



## **Bitcoin & Assessment**

Is Bitcoin mining a form of manufacturing or processing? Are modular data centers a structure? How do you separate the value of chattel and buildings when they are almost inextricably tied together? These are the questions that were recently posed to a Composite Assessment Review Board (CARB) in Alberta.

Bitcoin is generated through a complex, power intensive, computer process. Power consumption and heat are such significant issues that a new Bitcoin mining company elected to start operations directly adjacent to a municipal gas fired power plant on the cold Alberta prairies. The power consumed by the 40 data centers is enough to power 10,000 homes.

<https://hut8mining.com/landing-page>

The data centers are essentially seacans that have been either modified or purpose built to house server racks on one side and a wall filter on the other. The data centers are bolted to screw piles. The small computer fans on the servers together draw cool outside air through the structure and across the mining units and expel it out the opposite side in a surprising powerful warm wind. One could stand outside in -20C weather in a t-shirt next to a unit and be comfortable.

The assessors were tasked with placing an assessment on the facility, both for land & structures as well as machinery & equipment (M&E), which is assessed in Alberta, but subject to a 0 mill rate in this municipality. It was public knowledge that the facility cost well north of \$100 million to construct. The value placed on the roll was approximately \$10 million for land and buildings and \$0 for machinery and equipment. The reasoning behind the assessment was to capture the value of the site works, pile foundations, exterior shells of the data centers, and basic electrical servicing in the structures, but remove the mining units (server boxes & contents).

One of first questions raised during the appeal is whether these data centers are personal property or structures. It was suggested, and generally not disputed, that the data centers could be removed from the site in a matter of hours and that they often are for maintenance. In essence, they are little different from a laptop computer. How then could something with such a transient life be considered a structure?

In Alberta structures are statutorily defined as: "a building or other thing erected or placed in, on, over or under land." Here the broad wording of the definition of structure saves the

Assessors.

Where, though, is the line drawn then between chattel and structures? Legislation provides no further guidance and *Stack v. Eaton* isn't particularly helpful in this case. In a tenuous line of reasoning the Board found that computers are obviously chattel, and by extension all of the electrical cabling & components must be chattel as well. (Since your TV is chattel, the wires in the walls must be as well.)

During the appeal, in a rather intuitive argument, it was argued that the entire facility was used for manufacturing and processing in order to reclassify the facility as M&E and subject to a zero tax rate. What are you doing when mining Bitcoin, if not manufacturing it? Unhelpfully, the dictionary definition of processing includes "data processing". The Board looked to the legislation surrounding the definition of M&E and gauged from context, and the use of the words: tanks, apparatus, fittings, etc. that the legislator must have intended that M&E only exists in relation to some tangible product. Bitcoin mining, then, is neither manufacturing nor processing for assessment purposes in Alberta. Assessing these complex one-off facilities is a challenging process where one must strongly rely on local legislation and any case law that is available. There are no easy answers and almost certainly the law is yet to be settled.

The Board order is linked below:

<http://municipalaffairs.alberta.ca/cfml/boardorders/pdf/CARB%200217-055-2018.pdf>

Chris Down, AMAA