Between the Hashes: Developments in State Taxation and Incentives for Cryptomining

While the boom of cryptocurrency in the United States has led to several developments and changes to the world as we know it, one of the most intriguing is the rise in largescale mining of cryptocurrency with several states taking the lead on how to incentivize these operations from a tax and regulatory perspective. This article will focus on the many evolving issues states are dealing with for cryptomining, including encouraging the location and growth of mining facilities.

Crypto Craze – What is Cryptomining?

Given its recent popularity in the markets and news, most people at least generally understand what cryptocurrency is – a digital form of currency such as Bitcoin, Ethereum, and Dogecoin, to name a few. Cryptocurrency, however, is unique because unlike cash transactions, it does not use a central bank to generate, verify, exchange or transfer units of currency. Instead, these virtual transactions are recorded in a digital public ledger called a "blockchain."[1] Broken down further, these distributed public ledgers record transactions, with the records saved in a "block", with each block of transactions linked to a subsequent block of transactions to form a blockchain of records. Clear as mud? That's just the start.

In order for each block to be added to the blockchain, it must first be "validated" or "verified" generally through the use of a consensus mechanism called proof-of-work (PoW) as a way to verify the information contained therein. In order to verify the block, a network of high-powered computers and users (referred to as "miners") compete against one another to solve complex mathematical problems or numerical puzzles through what is known as digital "mining."[2] Once a problem is solved, the block is verified and can be added to the blockchain and in return for such efforts, the miner is generally rewarded with Bitcoin or another form of cryptocurrency.

While the most popular use of blockchain has been as a ledger for Bitcoin transactions, other types of information can be stored on a blockchain, such as a digital (smart) contract between two parties without the need for a third party to be involved given the secure nature of these verified blocks of information. Also, while many may picture millennials and Gen Z individuals in their parents' basements trying to mine for Bitcoin, the reality is that the verification/mining process is incredibly complex and energy intensive.

For example, the numeric equations/mathematical problems to verify the blocks are difficult to solve (having a 64-digit hexadecimal solution known as a "hash"), and requires sophisticated mining equipment (e.g., high-powered computers, servers, software, etc.) which use a substantial amount of energy to perform these processes – the more energy, and the faster hardware and software used, the better the chances to solve the complex problems and get (digitally) paid. As a result, the major players in this space operate out of largescale facilities with industrial-level energy and resources which allow miners using these facilities to increase their "hashes" produced per second, known as their "hashrate."

A higher hashrate requires greater amounts of electricity to perform these tasks, making the energy required for cryptomining jaw-dropping, as the annual electricity consumption used for the Bitcoin network alone exceeds that of many countries like Norway, the Netherlands, Argentina and others.[3] Further, cryptomining not only requires substantial energy and specialized high performance hardware to solve the computational algorithms at a high speed, with accuracy and efficiency, these facilities also provide the needed infrastructure/systems to help cool the heat generated from the mining equipment.

Given the size of, and the capital investment needed for, these facilities, some states have become eager to lure these operations to their locality through, among other things, tax incentives. As a result, dozens of industrial-sized facilities, and even unique locations like abandoned coal mines, are now being used throughout the country, particularly in certain states which are considered most friendly to these operations (discussed below), as the United States

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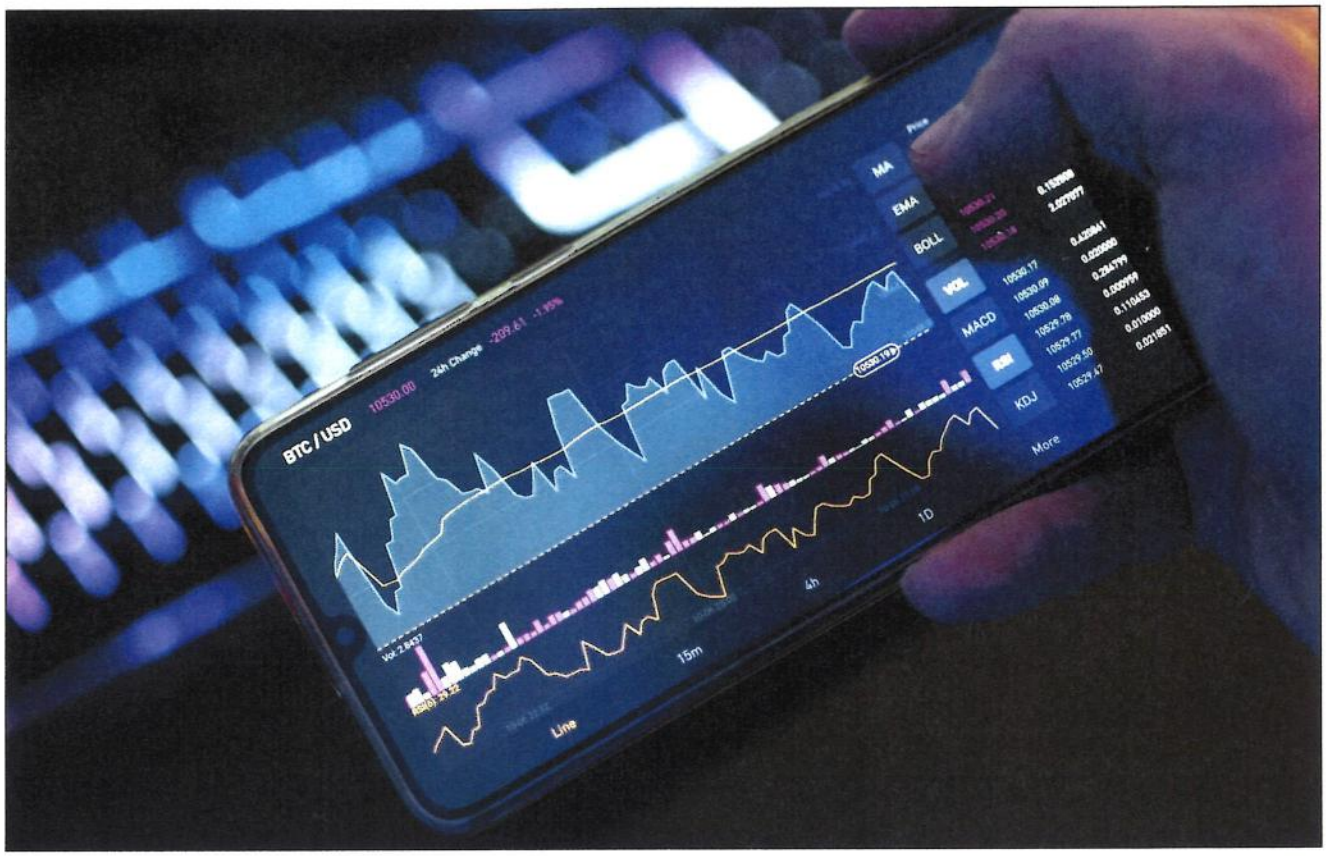

attempts to compete with China which owns approximately 75% of all cryptomining operations.[4] These facilities typically "host" these cryptocurrency mining operations – meaning miners pay the facility operators a fee(s) to locate, maintain and provide security to their mining equipment, and provide miners access to the substantial level of electricity/other energy sources pumped into these facilities to profitability mine for cryptocurrency. These facility operators may also have their own mining equipment likewise operating at the facility along with the third-party miners, often termed "co-location" facilities.

Still, the question remains: why has cryptomining become so popular over the past few years? There are several reasons for this, including the most obvious being the large spike in the value of Bitcoin and other cryptocurrencies. Miners can theoretically receive substantial profit on any cryptocurrencies awarded through its mining efforts.

Additionally, there is demand in some states to retrofit abandoned manufacturing and industrial facilities which have been idled or shuttered in regions which desperately need to bring back jobs and resulting tax revenue. There have been several stories across the country of cryptomining breathing much needed new life into defunct power plants and energy intensive facilities. A plant in Western New York that was reactivated in 2020 solely for cryptomining (after being offline for several years) has been extremely profitable thus far given its ability to generate its own electricity combined with the major swing in Bitcoin prices. As a result, it is estimated that the facility has had a nearly $70 million profit margin since starting operations, and now plans to ramp up its current 19 megawatts of mining capacity to 500 megawatts by 2025 (despite some local pushback because of this consumption).[5] Those are startling numbers all around!

There is also a major opportunity for market share as China has dominated in the industry, with few in the United States historically operating in this space on a large scale. There are several growing technology and AI-based companies which have seized the opportunity and rapidly grown their cryptomining operations in several states and globally. This is only the beginning as several states are actively seeking these companies, such as my home state of Kentucky (which will be discussed further below) which recently made it known through legislation that it wants these operations to locate and expand in Kentucky – touting its abundant, cheap energy from the Tennessee Valley Authority (TVA), and several former industrial plants which can quickly be revamped for these cryptomining facilities, and now, some very novel and targeted tax incentives for the industry.

What's the Hubbub?: State Taxation and Incentivizing of Cryptomining Hubs

The main focus on taxation of cryptocurrency has historically been how such assets are treated for Federal tax purposes, including the IRS's initial issuance of Notice 2014-21 (Mar. 24, 2014) which provided that virtual currency is not treated as currency, but instead as property and thus, general tax principles applicable to property transactions apply (i.e., basis is the fair market value upon receipt, recognition of gain or loss when exchanged based on how it is held by the taxpayer, etc.) and that cryptocurrency successfully mined is includible in gross income. The IRS has continued to release periodic guid-

ance on cryptocurrency-related issues as they arise.[6]

Recognizing the inevitable state and local tax issues associated with cryptocurrency, the Multistate Tax Commission (MTC) recently announced it will begin to explore cryptocurrency issues as part of its review on the broader subject of state taxation of digital products and services from both an income and sales/use tax perspective.[7] There is likely to be more guidance from a national perspective on treatment of cryptocurrency from the MTC, as well as at the individual state level, over the coming months. However, the current lack of guidance at the state and local tax level has not scared businesses from moving full steam ahead with continued and new cryptomining operations throughout the country, with certain states like Texas being the first to really embrace these operations, and other states like Kentucky, as already mentioned, now looking to catch up quickly.

Texas is already home to the biggest Bitcoin mining companies in the world, including Bitmain, Blockcap, Argo Blockchain, Great American Mining, Layer1, Compute North, Riot Blockchain and Whinstone, which have chosen the state because of the cheap and varied types of power even after the recent grid failures, a combination of traditional electricity, new oil and gas vent capture technologies, and substantial renewable sources like wind and solar. The state also boasts relaxed regulations for these operations.[8] Because of this, Texas has the largest Bitcoin mining presence of any state, yet it is still looking to make the state even more "crypto friendly" through recent legislation to make it a cryptomining "hub."[9]

While several states are considered more friendly to cryptocurrency by recognizing its use in various transactions and circumstances such as California, Colorado, Ohio, and Wyoming[10], it's an entirely different thing for a state to try and become a cryptomining "hub" and bring in these largescale mining operations with $25-$100 million capital investment, including hundreds of acres of land.

States like Washington are not far behind Texas as it also has largescale cryptomining facilities due in large part to its cool climate and abundance of hydroelectric power connected to abandoned mills. New York also has several industrial cryptomining facilities, including the expanding Western New York facility discussed above, as well as one of the largest cryptomining facilities in the world located in a former Alcoa Aluminum smelter. However, because of this massive expansion of mining in New York, a bill was recently proposed in and passed by the New York state Senate on June 8, 2021 (Senate Bill 6486) which would place a statewide ban/moratorium on mining operations for the next three years until a full review of the climate and local environmental impact of cryptomining can be performed. This may pose a serious threat to New York's status as a cryptomining hub and may lead to other states following suit.[11]

More states with cheap power and resources are also looking to get into the game quickly[12], offering attractive state and local tax exemptions and/or incentives. The two most common state tax incentives currently available to cryptominers are: (i) exemptions from sales/use tax for electricity, and (ii) other

tax benefits for the mining equipment used in these operations, typically through incentive programs for traditional data centers which have similar processes to cryptomining.

Although many states offer one or both of these critical SALT benefits for the cryptomining industry, each state has different criteria to be eligible. For example, the investment thresholds to be eligible for the data center benefits vary greatly (e.g., North Carolina and Texas require a $75 million and $200 million investment over 5 years thresholds, respectively; Nebraska requires $37-200 million investment; Georgia has a varying investment requirement anywhere from $100 to $250 million based on the involved county/census population over a seven-year period, etc.) with some states like Washington instead focusing more on the size of the facility as a criteria for eligibility.[13] Additionally, some states like Texas and North Carolina have a blanket sales/use tax exemption for electricity which makes them very attractive to cryptominers, while other states only exempt electricity used in a manufacturing or industrial processes like Arizona, Colorado, Georgia, and Nebraska.[14] As discussed in my prior article[15], the cryptomining process could reasonably be considered manufacturing in these states given its use of energy to process and create a new product with commercial value (e.g., a verified block), but that is an evolving topic which is dependent upon the state's definition of manufacturing via statute and/or case law.

Kentucky is one of those states which does have an older data center exemption but it does not easily fit cryptomining, as well as a partial exemption from sales/use tax (and its local utilities gross receipts license tax) for electricity used in manufacturing or industrial processing. However, the Kentucky Department of Revenue recently issued guidance that cryptomining is not eligible for manufacturing-based sales and use tax exemptions[16] despite the broad statutory language used for these exemptions and case law applying the same.

Therefore, Kentucky's General Assembly took matters into its own hands to make clear that it wants largescale cryptomining facility operators to come to the Bluegrass State to take advantage of its cheap available power through the TVA, abundance of land and shuttered manufacturing facilities after it enacted groundbreaking legislation during the 2021 regular session specifically targeted to the cryptomining industry. Rather than other states' approaches to encouraging these operations through generic data center-based SALT incentives, Kentucky is believed to be the first state to explicitly incentivize those engaged in cryptomining hosting/co-location facilities through two separate bills.

First, House Bill 230 exempts electricity used or consumed in commercial cryptocurrency mining from Kentucky's 6% sales/use tax, and the 3% local utilities gross receipts license tax, effective July 1, 2021. Although the initial draft of HB 230 specifically exempted cryptomining equipment (along with the electricity) and had a higher threshold for

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1 See Mordecai Lerer, "The Taxation of Cryptocurrency, Virtual Transactions Bring Real-Life Tax Implications," The CPA Journal (Jan. 2019), available at https://www.cpajournal.com/2019/01/24/the-taxation-of-cryptocurrency/.

2 See IRS Notice 2014-21, 2014-16 I.R.B. 938 (defining "mining" virtual currency as including the "use [of] computer resources to validate Bitcoin transactions and maintain the public Bitcoin transaction ledger).

3 Marcus Lu, "Visualizing the Power Consumption of Bitcoin Mining," Visualist Capital (Apr. 20, 2021), available at https://www.visualcapitalist.com/visualizing-the-power-consumption-of-bitcoin-mining/; Justin Rowlatt, "How Bitcoin's vast energy use could burst its bubble," BBC News (Feb. 27, 2021) available at https://www.bbc.com/news/science-environment-56215787.

4 Sam Shead, "China's bitcoin mining is threatening its climate change targets, study says," CNBC (Apr. 9, 2021), available at https://www.cnbc.com/2021/04/08/chinas-bitcoin-mining-is-threatening-its-climate-change-targets.html.

5 Jonathan Hilburg, "A power plant in New York ramped back up to mine Bitcoin, but opponents are pushing back," The Architect's Newspaper 9Apr. 14, 2021), available at https://www.archpaper.com/2021/04/greenidge-power-plant-mine-bitcoin-raising-fears-of-a-climate-crash/.

6 See e.g., IRS Rev. Rul. 2019-24 (Oct. 9, 2019); "Frequently Asked Questions on Virtual Currency Transactions," IRS website, available at https://www.irs.gov/individuals/international-taxpayers/frequently-asked-questions-on-virtual-currency-transactions; IRS Chief Counsel Advice Memo 202114020 (Hard Fork CCA, Apr. 9, 2021), available at https://www.irs.gov/pub/irs-wd/202114020.pdf.

7 See Amy Hamilton, "MTC to Begin Exploring Cryptocurrency Issues," 171 Tax Notes Federal 1486, Doc. 2021-20849 (May 31, 2021).

8 See Jessie Willms, "How Texas is Becoming a Mecca for Bitcoin Miners," Bitcoin Magazine (May 4, 2021), available at https://www.nasdaq.com/articles/how-texas-is-becoming-a-mecca-for-bitcoin-miners-2021-05-04; Nina Bambysheva, "Argo Blockchain Joins the Texas Bitcoin Mining Rush," Forbes (Mar. 8, 2021), available at https://www.forbes.com/sites/ninabambysheva/2021/03/08/argo-blockchain-joins-the-texas-bitcoin-mining-rush/?sh=7b33f40c379f.

9 Omar L. Gallaga, "Amid a Bitcoin Boom, Texas Leaders Get Cozier with Cryptocurrency," Texas Monthly (Apr. 29, 2021) available at https://www.texasmonthly.com/news-politics/bitcoin-cryptocurrency-texas-blockchain-leader/ (discussing legislation including HB 4474 which would recognize digital currencies as a valid for commercial transactions under its own Uniform Commercial Code amendment after Wyoming made a similar change in 2019, as well as SB 344 which would recognize blockchain-anchored electronic signatures as valid for smart contracts).

10 Jordana Cohen, "Top Crypto Friendly States: The Race is On!", Alpha Sigma Capital: Blockchangers Blog, available at https://alphasigma.fund/learn/top-crypto-friendly-states-the-race-is-on.

11 See Senate Bill S6486B (2021-2022 legislative session; introduced May 3, 2021; passed Senate on June 8, 2021 available at https://www.nysenate.gov/legislation/bills/2021/s6486; Shoshana Wodinsky, "New Bill Would Ban Bitcoin Mining Across New York State for Three Years," Gizmodo (May 5, 2021) available at https://gizmodo.com/new-bill-would-ban-bitcoin-mining-across-new-york-state-1846828277; Monika Ghosh, New York's Bitcoin mining showdown sets stage for battles elsewhere," Forkast (May 15, 2021) available at https://forkast.news/new-york-bitcoin-mining-carbon-battles/.

12 Jessie Willms, "Bitcoin Mining in North America: A New Gold Rush in the New World," Bitcoin Magazine (Dec. 3, 2019) available at https://bitcoinmagazine.com/business/bitcoin-mining-in-north-america-a-new-gold-rush-in-the-new-world.

13 N.C. Gen. Stat. § § 105-164.13(55a) & 105-164.3(201); TX TAX § 151.359 & 151.317(a)(9); Neb. Rev. Stat. Ann. § 77-5725; Nebraska Advantage Act Multi-Tiered Benefits, available at https://opportunity.nebraska.gov/why-nebraska/incentives/#:~:text=Tier%205%20%2D%20%2437%20Million%20New.web%20portal%20or%20data%20center; O.C.G.A. § 48-8-3 (68.1); GA Rule 560-12-2-.117; Georgia High Technology Data Center Aggregate by County, available at file:///C:/Users/10821/Downloads/HTD_C-County_Expenditures.pdf; RCW 82.08.986, RCW 82.12.986 & 82.32.534.

14 A.R.S. 42-5063; O.C.G.A § 48-8-3.2(d); Ga. Comp. R. & Regs. 560-12-2-.64(3); 316 Neb. Admin. Code Ch. 1, § 089.

15 See "Power Play - Emergence of Solar and Other Advancements in Energy Technologies May Light Up Old Manufacturing-Based SALT Benefits," Journal of Multistate Taxation and Incentives, Vol. 30, No. 06 (Sept. 2020).

16 Kentucky Dep't of Revenue, Kentucky Sales Tax Facts (Dec. 2020) ("Sales and use tax exemptions for traditional manufacturers do not extend to block chain production" based on its view of the statutory requirements for said exemptions).

17 See 19 RS BR 1964 available at https://apps.legislature.ky.gov/record/19rs/hr171.html; 20 RS SB 55/SCS 1, available at https://apps.legislature.ky.gov/record/20rs/sb55.html .

18 Jason Henry, "Coinbase Valued at $86 Billion in 'Landmark Moment' for Crypto," The New York Times (May 3, 2021), available at https://www.nytimes.com/live/2021/04/14/business/stock-market-today.

the size/capability of the facility (to encourage largescale facilities and the capital investment needed for same), it ultimately dropped the capacity threshold from a minimum facility size (an industrial facility at least 200,000 sq. ft) to a minimum energy consumption threshold (at least 200,000 kilowatt hours per month), and only exempted the electricity which is still a huge benefit in its own right that will help Kentucky compete with states like Texas.

Kentucky also enacted Senate Bill 255 to revive a prior renewable energy incentive program (IIEA), and renamed it the Incentives for Energy-Related Business Act (IEBA) program. The IEBA program only applies to cryptocurrency mining facilities making a new minimum capital investment of at least $1 million and includes refunds for sales and use tax on tangible personal property used to construct, retrofit, upgrade or equip a cryptocurrency mining facility. It also includes potential corporate/personal income tax (and limited liability entity tax) credits of up to 100% of the income generated by or arising from the eligible project, and other payroll/wage related benefits. Kentucky considered a third bill (House Bill 372) to create a more expansive data center exemption that could have extended to qualifying large cryptomining facilities. Although the bill passed both chambers, it was ultimately not signed by the Governor, but may very well be back on the table in 2022 along with any tweaks needed for the two cryptomining bills that did pass.

This was not an overnight decision, as Kentucky has been quietly studying the benefits of blockchain in various industries for the past few years[17]. This year's combined legislation took it to another level, as seen by the recitals to HB 230 which specifically stated that Kentucky's tax code must be read broadly to treat advanced forms of manufacturing and technologies, such as cryptomining, similar to traditional manufacturers. The legislation appears to directly contradict the Kentucky Department of Revenue's position on the issue by encouraging innovation in manufacturing and advanced processes through its tax code so that Kentucky can compete with other states for these and other emerging technologies.

Where Now?

Only time will tell how Kentucky's direct approach to incentivizing largescale cryptomining will work, and whether other states will pass similar incentives packages in the coming months. Although some fear that environmental concerns, increased regulatory pressures on several fronts, and other external forces (e.g., Elon Musk tweeting) may cause a perceived bubble to burst in the future, it appears cryptocurrencies like Bitcoin are here to stay, as most recently seen in May when Coinbase, a start-up that allows people to buy and sell cryptocurrencies, went public on the U.S. stock exchange, which many view as a landmark moment for the industry.[18] Therefore, it appears states will continue to compete for these growing operations through a variety of ways, including more innovative tax incentives, to keep the industry growing between the hashes. ■