

# The mining of crypto assets has complex income tax and VAT implications

By Joon Chong | 03 August 2022

*Crypto assets can be earned as rewards from proof of work or proof of stake mining, and the tax payable will be different from each activity.*

The income tax and VAT consequences for crypto asset mining will vary, depending on the different ways that crypto assets are earned as rewards. These are:

1. proof of work (POW) mining, where:
  - a. the miner owns the machines (Scenario 1a); or
  - b. the miner rents computing power (Scenario 1b); and
2. proof of stake (POS) mining (Scenario 2).

POW mining is analogous to “mining for gold in the ground”. The crypto miner solves a problem in order to validate a transaction to be added onto the distributed ledger. The likelihood of validating a transaction is in proportion to the crypto POW miner’s computing power from machines owned or leased.

POS mining, however, is analogous to “having voting rights on the board of directors based on shares held”. The crypto POS miner votes on the validity of a transaction to be added onto the distributed ledger. The voting power depends on the percentage of coins the POS crypto miner has staked as a proportion of total coins staked.

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## Scenario 1a: the POW miner owns the ASIC machines or graphics cards

POW mining requires graphics cards or Application Specific Integrated Circuit (ASIC) machines. These are the machines used to solve the algorithms to validate a transaction. Some algorithms are designed to be ASIC-resistant (such as Monero), in which case a miner can only use graphics cards to solve them.

There is a fundamental difference between the functionality of graphics cards and ASIC machines in POW mining. Graphics cards used for POW mining are usually top-of-the-range gaming graphics cards. They have value even if they are not used for POW crypto mining, because they can be used elsewhere, or sold on Gumtree, where there is a thriving second-hand market for them.

On the other hand, an ASIC machine can only be used for that specific POW mining and nothing else.

Section 11(e) of the Income Tax Act (ITA) and Interpretation Note 47 (IN 47) will determine how to claim the costs of the ASIC machines or graphics cards. If the cost of an item is less than ZAR7 000, then a full write-off can be claimed in the year of acquisition. Where the cost of an item is greater than ZAR7 000, then the recommended write-off periods in IN 47 would apply.

We believe that ASIC machines and graphics cards should be considered as "personal computers". IN 47 generally provides for personal computers to be written off over three years.

We submit that the costs of graphics cards should be written off over 3 years in line with IN 47, as they can be used for other purposes. However, an ASIC machine is only used for a very specific proof of work. Its useful life is less than two years, based on Moore's law (an empirical law held since 1965 that says computing power doubles every two years) and it has no alternative use or resale value after two years. For these reasons, we submit that the costs of ASIC machines can be written off over two years. Other tax-deductible costs during POW mining include electricity, maintenance, rental of premises, salaries, and shipping. We submit that these costs are fully deductible in terms of section 11(a) of the ITA.

As crypto mining is an exempt supply (section 2(1)(o) of the VAT Act), VAT paid by the miner in expenses cannot be claimed back as input VAT, except when included as a deduction against income for income tax purposes. At the same time, there is no output VAT on the supply of cryptocurrencies by the POW miner.

If the miner in this scenario also has digital wallet management services, for which a fee is charged, this fee is not an exempt supply and normal VAT rules apply.

When does the miner account for the gains on the coins which appear in the wallets from the POW mining? We submit that the coins which appear in the wallets are "trading stock", as defined in the ITA, and gains or losses on these coins should only be accounted for by the miner on their actual disposal as ordinary revenue from a scheme of profit making. This interpretation leads to a sensible, businesslike result given the highly volatile nature of cryptocurrency markets.

## Scenario 1b: the POW miner rents computing power from a supplier

In this scenario, the POW miner does not own the computing power used to solve the algorithms to validate a transaction but rents them from a supplier such as Nicehash.

The crypto produced is either paid into a wallet or Nicehash will liquidate the coins for USD. Nicehash then pays the USD to the POW miner, after deducting the rental for the computing power.

The supply of computing power falls into the category of “cloud computing” and is an electronic service in terms of the VAT electronic services regulations.

Nicehash is carrying on “electronic services” in terms of the VAT regulations and would need to register as a VAT vendor if the supply to South African recipients is more than ZAR1 million in 12 months. The POW miner will not be able to claim VAT paid on the rental as input VAT, because the service was used in furtherance of an exempt supply, i.e. cryptocurrency mining.

For income tax purposes, we submit that the POW miner renting the machine who earns coins from mining or USD is accumulating trading stock. We submit that gains or losses of a revenue nature should only be accounted on the actual disposal of these coins by the miner. In the arrangement where these coins are sold by Nicehash for USD, the USD paid (less rental due) to the POW miner would be income.

## Scenario 2: the POS miner earns rewards from staking

POS mining generates rewards in the form of coins for locking away cryptocurrencies, i.e. it “stakes the coins”. This is done in order to verify transactions to be added onto the distributed ledger on the decentralised network. In our view, this is analogous to dividends in the form of capitalisation shares. These coins become taxable as income when they appear in the wallet.

### Burden of proof

Certain coins can only be mined using POW mining, such as Bitcoins, Litecoins, Bitcoin Cash, and Monero. Coins that can be mined using POS mining are Ripple and Cardano. POW miners that account for gains on disposal of the coins, not when the coins appear in their wallets, would find it easier to discharge their burden of proof if they mined coins which can only be minted using POW mining.

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