# **Ethereum Mining Profitability & Scenario Analysis (NVIDIA)**

Prepared on: June 30, 2021 \*All dollar amounts in CAD

|    | Electricity Cost (¢/kWh)<br>Network Hashrate (TH/s) |      | 10.325<br>492.15 |      | ETH Price<br>Eth Mined/Day |       | 2646<br>13354 |       |      | Block Time (s)<br>Block Reward |      | 13.29<br>2.054 |         | ¢/MH/Day |      |      |       |
|----|---|------|------------------|------|----------------------------|-------|---------------|-------|------|--------------------------------|------|----------------|---------|----------|------|------|-------|
|    | Card  | 1070 | 1070 Ti          | 1080 | 1080 Ti                    | 1660s | 2060          | 2060s | 2070 | 2070s                          | 2080 | 2080s          | 2080 Ti | 3060 Ti  | 3070 | 3080 | 3090  |
|    | Revenue/Day   | 2.15 | 2.29             | 2.58 | 3.30                       | 2.15  | 2.30          | 3.03  | 3.16 | 3.09                           | 3.09 | 3.03           | 4.25    | 4.34     | 4.35 | 6.89 | 8.62  |
|    | Hashrate (MH/s)                                     | 30.0 | 31.9             | 36.0 | 46.0                       | 30.0  | 32.0          | 42.3  | 44.0 | 43.0                           | 43.0 | 42.2           | 59.2    | 60.5     | 60.6 | 96.0 | 120.0 |
| nt | Power Usage (W)                                     | 120  | 135              | 135  | 240                        | 90    | 90            | 110   | 120  | 125                            | 108  | 140            | 230     | 120      | 120  | 220  | 285   |
| ē  | El. Costs (\$ /Day)                                 | 0.30 | 0.33             | 0.33 | 0.59                       | 0.22  | 0.22          | 0.27  | 0.30 | 0.31                           | 0.27 | 0.35           | 0.57    | 0.30     | 0.30 | 0.55 | 0.71  |
|    | Gross Profit/Day <sup>1</sup>                       | 1.86 | 1.96             | 2.25 | 2.71                       | 1.93  | 2.07          | 2.76  | 2.86 | 2.78                           | 2.82 | 2.68           | 3.68    | 4.05     | 4.05 | 6.35 | 7.91  |
| 3  | Market Price <sup>2</sup>                           | 600  | 650              | 700  | 950                        | 500   | 800           | 950   | 1000 | 1000                           | 1000 | 1000           | 1200    | 1200     | 1300 | 1850 | 2777  |
|    | Efficiency (kH/s/W)                                 | 250  | 236              | 267  | 192                        | 333   | 356           | 384   | 367  | 344                            | 398  | 301            | 257     | 504      | 505  | 436  | 421   |
|    | ROI Time (Days)                                     | 323  | 332              | 311  | 351                        | 259   | 386           | 344   | 349  | 360                            | 355  | 373            | 326     | 297      | 321  | 291  | 351   |
|    | Annual Returns <sup>3</sup>                         | 113% | 110%             | 117% | 104%                       | 141%  | 95%           | 106%  | 104% | 101%                           | 103% | 98%            | 112%    | 123%     | 114% | 125% | 104%  |

<sup>1</sup> Gross profits take into account only cost of electricity. Taxes, withdrawal fees, transaction fees and depreciation has not been considered.

<sup>2</sup> Sourced from historic Ebay sold listings in Canada on May 1, 2021. These are approximate prices and subject to volatility in demand and supply.

<sup>3</sup> Return on investment into a graphics card to be used for mining 100% of the time for a period of 365 days.

|    | Discount               | 3%   |         |      |         |       |      |       |      |       |      |       |         |         |      |      |      |
|----|------------------------|------|---------|------|---------|-------|------|-------|------|-------|------|-------|---------|---------|------|------|------|
|    | Card                   | 1070 | 1070 Ti | 1080 | 1080 Ti | 1660s | 2060 | 2060s | 2070 | 2070s | 2080 | 2080s | 2080 Ti | 3060 Ti | 3070 | 3080 | 3090 |
|    | Revenue/Day (CAD)*     | 2.10 | 2.23    | 2.52 | 3.22    | 2.10  | 2.24 | 2.95  | 3.08 | 3.01  | 3.01 | 2.95  | 4.14    | 4.23    | 4.23 | 6.71 | 8.39 |
|    | Gross Profit/Day (CAD) | 1.80 | 1.90    | 2.18 | 2.62    | 1.87  | 2.01 | 2.68  | 2.78 | 2.70  | 2.74 | 2.60  | 3.57    | 3.93    | 3.94 | 6.17 | 7.68 |
| 59 | ROI Time (days)        | 333  | 343     | 321  | 362     | 267   | 397  | 354   | 360  | 371   | 365  | 384   | 336     | 305     | 330  | 300  | 361  |
| 55 | Annual Returns         | 109% | 106%    | 114% | 101%    | 137%  | 92%  | 103%  | 101% | 98%   | 100% | 95%   | 109%    | 120%    | 111% | 122% | 101% |

### VERY LIKELY

\* This scenario takes into account the effects of the EIP-1559 resolution. The current average block reward on May 1, 2021 is 2.5 eth (from etherscan) and the profitability numbers above reflect this amount. After the EIP-1559 resolution is implemented (expected in sometime July 2021), this block reward will be lowered to the standard 2 ether per block (plus rush fees). This will lower our profits from mining from its current number to 2/2.5 of what it is now, or 80% of what it is now (a decrease of 20%). Note that due to miners potentially exiting the network from the reduced fees, we may see a reduced network difficulty, so this is a conservative estimate of the results. Furthermore, the block reward will not only be the 2 ether per block, but will also include priority transaction fees. So the amount of discount in this scenario represents a worst-case scenario for a reduced block reward. This scenario discounts the revenue from mining by 35% to simulate the effects of EIP-1559.

|   | Discount               | 94%   |         |       |         |       |       |       |       |       |       |       |         |         |       |       |       |
|---|------------------------|-------|---------|-------|---------|-------|-------|-------|-------|-------|-------|-------|---------|---------|-------|-------|-------|
| _ | Card                   | 1070  | 1070 Ti | 1080  | 1080 Ti | 1660s | 2060  | 2060s | 2070  | 2070s | 2080  | 2080s | 2080 Ti | 3060 Ti | 3070  | 3080  | 3090  |
| 당 | Revenue/Day (CAD)*     | 0.13  | 0.14    | 0.15  | 0.20    | 0.13  | 0.14  | 0.18  | 0.19  | 0.18  | 0.18  | 0.18  | 0.25    | 0.26    | 0.26  | 0.41  | 0.51  |
| Ö | Gross Profit/Day (CAD) | -0.17 | -0.20   | -0.18 | -0.40   | -0.10 | -0.09 | -0.09 | -0.11 | -0.13 | -0.09 | -0.17 | -0.32   | -0.04   | -0.04 | -0.14 | -0.20 |
| Ü | ROI Time (days)        | N/A   | N/A     | N/A   | N/A     | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A     | N/A     | N/A   | N/A   | N/A   |
| ب | Annual Returns         | -10%  | -11%    | -9%   | -15%    | -7%   | -4%   | -4%   | -4%   | -5%   | -3%   | -6%   | -10%    | -1%     | -1%   | -3%   | -3%   |

## VERY UNLIKELY

\*This scenario will consider then impacts of an immediate market crash similar to the one following the 2017-2018 speculative bubble into cryptocurrencies. In 2018, the price of Ethereum fell from a high of \$1405 on Jan 9 to 83 USD at the lowest point on Dec 15 (from Coindesk). This reflects a 94% reduction in price and hence mining profits. This scenario discounts revenue by 94% to simulate a market crash. Note that in this scenario, in contrast to the above scenario, the loss of mining revenue is due to a discounted price of Ethereum whereas in the above scenario, revenue decreased from a reduction in ETH paid as a block reward for mining.

| Discount               | 65%   |  |   |   |  |  |  |   |   |  |  |   |  |  |  |   |
|------------------------|---|--|---|---|--|--|--|---|---|--|--|---|--|--|--|---|
| Card                   | 1070  | 1070 Ti  | 1080  | 1080 Ti   | 1660s  | 2060   | 2060s  | 2070  | 2070s   | 2080   | 2080s  | 2080 Ti   | 3060 Ti  | 3070   | 3080   | 3090  |
| Revenue/Day (CAD)*     | 0.74  | 0.79   | 0.89  | 1.14  | 0.74   | 0.79   | 1.05   | 1.09  | 1.07  | 1.07   | 1.05   | 1.47  | 1.50   | 1.50   | 2.38   | 2.97  |
| Gross Profit/Day (CAD) | 0.45  | 0.46   | 0.56  | 0.55  | 0.52   | 0.57   | 0.77   | 0.79  | 0.76  | 0.80   | 0.70   | 0.90  | 1.20   | 1.20   | 1.83   | 2.27  |
| ROI Time (days)        | 1345  | 1425   | 1255  | 1742  | 961  | 1403   | 1227   | 1261  | 1323  | 1253   | 1431   | 1337  | 998  | 1080   | 1009   | 1224  |
| Annual Returns         | 27%   | 26%  | 29%   | 21%   | 38%  | 26%  | 30%  | 29%   | 28%   | 29%  | 26%  | 27%   | 37%  | 34%  | 36%  | 30%   |
|                        | Card  Revenue/Day (CAD)*  Gross Profit/Day (CAD)  ROI Time (days) | Card         1070           Revenue/Day (CAD)*         0.74           Gross Profit/Day (CAD)         0.45           ROI Time (days)         1345 | Card         1070         1070 Ti           Revenue/Day (CAD)*         0.74         0.79           Gross Profit/Day (CAD)         0.45         0.46           ROI Time (days)         1345         1425 | Card         1070         1070 Ti         1080           Revenue/Day (CAD)*         0.74         0.79         0.89           Gross Profit/Day (CAD)         0.45         0.46         0.56           ROI Time (days)         1345         1425         1255 | Card         1070         1070 Ti         1080         1080 Ti           Revenue/Day (CAD)*         0.74         0.79         0.89         1.14           Gross Profit/Day (CAD)         0.45         0.46         0.56         0.55           ROI Time (days)         1345         1425         1255         1742 | Card         1070         1070 Ti         1080         1080 Ti         1660s           Revenue/Day (CAD)*         0.74         0.79         0.89         1.14         0.74           Gross Profit/Day (CAD)         0.45         0.46         0.56         0.55         0.52           ROI Time (days)         1345         1425         1255         1742         961 | Card         1070         1070 Ti         1080         1080 Ti         1660s         2060           Revenue/Day (CAD)*         0.74         0.79         0.89         1.14         0.74         0.79           Gross Profit/Day (CAD)         0.45         0.46         0.56         0.55         0.52         0.57           ROI Time (days)         1345         1425         1255         1742         961         1403 | Card         1070         1070 Ti         1080         1080 Ti         1660s         2060         2060s           Revenue/Day (CAD)*         0.74         0.79         0.89         1.14         0.74         0.79         1.05           Gross Profit/Day (CAD)         0.45         0.46         0.56         0.55         0.52         0.57         0.77           ROI Time (days)         1345         1425         1255         1742         961         1403         1227 | Card         1070         1070 Ti         1080         1080 Ti         1660s         2060         2060s         2070           Revenue/Day (CAD)*         0.74         0.79         0.89         1.14         0.74         0.79         1.05         1.09           Gross Profit/Day (CAD)         0.45         0.46         0.56         0.55         0.52         0.57         0.77         0.79           ROI Time (days)         1345         1425         1255         1742         961         1403         1227         1261 | Card         1070         1070 Ti         1080         1080 Ti         1660s         2060         2060s         2070         2070s           Revenue/Day (CAD)*         0.74         0.79         0.89         1.14         0.74         0.79         1.05         1.09         1.07           Gross Profit/Day (CAD)         0.45         0.46         0.56         0.55         0.52         0.57         0.77         0.79         0.76           ROI Time (days)         1345         1425         1255         1742         961         1403         1227         1261         1323 | Card         1070         1070 Ti         1080         1080 Ti         1660s         2060         2060s         2070         2070s         2080           Revenue/Day (CAD)*         0.74         0.79         0.89         1.14         0.74         0.79         1.05         1.09         1.07         1.07           Gross Profit/Day (CAD)         0.45         0.46         0.56         0.55         0.52         0.57         0.77         0.79         0.76         0.80           ROI Time (days)         1345         1425         1255         1742         961         1403         1227         1261         1323         1253 | Card         1070         1070 Ti         1080         1080 Ti         1660s         2060         2060s         2070         2070s         2080         2080s           Revenue/Day (CAD)*         0.74         0.79         0.89         1.14         0.74         0.79         1.05         1.09         1.07         1.07         1.05           Gross Profit/Day (CAD)         0.45         0.46         0.56         0.55         0.52         0.57         0.77         0.79         0.76         0.80         0.70           ROI Time (days)         1345         1425         1255         1742         961         1403         1227         1261         1323         1253         1431 | Card         1070         1070 Ti         1080         1080 Ti         1660s         2060         2060s         2070         2070s         2080         2080s         2080 Ti           Revenue/Day (CAD)*         0.74         0.79         0.89         1.14         0.74         0.79         1.05         1.09         1.07         1.07         1.05         1.47           Gross Profit/Day (CAD)         0.45         0.46         0.56         0.55         0.52         0.57         0.77         0.79         0.76         0.80         0.70         0.90           ROI Time (days)         1345         1425         1255         1742         961         1403         1227         1261         1323         1253         1431         1337 | Card         1070         1070 Ti         1080         1080 Ti         1660s         2060         2060s         2070         2070s         2080         2080s         2080 Ti         3060 Ti           Revenue/Day (CAD)*         0.74         0.79         0.89         1.14         0.74         0.79         1.05         1.09         1.07         1.07         1.05         1.47         1.50           Gross Profit/Day (CAD)         0.45         0.46         0.56         0.55         0.52         0.57         0.77         0.79         0.76         0.80         0.70         0.90         1.20           ROI Time (days)         1345         1425         1255         1742         961         1403         1227         1261         1323         1253         1431         1337         998 | Card         1070         1070 Ti         1080         1080 Ti         1660s         2060         2060s         2070         2070s         2080         2080s         2080 Ti         3060 Ti         3070           Revenue/Day (CAD)*         0.74         0.79         0.89         1.14         0.74         0.79         1.05         1.09         1.07         1.07         1.05         1.47         1.50         1.50           Gross Profit/Day (CAD)         0.45         0.46         0.56         0.55         0.52         0.57         0.77         0.79         0.76         0.80         0.70         0.90         1.20         1.20           ROI Time (days)         1345         1425         1255         1742         961         1403         1227         1261         1323         1253         1431         1337         998         1080 | Card         1070         1070 Ti         1080         1080 Ti         1660s         2060         2060s         2070         2070s         2080s         2080 Ti         3060 Ti         3070         3080           Revenue/Day (CAD)*         0.74         0.79         0.89         1.14         0.74         0.79         1.05         1.09         1.07         1.07         1.05         1.47         1.50         1.50         2.38           Gross Profit/Day (CAD)         0.45         0.46         0.56         0.55         0.52         0.57         0.77         0.79         0.76         0.80         0.70         0.90         1.20         1.20         1.83           ROI Time (days)         1345         1425         1255         1742         961         1403         1227         1261         1323         1253         1431         1337         998         1080         1009 |

#### LIKELY

\* This scenario recognizes that the price depreciation from a market correction will not be instantaneous and will take time similar to the previous crash. This scenario will consider the impacts that a market pullback of similar proportion to the one observed in 2018. In that market pullback from Jan 9 to Dec 15 2018, the average daily closing price of Ethereum was \$485 compared to the peak of \$1405 USD. In this scenario, we will consider a revenue reduction in Ethereum by 65% to simulate the actual average daily profitability in the case of a similar market decline.

# **Ethereum Mining Profitability & Scenario Analysis (AMD)**

Prepared on: June 30, 2021 \*All dollar amounts in CAD

|          | Electricity Cost (¢/kV                 | Vh)          | 10.325       |              | ETH          | Price        | 2646         |             | Block 1     | lime (s)    | 13.29        |              | ¢/MI         | l/Day        | 7.17973      |              |              |
|----------|--|--------------|--------------|--------------|--------------|--------------|--------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|          | Network Hashrate (TI                   | H/s)         | 492.15       |              | Eth Mir      | ed/Day       | 13354        |             | Block F     | Reward      | 2.054        |              | ¢/ IVII      | 1/ Day       | 7.17973      |              |              |
|          |  |              |              | •            |              |              |              |             |             |             |              | -            |              |              |              | •            |              |
|          | Card                                   | 470          | 480          | 570          | 580          | 590          | 5500XT       | 5600XT      | 5700        | 5700XT      | 6700XT       | 6800         | 6800XT       | 6900XT       | Vega56       | Vega64       | VII          |
| ب        | Revenue/Day                            | 2.18         | 2.18         | 2.19         | 2.25         | 2.21         | 1.87         | 2.66        | 3.84        | 3.93        | 3.37         | 4.55         | 4.62         | 4.60         | 2.77         | 3.37         | 6.50         |
| <u> </u> | Hashrate (MH/s)                        | 30.4         | 30.4         | 30.5         | 31.3         | 30.8         | 26.0         | 37.0        | 53.5        | 54.7        | 47.0         | 63.4         | 64.4         | 64.0         | 38.6         | 47.0         | 90.5         |
| וַ שַ    | Power Usage (W)                        | 120          | 130          | 130          | 130          | 130          | 70           | 100         | 160         | 140         | 170          | 175          | 190          | 220          | 215          | 220          | 220          |
| Current  | El. Costs (\$ /Day)                    | 0.30         | 0.32         | 0.32         | 0.32         | 0.32         | 0.17         | 0.25        | 0.40        | 0.35        | 0.42         | 0.43         | 0.47         | 0.55         | 0.53         | 0.55         | 0.55         |
| O        | Gross Profit/Day <sup>1</sup>          | 1.89         | 1.86         | 1.87         | 1.93         | 1.89         | 1.69         | 2.41        | 3.44        | 3.58        | 2.95         | 4.12         | 4.15         | 4.05         | 2.24         | 2.83         | 5.95         |
|          | Market Price <sup>2</sup>              | 500          | 500          | 500          | 500          | 500          | 500          | 650         | 900         | 950         | 1000         | 1300         | 1700         | 2200         | 700          | 850          | 2100         |
|          | Efficiency (kH/s/W)                    | 253          | 234          | 235          | 241          | 237          | 371          | 370         | 334         | 391         | 276          | 362          | 339          | 291          | 180          | 214          | 411          |
|          | ROI Time (Days)                        | 265          | 269          | 268          | 260          | 265          | 295          | 270         | 261         | 265         | 339          | 316          | 409          | 543          | 313          | 300          | 353          |
|          | Annual Returns <sup>3</sup>            | 138%         | 136%         | 136%         | 141%         | 138%         | 124%         | 135%        | 140%        | 138%        | 108%         | 116%         | 89%          | 67%          | 117%         | 121%         | 103%         |
|          |  |              | •            | •            | •            | •            | •            |             |             | •           |              | •            | •            | •            | •            | '            |              |
| 6        | Discount                               | 3%           |              |              |              |              |              |             |             |             |              |              |              |              |              |              |              |
| 2        | Card                                   | 470          | 480          | 570          | 580          | 590          | 5500XT       | 5600XT      | 5700        | 5700XT      | 6700XT       | 6800         | 6800XT       | 6900XT       | Vega56       | Vega64       | VII          |
| 15       | Revenue/Day (CAD)*                     | 2.13         | 2.13         | 2.13         | 2.19         | 2.15         | 1.82         | 2.59        | 3.74        | 3.82        | 3.29         | 4.43         | 4.50         | 4.47         | 2.70         | 3.29         | 6.33         |
|          | Gross Profit/Day (CAD)                 | 1.83         | 1.80         | 1.81         | 1.87         | 1.83         | 1.64         | 2.34        | 3.34        | 3.48        | 2.86         | 4.00         | 4.03         | 3.93         | 2.17         | 2.74         | 5.78         |
| E        | ROI Time (days)                        | 274          | 277          | 276          | 268          | 273          | 304          | 278         | 269         | 273         | 349          | 325          | 422          | 560          | 323          | 310          | 363          |
| Ш        | Annual Returns                         | 133%         | 132%         | 132%         | 136%         | 134%         | 120%         | 131%        | 136%        | 134%        | 105%         | 112%         | 87%          | 65%          | 113%         | 118%         | 100%         |
|          |  |              | -            |              |              |              |              |             |             |             |              |              |              |              |              |              |              |
|          | Discount                               | 94%          |              |              |              |              |              |             |             |             |              |              |              |              |              |              |              |
|          | Card                                   | 470          | 480          | 570          | 580          | 590          | 5500XT       | 5600XT      | 5700        | 5700XT      | 6700XT       | 6800         | 6800XT       | 6900XT       | Vega56       | Vega64       | VII          |
| Crash    | Revenue/Day (CAD)*                     | 0.13         | 0.13         | 0.13         | 0.13         | 0.13         | 0.11         | 0.16        | 0.23        | 0.23        | 0.20         | 0.27         | 0.27         | 0.27         | 0.16         | 0.20         | 0.38         |
| 18       | Gross Profit/Day (CAD)                 | -0.17        | -0.19        | -0.19        | -0.19        | -0.19        | -0.06        | -0.09       | -0.17       | -0.11       | -0.22        | -0.16        | -0.20        | -0.27        | -0.37        | -0.35        | -0.16        |
|          | ROI Time (days)                        | N/A          | N/A          | N/A          | N/A          | N/A          | N/A          | N/A         | N/A         | N/A         | N/A          | N/A          | N/A          | N/A          | N/A          | N/A          | N/A          |
|          | Annual Returns                         | -12%         | -14%         | -14%         | -14%         | -14%         | -5%          | -5%         | -7%         | -4%         | -8%          | -5%          | -4%          | -5%          | -19%         | -15%         | -3%          |
|          |  |              | •            |              |              |              |              |             |             |             |              |              |              |              |              |              |              |
| ٠.       | Discount                               | 65%          | 400          | 570          | 500          | 500          | 5500VT       | 5600VT      | 5700        | 57001/7     | CTOOVT.      | 5000         | COON'T       | COOONET.     | V 56         |              |              |
| Correct  | Card                                   | 470          | 480          | 570          | 580          | 590          | 5500XT       | 5600XT      | 5700        | 5700XT      | 6700XT       | 6800         | 6800XT       | 6900XT       | Vega56       | Vega64       | VII          |
| <u>=</u> | Revenue/Day (CAD)*                     | 0.75         | 0.75         | 0.76         | 0.78         | 0.76         | 0.64         | 0.92        | 1.33        | 1.36        | 1.16         | 1.57         | 1.60         | 1.59         | 0.96         | 1.16         | 2.24         |
| ō        | Gross Profit/Day (CAD) ROI Time (days) | 0.46<br>1096 | 0.43<br>1159 | 0.43<br>1153 | 0.45<br>1102 | 0.44<br>1133 | 0.47<br>1062 | 0.67<br>971 | 0.93<br>968 | 1.01<br>942 | 0.74<br>1345 | 1.14<br>1143 | 1.13<br>1511 | 1.04<br>2113 | 0.42<br>1651 | 0.62<br>1372 | 1.70<br>1237 |
|          |  |              |              |              |              |              |              |             |             |             |              |              |              |              |              |              |              |

30%

32%

Annual Returns

31%