

Kiwi CO2 (KCO2): A carbon accounting network enabling publicly verifiable carbon credit issuance and emission offsetting.

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1. Summary

Kiwi CO2 (KCO2) is a carbon credit issued by kiwico2.org. 1 Kiwi CO2 (KCO2) represents 1 tonne (1000 kg) of sequestered atmospheric CO₂. This representation is [anchored](#) by [compliant](#) real-world CO₂ sequestration data profiles linked to each Kiwi CO2 (KCO2) carbon credit in circulation, listed in a [public registry](#). Kiwi CO2 (KCO2) carbon credits are issued onto the [stellar-network](#). This enables open market pricing, full traceability, high network [efficiency](#) and emission offset [receipting](#).

2. Anchors

Anchors are validation methods used to authenticate steps within an ecosystem. The Kiwi CO2 accounting network uses anchors to validate: Asset association, carbon credits and emission offsetting.

The association of the [stellar-network](#) asset [Kiwi CO2 \(KCO2\)](#) and the website kiwico2.org is validated by the [issuing account](#) home domain and Kiwi CO2 [toml](#).

The Kiwi CO2 (KCO2) carbon credit representation is anchored by [compliant](#) real-world CO₂ sequestration data profiles linked to each Kiwi CO2 (KCO2) carbon credit in circulation, listed in a [public registry](#). The data profile URL is attached in the “Memo (TEXT)” section of each [issuance transaction](#).

Regulatory [guidance](#) defines offsetting as the cancellation or removal of carbon credits from circulation, so they cannot be used again by another buyer. On the [stellar-network](#) an asset is [deleted or ‘burnt’](#) when it is sent to the [issuing account](#).

This transaction creates a permanent [public record](#) proving how many credits were offset, when they were offset and who offset them.

3. Risk report

User error (high). There is a high level of risk associated with user error due to the possibility of losing or exposing your account secret key, and of entering typos when transferring or trading digital assets. User error is mitigated by securely backing up your secret key and double-checking all network actions before completion.

Third party application risk (medium). There is a medium level of risk associated with using third party applications, such as the solar wallet application and user device operating systems. Third party application risk is mitigated by keeping software updated, and it is partly mitigated by the solar wallet being non-custodial, meaning that your account can be restored on other stellar-network applications.

Kiwi CO2 network risk (medium). There is a medium level of risk associated with having an ongoing issuing authority due to exposure to user error and third party application risk. Kiwi CO2 network risk has been partly mitigated by the [authorization immutable](#) flag being set. Meaning that once issued, Kiwi CO2 (KCO2) carbon credits will persist on-chain in an open and accessible [state](#).

Stellar-network (low). There is a low level of risk associated with the stellar-network as it has a good operational history.

4. Emission offsetting

Regulatory [guidance](#) defines offsetting as the cancellation or removal of carbon credits from circulation, so they cannot be used again by another buyer. Kiwi CO2 carbon offsetting is completed in a permanent and publicly verifiable manner through the creation of [offset transactions](#).

Because 1 Kiwi CO2 carbon credit represents 1 tonne of CO₂ that has been captured, deleting that credit represents that CO₂ being released. But because the CO₂ (that was captured to issue the credit) remains captured after the credit is deleted, the representation of the credit changes to represent CO₂ that is emitted.

On the [stellar-network](#) an asset is [deleted or 'burnt'](#) when it is sent to the [issuing account](#). This transaction creates a permanent [public record](#) proving how many carbon credits were offset, when they were offset and who offset them.

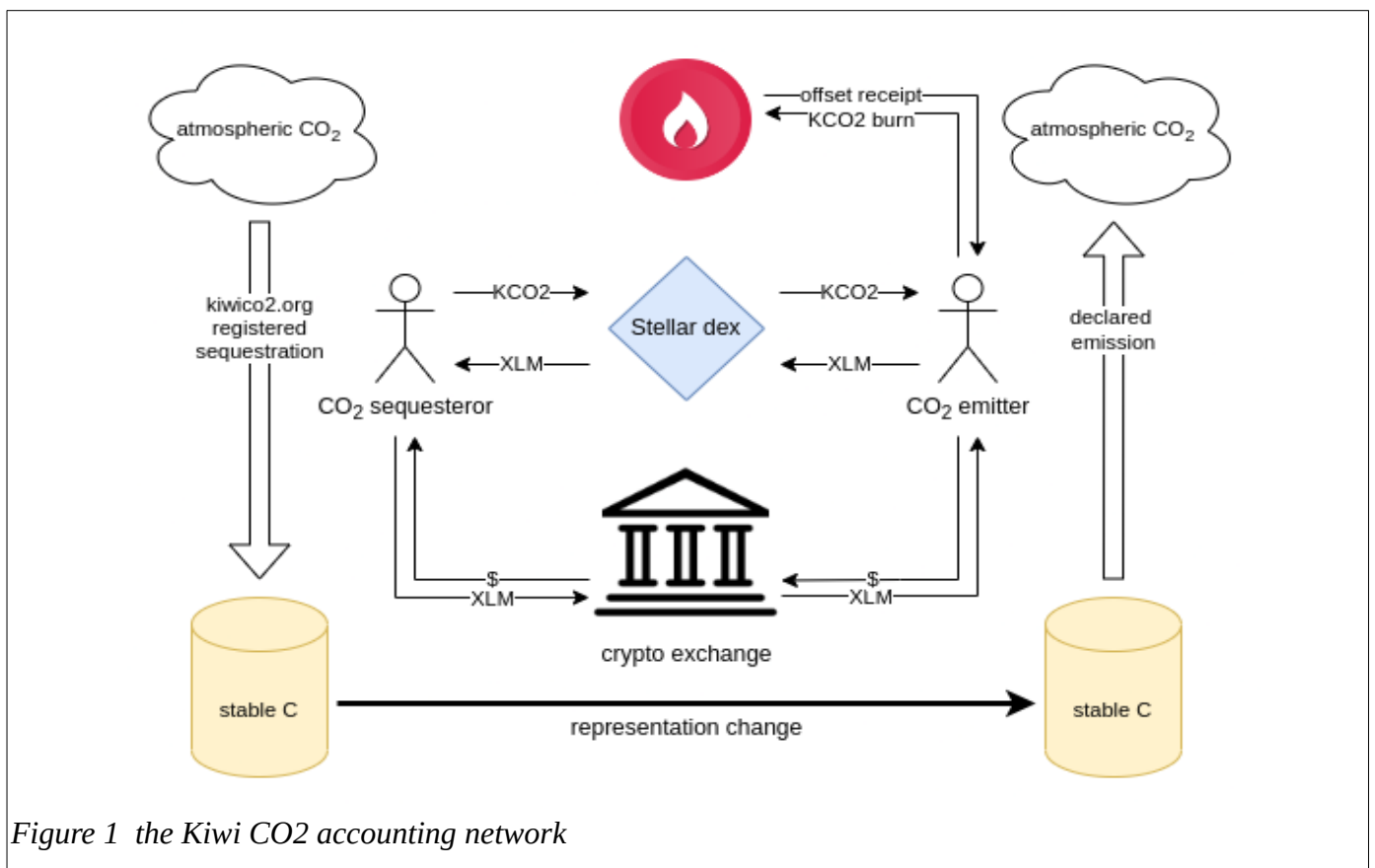


Figure 1 the Kiwi CO2 accounting network