

Ethereum Mining Profitability & Scenario Analysis (NVIDIA)

Prepared on:	August 27, 2021
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*All dollar amounts in CAD

c/MH/Day	9.70189
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Current	Electricity Cost (¢/kWh)			10.325		ETH Price			4123		Daily Blocks			6431		¢/MH/Day			9.70189	
	Network Hashrate (TH/s)			649.09		Daily Reward			15275		Block Reward			2.375						
	Card	1070	1070 Ti	1080	1080 Ti	1660s	2060	2060s	2070	2070s	2080	2080s	2080 Ti	3060 Ti	3070	3080	3090			
	Revenue/Day	2.91	3.09	3.30	4.46	2.91	3.10	4.10	4.27	4.17	4.17	4.09	5.74	5.87	5.88	9.02	11.64			
	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			
	Power Usage (W)	120	135	135	240	90	90	110	120	125	108	140	230	120	120	260	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	0.64	0.71			
	Gross Profit/Day ¹	2.61	2.76	2.96	3.87	2.69	2.88	3.83	3.97	3.86	3.90	3.75	5.17	5.57	5.58	8.38	10.94			
	Market Price ²	500	500	550	850	500	800	950	1000	1000	1000	1000	1200	1200	1500	1850	2777			
Efficiency (kH/s/W)	250	236	252	192	333	356	384	367	344	398	301	257	504	505	358	421				
ROI Time (Days)	191	181	186	220	186	278	248	252	259	256	267	232	215	269	221	254				
Annual Returns ³	191%	202%	197%	166%	196%	131%	147%	145%	141%	143%	137%	157%	169%	136%	165%	144%				

² 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	16%
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569	Discount	16%																
	Card	1070	1070 Ti	1080	1080 Ti	1660s	2060	2060s	2070	2070s	2080	2080s	2080 Ti	3060 Ti	3070	3080	3090	
	Revenue/Day (CAD)*	2.45	2.61	2.78	3.76	2.45	2.61	3.45	3.59	3.51	3.51	3.45	4.84	4.94	4.95	7.60	9.80	
	Gross Profit/Day (CAD)	2.15	2.27	2.44	3.16	2.23	2.39	3.18	3.30	3.20	3.25	3.10	4.27	4.65	4.65	6.95	9.10	
	ROI Time (days)	232	220	225	269	224	335	299	303	312	308	323	281	258	323	266	305	
	Annual Returns	157%	166%	162%	136%	163%	109%	122%	120%	117%	118%	113%	130%	141%	113%	137%	120%	

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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t Crash	Discount	94%															
	Card	1070	1070 Ti	1080	1080 Ti	1660s	2060	2060s	2070	2070s	2080	2080s	2080 Ti	3060 Ti	3070	3080	3090
	Revenue/Day (CAD)*	0.17	0.18	0.19	0.26	0.17	0.18	0.24	0.25	0.25	0.25	0.24	0.34	0.35	0.35	0.53	0.69
	Gross Profit/Day (CAD)	-0.13	-0.15	-0.14	-0.33	-0.05	-0.04	-0.03	-0.05	-0.06	-0.02	-0.11	-0.23	0.05	0.05	-0.11	-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	24298	30162	N/A	N/A
	Annual Returns	-9%	-11%	-9%	-14%	-4%	-2%	-1%	-2%	-2%	-1%	-4%	-7%	2%	1%	-2%	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.

	Discount	65%
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Correction	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)*	1.00	1.07	1.14	1.54	1.00	1.07	1.41	1.47	1.44	1.44	1.41	1.98	2.03	2.03	3.11	4.02
	Gross Profit/Day (CAD)	0.71	0.73	0.80	0.95	0.78	0.85	1.14	1.18	1.13	1.17	1.07	1.41	1.73	1.73	2.47	3.31
	ROI Time (days)	707	681	684	899	640	943	832	850	885	853	938	849	694	867	749	838
	Annual Returns	52%	54%	53%	41%	57%	39%	44%	43%	41%	43%	39%	43%	53%	42%	49%	44%

et **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: August 27, 2021

*All dollar amounts in CAD

Current	Electricity Cost (¢/kWh)			10.325			ETH Price			4123			Daily Blocks			6431			¢/MH/Day			9.70189		
	Network Hashrate (TH/s)			649.09			Daily Reward			15275			Block Reward			2.375								
	Card	470	480	570	580	590	5500XT	5600XT	5700	5700XT	6700XT	6800	6800XT	6900XT	Vega56	Vega64	VII							
	Revenue/Day	2.95	2.95	2.96	3.04	2.99	2.52	3.59	5.19	5.31	4.56	6.15	6.25	6.21	3.74	4.56	8.78							
	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 ¹	2.65	2.63	2.64	2.71	2.67	2.35	3.34	4.79	4.96	4.14	5.72	5.78	5.66	3.21	4.01	8.24							
	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)	189	190	190	184	188	213	195	188	192	193	227	294	282	218	212	255							
	Annual Returns ³	194%	192%	192%	198%	195%	171%	188%	194%	191%	189%	161%	124%	129%	167%	172%	143%							

EIP- 1559	Discount	16%															
	Card	470	480	570	580	590	5500XT	5600XT	5700	5700XT	6700XT	6800	6800XT	6900XT	Vega56	Vega64	VII
	Revenue/Day (CAD)*	2.48	2.48	2.49	2.56	2.52	2.12	3.02	4.37	4.47	3.84	5.18	5.26	5.23	3.15	3.84	7.39
	Gross Profit/Day (CAD)	2.19	2.16	2.17	2.23	2.19	1.95	2.77	3.97	4.12	3.42	4.75	4.79	4.68	2.62	3.29	6.85
	ROI Time (days)	229	231	230	224	228	256	234	226	230	234	274	355	342	267	258	307
	Annual Returns	160%	158%	158%	163%	160%	142%	156%	161%	158%	156%	133%	103%	107%	137%	141%	119%

Crash	Discount	94%															
	Card	470	480	570	580	590	5500XT	5600XT	5700	5700XT	6700XT	6800	6800XT	6900XT	Vega56	Vega64	VII
	Revenue/Day (CAD)*	0.17	0.17	0.17	0.18	0.18	0.15	0.21	0.31	0.31	0.27	0.36	0.37	0.37	0.22	0.27	0.52
	Gross Profit/Day (CAD)	-0.12	-0.15	-0.15	-0.14	-0.15	-0.02	-0.04	-0.09	-0.03	-0.15	-0.07	-0.10	-0.18	-0.31	-0.28	-0.03
	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	-9%	-11%	-11%	-10%	-11%	-2%	-2%	-4%	-1%	-7%	-2%	-2%	-4%	-16%	-12%	0%

Correct	Discount	65%															
	Card	470	480	570	580	590	5500XT	5600XT	5700	5700XT	6700XT	6800	6800XT	6900XT	Vega56	Vega64	VII
	Revenue/Day (CAD)*	1.02	1.02	1.02	1.05	1.03	0.87	1.24	1.79	1.83	1.57	2.12	2.16	2.14	1.29	1.57	3.03
	Gross Profit/Day (CAD)	0.72	0.70	0.70	0.73	0.71	0.70	0.99	1.40	1.49	1.15	1.69	1.69	1.60	0.76	1.03	2.49
	ROI Time (days)	694	718	715	689	705	717	656	645	640	694	769	1008	1001	921	826	845
	Annual Returns	53%	51%	51%	53%	52%	51%	56%	57%	57%	53%	47%	36%	36%	40%	44%	43%