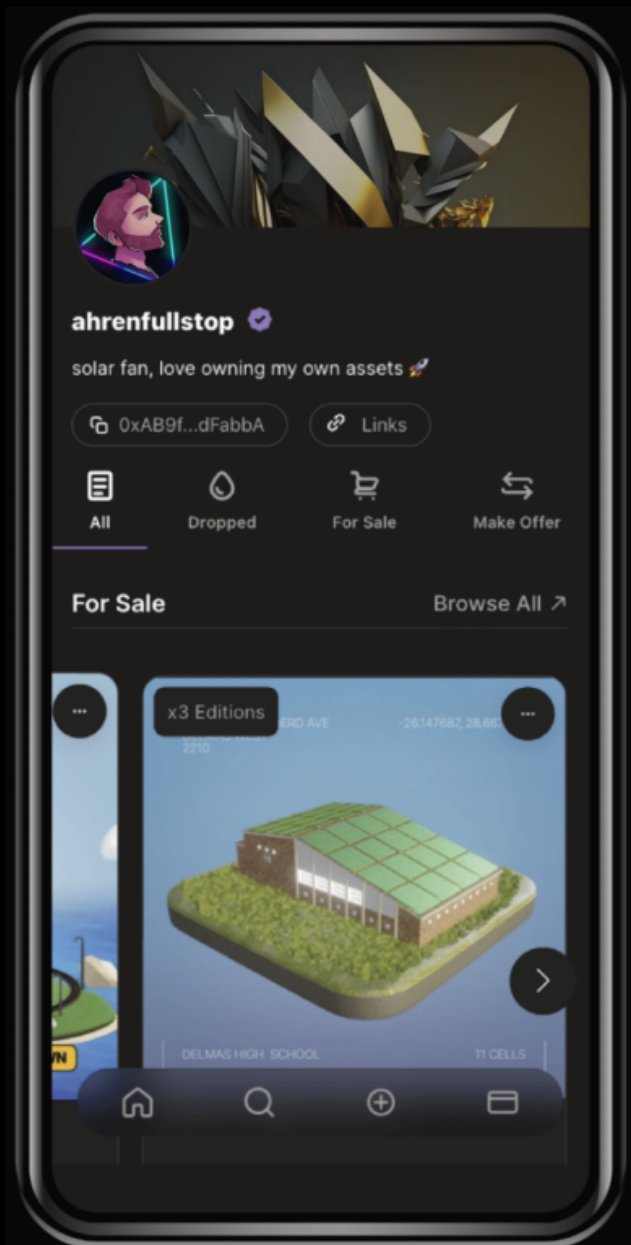
In the context of blockchain wallets, these encryption keys play a crucial role in securing your digital assets. A blockchain wallet is essentially a container that stores your digital assets. The wallet uses two specific encryption keys to access this container: a **public key** and a **private key**.

**Public Key:** The public key is accessible to anyone on the blockchain network. It acts as an address that allows others to send assets to your wallet. It's similar to a home address or email address, which can be freely shared with others.

**Private Key:** The private key, on the other hand, is a secret key that should only be accessible by you. It is securely stored within your wallet or sometimes on a separate device. The private key is used to prove your ownership of the Digital Assets and to authorize transactions. It's like a password that grants access to your wallet and allows you to manage your assets.

The security of your Certificates lies in the fact that the private key remains secure. When you want to make a transaction or interact with your Assets, your wallet uses the private key to create a digital signature.

This signature provides proof that the transaction is authorized by the rightful owner, and is verified/confirmed by the entire blockchain network, as a large, transparent and shared database (which is what blockchain is).



# CERTIFICATE VALUE AND MARKET DYNAMICS

The value of SunCash certificates is primarily tied to the income generated by the underlying solar hardware. While there is no guarantee of token value appreciation, the solar hardware is designed to retain its value throughout its lifespan.

Buyers should note that the value of solar certificates can be influenced by external factors such as increases in electricity prices - which would increase returns as our pricing is linked to that of the utility; or unexpected weather phenomena, asset failure or payment default by the offtaker - which may decrease returns.

As with any investment, there are inherent risks, but the potential failure of the national grid is considered a far greater risk with expectations of worsening load shedding, as confirmed by the Minister of Public Enterprises, as recently as May 2023.

SunCash mitigates the associated risks with solar investing through meticulous customer vetting, project planning and the incorporation of maintenance and repair costs into its investment forecasting.

## Payouts and Commercial Feasibility of Solar

Buyers start earning an income as soon as the solar plant is fully installed and operational, a process that typically takes between 2 to 5 months. This timeline is clearly communicated to SunCash Certificate holders.

Over the past 13 years, solar energy has experienced a remarkable transformation both in terms of technological advancements and cost-effectiveness. The cost of solar panels has significantly decreased, making solar energy more economically viable than ever before.

Improved manufacturing processes, economies of scale, and increased competition in the solar industry has contributed to this dramatic reduction in costs.

As a result, solar energy has emerged as a competitive and sustainable alternative to traditional fossil fuel-based energy sources.

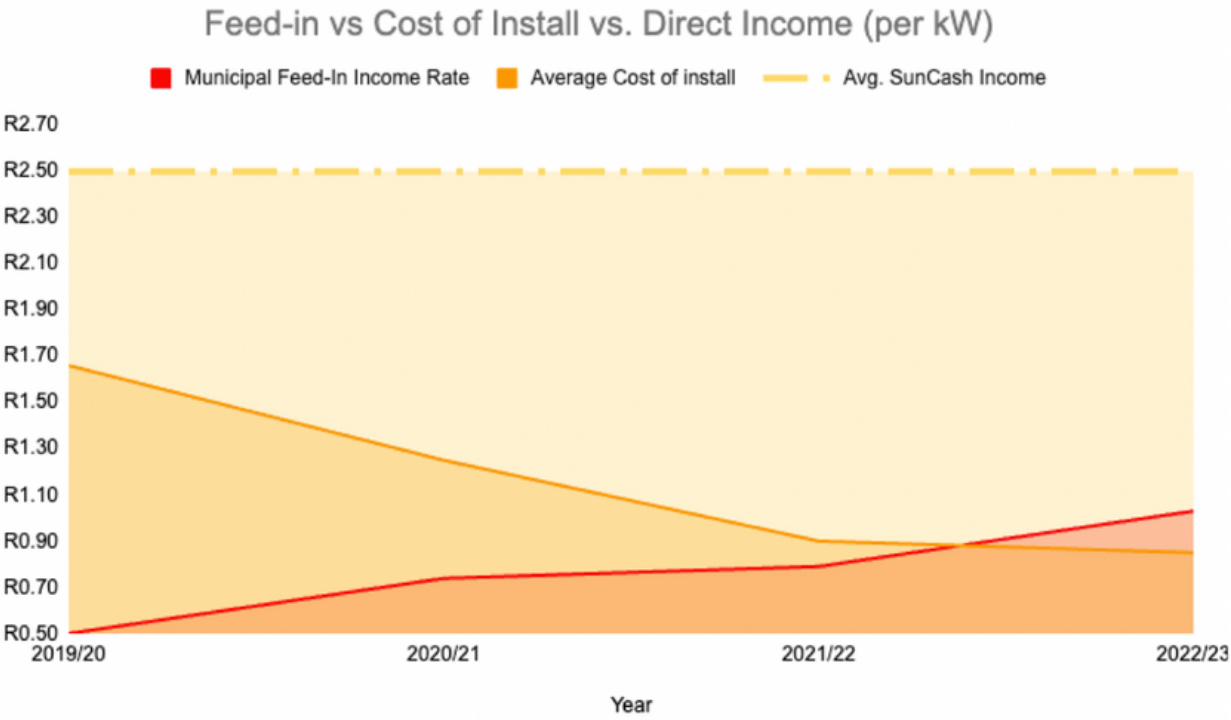
To illustrate this point, let's look at some data from various sources:

→ According to Bloomberg New Energy Finance (BNEF), solar photovoltaic module prices have dropped by 89% since 2010

→ By 2050, BNEF predicts that solar PV prices will drop for utility-scale PV at close to cost only \$0.025 cents per kWh (45c in ZAR). We are currently installing at a cost close to 0.90c in ZAR with feed in tariffs already making this profitable. Eskom currently charges tariffs between R1.42 and R4.92. Below is an illustration of cost over time vs feed-in tariffs;

→ In South Africa, individuals who purchase these cells may qualify for a 125% tax rebate on the cost of new or unused solar panels as announced by the government in the 2023 Budget Speech.

This graph displays the difference between the cost of installing vs the energy rates being paid by offtakers. The area between the graphs represents the value of the profit opportunity.



Eskom Tariffs to customers:

Eskom Miniflex <66k	Summer	Winter
<b>Peak</b>	R1.89	R4.92
<b>Standard</b>	R1.43	R1.79
<b>Average</b>	R1.66	R3.35
<b>Average Overall</b>	R2.51	

It is clear from the above that it's economically feasible to build rooftop solar with profitable margins whilst providing significant value to the customer/energy offtaker, and sources indicate that this trend will only continue.



## Target Yield, Revenue and Costs

SunCash ensures that all project costs - including management, maintenance and insurance - are considered included expenses. The target net revenue yield for certificate holders is 12% (project dependent). For example, if you spend R100 - that asset should earn you R12 every year for 20 years (R240 total - nominal).

Below is an example of a typical project, using real-word data and assumptions, reviewed by finance and energy experts including representatives from Momint, Carbon Zero Solar, Trust Solar and Kappa Crucis Solutions.

<b>PROJECT SNAPSHOT [EXAMPLE]</b>		
Total Capital (cost of Install)	R6,840,000.00	
Unit installation (kWp)		360.0
Effective sun hours per day		4.9
Energy generated per day (kWh/d)		1764.0
Energy generated per month (kWh/m)		53696.2
Energy used by offtaker per day (kWh/d)		1380.0
Energy used by offtaker per month (kWh/m)		42007.2
Electricity purchase rate paid by offtaker	R2.50	
<b>Monthly income from sale of energy to offtaker</b>	<b>105,018.00</b>	
Excess energy to be wheeled/sold per month	11689.0	
Feed in rate paid by the CoCT	1.03	
<b>Monthly income from sale of energy to CoCT</b>	<b>12,039.63</b>	
<b>Total income per month (energy sales)</b>	<b>117,057.63</b>	
Management & Maintenance costs	(12,061.73)	1.25% of revenue
Insurance costs (Fire, Theft, Damage)	(7,125.00)	3% of asset value
Network, Platform and Payment Fees	(11,400.00)	2% of asset value
<b>Total cost per month</b>	<b>(30,586.73)</b>	
<b>Total monthly project revenue</b>	<b>R86,470.90</b>	
<b>Monthly project yield</b>	<b>1.26%</b>	
<b>Theoretical Annual project yield</b>	<b>15.17%</b>	
<b>Target Annual Return</b>	<b>12.00%</b>	

The above analysis suggests a 12% yield is achievable. This is the "Target" for the asset to return. Of course this return is not pegged, the asset may under or over-perform.

Momint will make a 2% “Asset management fee” in this case, incurred on payout distributions (this covers currency conversions, network gas fees and slippage).

There are buyout clauses for the offtaker and 3rd parties which protect the returns of the certificate holders first and foremost. These clauses are customized according to the requirements of each SunCash project.

## Secondary Market

The secondary market for SunCash Solar Certificates plays a role in providing holders with the opportunity to trade their certificates. It is essential, however, to emphasize that the primary purpose of acquiring a solar certificate should be to generate long-term earnings from the yield, rather than pursuing short-term speculative gains.

This approach ensures a sustainable investment mindset and aligns with the underlying principles of the SunCash ecosystem.



Ahren Posthumus  
Chief Executive, Momint

**“It is essential to emphasize that the primary purpose of acquiring a solar certificate should be to generate long-term earnings from the yield, rather than pursuing short-term speculative gains.”**

The trading process operates on a willing buyer, willing seller model. Any certificate holder has the option to utilize the Momint platform, a dedicated marketplace, to list their solar certificates for sale at any time. By doing so, they can advertise the availability of their certificates to interested parties within the platform’s user base. This process is akin to listing personal property on a conventional marketplace, where sellers connect with potential buyers to negotiate and finalize transactions.

Furthermore, the nature of SunCash Solar Certificates, which adhere to the ERC-721 standard, grant holders full ownership and portability. They have the freedom to transfer their certificates to other platforms, marketplaces, or wallets as they see fit. This flexibility ensures that certificate holders have control over their assets and can explore various trading avenues that suit their preferences.

One notable highlight is the significant secondary trade activity witnessed during the initial Solar Certificate listing, which recorded a remarkable 260% trade volume. This means that each certificate was sold more than two and a half times on the secondary market, at an average premium of 15% over and above their initial listing price. Although such behavior is not predicted to be the norm, there is an established market pattern of revaluing renewable energy assets with long-term offtakes and established cash flows through yield compression. This pattern is even more pronounced where the secondary transaction involves a diversified portfolio of assets and can result in a significant uplift in value. No re-rating is included in our yield calculations, however.

While the ecosystem primarily supports peer-to-peer trading, the contracts governing SunCash Solar Certificates also include provisions for the off-taker itself or institutional investors to acquire the entire solar installation. In such cases, certificate holders would be presented with an offer and expected to vote on the decision with a final outcome determined by the majority’s decision. This ensures democratic participation and consensus among certificate holders.

It is crucial to note, once again, that SunCash Solar Certificates are asset-backed, providing inherent value to their holders. Unlike non-asset-backed blockchain projects, where the value may solely rely on speculative sentiment,

the SunCash Solar Certificates derive their worth from tangible solar installations. This asset-backed nature ensures a residual value for certificate holders, enhancing the attractiveness and reliability of their holdings.

## Tokenizing Illiquid Assets: Transforming Energy Funding Models

Traditional funding models for solar installations, and real-world assets more generally, often face challenges due to their illiquid nature. Boston Consulting Group estimates that the market for such illiquid assets is \$16.1Tn. SunCash introduces a solution to this problem by leveraging blockchain to tokenize these assets, bringing significant benefits to the market. This section explores some of those benefits.

### 1 ENHANCED MARKET LIQUIDITY

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Tokenization turns physical assets and dated paper contracts into digital assets represented as tokens/certificates on the blockchain.

This enables the swift and easy trading of these assets on digital asset exchanges (often measured in seconds), thus transforming their liquidity.

The increased liquidity in turn facilitates mainstream access to the assets, previously restricted to large-scale investors or institutions thereby creating a more open, inclusive market.

### 3 GLOBAL INVESTMENT OPPORTUNITIES

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Through tokenization, SunCash unlocks global investment opportunities in solar energy projects.

Since digital tokens are easily tradable and accessible through the internet, investors from anywhere in the world can participate in the SunCash initiative.

This global reach expands the investor base and increases the potential funding pool for solar projects, accelerating the deployment of renewable energy infrastructure and driving positive environmental impact on a larger scale.

### 2 FRACTIONAL OWNERSHIP AND LOWER ENTRY BARRIERS

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Tokenization allows for fractional ownership of solar installations, meaning investors can acquire a portion of an asset rather than the entire asset.

This lowers the entry barriers for individual investors, enabling them to participate in solar projects with smaller capital contributions.

SunCash's tokenized approach therefore democratizes access to solar investments, empowering a broader range of investors to contribute to sustainable energy projects and benefit from their financial returns.

### 4 TRANSPARENCY AND TRUST

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Blockchain technology underpins the tokenization process, providing transparency and trust to investors. Each token represents a verifiable share of ownership in a specific solar installation, and all transactions are recorded on the blockchain, creating an immutable and auditable trail.

This level of transparency instills confidence among investors, as they can easily verify the authenticity, ownership, and performance of their investments, fostering trust in the SunCash ecosystem.

## 5 STREAMLINED INVESTMENT PROCESS

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Tokenization simplifies the investment process for solar projects. Investors can easily participate in the SunCash initiative by purchasing digital tokens through the SunCash platform.

The use of blockchain-based smart contracts automates various aspects of investment management, such as income distribution,

reducing administrative overhead and increasing efficiency.

Additionally, token holders can conveniently track their investment performance and receive regular income distributions in a streamlined manner through automated transactions.

Overall, tokenizing illiquid assets, such as solar installations, through the SunCash initiative offers numerous benefits to the market and funds. It enhances market liquidity, lowers entry barriers, opens up global investment opportunities, provides transparency and trust, and streamlines the investment process. By revolutionizing the funding models for solar projects, SunCash is driving the transition towards a more sustainable and decentralized energy ecosystem while creating a dynamic marketplace for solar investments that is accessible to a diverse range of investors.

### **Enabling Reliable Carbon Offset and iREC trading**

The integration of smart meters and tokenization of solar assets facilitates the production and trade of carbon offsets and International Renewable Energy Certificates (iRECs). The SunCash method employs blockchain technology to accurately measure, verify, and exchange these environmental assets.

Smart meters are essential for this process as they provide real-time data on energy generation and consumption.

They enable the reliable calculation of carbon offsets and iRECs based on precise measurements of solar energy production.

This data, securely recorded on the blockchain enhances transparency and traceability and reduces the risks of fraud and double counting, which have historically undermined traditional carbon offset markets.

## PEOPLE AND PARTNERS:

### Momint

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Momint is a simple to use and understand blockchain wallet for bankless transactions and marketplace for Digital Assets. It is the number one Web3 company in Africa - being the first platform in the world to facilitate free minting of NFTs for artists and creators who want to own their work. Momint has built Web3 tools that power physical assets and legal contracts on the blockchain, including tracking gold on-chain, fractionalising rare and valuable assets, international marketing campaigns) for the likes of Burger King, Pepsi, Klipdrift) and, of course, the digitisation of heritage assets like Nelson Mandela's Original Warrant of Arrest.

## People

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**Ahren Posthumus**  
**Momint CEO**

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With a formal background in Business and Computer Science at the #1 University in Africa (UCT), Ahren started his career in Cyber Security uncovering vulnerabilities in large banks and telecoms companies and then moved to a mobile money lending business, where he led the secure development lifecycle for the company. He gained certifications such as his CEH, Advanced Cryptography and Peer to Peer Networking.

This background gave him deep insights into the vulnerabilities that lie within Financial and Banking infrastructure, as well as the shortfall in access to finance and payment infrastructure across Africa; having worked in South Africa, Kenya, Ethiopia, Ghana and more.

Ahren is driven by a passion for access to self-sovereign, secure and democratic technology, with the aim of building solutions that positively impact people's lives.

He was awarded 'Investec Entrepreneur Leader of the Year' in 2016. He was also selected to present at the JSE (Johannesburg Stock Exchange) on breaking the walls of code and poverty in South Africa. In 2020 He was voted in the 'Mail & Guardian's top 200 Young South Africans' as the Editor's Choice for Innovation. In 2021 was awarded the 'GQ Man of the year' for innovation. In 2023 awarded EPF Entrepreneur of the year.



## **Roland Tatnall**

### **Led \$3bn renewable transition at major mining company**

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Roland Tatnall, a distinguished executive in private equity, has made a significant impact in the global energy and infrastructure sectors. Notably, as the Managing Director of Exxaro Resources Ltd's Energy Division, he played a pivotal role in the successful \$3 billion Renewable Energy Transition. His influence further extends to key leadership roles at Mubadala Infrastructure Partners, I-Squared Capital, and as a founding member of PMEA Infrastructure, showcasing his broad reach in private equity.

Tatnall's commitment to the sub-Saharan Africa region is evident, having operated in over 15 African countries as well as leading investments for Mubadala Infrastructure Partners. As a founding member of the inaugural private equity infrastructure fund exclusively focused on Sub-Saharan Africa, his dedication is unmistakable. This commitment is further emphasized by his founding of an investment company and his earlier career in oil and gas exploration.

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## **Tyler Reed**

### **CEO Hyve Mobile, 1.5Bn monthly transactions**

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Tyler Reed is a seasoned technology entrepreneur and has founded multiple startups. His expertise lies in navigating the intersection of cutting-edge technology with established processes, leading to disruption and new opportunities. In consulting roles with blue-chip companies, Tyler offers insightful perspectives on technology's impact across diverse industries.

With over a decade in the digital, mobile, and telecom sectors, Tyler collaborated with companies like Vodacom, Multichoice, Media24, TraceTV, WeChat, and SAB.

As the CEO at Hyve, Tyler played a crucial role in expanding the company to a team of 80+ with 15+ deployments across Africa.

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## **Raj Kulasingam**

### **Senior Counsel at Dentons, Energy and Renewables**

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Raj Kulasingam is a seasoned corporate and commercial lawyer at Dentons with over 30-years experience in diverse sectors globally. Specializing in private equity, infrastructure, and utility projects, he focuses on transactions in the UK, Europe, Africa, Asia, and the Middle East. Raj's expertise spans financial services, private equity, real estate, energy, transport, and utilities.

Based in London, Raj is an active entrepreneur and investor with a portfolio of 30+ companies and involvement in four VC funds and a tech accelerator. Born in Malaysia, he maintains close connections with Malaysian companies globally. His legal career includes advising on transactions in Africa, particularly in Kenya, Uganda, Nigeria, Ghana, Zambia, and Mozambique.

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## Partners



### **Operations Finance**

*Group Accounting and Finance management*

Based in London, OpsFi specializes in Crypto Accounting and Strategic Blockchain CFO Services for DeFi, Web 3.0, NFTs, and investment funds. They provide Web3/Crypto and Fiat Accounting, CFO Reporting, and Strategic Advisory for projects in these sectors. Their expertise spans bookkeeping, Financial Operations, and strategic support for startups. They also excel in Tokenomics, Web3 Accounting, Financial Modeling, and Whitepaper Reviews.



### **Cybera**

*AML and Fraud Prevention*

Cybera is a leading partner in fraud protection and Anti-Money Laundering (AML). They provide a global dataset utilized by companies and governments to identify and prevent cyber-related financial crimes, scams, and money laundering. All holders and recipients undergo automated AML verification.

Furthermore, Cybera offers an independent Cyber Crime complaints and case resolution service for Momint and SunCash customers, allowing victims of cybercrime to report incidents swiftly and efficiently.



### **Consensys**

*Startup Accelerator*

ConsenSys supports SunCash through its Startup program, providing direct access to world class blockchain experts and tools. ConsenSys is the leading Ethereum software company in the world, enabling developers to build next-generation financial infrastructure.



### **Microsoft For Startups**

*Cloud Computing Support*

Supports SunCash through its 'Microsoft 4 Startups' program, dedicated to helping innovative startups successfully scale through resourcing, cloud infrastructure and mentorship



### **Mountain Partners**

*Investor*

A Swiss-based early-stage venture capital firm that invests in startups developing innovative technologies and business models. Over more than 25 years, Mountain Partners, its founders, and partner funds have invested in 400+ technology companies.



**CROSSFIN**  
TECHNOLOGY

**Crossfin Holdings**  
Investor

Carbon Zero Solar is an independent consultancy that specializes in the engineering, procurement and installation of turnkey energy-saving solar solutions.



**Outlier Ventures**  
Investor

A leading, UK based, Web3 accelerator and founder community that offers support, infrastructure and advisory in Web3.



**ADAVERSE**

**Adverse**  
Investor

A Web3 Ecosystem Accelerator that aggregates entrepreneurs building tangible utility with its most robust foundation in Africa.

CONSENSYS  
**Diligence**

**Consensys Diligence**  
Smart contract auditing

Industry-leading smart contract audit service used for auditing smart contracts.



full circle  
AFRICA

**Full Circle Africa**  
Investor

A group of venture-backed pan African companies.



**SM River**  
Investor

500 Startups Angel Investor of the year 2021, Investing in great ideas, founders and companies.

**simple.**  
**Capital()**

**Simple Capital**  
Investor

An early-stage venture capital investment and technology company with a focus on democratization.

SUN  SYNK®

**Sunsynk**  
Hardware Supplier

Established over 20 years ago, Sunsynk is an internationally recognised inverter and battery storage brand



TRUST SOLAR  
WE GIVE YOU POWER

**Trust Solar**  
Supplier

Trust Solar is a National Solar PV company that provides high quality residential, and commercial solar solutions.

**ZERO** 

**Carbon Zero Solar**  
Engineering, Maintenance  
and Logistics Partner

Carbon Zero Solar is an independent consultancy that specializes in the engineering, procurement and installation of turnkey energy-saving solar solutions.

## Supported Blockchains



Gnosis is a decentralized platform operating on the Ethereum blockchain, facilitating prediction markets. Users engage in predicting the outcomes of future events, with the precision of these forecasts holding significant informational value.



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Ethereum is a decentralized blockchain platform known for enabling smart contracts and decentralized applications (DApps) using its native cryptocurrency, Ether (ETH).



Cardano is a blockchain platform and cryptocurrency (ADA) designed for scalability, sustainability, and interoperability. It focuses on secure and scalable infrastructure for decentralized applications and smart contracts, using a proof-of-stake consensus algorithm.

As seen in the media: [Click to read article](#)



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## CONCLUSION

SunCash offers a unique opportunity for individuals to invest in renewable energy and contribute to addressing South Africa's energy crisis. By leveraging blockchain technology, SunCash provides a transparent, secure, and pseudonymous method for investors to own physical solar hardware and earn income from their electricity generation. The initiative aims to combat corruption, reduce the strain on the national grid, and promote investment into sustainable energy solutions. SunCash invites potential investors to join our movement towards a greener and more prosperous future.

For more information and to explore our investment opportunities, please visit the SunCash website: <https://suncash.co.za>

### **Disclaimer:**

This white paper serves as a comprehensive guide to the SunCash initiative and its functionalities. Investors are advised to conduct their own research and consult with financial professionals before making any investment decisions and should not rely on any of the information contained herein.

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