



# 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 a sense of ownership, empowerment, and shared responsibility.

SunCash is an initiative that was developed 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 South Africa's national energy crisis.

This white paper provides an in-depth overview of SunCash, 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. This white paper aims to provide a comprehensive layout of the SunCash Initiative and concept to potential buyers and stakeholders.



# WHO IS THIS WHITE PAPER 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 fractionalised digital assets called “Solar Certificates”.

These certificates represent full or proportional ownership in real-world physical solar installations that have been or are in the process of being installed in various locations such as schools, businesses, hospitals, and farms.

SunCash leverages blockchain technology to ensure transparency, security, and immutability in tracking ownership, income generation, and payments associated with the solar installations.

In this white paper, we will describe 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 energy crisis by facilitating democratized funding and installation of renewable energy in communities and businesses affected by energy security; the reduction of carbon emissions and the cost of renewable energy.

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

- 1 Provide South Africans with a **secure and transparent platform** to support renewable energy projects.
- 2 Enable individuals to **earn a meaningful income** from the electricity generated by the portion they have purchased of each solar project over the lifespan of those projects (generally 20 years).
- 3 Reduce the strain on the South African national energy grid by generating independently funded **renewable energy**.
- 4 Foster transparency and **eliminate corruption** by utilizing the latest advancements in blockchain technology for auditability, transaction tracking, contract enforcement and ease of transferability.
- 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 installations and enable secure ownership registration, income distribution, and transparent transaction tracking. A step by step process is provided below:



### SOLAR CERTIFICATE CREATION

SunCash creates a set number of Digital Assets, known as “SunCash Solar Certificates”, on the blockchain for each solar installation.

These Certificates represent beneficial interests in the solar installations to which they are linked and contain relevant legal contracts associated with that relationship.

This data is embedded into each SunCash Certificate and can never be altered or removed.



### INTEREST AND INCOME

By purchasing SunCash Certificates, buyers obtain a beneficial interest in the ownership of physical solar installations located in different community sites.

This beneficial interest entitles buyers to the income from the electricity generated by the solar installations over a term (usually 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 in the future.



### TRANSPARENT BLOCKCHAIN INFRASTRUCTURE

SunCash leverages the blockchain (Gnosis, Polygon and Eth) to provide a secure and transparent register of legal rights.

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

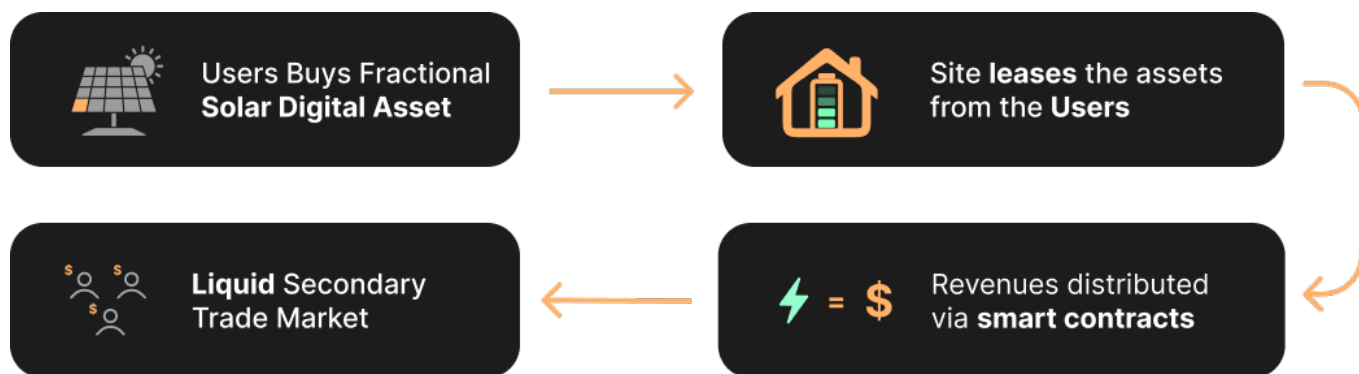


### SOLAR CELL LIFESPAN

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

Partners such as [Carbon Zero Solar](#) are generally incorporated into the long term plan of any project. As a result, we (the partners) receive a discount on the cost of the installation by appointing the engineering company to maintain the site for the lifespan of the asset.

This secures recurring income for them (as opposed to simply working on a project by project basis) and aligns the incentives of all 3 parties to the transaction, namely:

- 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 Holder” - This represents all of the buyers who collectively own all the solar installation that produces energy. The certificate holders want the best possible solar yield, as this directly correlates to income.
- 3 The “EPC” - EPC stands for Engineering and Procurement Company. These are the boots on the ground that get the systems installed and maintain them.

Generally with most solar models, the EPC is primarily incentivised to get the job done as quickly as possible, to move on to the next job. Even if this means cutting corners, because they do not generally have to cater for asset’s performance in 5 years (ie. their revenues are not tied to the long term performance of the system, normally EPCs 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, is placed onto a maintenance contract, whereby their maintenance fee is tied to the ongoing output/revenue of the cells collectively - meaning they are now aligned in incentives, to do the best possible install and maintain the system optimally for its entire lifespan or else it will negatively affect their income to the same proportion that it affects the Offtaker and Certificate holders.



Maintenance contracts will typically cover the following considerations:

### VETTING AND ON-BOARDING OF INSTALLERS AND CONTRACTORS

- Certified electricians & PV green card
- Compliance with local regulations and National NRS 097-2 standards
- SHEQ file and compliance in place
- All other business regulatory Requirements

### CONTRACT ADMINISTRATION

- Site inspection and administration
- Oversee Certificate of Compliance issue (COC)
- Metering and communication infrastructure
- Final completion certificate issued
- Client Liaison during Installation phase
- System sizing and sign off of engineering performance

### COMPLIANCE

- Application of Small Scale Embedded Generation installation to local supply authority
- System and inverters complied and approved 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 administer the metering application process
- Application for tariff changes where necessary
- Where grid or any further studies are required by the regulators and authority, a separate arrangement will be made

## ONGOING ASSET MANAGEMENT

- Managing all insurance & warranty claims. (Collate, submit, follow ups and meetings)
- Smart meter readings and reporting on energy generated and sold to site ensuring optimal efficiency operations
- Management of monthly energy accounts to clients including account statements and payment collection
- Management and monthly settlement of supply authority accounts, where applicable
- Credit check and credit 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)
- New building ownership transfer of systems. (charged to building owner)
- Disconnect and reconnect supply for defaulters. (3 phase, >100 Amp charged to offender)
- Management of contractors and installers during warranty or insurance claims. (incl. In replacement cost)
- New or amended PPA on building ownership transfer (charged to Momint)
- Additional compliance and regulatory requirements (charged to Momint)

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

SunCash leverages blockchain 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 a buyer acquires a SunCash Certificate, the associated legal agreements are already "burned in" or embedded into the metadata of the certificate (an ERC-721 token). The ERC-721 token standard is a non-fungible token standard on the Ethereum blockchain (layer 1 or layer 2), 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 SunCash 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 SunCash Certificates 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/QmdS51hAQ3UMhby7r3ViLMBKnRdjMx9xK9LxMfDryHnErB",
  "image": "https://ipfs.io/ipfs/QmQDxqYUY8Kn2npiFkUfX3d2BLdp8UC7Mt8S5vFTbzhquv"
}

```

## This approach offers several benefits:



### IMMUTABILITY

The legal agreements stored on IPFS cannot be altered or modified, 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 certificate'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 the ERC-721 standard, SunCash ensures that owners have secure and immutable access to the legal agreements governing their ownership of SunCash 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 the legal agreements 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 SunCash Certificates and is highly energy efficient.

## 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 cell is actually acquired by a certificate purchaser, and that the rights and obligations surrounding the certificates 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 simply 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, accurate and unique: 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 certificate, and the relevant data - on the blockchain.

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

Therefore, inserting NFTs as an extra layer in a sales transaction, simply inserts a secure and accurate digital certificate, verifying the sales transaction that has taken place as well as any other essential information related to the sale (old owner, new owner etc).

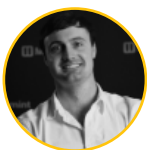
There is nothing about an NFT that changes the fundamental or standard nature of any sales transaction. It merely adds extra provenance, and therefore value, to the transaction. Indeed, the Law Commission of England and Wales recently published a paper on digital assets, smart contracts and other related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

- The existing English common law framework is already flexible, iterative and can 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

English and South African common law are aligned in this respect, therefore our legal counsel has determined that the same conclusions would be reached by South Africa’s legal stature.

Therefore, in order to ensure that validity and enforceability of SunCash’s tokenized model, every certificate and transaction is underpinned by 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 the point of any written contractual agreement).

Put another way, a DASA is nothing more than a standard contract of sale between two parties using an asset-backed digital certificate, as both the method of transferring ownership, as well as the record of that transfer. Other relevant data such as its previous owner (the seller) and present owner (the purchaser) are 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 a Solar certificate contained as an ERC-721 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 a lessee of the electricity generated by the Asset (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. Owners and stakeholders can therefore rest assured that their rights and obligations receive the full recognition and protection of the law.

## Wallets, Storage and Management

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 Non-Fungible Tokens (NFTs) and SunCash Certificates in a blockchain wallet, the security 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.

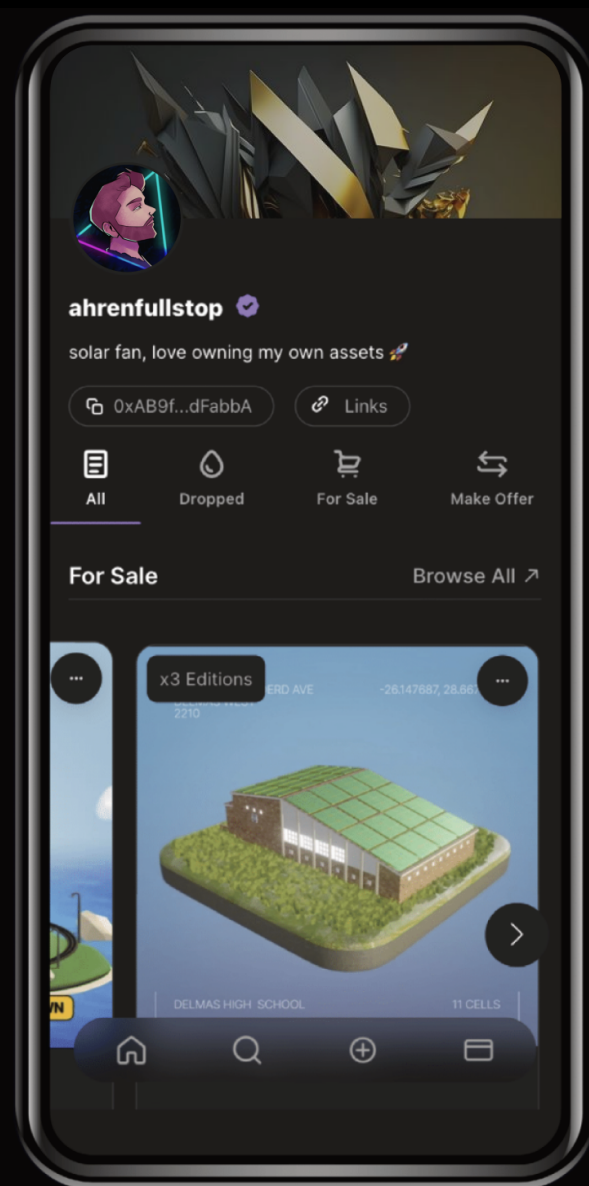
In the context of blockchain wallets, these encryption keys play a crucial role in securing your digital assets. A blockchain wallet is essentially a container that stores your digital assets. The wallet uses two specific encryption keys to access this container: a **public key** and a **private key**.

**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 shared database.



## CERTIFICATE VALUE AND MARKET DYNAMICS

The value of SunCash Certificates is primarily tied to the energy generated by the underlying solar installation. While there is no guarantee of certificate value appreciation, the solar installations are designed to retain their value throughout their 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 we link increases to utility pricing; or unexpected weather phenomena, poor maintenance, asset failure or payment default by the offtaker - which may decrease returns.

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

SunCash aims to mitigate associated risks to solar investing through customer vetting, credit checking, project planning and by incorporating maintenance and repair costs into its financial forecasts.

### Payouts and Commercial feasibility of Solar

Buyers start earning an income as soon as the solar installation is fully installed and operational - this is always clearly communicated to SunCash Certificate owners.

The earning period begins at this point, and owners are notified accordingly. The installation process typically takes 2 to 5 months.

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 have 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.



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



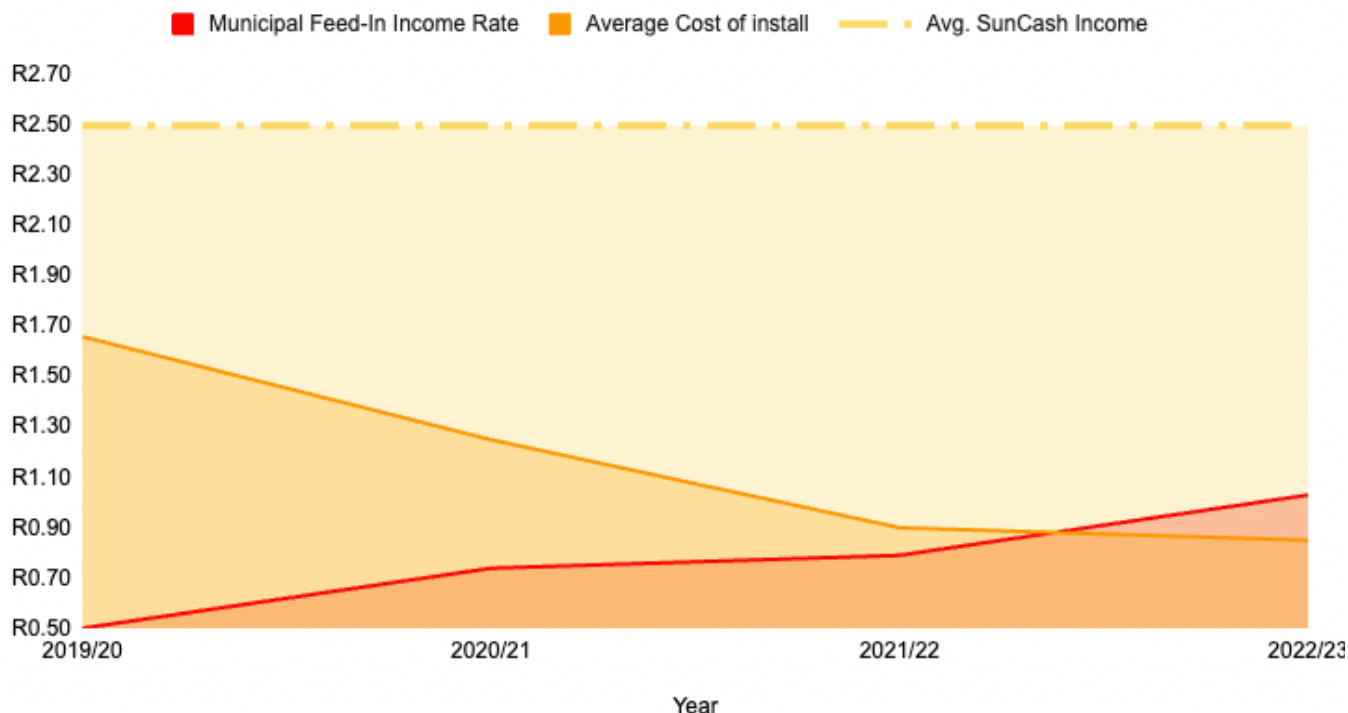
In South Africa, individuals who purchase these cells may qualify for a 25% tax rebate on the cost of new or unused solar panels – up to a maximum rebate of R15,000. For companies the rebate is as high as 125% – as announced by the government in the 2023 Budget Speech.



By 2050, BNEF predicts that solar PV prices will drop for utility-scale PV to cost only \$0.025 per kWh (45c in ZAR). We are currently installing at a cost of less than R1 per kWh which provides significant cost savings versus Eskom. Eskom currently charges tariffs between R1.42 and R4.92. Below is an illustration of cost over time vs feed-in tariffs.

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

### Feed-in vs Cost of Install vs. Direct Income (per kW)



Eskom Tariffs to customers:

Eskom Miniflex <66k	Summer	Winter
Peak	R1.89	R4.92
Standard	R1.43	R1.79
Average	R1.66	R3.35
Average Overall	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 off-taker, and sources indicate that this trend will only continue.



Ahren Posthumus  
Chief Executive, Momint

***“This combination creates a paradigm shift, where individuals and communities are no longer passive consumers but active participants in the energy transition, fostering a sense of ownership, empowerment, and shared responsibility.”***



## Target Yield, Revenue and Costs

SunCash ensures that all project costs, including management, maintenance and insurance are considered included expenses. The target forecast for certificate owners net revenue is approx. 12% yield (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-world data and assumptions, reviewed by finance and energy experts including representatives from Momint, Carbon Zero Solar, Trust Solar, Kappa Crucis Solutions among others.

<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)	<i>1.25% of revenue</i>
Insurance costs (Fire, Theft, Damage)	(7,125.00)	<i>3% of asset value</i>
Network, Platform and Payment Fees	(11,400.00)	<i>2% of asset value</i>
<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 or another potential buyer which will always protect the returns of the SunCash Certificate Owner first and foremost. These clauses are customized to match each project SunCash launches.

## Secondary Market

The secondary market for SunCash Solar NFTs plays a role in providing certificate holders with the opportunity to trade their solar certificates. 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.

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, grants certificate holders full ownership and portability. Certificate holders 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 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 15% premium, 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 operating 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 site itself or a large institutional investor to acquire the entire solar installation. In such cases, certificate holders would be presented with an offer and expected to vote on the decision.

The final outcome would be determined by a majority vote, ensuring democratic participation and consensus among certificate holders.

It is crucial to note that SunCash Solar Certificates are asset-backed, providing inherent value to certificate 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 often face challenges due to the illiquid nature of the underlying assets. Boston Consulting Group estimates that the market for such illiquid assets is \$16.1Tn. SunCash introduces an approach to this problem by leveraging blockchain to tokenize these illiqui

d assets, such as solar installations, bringing significant benefits to the market. This section explores how tokenization improves upon existing solar funding models.

### **1 ENHANCED MARKET LIQUIDITY**

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

These certificates can be easily bought, sold, and traded on digital asset exchanges. By tokenizing illiquid assets, SunCash provides an innovative solution to enhance market liquidity.

The market can now access an asset class that was previously restricted to large-scale institutions, creating a more inclusive and liquid market for solar projects.

### **2 FRACTIONAL OWNERSHIP AND LOWER ENTRY BARRIERS**

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

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

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

## **3** GLOBAL INVESTMENT OPPORTUNITIES

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

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

This global reach expands the trading 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.

## **5** STREAMLINED INVESTMENT PROCESS

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Tokenization simplifies the funding process for solar projects. Buyers can easily participate in the SunCash initiative by purchasing digital certificates through the SunCash platform. T

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

Overall, tokenizing illiquid assets, such as solar installations, offers numerous benefits to the free market. It enhances market liquidity, lowers entry barriers, opens up global opportunities, provides transparency and trust, and streamlines the funding process.

## **4** TRANSPARENCY AND TRUST

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Blockchain technology underpins the tokenization process, providing transparency and trust to owners. Each certificate 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 of ownership and earned revenues.

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

reducing administrative overhead and increasing efficiency.

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

## 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.



## CONCLUSION

SunCash offers a unique opportunity for individuals to own renewable energy assets and contribute to addressing South Africa's energy crisis.

By leveraging blockchain technology, SunCash provides a transparent, secure, and pseudo anonymous method for buyers to own physical solar cells 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 the global community to join our movement towards a greener and more prosperous future.

For more information and to explore our opportunities, please visit the [SunCash website](#).

# APPENDICES

## People and Partners Behind the Initiative

### Momint

Momint is a simple to use and understand blockchain wallet for bankless transactions, as well as a marketplace for blockchain verified 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 powers physical assets and legal contracts on the blockchain, inc

cluding 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. Momint has an incredible team behind the SunCash initiative.



**Ahren Posthumus**  
**Momint CEO | SunCash Spokesperson**

With a formal background in Business and Computer Science, Ahren started his career in Cyber Security and then moved to a large mobile money lending business where he led the secure development lifecycle for the company.

This background gave him deep insights into the vulnerabilities that lie within Banking infrastructure, and having worked in Kenya, Ethiopia, Ghana and more - exposed him to the shortfall of finance and payment infrastructure across Africa.

This led him to further studies in Advanced Cryptography and Peer to peer networks, which form the basis of blockchain. Ahren is a CoFounder of Momint, which was driven by a passion for sovereign, secure and democratic technology, as well as, a drive to build 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 - and is now focusing his full efforts on creating global impact through Web3.0 technology.



## CYBERA™

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Partner for fraud protection and AML (Anti-money laundering) Cybera offers a global dataset which companies and governments use to detect and prevent cyber-related financial crime, scams and money laundering. All holders and recipients undergo automated AML verification.

Additionally any customers of Momint or SunCash can utilize an independent, dedicated Cyber Crime complaints & case resolution service on their platform, where victims of cyber crime can quickly and easily report incidents if they suspect that they have been a victim of a cyber crime ([CYBERCRIME VSRTM](#)).



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



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



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.



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



A Venture Capital firm with a strategic focus on highly scalable financial technology businesses across Sub-Saharan Africa.

## Outlier Ventures\*

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



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



A group of venture-backed pan African companies.



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



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



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



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



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



On a mission is to help carbon-emitting enterprises switch to clean energy cost-effectively

Supported Blockchains:



As seen in the media:



## **Transparency and disclaimers**

This white paper serves as a comprehensive guide to the SunCash initiative and its functionalities. Buyers are advised to conduct their own research and consult with financial professionals before making any purchase decisions. SunCash is an independent initiative, all transactions, legal agreements and representations are undertaken by Momint, A registered company ZA, Registration number: 2021/584583/07.

Momint is banked by First National Bank and collects payments into a secure bipartisan trust account prior to conversion and distribution in USDC. USDC is 'split' using a simple, audited and verified smart contract. All users are sent a link to the public transaction upon pay-outs proving the earning and split of earnings to all SunCash Certificate Holders.

Specific numbers used in this document, such as target yield, depreciation percentage etc, are used for illustrative purposes, and are understood to be the default figures used in projects at the time of writing, but may differ from time to time as advertised on a per-project basis. Please read the specifics of a project prior to purchase.

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