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

Prepared on: June 26, 2021 \*All dollar amounts in CAD

	Electricity Cost (¢/kWh) Network Hashrate (TH/s)		10.325 477.50		ETH Price Eth Mined/Day		2312 13413		Block Time (s) Block Reward		13.23 2.054		¢/MH	l/Day	6.49431		
	Card	1070	1070 Ti	1080	1080 Ti	1660s	2060	2060s	2070	2070s	2080	2080s	2080 Ti	3060 Ti	3070	3080	3090
	Revenue/Day	1.95	2.07	2.34	2.99	1.95	2.08	2.74	2.86	2.79	2.79	2.74	3.84	3.93	3.93	6.23	7.79
	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
ıt	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>	1.65	1.74	2.00	2.39	1.73	1.86	2.47	2.56	2.48	2.52	2.39	3.27	3.63	3.64	5.69	7.09
J J	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)	363	374	349	397	290	431	384	391	403	396	418	366	330	358	325	392
	Annual Returns <sup>3</sup>	100%	98%	104%	92%	126%	85%	95%	93%	91%	92%	87%	100%	110%	102%	112%	93%

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

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)*	1.90	2.02	2.28	2.91	1.90	2.02	2.67	2.78	2.72	2.72	2.67	3.74	3.83	3.83	6.07	7.59
	Gross Profit/Day (CAD)	1.60	1.68	1.94	2.31	1.67	1.80	2.40	2.49	2.41	2.45	2.32	3.17	3.53	3.53	5.53	6.88
59	ROI Time (days)	375	386	360	411	299	444	396	402	415	408	431	378	340	368	335	403
55	Annual Returns	97%	94%	101%	89%	122%	82%	92%	91%	88%	89%	85%	97%	107%	99%	109%	90%

#### 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
l R	Revenue/Day (CAD)*	0.12	0.12	0.14	0.18	0.12	0.12	0.16	0.17	0.16	0.16	0.16	0.23	0.23	0.23	0.37	0.46
Ö	Gross Profit/Day (CAD)	-0.18	-0.21	-0.20	-0.42	-0.11	-0.10	-0.11	-0.13	-0.14	-0.10	-0.19	-0.34	-0.07	-0.07	-0.18	-0.25
ΙŌ	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	-11%	-12%	-10%	-16%	-8%	-5%	-4%	-5%	-5%	-4%	-7%	-10%	-2%	-2%	-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)*	0.67	0.72	0.81	1.03	0.67	0.72	0.95	0.99	0.96	0.96	0.95	1.33	1.36	1.36	2.15	2.69
Gross Profit/Day (CAD)	0.38	0.38	0.47	0.44	0.45	0.49	0.67	0.69	0.65	0.70	0.60	0.76	1.06	1.06	1.61	1.98
ROI Time (days)	1599	1708	1481	2176	1112	1618	1408	1451	1529	1436	1669	1585	1133	1226	1151	1400
Annual Returns	23%	21%	25%	17%	33%	23%	26%	25%	24%	25%	22%	23%	32%	30%	32%	26%
	Card Revenue/Day (CAD)* Gross Profit/Day (CAD) ROI Time (days)	Card         1070           Revenue/Day (CAD)*         0.67           Gross Profit/Day (CAD)         0.38           ROI Time (days)         1599	Card         1070         1070 Ti           Revenue/Day (CAD)*         0.67         0.72           Gross Profit/Day (CAD)         0.38         0.38           ROI Time (days)         1599         1708	Card         1070         1070 Ti         1080           Revenue/Day (CAD)*         0.67         0.72         0.81           Gross Profit/Day (CAD)         0.38         0.38         0.47           ROI Time (days)         1599         1708         1481	Card         1070         1070 Ti         1080         1080 Ti           Revenue/Day (CAD)*         0.67         0.72         0.81         1.03           Gross Profit/Day (CAD)         0.38         0.38         0.47         0.44           ROI Time (days)         1599         1708         1481         2176	Card         1070         1070 Ti         1080         1080 Ti         1660s           Revenue/Day (CAD)*         0.67         0.72         0.81         1.03         0.67           Gross Profit/Day (CAD)         0.38         0.38         0.47         0.44         0.45           ROI Time (days)         1599         1708         1481         2176         1112	Card         1070         1070 Ti         1080         1080 Ti         1660s         2060           Revenue/Day (CAD)*         0.67         0.72         0.81         1.03         0.67         0.72           Gross Profit/Day (CAD)         0.38         0.38         0.47         0.44         0.45         0.49           ROI Time (days)         1599         1708         1481         2176         1112         1618	Card         1070         1070 ri         1080         1080 ri         1660s         2060         2060s           Revenue/Day (CAD)*         0.67         0.72         0.81         1.03         0.67         0.72         0.95           Gross Profit/Day (CAD)         0.38         0.38         0.47         0.44         0.45         0.49         0.67           ROI Time (days)         1599         1708         1481         2176         1112         1618         1408	Card         1070         1070 Ti         1080         1080 Ti         1660s         2060         2060s         2070           Revenue/Day (CAD)*         0.67         0.72         0.81         1.03         0.67         0.72         0.95         0.99           Gross Profit/Day (CAD)         0.38         0.38         0.47         0.44         0.45         0.49         0.67         0.69           ROI Time (days)         1599         1708         1481         2176         1112         1618         1408         1451	Card         1070         1070 ri         1080         1080 ri         1660s         2060         2060s         2070         2070s           Revenue/Day (CAD)*         0.67         0.72         0.81         1.03         0.67         0.72         0.95         0.99         0.96           Gross Profit/Day (CAD)         0.38         0.38         0.47         0.44         0.45         0.49         0.67         0.69         0.65           ROI Time (days)         1599         1708         1481         2176         1112         1618         1408         1451         1529	Card         1070         1070 Ti         1080         1080 Ti         1660s         2060         2060s         2070         2070s         2080           Revenue/Day (CAD)*         0.67         0.72         0.81         1.03         0.67         0.72         0.95         0.99         0.96         0.96           Gross Profit/Day (CAD)         0.38         0.38         0.47         0.44         0.45         0.49         0.67         0.69         0.65         0.70           ROI Time (days)         1599         1708         1481         2176         1112         1618         1408         1451         1529         1436	Card         1070         1070 ri         1080         1080 ri         1660s         2060         2060s         2070         2070s         2080         2080s           Revenue/Day (CAD)*         0.67         0.72         0.81         1.03         0.67         0.72         0.95         0.96         0.96         0.95           Gross Profit/Day (CAD)         0.38         0.38         0.47         0.44         0.45         0.49         0.67         0.69         0.65         0.70         0.60           ROI Time (days)         1599         1708         1481         2176         1112         1618         1408         1451         1529         1436         1669	Card         1070         1070 Ti         1080         1080 Ti         1660s         2060         2060s         2070         2070s         2080         2080s         2080 Ti           Revenue/Day (CAD)*         0.67         0.72         0.81         1.03         0.67         0.72         0.95         0.99         0.96         0.96         0.95         1.33           Gross Profit/Day (CAD)         0.38         0.38         0.47         0.44         0.45         0.49         0.67         0.69         0.65         0.70         0.60         0.76           ROI Time (days)         1599         1708         1481         2176         1112         1618         1408         1451         1529         1436         1669         1585	Card         1070         1070 ri         1080         1080 ri         1660s         2060         2060s         2070         2070s         2080         2080s         2080 ri         3060 ri           Revenue/Day (CAD)*         0.67         0.72         0.81         1.03         0.67         0.72         0.95         0.99         0.96         0.96         0.95         1.33         1.36           Gross Profit/Day (CAD)         0.38         0.38         0.47         0.44         0.45         0.49         0.67         0.69         0.65         0.70         0.60         0.76         1.06           ROI Time (days)         1599         1708         1481         2176         1112         1618         1408         1451         1529         1436         1669         1585         1133	Card         1070         1070 I         1080 I         1080 I         1660s I         2060 I         2060s I         2070 I         2070s I         2080 I         2080 I         2080 II         3060 II         3070 II           Revenue/Day (CAD)*         0.67 I         0.72 I         0.81 I         1.03 I         0.67 I         0.72 II         0.95 II         0.99 II         0.96 II         0.95 II         1.36 II         1.36 II         1.36 II         1.36 II         1.36 II         1.06 II         1.06 II         0.69 II         0.69 II         0.69 II         0.69 II         1.06 II <th>Card         1070         1070 rt         1080         1080 rt         1660s         2060s         2060s         2070s         2070s         2080 rt         2080 rt         3060 rt         3070 rt         3080 rt           Revenue/Day (CAD)*         0.67         0.72         0.81         1.03         0.67         0.72         0.95         0.95         0.96         0.95         1.33         1.36         1.36         2.15           Gross Profit/Day (CAD)         0.38         0.38         0.47         0.44         0.45         0.49         0.67         0.69         0.65         0.70         0.60         0.76         1.06         1.06         1.61           ROI Time (days)         1599         1708         1481         2176         1112         1618         1408         1451         1529         1436         1669         1585         1133         1226         1151</th>	Card         1070         1070 rt         1080         1080 rt         1660s         2060s         2060s         2070s         2070s         2080 rt         2080 rt         3060 rt         3070 rt         3080 rt           Revenue/Day (CAD)*         0.67         0.72         0.81         1.03         0.67         0.72         0.95         0.95         0.96         0.95         1.33         1.36         1.36         2.15           Gross Profit/Day (CAD)         0.38         0.38         0.47         0.44         0.45         0.49         0.67         0.69         0.65         0.70         0.60         0.76         1.06         1.06         1.61           ROI Time (days)         1599         1708         1481         2176         1112         1618         1408         1451         1529         1436         1669         1585         1133         1226         1151

#### 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)**

June 26, 2021 Prepared on: \*All dollar amounts in CAD

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	Electricity Cost (¢/kV	Vh)	10.325		ETH	Price	2312	ľ	Block 1	Time (s)	13.23		¢/MF	I/Day	6.49431	ľ	
	Network Hashrate (TI	H/s)	477.50		Eth Mir	ed/Day	13413		Block I	Reward	2.054		¢/ IVII	i, Day	0.43431		
	Card	470	480	570	580	590	5500XT	5600XT	5700	5700XT	6700XT	6800	6800XT	6900XT	Vega56	Vega64	VII
ب	Revenue/Day	1.97	1.97	1.98	2.03	2.00	1.69	2.40	3.47	3.55	3.05	4.12	4.18	4.16	2.51	3.05	5.88
<b>□</b>	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
<u> </u>	Power Usage (W)	120	130	130	130	130	70	100	160	140	170	175	190	220	215	220	220
urrent	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
J	Gross Profit/Day <sup>1</sup>	1.68	1.65	1.66	1.71	1.68	1.52	2.16	3.08	3.21	2.63	3.68	3.71	3.61	1.97	2.51	5.33
	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)	298	303	301	292	298	330	302	292	296	380	353	458	609	355	339	394
	Annual Returns <sup>3</sup>	122%	121%	121%	125%	123%	111%	121%	125%	123%	96%	103%	80%	60%	103%	108%	93%
																	<u> </u>
6	Discount	3%															
7	Card	470	480	570	580	590	5500XT	5600XT	5700	5700XT	6700XT	6800	6800XT	6900XT	Vega56	Vega64	VII
15	Revenue/Day (CAD)*	1.92	1.92	1.93	1.98	1.95	1.64	2.34	3.38	3.46	2.97	4.01	4.07	4.05	2.44	2.97	5.72
	Gross Profit/Day (CAD)	1.63	1.60	1.61	1.66	1.63	1.47	2.09	2.99	3.11	2.55	3.58	3.60	3.50	1.91	2.43	5.18
_	ROI Time (days)	308	312	311	302	308	340	311	301	305	392	364	472	628	367	350	406
Е	Annual Returns	119%	117%	117%	121%	119%	107%	117%	121%	120%	93%	100%	77%	58%	100%	104%	90%
	-																
	Discount	94%															
_	Card	470	480	570	580	590	5500XT	5600XT	5700	5700XT	6700XT	6800	6800XT	6900XT	Vega56	Vega64	VII
Crash	Revenue/Day (CAD)*	0.12	0.12	0.12	0.12	0.12	0.10	0.14	0.21	0.21	0.18	0.24	0.25	0.25	0.15	0.18	0.35
<u>                                    </u>	Gross Profit/Day (CAD)	-0.18	-0.21	-0.21	-0.20	-0.20	-0.07	-0.11	-0.19	-0.14	-0.24	-0.19	-0.22	-0.30	-0.38	-0.36	-0.20
	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	-13%	-15%	-15%	-15%	-15%	-5%	-6%	-8%	-5%	-9%	-5%	-5%	-5%	-20%	-16%	-3%
			Ī														
	Discount	65%															
ק ו	Card	470	480	570	580	590	5500XT	5600XT	5700	5700XT	6700XT	6800	6800XT	6900XT	Vega56	Vega64	VII
Correct	Revenue/Day (CAD)*	0.68	0.68	0.68	0.70	0.69	0.58	0.83	1.20	1.23	1.05	1.42	1.44	1.43	0.87	1.05	2.03
٥١	Gross Profit/Day (CAD)	0.38	0.36	0.36	0.38	0.37	0.41	0.58	0.80	0.88	0.63	0.99	0.97	0.89	0.33	0.51	1.48
ŭ	ROI Time (days)	1302	1391	1383	1317	1357	1221	1117	1121	1080	1581	1316	1747	2473	2105	1672	1415
	Annual Returns	28%	26%	26%	28%	27%	30%	33%	33%	34%	23%	28%	21%	15%	17%	22%	26%