Ethereum Mining Profitability & Scenario Analysis

Prepared on:	May 24, 2021

Current

Electricity Cost (CAD/kWh)	0.10325
Network Diff (TH/s)	613.847

ETH Price (CAD)	2971
Block Reward	3.000

Block Time (s)	13.16
$/MH/Day	0.09532

Card	1070	1080	1080 Ti	1660s	2060	2060s	2070	2070s	2080	2080s	2080Ti	3060 Ti	3070	3080	3090
Revenue/Day (CAD)	2.86	3.43	4.24	2.86	3.05	4.03	4.07	4.10	4.10	4.02	5.64	5.77	5.77	9.15	11.44
Hashrate (MH/s)	30	36	44.5	30	32	42.25	42.7	43	43	42.2	59.2	60.5	60.56	96	120
Power Usage (W)	120	135	240	90	90	110	120	125	108	140	230	120	120	220	285
El. Costs (CAD/day)	0.30	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 (CAD)[1]	2.56	3.10	3.65	2.64	2.83	3.75	3.77	3.79	3.83	3.68	5.07	5.47	5.48	8.61	10.73
Market Price (CAD)[2]	600	700	950	450	800	950	1000	1000	1300	1300	1800	1800	1850	2900	4300
Efficiency (MH/s/W)	0.25	0.27	0.19	0.33	0.36	0.38	0.36	0.34	0.40	0.30	0.26	0.50	0.50	0.44	0.42
ROI Time (days)	234	226	260	171	283	253	265	264	339	354	355	329	338	337	401
Annual Returns[3]	156%	161%	140%	214%	129%	144%	138%	138%	108%	103%	103%	111%	108%	108%	91%

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

[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.

EIP- 1559

Discount	33%

Card	1070	1080	1080 Ti	1660s	2060	2060s	2070	2070s	2080	2080s	2080Ti	3060 Ti	3070	3080	3090
Revenue/Day (CAD)*	1.91	2.29	2.83	1.91	2.03	2.68	2.71	2.73	2.73	2.68	3.76	3.84	3.85	6.10	7.63
Gross Profit/Day (CAD)	1.61	1.95	2.23	1.68	1.81	2.41	2.42	2.42	2.46	2.33	3.19	3.55	3.55	5.56	6.92
ROI Time (days)	373	358	425	267	442	394	414	413	527	557	564	507	521	522	621
Annual Returns	98%	102%	86%	137%	83%	93%	88%	88%	69%	66%	65%	72%	70%	70%	59%

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.

Market Crash

Discount	94%

Card	1070	1080	1080 Ti	1660s	2060	2060s	2070	2070s	2080	2080s	2080Ti	3060 Ti	3070	3080	3090
Revenue/Day (CAD)*	0.17	0.20	0.25	0.17	0.18	0.24	0.24	0.24	0.24	0.24	0.33	0.34	0.34	0.54	0.68
Gross Profit/Day (CAD)	-0.13	-0.13	-0.34	-0.05	-0.04	-0.03	-0.06	-0.07	-0.03	-0.11	-0.24	0.04	0.04	0.00	-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	41552	42376	N/A	N/A
Annual Returns	-8%	-7%	-13%	-4%	-2%	-1%	-2%	-2%	-1%	-3%	-5%	1%	1%	0%	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.

Market Correction

Discount	65%

Card	1070	1080	1080 Ti	1660s	2060	2060s	2070	2070s	2080	2080s	2080Ti	3060 Ti	3070	3080	3090
Revenue/Day (CAD)*	0.99	1.18	1.46	0.99	1.05	1.39	1.41	1.41	1.41	1.39	1.95	1.99	1.99	3.16	3.95
Gross Profit/Day (CAD)	0.69	0.85	0.87	0.76	0.83	1.12	1.11	1.11	1.15	1.04	1.38	1.69	1.70	2.61	3.24
ROI Time (days)	870	824	1093	589	964	850	903	905	1133	1248	1306	1063	1091	1110	1326
Annual Returns	42%	44%	33%	62%	38%	43%	40%	40%	32%	29%	28%	34%	33%	33%	28%

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.