

## Ethereum Mining Profitability & Scenario Analysis (NVIDIA)

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

¢/MH/Day	7.17973
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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
Power Usage (W)	120	135	135	240	90	90	110	120	125	108	140	230	120	120	220	285
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
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%
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Discount	9%															
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
ROI Time (days)	333	343	321	362	267	397	354	360	371	365	384	336	305	330	300	361
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%
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Card	1070	1070 Ti	1080	1080 Ti	1660s	2060	2060s	2070	2070s	2080	2080s	2080 Ti	3060 Ti	3070	3080	3090
Revenue/Day (CAD)*	0.13	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
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
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	-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%
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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%	38%	30%

## 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

Current	Electricity Cost (¢/kWh)			10.325		ETH Price			2646		Block Time (s)			13.29		¢/MH/Day			7.17973	
	Network Hashrate (TH/s)			492.15		Eth Mined/Day			13354		Block Reward			2.054						
	Card	470	480	570	580	590	5500XT	5600XT	5700	5700XT	6700XT	6800	6800XT	6900XT	Vega56	Vega64	VII			
	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			
	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			
	Power Usage (W)	120	130	130	130	130	70	100	160	140	170	175	190	220	215	220	220			
	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			
	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%			

EIP- 1559	Discount	3%															
	Card	470	480	570	580	590	5500XT	5600XT	5700	5700XT	6700XT	6800	6800XT	6900XT	Vega56	Vega64	VII
	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
	ROI Time (days)	274	277	276	268	273	304	278	269	273	349	325	422	560	323	310	363
	Annual Returns	133%	132%	132%	136%	134%	120%	131%	136%	134%	105%	112%	87%	65%	113%	118%	100%

Crash	Discount	94%															
	Card	470	480	570	580	590	5500XT	5600XT	5700	5700XT	6700XT	6800	6800XT	6900XT	Vega56	Vega64	VII
	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
	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%

Correct	Discount	65%															
	Card	470	480	570	580	590	5500XT	5600XT	5700	5700XT	6700XT	6800	6800XT	6900XT	Vega56	Vega64	VII
	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
	Gross Profit/Day (CAD)	0.46	0.43	0.43	0.45	0.44	0.47	0.67	0.93	1.01	0.74	1.14	1.13	1.04	0.42	0.62	1.70
	ROI Time (days)	1096	1159	1153	1102	1133	1062	971	968	942	1345	1143	1511	2113	1651	1372	1237
	Annual Returns	33%	31%	32%	33%	32%	34%	38%	38%	39%	27%	32%	24%	17%	22%	27%	30%