

DESIGN PAPER

A tonne of durable removal per coin, and the arithmetic to check it.

Auragreen Coin is a claim on verified removal credits held in a bankruptcy-remote reserve. They are locked in the registry rather than retired, which is the choice everything else in this paper follows from.

This paper sets out the design in full: how a tonne becomes a coin, what keeps the price inside a narrow corridor, and what happens if holders all leave at once. The mechanism rests on four parameters: a 0.5% mint fee, a 1.0% redeem fee, a 0.5% retire fee, and a 5% buffer target with a 3% floor. Feed in a reference price and a deposit volume and the rest is arithmetic, shown so you can check it.

What backs the coin, and what it costs you to leave.

Auragreen is designed as a full-reserve claim, not a fund and not a promise. This page is the design in one place: what a tonne must be to back a coin, what the fees do, what leaving costs, and what the fees do not cover.

One AGC is one tonne of CO₂e of verified, durable removal. A tonne is eligible on four tests. It must last a hundred years by its own method, not on average across a portfolio. It must follow a CCP-eligible methodology, assessed against the Core Carbon Principles. It must have been issued within the last twelve months. It must sit in a registry account the reserve entity controls. Credits are locked through the registry's own API, never retired.

There is one grade, so redemption delivers the cheapest eligible method, oldest lot first. The coin therefore prices the cheapest-to-deliver tonne, today biochar at a reference price of \$150. A 1.0% redeem fee sets the floor at minus one per cent and a 0.5% mint fee sets the ceiling at plus 0.503%. Arbitrage closes that gap, not the company.

You leave in one of three ways. Sell the coin. Redeem it and take the tonne into your own registry account, subject to a throttle of two per cent of supply per day and then a seven-day queue. Or retire the tonne in a beneficiary's name, which is never throttled. Exits escrow first: coins burn only when the registry confirms the transfer inside a five-day settlement window, and if it does not, the escrowed coins return to you.

Revenue is the weak part, and it has a page of its own. Retire fees cover the \$1.5M annual operating budget only at about 166,700 tonnes retired a month, far above any plausible early volume. So the design is capitalised to wait: about \$7.55M of equity, of which \$4.5M is three years of operations.

IN THIS PAPER

- 03 The problem
- 04 The market
- 05 The unit
- 06 The grade
- 07 The mint path
- 08 The exits
- 09 The corridor
- 10 The buffer
- 11 The invariant
- 12 Liquidity
- 13 Custody
- 14 Verification
- 15 Reflexivity
- 16 Governance
- 17 Capitalisation
- 18 Revenue
- 19 Risks
- 20 Roadmap and close

99,500

AGC ISSUED AT GENESIS (DESIGN TARGET)

104,475 t

LOCKED AGAINST THOSE COINS

\$15.67M

RESERVE VALUE AT \$150 A TONNE

1.5%

WIDTH OF THE PRICE CORRIDOR

Floor -1.0%, ceiling +0.503%

Genesis figures are design targets derived from the stated parameters.

THE PROBLEM

You cannot check what you bought.

The average retired carbon credit costs around \$6 a tonne. Almost none of that price buys you the ability to verify what you are holding.

Buy a carbon credit today and you receive a line in someone else's database. The serial exists. Whether the tonne behind it does, whether it lasts, whether it was sold twice, whether the methodology survives its next review — none of that is something you can establish yourself. You are trusting an intermediary who trusted another intermediary.

Price shows that the market already knows this. At roughly \$6 a tonne, there is almost nothing left over to pay for independent checking of the tonne behind it. Verification does not get bought at that price, so the cheap end stays hard to verify by construction.

Durable removal was meant to fix this, and on measurement it has. On delivery it has not. About 30.4 million tonnes sit under contract, and only 3 to 13 per cent has been delivered. A contract is a promise about a future tonne, and the distance between the promise and the tonne is where the risk lives.

The plumbing is only partly ready. Verra, one of the main voluntary carbon registries, still has no tokenisation framework and is targeting the end of 2026. Where a registry cannot immobilise a credit through its own interface, the token on the chain and the credit in the registry are two separate objects that can drift apart until someone tries to redeem. Auragreen therefore uses only registries that lock through their own API: at genesis, Puro.earth and Isometric. That is a narrow base, and a stated risk.

Auragreen's answer is narrow rather than clever. Lock the credit where it already lives, in the registry, instead of minting a representation of it somewhere else. That single substitution is what the rest of this paper has to hold up. The eligibility tests, the buffer, the exit throttle and the monthly attestation all exist to stop the token and the credit drifting back into being two objects.

A contract is a promise about a future tonne. The distance between them is where the risk lives.

The \$6 average, the 30.4 Mt contracted and the delivery range are published third-party figures, cited in the sources section.

THE MARKET

Small, concentrated, and the main buyer has paused.

Durable removal issued about 0.7 million tonnes in 2025, and one registry, Puro.earth, issued 93 per cent of it. Demand is narrower still: a single company has bought most of what exists.

Set the scale first. The voluntary market retires 170 to 200 million tonnes a year. Durable removal issued about 0.7 million tonnes in 2025, roughly four tenths of one per cent of that. Issuance and retirement are different flows, so read that as a scale check rather than a market share. This is not a large market being reorganised. It is a small one that has not been built yet.

Concentration runs the whole length of it. Microsoft has been roughly 90 per cent of durable purchases, and paused buying in April 2026. With the single buyer standing back from a market this thin, there is very little transacted volume left to set a price against. Published ranges remain, but they rest on few trades rather than a working market.

METHOD	PUBLISHED PRICE PER TONNE
Biochar	\$125–177
Enhanced rock weathering	\$200–370
Bioenergy with carbon capture (BECCS)	~\$390
Direct air capture	\$500+

PUBLISHED PRICE RANGES BY METHOD. THE WEIGHTED FORWARD PRICE ACROSS METHODS IS AROUND \$180 A TONNE.

Prices differ by a factor of four between methods. A tonne is a tonne to the atmosphere, but \$125 of biochar and \$500 of direct air capture are not the same purchase, and no single number sits honestly between them. The table below is four products sold under one word, in a market too thin to arbitrate between them.

That spread is the hardest single fact for any reserve holding more than one method, and it is why this design issues one grade rather than a basket priced at its average. The mechanism, and what it does to the price a holder can rely on, is set out on page 6.

0.7 Mt

DURABLE REMOVAL ISSUED IN 2025

93%

ISSUED THROUGH PURO.EARTH

~90%

OF DURABLE PURCHASES, BY MICROSOFT

Issuance, concentration, buyer-share and price figures on this page are published third-party data, cited in full in the sources section.

The tonne is specified, not averaged

One AGC is a claim on one specific tonne of CO₂e, already in the reserve. Four tests decide whether a tonne may back a coin — durability, methodology, age and account control — and every one is checked before the coin exists.

Behind every coin sit credits in a registry account controlled by the reserve entity: immobilised, countable, and identified by serial number. AGC is not a promise to buy a tonne later, and not a share in a fund that owns tonnes. The tonne is there, in a named lot, before the coin is. What the reserve will accept as that tonne is set by four tests.

Durability is at least one hundred years, measured per method rather than across the basket. An average is a loophole. A basket that averages a century can hold tonnes reverting in a decade, offset on paper by tonnes locked for a millennium. The reversal lands inside your reporting life; the millennium does not help you. So each method clears the bar alone.

The methodology must be eligible under the Core Carbon Principles, the published benchmark a

credit has to meet before it counts as high quality. The credit must also have been issued within the last twelve months. Freshness is not fussiness. Methodologies tighten, projects change hands, registries open reviews, and an old vintage carries more of that history than a new one. Lots that reach six years from issuance are flagged for replacement within 180 days.

Credits are locked to mint, never retired. Retirement is terminal. It consumes the tonne and writes a name on it, so retiring at mint would put our name where yours belongs and leave nothing to redeem. Locking immobilises the lot through the registry's own API, so it cannot be sold, transferred or counted twice. The reserve keeps one power only: retiring the tonne at the end, on your instruction.

1:1

COIN TO TONNE

1 AGC = 1 tCO₂e held in the reserve

≥ 100 yr

DURABILITY, PER METHOD

Not a basket average

12 months

MAXIMUM AGE AT DEPOSIT

Measured from issuance

One grade, and the cheapest tonne sets the price

A reserve holding several methods could sort them into tiers, a coin or a price for each. Auragreen does not. One grade is what keeps one-for-one minting honest when the reserve is designed to hold methods priced between \$150 and \$500 a tonne.

Hold five methods at five prices, mint one coin per tonne regardless, and the arbitrage writes itself. Every depositor brings the cheapest tonne they can find. Every redeemer asks for the dearest. Each round trip takes value out of the reserve and puts it in a trader's pocket. The reserve funds the difference until it runs out.

Tiering buys fungibility problems instead. Several thin markets, a quoted spread for each, and a holder who has to know which tonne they own before they know what they hold. The other route is to keep one grade and define redemption rather than let anyone choose it.

Redemption delivers the cheapest eligible method, oldest lot first. Nobody picks the direct-air tonne out of the reserve, because picking is not on offer. That single rule fixes what a coin can be redeemed for: the cheapest tonne the reserve could hand you today, less

the 1.0% redemption fee taken in kind. Today that tonne is biochar, at a reference price of \$150.

Anything dearer sits behind that price as a cushion, not a premium. Enhanced rock weathering, BECCS, BiCRS and direct air capture with storage would be held at reference prices above the one the coin tracks. The cushion is never payable to you and never becomes a higher redemption ratio. At genesis there is no cushion: every deposited tonne is biochar. What lifts the reserve above supply times \$150 on day one is the buffer alone.

The mechanism is borrowed, not invented. Deliverable bond futures work the same way: the contract tracks whichever bond in the basket is cheapest to deliver, because the seller chooses. Give the seller the choice and the price stops being a claim about the basket and starts being a fact about its floor.

DELIVERY ORDER	METHOD	WHEN A HOLDER WOULD RECEIVE IT
1	Biochar	Always, while any eligible biochar remains. Oldest lot first.
2	Enhanced rock weathering	Only once no eligible biochar is left.
3	BECCS (bioenergy with carbon capture and storage)	Only once the two above are exhausted.
4	BiCRS (biomass carbon removal and storage)	Only once the three above are exhausted.
5	Direct air capture with storage	Last, and in practice not at all while cheaper methods are held.

REDEMPTION WORKS DOWN THIS ORDER AND STOPS AT THE FIRST ELIGIBLE LOT. REFERENCE PRICES BY METHOD ARE ON PAGE 4.

A basket with many prices and one mint ratio hands its dearest tonnes to whoever asks first.

The delivery order is not fixed to biochar. If biochar stopped being the cheapest eligible method, the coin would track whatever took its place at the top of the order.

THE MINT PATH

Six steps from a tonne to a coin

Minting is not a decision about supply. Coins appear only after credits are locked, so the float follows the deposit history — with one capped exception, where buffer tonnes above target are minted to the operating entity as inventory.

Nothing is minted to order for the public float. Credits move into the reserve entity's registry account, the lot passes the eligibility tests, the registry confirms the lock, and only then does the contract mint. Read the float and you are reading a deposit history.

The mint path

- 01 Deposit. A verified supplier transfers issued credits into the reserve entity's registry account, by serial range.
- 02 Test. Each lot is checked for durability, methodology, issuance date and account control, then against the concentration caps: 10% per project, 20% per verification body, 60% per registry.
- 03 Lock. The reserve entity immobilises the lot through the registry's own API. Nobody can transfer, sell or retire the credits while the lock holds, and locking is not retirement: the tonne is still there to redeem or retire later.
- 04 Hash. The serial ranges are hashed on-chain and enter the daily published record, which allocates ranges to holders.
- 05 Mint. One coin per tonne, less the 0.5% fee, which stays behind as tonnes.
- 06 Attest. Each month an independent accountant confirms the serials on-chain are live, locked credits, and that their count covers supply plus buffer.

0.5%

MINT FEE

Taken in kind, never in cash

500 t

HELD BACK AT GENESIS

From 100,000 tonnes
deposited

Only one of the two exits is capped

A coin leaves the system by retirement or by redemption. One consumes the tonne in a name you choose; the other hands you the credit. Both end in a burn, and the burn always comes last.

Retire when you are the buyer of the removal. You name a beneficiary, the reserve retires the tonne at the registry, and the retirement certificate is issued in that name. The coin burns with the tonne. The fee is 0.5%, paid in cash at the reference price. It is the only fee in the system not taken in tonnes.

Redeem when you want the credit itself: you hold a registry account, face a reporting obligation, or have a better use for the tonne than the reserve has. The reserve transfers the lot to your account and the coin burns. The fee is 1.0%, taken in kind, and it stays behind as buffer for the holders who remain.

	RETIRE	REDEEM
Where the tonne ends up	Consumed at the registry. It cannot be claimed or sold again	Live in your account. You can hold it, retire it or sell it on
In whose name	A beneficiary you choose	Your own account
Fee	0.5%, in cash at the reference price	1.0%, in kind, kept as buffer
Pace limit	None	2% of supply per day, then a seven-day queue

THE TWO EXITS SIDE BY SIDE. IN BOTH, THE COIN BURNS ONLY WHEN THE REGISTRY CONFIRMS, WITHIN FIVE DAYS.

Both exits settle the same way, and the ordering is the protection. Your coins move into escrow first. They burn only when the registry confirms the retirement or the transfer, inside a five-day window. If confirmation does not arrive, the escrow returns them. No point in that sequence leaves the coin burned and the tonne unmoved. That is what the ordering buys, and not more: smart-contract and custody risk sit with the other risks.

Redemption is capped at 2% of supply a day, and beyond that cap exits join a seven-day queue. Position in the queue buys nothing. If a registry

opens a review, every exit in it settles at the same provisional ratio. The affected lots are quarantined in the same block, so a shortfall is shared rather than falling on whoever is last. The cap exists because a run is possible, and leaving it out would not make the reserve any deeper.

Retirement is never throttled. If you bought a coin in order to make a claim, a queue between you and that claim defeats the instrument. Redemption is where a run would come from, because it moves tonnes back out into the market where they can be sold again. Retirement ends them.

Redemption returns a tonne to the market. Retirement is the only exit that consumes one.

The floor is a redemption, the ceiling is a mint

Both edges are trades, not promises. Above the ceiling a tonne holder can manufacture a coin more cheaply than the market sells one; below the floor a coin holder can take delivery of a tonne worth more. Nobody is obliged to do either.



Start at the bottom. A coin can be handed back for a tonne, less the 1.0% redemption fee, which is taken in tonnes rather than cash. That fixes a hard number below the reference price: 99 cents of tonne for every dollar of reference. Sell a coin under that and you have sold it for less than its contents.

Now the top. Anyone holding an eligible tonne may deposit it and mint, and the 0.5% mint fee is also paid in kind, so 1,000 tonnes become 995 coins. The cost of manufacturing a coin is therefore the price of a tonne divided by 0.995, half a per cent above reference. Pay more than that in the market and you have overpaid for something you could have made.

Between the two edges sits about 1.5% of free space. Inside it the price is whatever buyers and sellers agree. Outside it, a third party with tonnes or coins has a mechanical reason to act, and that acting drags the price back. The reserve itself takes no position at either edge: a deposit is accepted at one and a redemption honoured at the other, on the same terms every day, so the gap is always a third party's to close.

This is a boundary, not a peg. It holds only while someone is willing to do the trade. That trade takes registry time: a deposit has to settle, and a redemption has to clear a five-day settlement window, plus a queue on a busy day. Expect the edges to be soft by the width of those frictions.

WHERE THE PRICE IS	WHO ACTS	THE TRADE	EFFECT
Above $P \div 0.995$	A tonne holder	Deposit an eligible tonne, mint 0.995 coins, sell	Supply rises, price falls back
Inside the corridor	Nobody	No riskless trade exists	Price floats on demand
Below $P \times 0.99$	A coin holder	Buy the coin, redeem, take delivery of the tonne	Supply falls, price rises back

THE TWO EDGES, AND THE TRADE EACH ONE PAYS FOR.

-1.0%

REDEMPTION FLOOR

$P \times (1 - 1.0\% \text{ redeem fee})$

THE CORRIDOR

+0.503%

MINT CEILING

$P \div (1 - 0.5\% \text{ mint fee})$

≈1.5%

CORRIDOR WIDTH

Floor to ceiling

THE BUFFER

More tonnes than coins, on purpose

The reserve targets 5% more tonnes than coins in issue, with a hard floor at 3%. When the floor breaks the mint fee steps up to 5%, and the arithmetic explains why it cannot be lower.

The buffer exists because credits can fail after they are locked. A registry can invalidate a lot; a project can reverse; a re-verification can come back short. Those losses land on the reserve's own tonnes first. The rule is that the buffer must be at least twice the invalidation loss expected in a year, so an ordinary bad year is absorbed without touching backing.

Target and floor do different jobs. The target, 5% of supply in tonnes above one-for-one, is where the reserve is meant to sit. The floor, 3%, is where behaviour changes. The mint fee jumps from 0.5% to 5%, still in kind, so each new deposit hands over ten times as much of itself until the target is back.

The 5% step-up is not a round number chosen for effect. At a target buffer ratio b , a mint fee of exactly $b/(1+b)$ leaves the ratio where it found it. With b at 5% that break-even is 4.76%. Set the step-up below that and each new deposit would thin the very thing it was called in to thicken. A 5% fee clears the line, with little to spare.

Depth of buffer is useless if the losses arrive together. So the buffer is paired with concentration caps on project, verifier and registry, and with an age rule. An old lot is one whose project has had longer to go wrong.

What the reserve is not allowed to become

- No more than 10% of tonnes from any one project.
- No more than 20% verified by any one verification body.
- No more than 60% held in any one registry.
- At least three verifiers in place before the reserve passes 50,000 tonnes.
- Lots older than six years flagged, and replaced within 180 days.
- Invalidation insurance on top of the buffer, not instead of it.

Depth of buffer is useless if the losses arrive together.



The 2x rule is a design parameter, not a measurement. The expected annual invalidation loss it multiplies is itself an estimate, which is why the caps and the insurance sit alongside the buffer rather than behind it.

Nobody can sell the same tonne twice

No rebasing, no haircut, no announcement that each coin is now worth 0.98 tonnes.

Coins in issue may never exceed tonnes locked. The invariant binds in one direction only, survives an invalidation without rebasing anybody's balance, and fences the single route by which the company may hold coins of its own.

The rule is one line: coins in issue may never exceed tonnes locked. It binds in one direction only. Tonnes may sit in the reserve with no coin against them, and the genesis design leaves 4,975 doing just that. Coins cannot exist with no tonne behind them. Nothing mints against a pledge, a forward or a credit in transit, because none of those can be locked at a registry, and the lock is what the mint reads.

Supply cannot drift above backing because a locked tonne is never consumed. It is allocated to a coin holder, but nobody has claimed the removal as their own, so it stays countable for as long as a coin stands against it. A retired tonne is different: the claim is made, once, and the tonne is spent. Sell a second coin against one and the shortfall is

permanent. That is why retirement waits for a holder's instruction.

When a lot is invalidated, nothing happens to your coin. The tonnes come out of the buffer, so backing falls from 105% of supply towards its 103% floor. Break that floor and the mint fee steps up until deposits refill the buffer. No rebasing, no haircut, no announcement that each coin is now worth 0.98 tonnes.

The one route by which the operating entity can hold coins is inventory, and it is fenced. Only buffer tonnes above target may be minted that way, never tonnes that back supply. The position is capped at 20% of float. Any sale needs 30 days of public notice, so the market sees the seller coming rather than meeting it in the book.

The buffer is finite. If invalidations ever outran it, the shortfall would reach holders; the caps and the insurance make that less likely, not impossible. Nothing has been deposited yet, and no coin has been issued.

LIQUIDITY

Where the cash goes, in order

Cash the company earns is spent in a fixed order, and operations come last. What that buys is depth: a measured target that rises with retirement volume, funded by owned positions rather than rented ones.

It would be easy to fund the market last and then call thin trading a launch problem. Here the order is fixed in advance, so it cannot be re-argued in a quarter when cash is short. The buffer comes first: a reserve short of its target is one bad lot closer to the floor, so cash that could top it up is not available for anything else, including the payroll of the people deciding how to spend it.

Depth is a measured quantity with a target attached. Two per cent depth means the value the market can absorb without moving the price more than 2% from the mid-price. That figure must be at least 0.05 times the trailing thirty days of retirement value. The target moves with use: a quiet reserve is not asked to fund a large book, and a busy one cannot let its market lag behind its flow.

The waterfall, in order

- Buffer purchases, until the reserve is back at its 5% target.
- Then 50% of what remains into protocol-owned liquidity, until the depth target holds.
- Then operations.

\$250,000

LIQUIDITY SEED

Equity, required at launch

33,300 t

MONTHLY RETIREMENT COVERED

By the seed alone, at the depth target

CUSTODY

Who holds the tonnes

Backing is a legal question before it is a technical one. The credits behind AGC sit in registry accounts held by an entity that cannot trade them, borrow against them, or fail its way into spending them.

The account holder of record at every registry is a bankruptcy-remote reserve entity. It holds the locked credits for the benefit of coin holders and for nothing else. The credits are not assets of the operating entity. A creditor of the operating business has no claim on a single tonne, and an administrator winding that business up finds no reserve to sell.

Allocation is by serial range, published daily. The record maps every serial in the reserve to the coins standing against it. Backing is not an aggregate assertion but a list that can be read line by line. Puro.earth and Isometric hold the reserve at genesis, and the split is deliberate: two accounts of record, two sets of registry terms, and no single record-keeper whose failure takes the whole reserve with it.

PARTY	HOLDS	CAN DO	CANNOT DO
Reserve entity	Registry accounts of record; the locked credits	Lock, release, retire; revoke operator credentials	Pledge, sell or lend the credits
Operating entity	Operator credentials only	Instruct registry actions on the reserve entity's behalf	Hold title to a tonne
Coin holder	AGC	Retire, redeem or transfer coins	Instruct a registry directly; every lock, release and retirement passes through the reserve entity
Registry	The canonical record of each credit	Mark a credit locked, released or retired	Release a locked lot to anyone but the account holder of record

TITLE, CONTROL, AND THE GAP KEPT BETWEEN THEM.

The operating entity never holds title. What it holds is operator credentials: the ability to instruct a lock, a release or a retirement. The reserve entity can revoke them at any time, which is what makes the daily record enforceable. If the operator misbehaves, the credentials go and the reserve carries on without an operator.

Registries can fail too, so the design makes a run-off covenant a condition of using a registry at all. A terminating registry must keep processing locked lots for 24 months after it stops taking new business. That is the window in which credits are migrated or released, and the design requires it in writing before a single tonne is locked rather than leaving it to a crisis.

The operating entity can fail without a single tonne moving.

VERIFICATION

The evidence is a list of serials

The reserve's claim is a list, not an assertion. Every tonne behind AGC is a serial number, hashed on-chain as the coins are minted against it and public at the registry every day the reserve holds it.

Minting writes the evidence first. A credit is locked in the reserve entity's registry account through the registry's own API, its serial is hashed on-chain, and only then are the coins issued. The hash is not the proof; the registry is. The hash fixes what the reserve claimed, and when it claimed it, so the record cannot be quietly edited afterwards.

Once a month an independent accountant attests to a narrow set of facts. Narrow is the point. A cheap, binary check performed twelve times a year is worth more than a broad opinion nobody can reproduce. It also keeps a boundary in place: the accountant

checks the registry's record, not the science behind it.

Between reports nothing is withheld. Registries publish credit status, so anyone can take a serial from the daily allocation record and look it up the same afternoon. Most days, verification is self-service. The monthly attestation covers the days nobody bothers, and puts a name to the result.

The attestation inherits the registry's accuracy. If a registry's record is wrong, the reserve's record is wrong in the same way. That is an argument for capping exposure to any single registry and verification body, and for holding a buffer, not for claiming more certainty than the evidence carries.

What the monthly attestation asserts

- Every serial hashed on-chain corresponds to a credit that exists at the registry.
- Each of those credits is live and locked: not retired, not transferred, not counted twice.
- The count of locked tonnes covers circulating supply plus the buffer.
- It does not assert that a tonne was removed. The methodology and its verifier do that.

Every serial

HASHED ON-CHAIN AT MINT
Fixes the claim and the day it was made
VERIFICATION

Monthly

INDEPENDENT ATTESTATION
Published with the serial list

Any day

SELF-SERVICE CHECK AT THE REGISTRY
No need to wait for the report

Nothing here feeds on itself

Two failure modes share one shape: a price that responds to its own flows, and an exit that responds to other people's exits. Both are cut off by construction rather than by discretion.

±10%

ORACLE BOUND TO THE INDEX

The published price is bounded to that range

3%

CAP ON DAILY MOVEMENT

Measured across the day, not per print

Three

INDEPENDENT INPUTS TO THE PRICE

Index, broker composite, third-party prints

The reference price is exogenous only: a published index, a broker composite and third-party primary prints. Deposits and redemptions settle in tonnes, and their fees are taken in kind, so the reserve never sets a cash price at which they clear. The one cash line is the retire fee, charged at the reference price rather than fed into it. No channel exists by which the reserve's own activity can reach its own oracle.

Bounds do the rest. A published price must sit within 10% of the index, and may move at most 3% in a day. A bad print therefore has a known worst case instead of an open-ended one. The centre of the corridor cannot be walked away from the market one small step at a time.

Exits have the same shape as prices: the danger is one responding to another. The redemption

throttle, the queue and the settlement window are set out under exits. What belongs here is the reason none of them touches retirement. A run is a rush to leave with the tonne intact; retirement does not leave with a tonne, it ends one. The exit that cannot feed a run is the one that is never rate-limited.

What a review does, it does to everyone at once. If a registry opens one, exits stop settling one-for-one and settle at a provisional ratio instead, which holds the disputed tonnes back until the review closes. Every exit submitted in the same block is quarantined together, so a loss is shared across the queue rather than landing on whoever clicked last. Nothing is gained by being early, which is what stops one exit becoming a reason for the next.

An oracle that can see the reserve's own flows will eventually be quoting them back.

The oracle governs where the corridor sits. It has no authority over how many tonnes a coin mints or redeems for.

GOVERNANCE

Tighten fast, loosen slowly

The council can make the reserve more conservative on the day it decides to. Loosening anything takes 104 days, a holder veto stands over it throughout, and while the launch freeze holds it cannot happen at all.

CHANGE	PUBLIC NOTICE	TIMELOCK	HOLDER VETO	TAKES EFFECT
Tightening a constraint	None required	None	Not applicable	On decision
Loosening a constraint	90 days	14 days	Yes	After both periods run
Loosening while the freeze holds	—	—	—	Not possible

WHAT EACH KIND OF CHANGE HAS TO CLEAR BEFORE IT TAKES EFFECT.

The council can tighten immediately. It can lower a concentration cap, raise the buffer floor, shorten the 180-day window for replacing an old lot, or suspend a method. Each takes effect on the day it is decided, because the cost of waiting falls on holders.

Loosening runs the other way. A change that relaxes a constraint is published, waits 90 days, then waits a further 14 in a timelock before it can execute, and a holder veto stands over the whole of it. The delay is not friction for its own

sake: three months is long enough to sell, redeem or retire if you disagree with where the design is going.

Early on, even that is more discretion than the design deserves. Governance is frozen until the non-affiliated float reaches at least 50% of supply, or for 12 months, whichever comes first. Until then the parameters in this paper can be tightened but not relaxed, and the people who wrote them cannot vote to improve their own position.

No yield, no staking, no pre-mine: holding a coin earns nothing, and every coin in existence was minted against a tonne locked in the reserve. Anything paid to holders would come out of the reserve, and the reserve is already spoken for. Non-affiliated float means coins held by parties unconnected to the operating and reserve entities.

What sits on the balance sheet at genesis

The reserve lines below fall out of parameters already set: the mint fee, the buffer target and the reference price. The equity lines are commitments the design chooses, sized so you can argue with each one. Neither is a forecast.

Read the table below as two halves. Above the line, the reserve figures are consequences: tonnes come in, the mint fee holds some back in kind, and the coin count follows from what is left. Below it, every figure is a choice. The only place the two halves meet is the 4,475 tonnes equity buys to lift the buffer to target, which appears twice, once as tonnes and once as the cash it cost.

Buying that buffer at genesis rather than letting fees accrue it is not a preference. A 0.5% fee cannot build a 5% buffer at all: every new deposit adds tonnes to

supply faster than the fee adds them to the buffer. That is why the fee steps up to 5% in kind if the buffer ever falls through its floor, and why at genesis equity does the job instead.

Only one of the six equity lines buys tonnes. The rest pay for counsel, attestation and three years of salaries, because an entity that can be audited costs money whether or not anyone mints. The wind-down reserve is the outlier: \$250,000 held back so the entity can afford to stop. It is the only line in the plan that assumes the plan fails.

LINE	AMOUNT	NOTE
Tonnes deposited	100,000 t	Biochar suppliers at genesis
Mint fee, in kind	500 t	0.5%, retained as buffer
Coins issued	99,500 AGC	One coin, one tonne
Equity buffer purchase	4,475 t	Tops the buffer to 5%
Total locked	104,475 t	Reserve value \$15.67M
Buffer purchase, in cash	\$671,250	Cost of the 4,475 t above, at \$150
Own funds	\$378,000	Minimum capital held: EUR 350,000 at \$1.08
Liquidity seed	\$250,000	Protocol-owned depth
Audits and legal	\$1.5M	Attestation, counsel, filings
Operations	\$4.5M	Three years at \$1.5M
Wind-down reserve	\$250,000	Prefunded

GENESIS RESERVE AND THE EQUITY PLAN BEHIND IT

\$7.55M

EQUITY REQUIRED

Sum of the six equity lines below

5.0%

BUFFER AT GENESIS

4,975 t held above 99,500 coins

5 of 6

EQUITY LINES THAT BUY NO TONNES

Own funds, liquidity, audits, operations, wind-down

These are the figures the stated parameters produce. At genesis one method backs the reserve, so the reference price and its market value are the same number.

REVENUE

The fees do not pay for the company

166,700 t

MONTHLY RETIREMENT BREAK-EVEN

Retire fees alone against \$1.5M a year

Mint and redeem fees are taken in kind. They strengthen the reserve and pay nobody. The retire fee is the only cash that comes in: 0.5% of the \$150 reference price, which is where the 75 cents comes from. That is the whole of the fee income, and everything below follows from it.

Divide the \$1.5M annual operating budget by that 75 cents and you need two million tonnes retired a year, or roughly 166,700 every month, before fees alone cover the company. Set that against a durable CDR market that issued about 0.7 Mt across the whole of 2025. Break-even asks for close to three times everything the market produced last year, retired through this one reserve, and then again the year after.

The plan funds three years of operations at \$1.5M a year because the alternative is worse. Assume fee income arrives sooner and you either raise the retire fee until settling through the coin costs more than retiring at the registry direct, or you pay salaries out of the reserve. Neither is acceptable, so neither is assumed.

Retirement services are meant to carry the rest. A corporate buyer wants removal retired in its own name, with a serial it can look up and an attestation behind it. That is a service, not a spread. None of that revenue is modelled here, because none of it has been earned. What is modelled is the runway that has to outlast the wait.

\$0.75

CASH PER TONNE RETIRED

0.5% of the \$150 reference price

3x

BREAK-EVEN AGAINST THE MARKET

2 Mt a year needed; 0.7 Mt was issued in 2025

RISKS

Eight ways this can fail

Each of these is live. The design mitigates several and eliminates none. Read the third column as what the design does first, not as a promise about what happens next.

Credit failure lands on the reserve's own tonnes before it reaches any holder. The buffer is sized against an ordinary year, and the table below gives the sizing. A worse year than that is possible, and if one

came the shortfall would reach holders. Insurance and the caps change the odds. Neither changes the arithmetic.

RISK	WHAT IT MEANS	FIRST MITIGATION
Invalidation or reversal	A locked credit is invalidated or reverses after minting.	Buffer at 5%, floor 3%, at least 2x expected annual loss, plus insurance.
Method concentration	Biochar backs the whole reserve at genesis.	Breadth gate: a second method at 15% of the reserve for 90 days.
Registry and verifier concentration	Few registries, few verification bodies.	Caps of 60% per registry and 20% per verifier; three verifiers before 50,000 t.
Liquidity	The corridor holds only if somebody arbitrages it.	Protocol-owned liquidity; 2% depth at 5% of trailing-30-day retirement value.
Run risk	Holders exit faster than settlement allows.	2% daily throttle, 7-day queue, escrow-then-burn. Retirement is never throttled.
Smart contract and custody	Code or credential failure.	Reserve entity is the account holder; operator credentials are revocable.
Regulatory classification	No authorisation anywhere; posture only.	None available. Stated as an open risk.
Tax	Treatment is unknown and personal to the holder.	None available. Take your own advice.

PRINCIPAL RISKS AND THE FIRST LINE OF DEFENCE

Two things that cannot be engineered around

- Regulatory classification: in the EU the posture is an asset-referenced token under MiCA, the bloc's crypto rulebook, meaning a token backed by a reserve of other assets. In the US the posture is a commodity. Nothing is registered or authorised anywhere, and a different classification would change the design or end it.
- Substitution: durable removal is not a substitute for cutting emissions. A tonne removed and a tonne never emitted are not the same instrument. Treating a reserve of the first as licence for the second is a misuse of it.

Two rows in this table have nothing in the third column. Those are the risks the design cannot touch.

The corridor prices a tonne at the index. It does not discount for the chance that the tonne fails; the buffer is what absorbs that instead.

Four workstreams, one critical path

Phase 0 is complete, and its deliverable is this document. What follows is not a queue. Four build workstreams run concurrently from the capitalisation close, and one of them, registry lock integration, sets the date of first issuance.

WORKSTREAM	WINDOW	GATED BY	EVIDENCE THAT CLOSES IT
Design and specification	Complete	Nothing	The 19 pages before this one, every parameter fixed
Supply contracting	M0 to M8	Nothing, longest lead	Tonnes contracted inside the 10/20/60% caps
Entity, custody and counsel	M0 to M4	Capitalisation close	An entity able to hold a registry account in its name
Contract engineering and audit	M0 to M7	Nothing, runs from day one	Mint, redeem, retire and escrow on testnet, audit cleared
Registry lock and attestation	M4 to M8	Entity formation	A test lot locked, released, serials reconciled to it
Genesis and corridor proof	M8 to M12	All four workstreams	104,475 t locked, then 30 days inside the band

FOUR WORKSTREAMS, ONE CRITICAL PATH, CAPITALISATION CLOSE TO CORRIDOR

Phase 0 is closed, and the nineteen pages before this one are its deliverable: the unit definition, the eligibility tests, the fee arithmetic and the corridor it draws, buffer mechanics, the exit and escrow design, custody, attestation, oracle bounds, governance and a costed capitalisation plan. Nothing in the build below waits on a design decision, because the design decisions have been made and written down where they can be checked.

What follows is four workstreams, not four phases. Entity formation, contract engineering, registry integration and supply contracting have different counterparties, different skills and different failure modes, so they run at once. Supply contracting starts on day one and finishes last: sourcing tonnes inside the 10% project, 20% verifier and 60% registry caps is the longest commercial lead in the plan, and it waits on no line of code. Genesis is not a fifth workstream. It is the four arriving together.

Only two hard dependencies bind the four. A registry account cannot be opened before the entity that will hold it exists, and an attestation cannot be dry-run before there is a locked lot to reconcile against. Both run through the registry, so the critical path is formation, then an account in the entity's own name, then lock and release proved end to end on a test lot, then genesis. That chain runs nine months, and every other workstream is planned to finish inside it.

Genesis is not the end of the plan. The corridor is proved after it, on thirty consecutive days of prints inside the band with ten or more counterparties trading at the edges. Breadth follows the corridor, because admitting a second method while arbitrage is still unproven would move two variables at once and the buffer would absorb the confusion. Each of those thresholds is a number, set here, and published every day it is measured.

Every threshold here was set before there was a result to suit, and each will be measured in public.

Windows count from the capitalisation close, not from calendar dates, and are targets. Every figure in this document derives from the stated design parameters at a \$150 reference price.