Ethereum Mining Profitability & Scenario Analysis (NVIDIA)

Prepared on: Sep 3, 2021 *All dollar amounts in CAD

	Electricity Cost (¢/kWh) Network Hashrate (TH/s)		10.325 675.29			H Price 48 y Reward 146						6541 2.235		I/Day	10.59		
	Card	1070	1070 Ti	1080	1080 Ti	1660s	2060	2060s	2070	2070s	2080	2080s	2080 Ti	3060 Ti	3070	3080	3090
	Revenue/Day	3.18	3.38	3.60	4.87	3.18	3.39	4.47	4.66	4.55	4.55	4.47	6.27	6.41	6.41	9.85	12.71
	Hashrate (MH/s)	30.0	31.9	34.0	46.0	30.0	32.0	42.3	44.0	43.0	43.0	42.2	59.2	60.5	60.6	93.0	120.0
ıt	Power Usage (W)	120	135	170	240	90	90	110	120	125	108	140	230	120	120	260	285
ē	El. Costs (\$ /Day)	0.30	0.33	0.42	0.59	0.22	0.22	0.27	0.30	0.31	0.27	0.35	0.57	0.30	0.30	0.64	0.71
	Gross Profit/Day ¹	2.88	3.04	3.18	4.28	2.95	3.16	4.20	4.36	4.24	4.29	4.12	5.70	6.11	6.11	9.20	12.00
l n	Market Price ²	530	550	550	850	650	750	850	900	950	950	1100	1200	1500	1750	2350	3500
	Efficiency (kH/s/W)	250	236	200	192	333	356	384	367	344	398	301	257	504	505	358	421
	ROI Time (Days)	184	181	173	199	220	237	202	206	224	222	267	211	246	286	255	292
	Annual Returns ³	198%	202%	211%	184%	166%	154%	180%	177%	163%	165%	137%	173%	149%	128%	143%	125%

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.

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

	Discount	11%															
	Card	1070	1070 Ti	1080	1080 Ti	1660s	2060	2060s	2070	2070s	2080	2080s	2080 Ti	3060 Ti	3070	3080	3090
	Revenue/Day (CAD)*	2.84	3.02	3.22	4.36	2.84	3.03	4.00	4.17	4.07	4.07	4.00	5.61	5.73	5.74	8.81	11.37
	Gross Profit/Day (CAD)	2.55	2.69	2.80	3.76	2.62	2.81	3.73	3.87	3.76	3.81	3.65	5.04	5.44	5.44	8.17	10.66
59	ROI Time (days)	208	205	196	226	248	267	228	232	252	250	301	238	276	322	288	328
55	Annual Returns	175%	178%	186%	162%	147%	137%	160%	157%	145%	146%	121%	153%	132%	113%	127%	111%

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)*	0.19	0.20	0.21	0.29	0.19	0.20	0.26	0.28	0.27	0.27	0.26	0.37	0.38	0.38	0.58	0.75
Ö	Gross Profit/Day (CAD)	-0.11	-0.14	-0.21	-0.31	-0.04	-0.02	-0.01	-0.02	-0.04	0.00	-0.08	-0.20	0.08	0.08	-0.06	0.04
Ö	ROI Time (days)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	718513	N/A	N/A	18509	21494	N/A	78976
ب	Annual Returns	-8%	-9%	-14%	-13%	-2%	-1%	0%	-1%	-2%	0%	-3%	-6%	2%	2%	-1%	0%

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.

															65%	Discount	⊑
80 3090	3080	3070	3060 Ti	2080 Ti	2080s	2080	2070s	2070	2060s	2060	1660s	1080 Ti	1080	1070 Ti	1070	Card	.0
4.39	3.40	2.21	2.21	2.16	1.54	1.57	1.57	1.61	1.54	1.17	1.10	1.68	1.24	1.17	1.10	Revenue/Day (CAD)*	ct
75 3.68	2.75	1.92	1.91	1.59	1.20	1.30	1.26	1.31	1.27	0.95	0.87	1.09	0.82	0.83	0.80	Gross Profit/Day (CAD)	ē
951	853	913	784	753	920	729	753	687	668	792	744	782	670	662	663	ROI Time (days)	
% 38%	43%	40%	47%	48%	40%	50%	48%	53%	55%	46%	49%	47%	55%	55%	55%	Annual Returns	ပြ
85	8	913	784	753	920	729	753	687	668	792	744	782	670	662	663	ROI Time (days)	_ ⊆

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: *All dollar amounts in CAD

				•													
	Electricity Cost (¢/kV	Vh)	10.325		ETH	Price	4891		Daily	Blocks	6541		c/846	I/Day	#######		
	Network Hashrate (Ti	H/s)	675.29		Daily F	Reward	14618		Block I	Reward	2.235		¢/ IVIF	1/ Бау	***********		
	Card	470	480	570	580	590	5500XT	5600XT	5700	5700XT	6700XT	6800	6800XT	6900XT	Vega56	Vega64	VII
٠.	Revenue/Day	3.22	3.22	3.23	3.31	3.26	2.75	3.92	5.66	5.79	4.98	6.71	6.82	6.78	4.09	4.98	9.58
 ⊆	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
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
Ū	Gross Profit/Day ¹	2.92	2.90	2.91	2.99	2.94	2.58	3.67	5.27	5.44	4.55	6.28	6.35	6.23	3.55	4.43	9.04
	Market Price ²	500	500	500	500	500	500	650	900	950	800	1300	1700	1600	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)	171	173	172	167	170	194	177	171	174	176	207	268	257	197	192	232
	Annual Returns ³	213%	211%	212%	218%	215%	188%	206%	214%	209%	208%	176%	136%	142%	185%	190%	157%
6	Discount	11%															
7	Card	470	480	570	580	590	5500XT	5600XT	5700	5700XT	6700XT	6800	6800XT	6900XT	Vega56	Vega64	VII
15	Revenue/Day (CAD)*	2.88	2.88	2.89	2.97	2.92	2.46	3.51	5.07	5.18	4.45	6.01	6.10	6.06	3.66	4.45	8.57
	Gross Profit/Day (CAD)	2.58	2.56	2.57	2.64	2.60	2.29	3.26	4.67	4.84	4.03	5.57	5.63	5.52	3.12	3.91	8.03
<u>a</u>	ROI Time (days)	194	195	195	189	193	218	200	193	196	198	233	302	290	224	217	262
E	Annual Returns	189%	187%	187%	193%	190%	167%	183%	190%	186%	184%	156%	121%	126%	163%	168%	140%
	-		_														
	Discount	94%															
_	Card	470	480	570	580	590	5500XT	5600XT	5700	5700XT	6700XT	6800	6800XT	6900XT	Vega56	Vega64	VII
Crash	Revenue/Day (CAD)*	0.19	0.19	0.19	0.20	0.19	0.16	0.23	0.33	0.34	0.29	0.40	0.40	0.40	0.24	0.29	0.57
	Gross Profit/Day (CAD)	-0.11	-0.13	-0.13	-0.13	-0.13	-0.01	-0.02	-0.06	0.00	-0.13	-0.04	-0.07	-0.14	-0.29	-0.25	0.02
	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	100585
	Annual Returns	-8%	-10%	-10%	-9%	-9%	-1%	-1%	-3%	0%	-6%	-1%	-1%	-3%	-15%	-11%	0%
			-														
	Discount	65%															
ן ק	Card	470	480	570	580	590	5500XT	5600XT	5700	5700XT	6700XT	6800	6800XT	6900XT	Vega56	Vega64	VII
Correct	Revenue/Day (CAD)*	1.11	1.11	1.11	1.14	1.13	0.95	1.35	1.96	2.00	1.72	2.32	2.35	2.34	1.41	1.72	3.31
ō	Gross Profit/Day (CAD)	0.81	0.79	0.79	0.82	0.80	0.78	1.10	1.56	1.65	1.30	1.88	1.88	1.79	0.88	1.17	2.76
Ö	ROI Time (days)	614	634	631	608	622	644	589	577	575	617	690	903	892	797	725	760
	Annual Returns	59%	58%	58%	60%	59%	57%	62%	63%	63%	59%	53%	40%	41%	46%	50%	48%