



HYDROMINER

H2O Token

Launch White Paper

October 2017



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Legal Disclaimer

This whitepaper („Whitepaper“) gives an overview of certain aspects of HydroMiner, H2O and its intended use. This Whitepaper and the information stated herein is not legally binding. **The Token Sale is only made on the basis of a separate document, the Token Offer Document which will be published alongside this Whitepaper.** This Whitepaper does not constitute an offer of H2Os nor an invitation for an offer to exchange any amount of Ether for H2O.

If you decide to participate in the Token Sale as a form of investment, HydroMiner expressly warns you that an investment in H2O carries a high degree of risk. For a description of the risks associated, see the chapter “RISK FACTORS” in the Token Offer Document.

Forward-Looking Statements

This Whitepaper contains certain forward-looking statements. A forward-looking statement is a statement that does not relate to historical facts and events. The forward-looking statements are based on analyses or forecasts of future results and estimates of amounts not yet determinable or foreseeable. Such forward-looking statements are identified by the use of terms and phrases such as „anticipate“, „believe“, „could“, „estimate“, „expect“, „intend“, „plan“, „predict“, „project“, „will“ and similar terms, including references and assumptions. This applies, in particular, to statements in this Whitepaper containing information on future developments of HydroMiner, plans and expectations regarding H2O or its growth of value. Forward-looking statements are based on current estimates and assumptions that the Developer makes to the best of its present knowledge. Such forward-looking statements are subject to risks, uncertainties and other factors which could cause actual developments to differ materially from and be worse than expected or assumed or described in these forward-looking statements. Accordingly, any persons interested in participating in the Token Sale is strongly advised to read the chapter “RISK FACTORS” in the Coin Offer Document. This chapter includes more detailed descriptions of factors that might have a negative impact on HydroMiner and the H2O. In light of these risks, uncertainties and assumptions, future events described in this Whitepaper may not occur.

HydroMiner Overview

HydroMiner is a crypto currency mining company using **green energy** drawn from hydro power stations in the Alpine region of Europe. Hydro power is generally thought to be one of the **most effective and lowest-cost renewable energy resources**. It is environmentally friendly, carbon-neutral and natural. Hydro power allows us to manage resources sustainably and enables low-emission production. What's more, the technology is simple, controllable and has an excellent track record.

Using hydro power stations in the Alps region, we reach one of the lowest prices per kiloWatt in Europe. In fact, our cost of electricity is **currently 85% lower than the average in Europe**.

In addition, we realize further cost savings by using the water for cooling our mining equipment. In fact, we are able to compete in energy prices with Northern Europe and China.

Not only is hydro power mining ecologically friendly, but it is also **profitable**.

HydroMiner mines all scalable crypto currencies. The decision as to what currency to mine is made by software algorithms, which choose the best option available at any moment. HydroMiner is also flexible about the mining pools it uses, depending on payouts and liquidity among other factors.

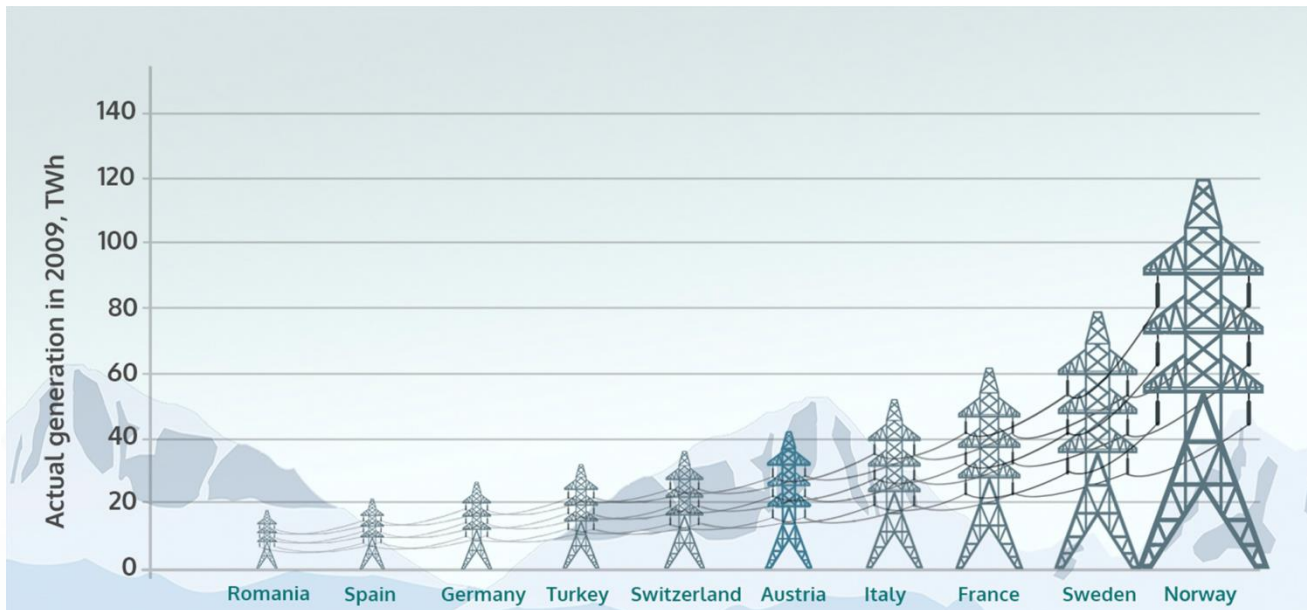
Where possible, mining equipment is built inside standard **sea freight containers**. The advantage is that containers can easily be assembled near our headquarters in Vienna, Austria, and then taken to the hydro power station. Another advantage is that we have a proven method for equipping containers with mining gear using extremely effective cooling and ventilation equipment. In addition, the container can be moved to another location very quickly if needed, sometimes depending on water levels or the need for extensive maintenance to the power station's turbines.

The average cost for one fully equipped container is between 350,000 and 650,000 USD, depending on the hardware used and the cooling technology.

With our upcoming ICO, we are selling H2O Tokens that will act as vouchers that can be exchanged to mining contracts on the HydroMiner platform.

We have currently rented, with the option to buy, two hydroelectric power stations in Austria. We use the room inside the stations or place containers nearby to avoid the high network costs for the power lines. Additionally, our proprietary cooling system allows us to save considerable space so that we can significantly increase the number of GPU cards per square meter compared to other mining projects.

We will use the ICO proceeds to further **scale up our mining operation** in additional hydro power stations.



What is a Miner?

A crypto currency miner provides computing capacity to solve mathematical problems. As a reward, the miner gets the crypto currency of the blockchain it is helping secure. The miner consists of a piece of equipment operating 24/7 under extremely high load, so failures and breakdowns are quite common. Miners have to be shipped to service centers for repairs, which takes time, especially if a service center is located abroad. And, every day of downtime means a loss of mining profit. HydroMiner's power stations, however, are located within three hours from our headquarters, minimizing any downtime, thereby achieving more efficient mining.

It is common practice in the industry not to disclose the details of mining facilities, including their locations, in order to preserve trade secrets and shut competitors out of inexpensive power locations. HydroMiner believes in transparency and publishes its current locations and locations financed through this Token Sale. In fact, we even offered guided tours and invite you to spend a weekend in the beautiful Alpine regions of Austria.

HydroMiner's History

In 2014, Nadine and Nicole Damblon, inspired by a common friend from the US, started to mine crypto currencies with their home computers in Vienna and Düsseldorf. After a year of profitable mining, some friends wanted to invest in their mining business and the mining farm grew bigger, soon outgrowing their small apartment.

In late 2015, they reached the maximum amount of electricity that they could receive in their apartments. That's when they realized that the lowest price per unit of energy would decide the success of mining operations in the future.

Now the question was: Where could they get the lowest energy price? Soon they learned that the largest part of the electricity fee in Germany and Austria consists of the so called network power transmission fee, effectively a tax set by the government. This fee comes into play as soon as generated power is transmitted into the general energy network.

The only way to avoid this fee would be to **sit directly at the source**.

Austria, the beautiful mountainous country in central Europe, is home to thousands of small hydro power stations. They are usually in private hands and barely break even.

Through a friend, they were able to rent space in a hydro power station near Vienna. Cheap energy indeed! As more investors joined, they expanded into another hydro power station.

They plan to enlarge the operation significantly with the funds from the ICO. The next step is to rent space in larger power stations that will provide an even better environment and higher profitability for mining.

HydroMiner's Pricing

HydroMiner's pricing structure is based on available power that can be used for mining. HydroMiner will ensure that the energy is used most efficiently for the largest mining gains. Our mining contracts are based on kWh and the payout is based on the net profits earned for that kWh.

We believe this represents a much better approach than the usual method of paying per hash rate, as the power of networks increases continuously and proceeds based on hashes can erode very quickly.

Hydro Power Stations in Operation

We currently have one hydro power station fully operational and a second one rented, with hardware being deployed end of September.

Langenlois in Lower Austria (Hydro 1)

In Langenlois, the HydroMiner team has equipped a 290 kW hydro power station with a total of 120 units, each with between 6 and 10 GPUs. Besides installing the units, HydroMiner had to adapt the power station's electric system to fit the equipment. Due to the very small amount of space available and the impossibility of using a co-located container, this was a very challenging project. However, this particular power station has a very stable supply of energy and is in very good condition. HydroMiner rents the whole power station and has a purchase option until the end of 2018. In Langenlois, the average price per kWh is about 4.5 cents.

Waidhofen an der Ybbs (Hydro 2)

In Waidhofen, HydroMiner is currently equipping another power station with a maximum capacity of 700 kW. This project is realized in a smaller 20-foot container with a capacity of up to 150 GPU-based units and

100 Bitcoin miners. This power station is a large hydro power station and has just recently been overhauled. There is sufficient energy for up to 3 containers without any interruptions, even at low water levels. In this location, HydroMiner has a energy purchase contract with a variable price over time and depending on water levels.

Future Projects

Using the proceeds of the ICO, the HydroMiner team will equip more hydro power stations in the Alps. HydroMiner has several options for power stations. In Styria for example, there is an option to place units in containers at a facility with an output of up to 12,000 kW. Other smaller facilities are also available in southern Germany, with a range from 500 kW to 4,500 kW.

Expansion Plan¹

Proceeds	Colocations ²	Power consumption	Hashrate GH/s	MH/ Watt	Headcount
current	2	330 kW	45.82	0.158	7
1 mio USD	6	700 kW	115.5	0.165	8
2.5 mio USD	6	1.2 MW	206.4	0.172	9
5 mio USD	9	1.95 MW	351.0	0.180	11
10 mio USD	11	3.5 MW	654.5	0.187	14
25 mio USD	10 ³	25.5 MW	7,768.5	0.187	16
50 mio USD	12	52 MW	9,932	0.191	20
75 mio USD	14	80 MW	15.360	0.192	25

¹ Collocation expansion is not linear as we have already options with colocations with different power and space supply.

² Calculation includes increasingly better hardware with more output/watt.

³ At this stage, we would move smaller colocations to a larger hydro station, therefore reducing the number of colocations.

Facility Specifications

	HYDRO 1	HYDRO 2
STRUCTURE	Reinforced concrete building	20" container
AREA	ATS / ELIN	ATS / Siemens
ON SITE PERSONNEL	Waterproof/Fire resistant	Waterproof/Fire resistant
DATA CENTER	Free Air Cooling	Free Air Cooling
CONNECTIVITY	34000 m3	34000 m3
OPERATORS	Soler & Palau	Soler & Palau
POWER CONSUMPTION	170KW	160KW
HYDRO POWER	20 to 24 C	24 to 30 C
TURBINE	2x Francis Voith	Koessler Pelton
POWER BACKUP	Verbund Austria	Private grid/EVN
SUBSTATION	ATS / ELIN	Hydroenergie Roth
CABLING	Waterproof/Fire resistant	Waterproof/Fire resistant
COOLING TYPE	Free Air Cooling	Free Air Cooling
COOLING CAPACITY	22000 m3	34000 m3
COOLING MAKE	Soler & Palau	Soler & Palau
HEAT EXCHANGERS	65KW	80KW
TEMPERATURE	20 to 24 C	24 to 30 C
HUMIDITY	Industry standard	Industry standard
FIRE	Gas extinguishing fire supr.	Gas extinguishing fire supr.
INTRUSION	Detection with sensors, video	Detection with sensors, video
SURVEILLANCE	Video, Group4, Alarmsystem	Video, Group4, Alarmsystem
INSURANCE	Fire, Water, Damage, Theft	Fire, Water, Damage, Theft
INSURER	Uniqa	Uniqa

HydroMiner Technology

Over the past four years, the HydroMiner team has built over 20 mining facilities, from small in-house mining stations to large farms, mainly in power stations and containers. Almost all of the facilities are air-cooled and vary in size and output. Over time, we have come to the conclusion that hydro power stations are ideal for crypto mining, because of the low energy cost and because the water can be used for cooling. The use of containers is a good solution when it comes to flexibility, density and profitability, and can be implemented in almost every location.

Besides its air-cooled systems, HydroMiner is also working together with the 3M Novec ⁴ Team to push its own GPU miner immersive cooling technology. This technology requires almost 90% less space and 20% less energy. On top of this, immersion cooling is very quiet and does not require air ventilation systems that can cause problems with the power station's neighbors.

Using 3M's liquid cooling also enable us to run the most demanding mining software on GPUs, as well as CPUs, without stressing the material or impacting its quality or lifespan.

Another option for cooling is the use of the river's cold water by pumping it through copper tubes that run between rigs. This method enables us to lower temperatures without the need for ventilation between the power station or the container and the outside air. With the copper tube method, we only need to ensure sufficient air movement within the facility, and this is again, useful where noise can pose a problem to neighbors or the environment.

In power stations, the main challenge is the stability of the power supply. Electricity output can vary between seasons or over the course of a season, but it can also vary substantially within just minutes depending on weather, temperature, rainfall, and the actions of other hydro power stations or dam operators. In order to overcome these obstacles, the HydroMiner team has implemented various systems to ensure a continuous operation. These systems range from diesel-based USVs, to special contracts with power grid operators, to automated shutdown and sequential booting operations.

The HydroMiner team has a team member in South Asia testing logistics-management equipment that we plan to purchase.

The Internet connections to the hydro power stations are usually managed with carrier networks of at least two independent carriers that use different infrastructures.

Cooling Technology

HydroMiner uses 3 different types of cooling.

A Standard cooling with air at setups inside power stations. Depending on the rooms in power stations' outside temperature, noise situation (neighbors etc.) we use standard air cooling systems to keep the equipment cold. The advantage usually is that hydro power stations have a cool environment and cooling can be provided quite easily, even in the summertime.

B Container cooling, inside of containers we have a well proven system of cooling using a combination of air ventilation and heat exchangers using the water from the river to cool the facility to lower the usual temperature levels. Depending on weather and river temperature, this technology keeps the temperature of the container room between 22 and 35 degrees Celsius.

C Using Novec to cool GPUs we are able to reach a very high density of mining power, usually 1,500 MHs in a box of 60x60x30cm in size. This solution also saves up to 20% of energy and increases the mining output as well. This solution can be applied using dedicated mining GPUs only.

⁴ http://www.3m.com/3M/en_US/novec-us/applications/immersion-cooling/

Monitoring and Maintenance

We have monitoring software installed to constantly monitor the status of the miners and thus we can instantly react if a miner stops working. A team of 2 is constantly available and tours the facilities every week, checking on problems with hardware, cooling, and the power station itself. No power station currently is further away than 2 hours from our headquarters. In most power stations, there is also personnel available for smaller tasks at the facility if necessary.

Energy Market

Since energy prices are paramount to the process of mining and the main cost factor over time, HydroMiner has conducted intensive research to identify the best energy supply solution for its business. The European energy sector is a dynamic market that is influenced by all of its participants, including private and business customers, power plants, and governments, as well as the European commission.

Very little attention has been given to the consequences of market liberalization since 1998, and in particular, how it shifted the risk allocation. In a nutshell, whereas previously almost all the risks of different kinds were carried by the customers (or even by the state), the three EU Energy Packages have shifted the conventional energy generation risks completely onto the power companies. Looking to the future, apart from selected investments in peaking stations, few, if any, new conventional stations will be built, so the challenges relate to making the correct future decisions about the existing fleet.⁶

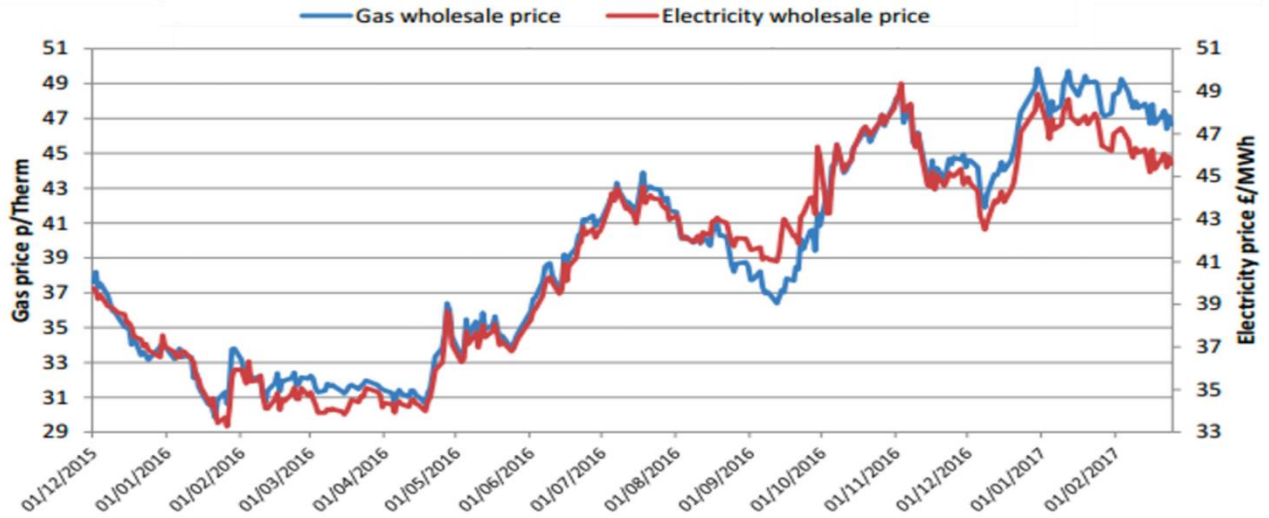
The set of challenges shows how the operating environment is continuing to become more difficult for the power sector. Society has placed so many different and changing requirements on it that it is difficult to provide the necessary consistency and stability for the industry to function efficiently and be financially positioned to make the investments required. The imperative of decarbonization is clear, and now that the main guidelines have been set, along with the ambitious intermediate target to achieve 40% decarbonization in 2030 vs. 1990 levels (i.e. a 20% reduction in a decade, as compared with the same reduction over three decades through 2020 – and that was with the benefit of the closure of inefficient factories in Eastern Europe).⁷

While the ambitions and goals of the EU commission are clear, it is entirely unclear how these goals will be achieved. However, it seems obvious that low-carbon forms of energy generation are going to be favored over energy generation that is connected to high carbon emissions. It is to be expected that in the future, the European commission will introduce more taxes and regulations on energy forms with a higher carbon output. On the other hand, we also expect that new energy forms with low carbon emission will receive substantial subsidies, which in turn will make this form of energy expensive, or at least expensive to purchase.

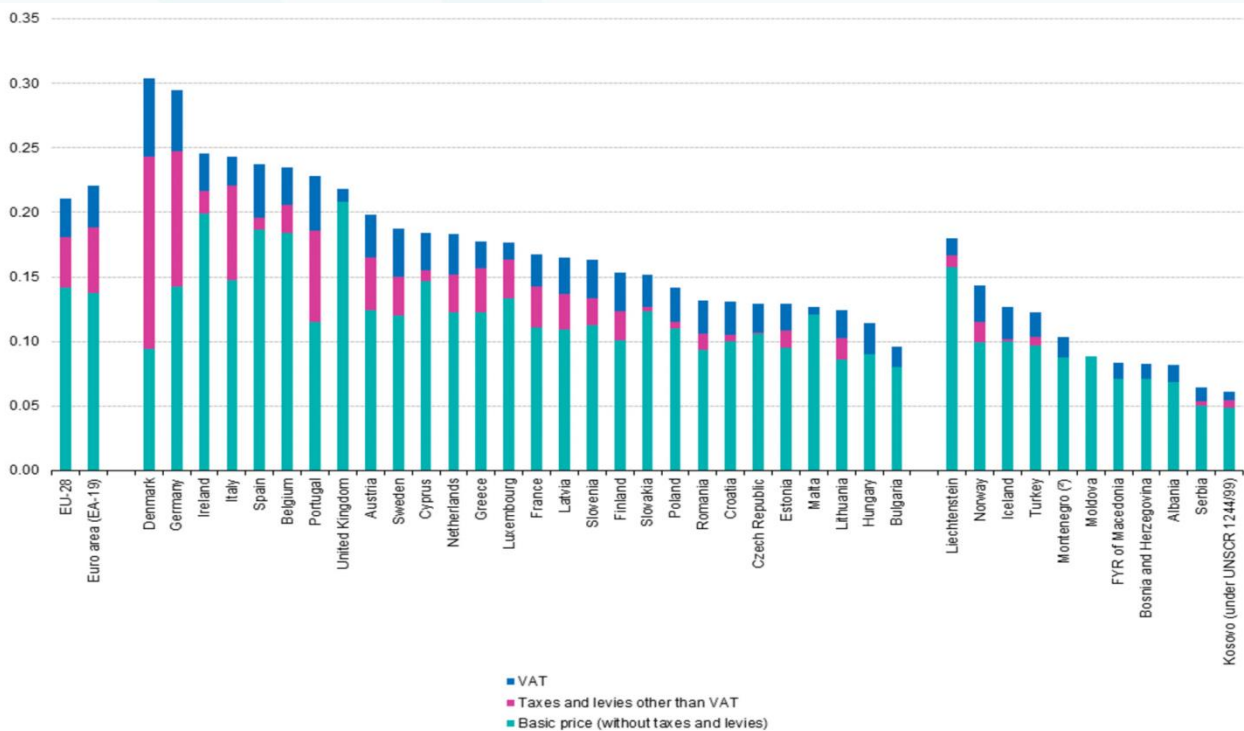
Therefore, HydroMiner has chosen to rely on eco-friendly forms of energy production. Since wind and solar power do not produce a steady supply of energy, we are left with either biogas or hydro power. In the biogas sector in most of Europe, energy production is heavily subsidized so that net prices range between 6 and 8 cents per kWh. In the hydro power sector, subsidies typically ended between 2010 and 2014, so that producers, especially those with smaller power stations ranging from 100 to 1000 kWh, are now forced to sell their energy to distributors at a price currently around 3.0 cents. This price level can easily compete with energy prices in Northern Europe and even China.

The retreat from nuclear energy, which many expect to cause a rise in energy prices in general, will probably not substantially affect the market. This is because most of the contraction, in terms of decommissioning old facilities, has already happened, so current facilities are considered safe and will be operational for many more years, and the total share of nuclear energy is less than 10%.

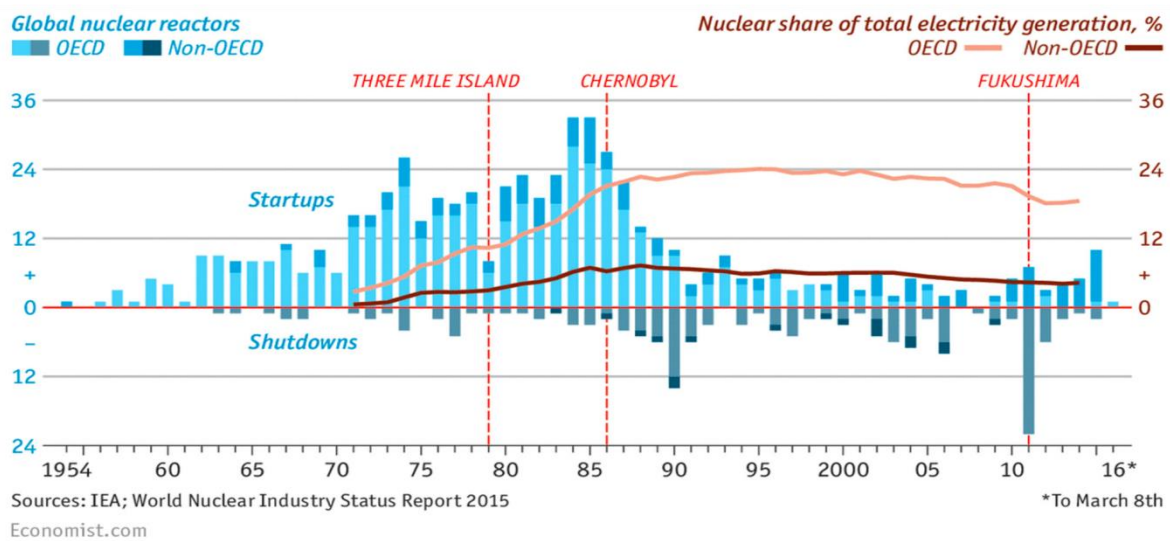
Energy Wholesale Prices



Over time, we expect to see mining to vanish from all areas with higher energy prices. In Europe, private mining rigs in Germany, France, Denmark, and the Netherlands will be the first to become unprofitable. Mining will probably next become unprofitable wherever miners have to bear the cost of electric power distribution. As a consequence, the best way to stay competitive is to avoid network costs and use inexpensive energy sources that are carbon friendly and have already exhausted any subsidies.



(*) Annual consumption: 2 500 kWh < consumption < 5 000 kWh.
 (†) Taxes and levies other than VAT are slightly negative and therefore the overall price is marginally lower than that shown by the bar.



The Case for Energy

Because there is so much discussion and so many different views on the topic of using energy to produce crypto currencies with the POW concept, we also wanted to share our view on the subject. In the following discussion, be keep in mind that we concentrate on hydro power in central Europe, so that the way we produce energy is probably among the most environmentally friendly ways possible in terms of classic environmental concerns. If there are concerns about using energy for mining, please carefully consider the following:

- 1) Crypto currencies have a value, just as gold does, or a bottle of water, or a car. If one is not concerned about using energy to produce cars, gold or water, then one should not be concerned when it comes to crypto currency, as it is a valuable product that is obviously needed by people.
- 2) The use of electric energy is considered to be the leading means for lifting people out of poverty. Energy substitutes for work and eases one's life. Electricity means better food, better products, better life, better health, and longer lives.
- 3) While resources are often considered to be scarce, it only depends on how one looks at the problem. Almost every product will over time be replaced by another, with usually much better features. There are almost no cases in history of running out of any commodity. Two centuries ago, we had no aluminum, even though its ores are common worldwide. We all have heard of peak oil, but oil prices, as with all other commodity prices, have decreased over time as humans have learned how to produce commodities in a more efficient and less expensive way.
- 4) We especially increase productivity for those products that we need most. When this happens, money flows into that sector and innovation starts. So, it is for electricity, where we have seen a great amount of innovation in recent years. If we continue to increase the demand for electricity, we will encourage innovation; and in turn, this will lead to more, better and cheaper energy.

GPU Mining

AMD has been considered for a long time the leader in the GPU mining market due to the high hash-rate per watt of its RX 4xx and 5xx chips. With specific custom BIOSes it is possible to obtain, using a real example, a 160 MH/s Ethereum mining rig with less than 700W power consumption, using 6x RX580 mining at 26 to 28 MH/s average per ~100W each.

Moreover, AMD has just released a new driver that boost mining performance of his RX chips, by preventing them to lose effectiveness on DAG changes - for the first time we are seeing a GPU manufacturer backing officially the crypto currency environment.

This said, it is quite difficult to purchase large amount of AMD GPUs, as consumer market is suffering from a supply problem coming from the "Mining Rush". After Ethereum mining profitability increased to up to 200 \$ per mining card, even in countries where electricity is not cheap, many end-users, even with basic computer skills and crypto currency knowledge, started their own in-house mining operation, while investors secured large number of GPUs.

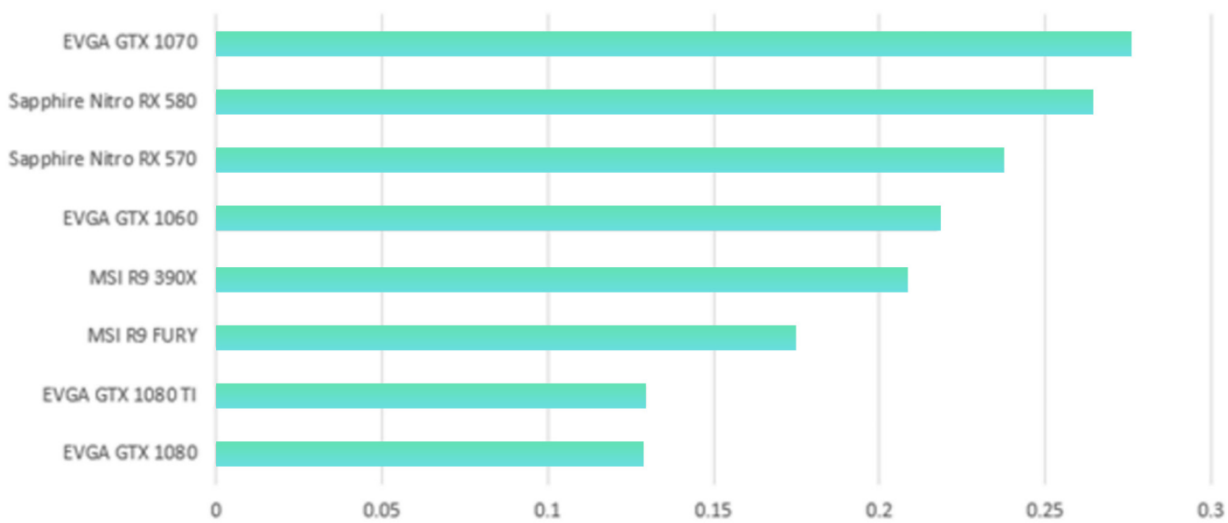
Because of this, miners started looking at NVIDIA cards, which on the other hand are much easier to purchase due to larger production from manufacturers. After different optimizations on mining software, we now have a situation where the GTX1070 from NVIDIA challenges the top AMD cards and in many cases can overcome them in terms per hash-rate per watt.

Other more powerful cards from NVIDIA, like the 1080 and 1080TI, actually are not a good mining fit because of the memory specs – the mining algorithms usually fit the GDDR5 latency characteristics better than GDDR5X from higher-end GPUs.

Summary data – taken from an Ethereum proxy-mining operation:

GPU	Average MH/s	Power Cons. (W)	MHs / W
EVGA GTX 1080 TI	32.3	250	0.1292
EVGA GTX 1080	22.5	175	0.128571429
EVGA GTX 1070	30.2	110	0.274545455
EVGA GTX 1060	21.3	98	0.217346939
MSI R9 FURY	29.6	170	0.174117647
MSI R9 390X	31.1	150	0.207333333
Sapphire Nitro RX 580	27.3	104	0.2625
Sapphire Nitro RX 570	23.2	98	0.236734694

Mining Performance



The Future of Mining

Over the next five years, mining will move into the direction of large mining farms that gain from economies of scale in infrastructure and capital expenditures. Mining will become a specialized trade that occurs in countries that actively develop renewable energy and lower the costs of electricity. As a result, mining will resemble an oligopolistic market where a few mining pools dominate the sector; although, these pools will limit membership. This will signal to investors that any one pool could not perform a 51% attack on the crypto currency. By limiting membership and computing power, mining pools will actually be able to increase profits.

Considerable improvements in mining hardware will be created over the next few years. Today, some coins can still be mined with regular CPUs installed on home computers and laptops. In the future, more crypto currencies may try to limit ASIC and GPU mining in order to increase decentralization in the network. For coins like Ether, miners quickly employed GPU processors in order to achieve better results. Mining with GPU processors allows miners to swiftly switch to mining the most profitable crypto currency at every moment. In the future, more competitive algorithms will be created that can quickly determine which crypto currencies to dedicate processing power to from hardware GPUs.

Currencies to Mine

As of September 2017, mining Ether is still very profitable because of the potential growth of the Ethereum platform in the next 1-2 years. Analysts generally agree that the Ethereum platform still has a lot of potential and that price might surge as high as 500 \$ by end of 2018.

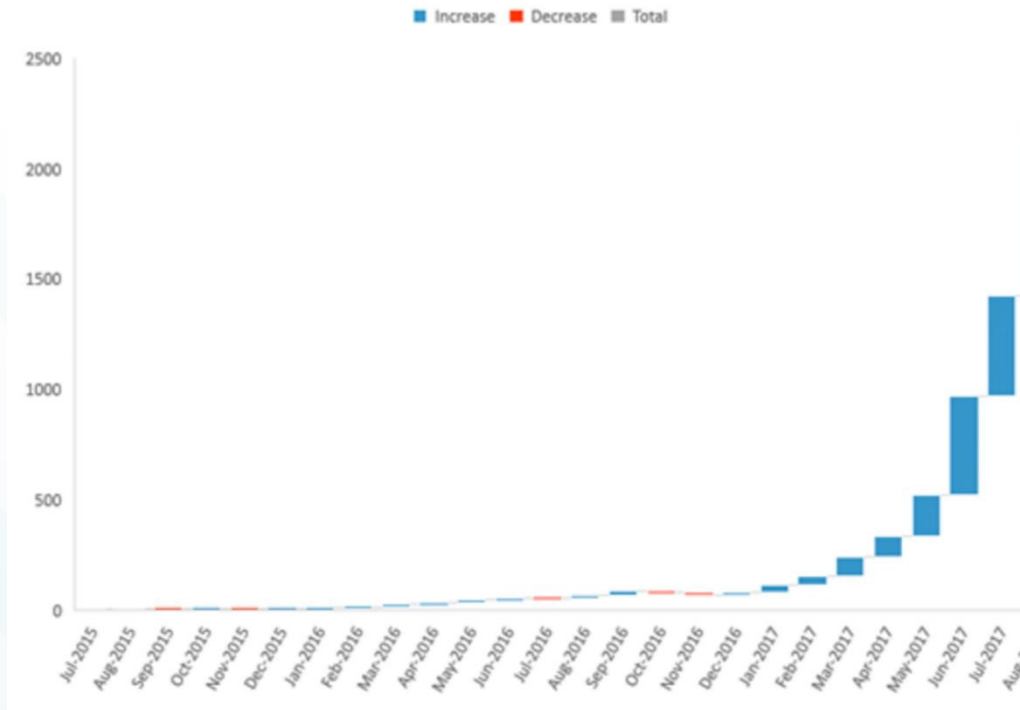
One of the big question marks about Ethereum is the introduction of the so-called PoS, Proof of Stake, which Vitalik Buterin is planning to introduce in a future "Casper" release of Ethereum – still no date has been planned nor confirmed.

The POS concept is very different from the current PoW (proof of work) that Ethereum is using. With Casper, virtual miners, known as validators, commit money to the system with the understanding that they will lose their deposits if they don't follow the rules.

The Ethereum community is quite divided on the matter – it might be that a PoS on Ethereum never sees the light actually, and the change might have many different implications that could endanger the platform itself.

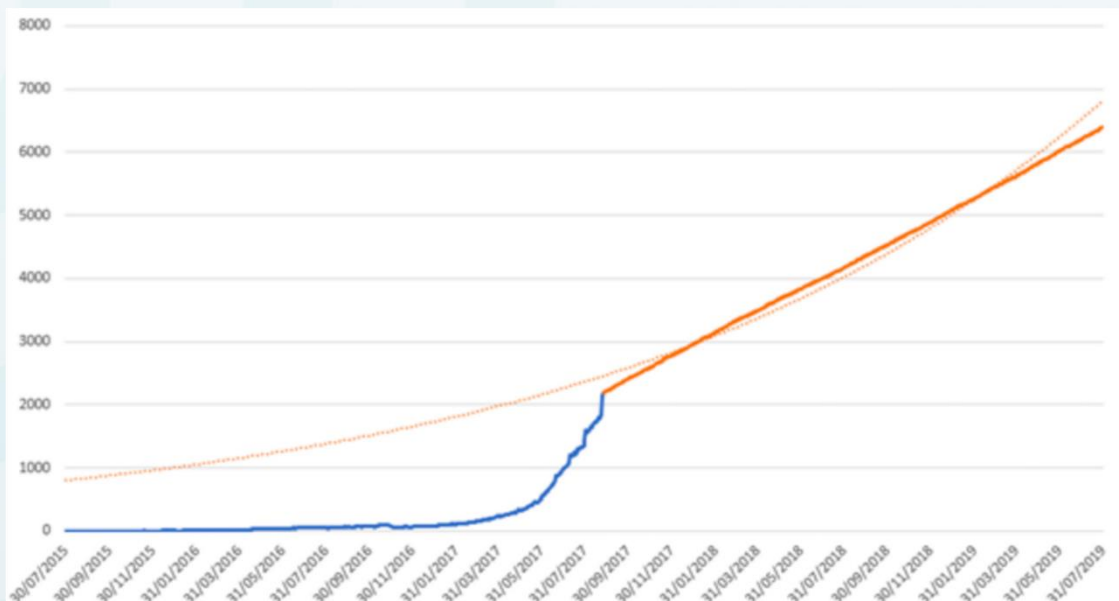
The Ether mining difficulty has increased steadily in the last 3 to 4 months. This pace has brought many casual miners out of play and is leaving space only for well-organized mining operations with an eye on power consumption, like HydroMiner.

Ethereum Difficulty Growth






The main reason for this increase in mining difficulty has been Ethereum’s price growth of 1,500%, surging from \$20 to \$300 in less than a year. With the price stabilizing around \$300 and the shortage of GPU supplies, the difficulty growth might be slower in the months to come – although it is difficult to predict.

In fact, trying to run a state of the art forecast on Ethereum difficulty time series won’t return any meaningful result due to the lack of historical data (it would require at least 4 years). A good compromise is to show a linearized growth of difficulty based on an exponential pattern:



In this scenario, we would be able to run Ethereum mining for another 2 years.

This might be difficult to achieve in reality, therefore the infrastructure needs to be prepared to switch to Altcoins to mine. Luckily, there are many Altcoins available today with similar profitability.

Name(Tag)	Coin Ratio / MHS (24 h)	Mined in 24h	Power Cost (\$)	Exchange Rate vs BTC	Profit
Zclassic(ZCL) Equihash	0,022822619	2,282261905	0,96	0,00079347	6,28
 Musicoin(MUSIC) Ethash	1,728360714	172,8360714	0,96	0,00000968	7,73
 Monero(XMR) CryptoNight	0,000541667	0,054166667	0,96	0,0302322	5,59
 Expense(EXP) Ethash	0,021144048	2,114404762	0,96	0,00074793	5,37
 EthereumClassic(ETC) Ethash	0,004358333	0,435833333	0,96	0,00362517	5,36
 Ethereum(ETH) Ethash	0,000191667	0,019166667	0,96	0,07792531	5,01
 Ubiq(UBQ) Ethash	0,030233333	3,023333333	0,96	0,00047601	4,8
 Zcash(ZEC) Equihash	0,000219048	0,021904762	0,96	0,06345618	4,6

Replacing Gold

The question of how long mining can be usefully conducted can also be answered, in addition to its value as a validation exercise, by looking at the role of gold in the economy.

The composition of the worldwide money supply looks something like this: the world's central banks have created something like 4.5 trillion USD in banknotes and coins and another 24 trillion USD in narrow money. Most of the money is actually debt. In the US, there are approximately 4.5 trillion USD from the Federal Reserve, but there are over 50 trillion USD that have come to life through debt. The worldwide figure is about 200 trillion USD. One may or may not choose to add derivatives to this number; the figure would go up to 600 trillion USD or much more, but nobody knows the exact value of the current market in derivatives.⁵

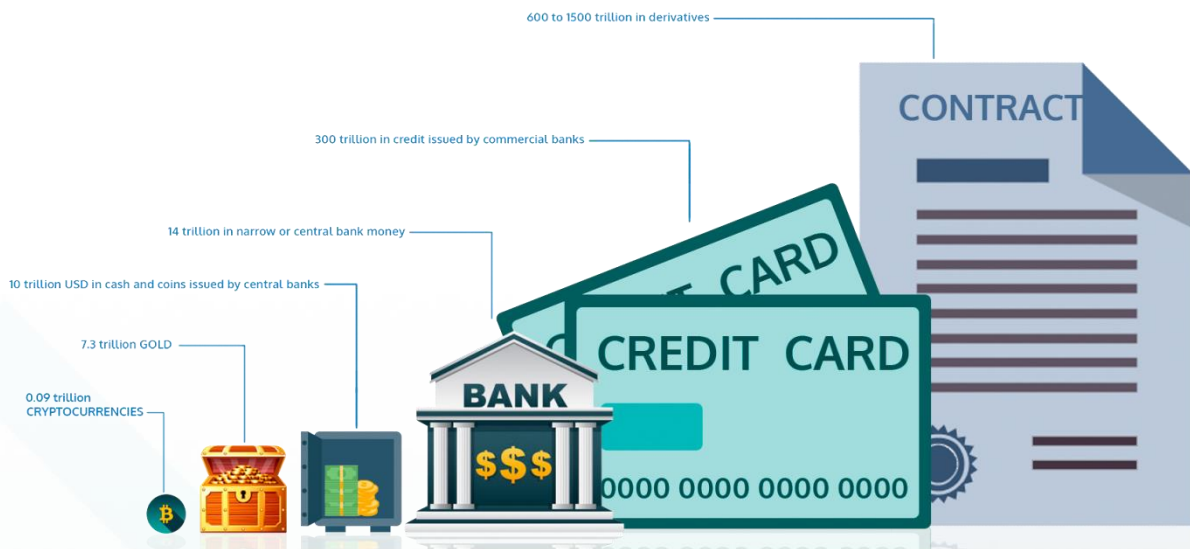
Because mined crypto currencies are much more like gold than money, the right benchmark for mined crypto currencies is gold and other precious metals.

This is in fact great news for crypto currencies, as there are currently approximately 183,000 tons of gold above ground in the world. At least this is the traceable amount of gold; there is perhaps much more than this amount. This gold, mainly in possession of central banks, funds, and HNWI, as well as all known gold coins, have a total value of 7.3 trillion USD. Most of it is used to store value and only very little for actual production processes or other uses. So, this is amazing news: if Bitcoin were to replace gold, to choose an arbitrary figure, only 10% of the value stored in gold, each Bitcoin would cost 35,000 USD. If Bitcoin would replace 50% of gold's value, each would cost 175,000 USD. Why compare Bitcoin with gold? Because both are hard currencies, both must be mined or produced; they cannot be created like our current currencies and other financial instruments. I personally expect that the accumulated value of the best crypto currencies to reach these price levels as people shift over time to the best possible crypto currencies.

There is also a chance that mined crypto currencies will outperform gold over time because there are more use cases for crypto currencies than gold. From an economic perspective, what this all means for mined currencies is that there is a lot more currency to mine out there. If we look at the current network capacities and prices, it would take us another 15 years of mining to create crypto currencies at a value of 10% of gold, and 140 years to produce half of gold's value.

⁵ <http://data.worldbank.org/indicator/FI.RES.TOTL.CD>

MONEY IN THE WORLD TODAY



Business Case/Calculation



As HydroMiner brings project after project to completion, this is its approach, from a technological and from a business perspective. Here is an example of a typical project:

- 1 HydroMiner identifies a suitable hydro power station, in this example with a usable capacity of 100 kW.
- 2 HydroMiner orders all necessary equipment, miners, a container, cooling systems, security, etc., at a cost of 500,000 USD per container.
- 3 Within a timespan of about 40 days, all hardware is available and the container can be equipped and deployed.
- 4 Typically, a facility of this size will produce a monthly income of about 50,000 USD.
- 5 The cost for the energy and service etc. in this scenario is 10,000 USD.
- 6 We also accumulate funds to renew the hardware as soon as it does not perform anymore. The hardware reserve fund in this scenario is 15,000 USD.

7 The profit from this facility is as of October 2017 be 25,000 USD.

Our mining contracts will be based on kWh. With the difficulty and profitability as of October 2017, the performance that one would receive is as follows:

Contract	Mining Currency	Term (Months)	Total Return
1,000 H2O	BTC	24	5,584.7 USD
1,000 H2O	ETH	24	6,099.5 USD

When the next project is brought to completion, it will be factored into the overall calculation. The performance might be lower for short periods when tokens are sold to investors and not yet put to work in mining. To compensate for this, HydroMiner has opted for a form of continuous ICO so that we are not faced with a situation where large amounts of money cannot be invested, lowering the performance of the token as a result.

Looking at the current facilities and their past performance, the profitability looks like this:

	Profit/watt in USD ⁶	Profit/year in USD ⁷	Profit/year in %
August 2016	0.15	1.80	72.00%
September 2016	0.16	1.92	76.80%
October 2016	0.21	2.52	100.80%
November 2016	0.23	2.76	110.40%
December 2016	0.15	1.80	72.00%
January 2017	0.13	1.56	62.40%
February 2017	0.23	2.76	110.40%
March 2017	0.17	2.04	81.60%
April 2017	0.34	4.08	163.20%
May 2017	0.36	4.32	172.80%
June 2017	0.21	2.52	100.80%
July 2017	0.17	2.04	81.60%
August 2017	0.31	3.72	148.80%

⁶ We have retained approximately half of the net proceeds to purchase more equipment. The cost of the equipment per watt was 2.5 USD.

⁷ Since the number of watts will not always correspond exactly to the number of tokens that have been distributed, the number of tokens is to be seen as the divisor for the profit and the net profit will be equally shared among all tokens.

Equipment Exchange

To keep the facilities always at the highest level of profitability we update the hardware on a regular basis; however, we cannot reveal the pace as this is a crucial ingredient of HydroMiner's business. The used equipment is sold also on our website hydrominer.org.

Transparency

We organize tours of our facilities on a regular basis, usually biweekly, and you are invited to request a tour on our website.

kwH Vs. Hash

Why do we pay per kwH and not per Hash like many other mining operations? The answer is simple, acquiring hash rates seems nice at first, however the hash-rate of today has very little value in a few months from now. Looking at the past performance from various mining operations, it turns out that the performance is great in the first weeks, sometimes months, then very quickly, one needs to worry if there will be any ROI at all. However, this depends widely on the underlying price of the currency. Another widespread problem is that in many schemes, one needs to decide for a particular currency upfront versus switching the currency according to performance. A comparison of the models using past performance reveals the problem.

Competition Overview⁸

	HYDROMINER	COMPETITION 1	COMPETITION 2	COMPETITION 3 ⁹	HOME MINING 3 ¹⁰
August 2016	6.10%	14.10 %	11.30 %	4.10%	15.80 %
September 2016	5.20%	10.20 %	9.40 %	3.20%	15.30 %
October 2016	7.20%	7.20 %	4.50 %	4.20%	11.40 %
November 2016	2.50%	4.50 %	4.20 %	4.50%	12.50 %
December 2016	5.40%	3.40 %	2.10 %	2.40%	7.60 %
January 2017	6.80%	2.80 %	3.60 %	5.80%	6.70 %
February 2017	5.20%	1.20 %	3.80 %	3.20%	7.30 %
March 2017	6.30%	1.30 %	2.20 %	4.30%	6.20 %
April 2017	8.60%	0.60 %	1.40 %	2.60%	5.10 %
May 2017	7.30%	0.30 %	0.40 %	4.30%	2.20 %
June 2017	7.40%	0.10 %	0.20 %	2.10%	2.40 %
July 2017	7.70%	0.00 %	0.20 %	2.00%	2.52 %
TOTAL	75.70%	45.70%	43.20%	42.70%	95%¹¹

However, this does not touch the actual main problem with cloud mining. While researching the payouts of various cloud mining programs, we realized that the payouts have been very different depending on programs chosen, start date of the contract and other factors that are unknown. This leads to a very intransparent model where some customers are very pleased with the results and some are very unhappy; and, this discrepancy can easily be discovered if one looks for the reviews of cloud mining programs.

⁸ The data has been collected from customers of Genesis Mining, Bitcoin.com, hashing24.com in various contracts for Bitcoin and Ethereum.

⁹ Competitors life plan

¹⁰ Home mining with GPU and location central Europe, mix of Germany and UK.

¹¹ This calculation does not include the purchase of new equipment and does not contain the result of used equipment sales.

Token Sale Details

- 1 The best available price for eco-friendly energy.
- 2 An ideal hosting environment, inside or next to a power station and a cooling river, and usually in a cool environment in the Alps.
- 3 A business model that enables us to continuously keep the hardware updated to the latest version.

Now, through the ICO of HydroMiner, a wider community can participate in this model.

Tokens acquired in the Token Sale can be exchanged for mining time starting from February 2018. Our mining contracts will be based on kWh – the calculation is based on the energy consumed.

We plan to have the following mining packages available in terms of 24 months:

- ETH
- BTC
- ZEC
- Basket of altcoins (for example, ETC, XMR) – to be determined at the time of offering
- Algorithmically determined most profitable mix of coins

To exchange H2O tokens for mining time, H2O token holders have to register on our platform. H2O tokens can then be credited towards mining time. You may choose to use the mining farm for any coins that we offer on our platform. Mining proceeds are credited to the web wallet on a daily basis.

Initially, and as long as it's profitable, the chosen currency will be mined primarily. In case the profitability of the chosen currency decreases, we will use the allocated kWh on a best-effort basis to mine the most profitable coin for you.

Token Sale 2018



Every ICO participant will be able to purchase H2O tokens once their mining time ends. To reward them for the support during the ICO, they will always receive the same bonus that they got during ICO, up to the amount of their initial contribution. For example, John contributes 50 ETH during the first week of ICO (20% bonus) and exchanges his tokens in February 2018 for mining time. Once the mining time ends, John will be able to purchase H2O tokens for up to 50 ETH and get the same bonus of 20%. This process can be repeated as long as HydroMiner is operating.

H2O Token Launch

The ICO will be conducted on the Ethereum Network. We have developed our own proprietary smart contract, which has been audited by two independent consultants. Details of the security audit will be published on our website before the ICO.

H2O is an Ethereum token. It complies with and extends ERC20 – a de-facto standard and widely-used token platform.

ICO Timeline

H2O Tokens will be available for purchase on pre-sale starting on September 25, 2017 and during the ICO starting October 18th, 2017.

Total tokens:	100,000,000
Nominal token	1 H2O = 0.01 ETH
Pre-sale start:	September 25
Discount level	25%
Pre-sale token cap:	187,500 H2O (1,500 ETH)
ICO start:	October 18th
ICO level 1 discount level (first week):	20%
ICO level 2 discount level (second week):	15%
ICO level 3 discount level (third week):	10%
ICO level 4 discount level (fourth week):	5%
ICO token cap:	25,000,000 H2O
General availability token price	based on previous day's (CET) CoinMarketCap high price + 2%

H2O can be acquired with ETH. Transfers can be made from any ETH wallet.

Use of Funds

The proceeds from the ICO will be allocated to hardware, expansion costs at the power stations, and mounting the equipment. ICO proceeds will also be used for marketing, legal, and advisory fees.

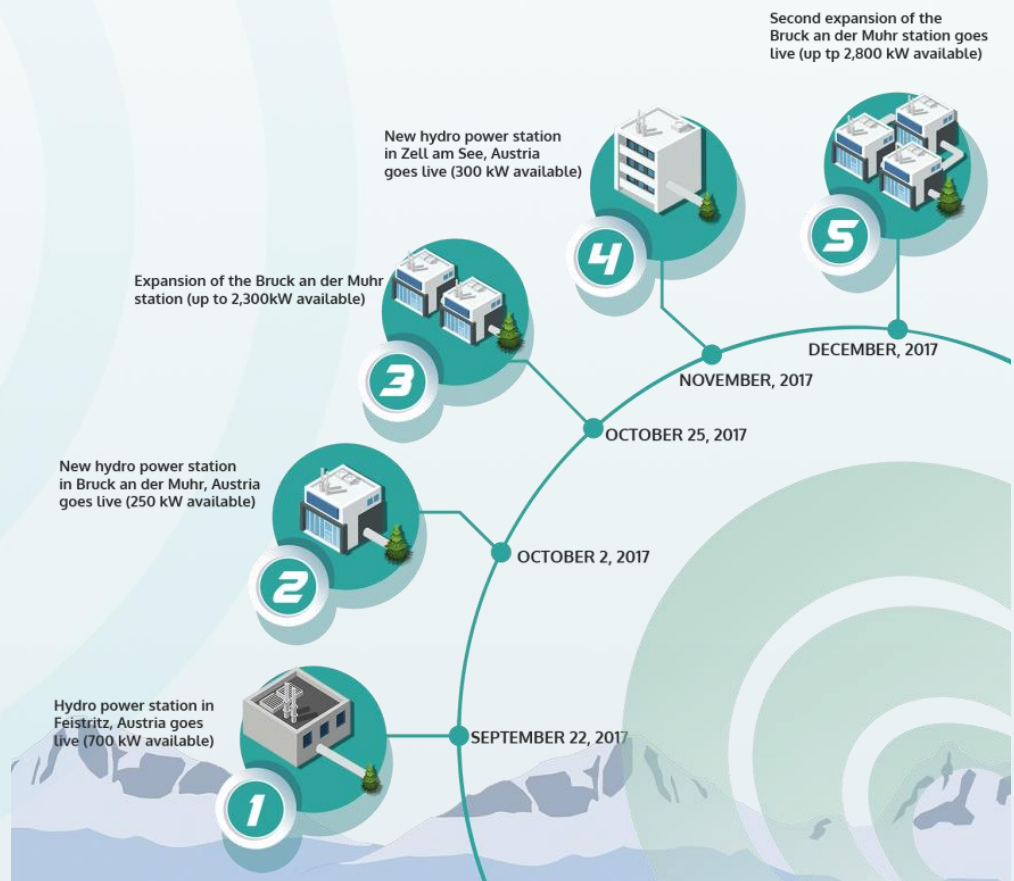
HydroMiner plans to use 1% of the raised funds to buy BNT and create a Bancor “token changer” between BNT and H2O, thus creating intrinsic liquidity for the H2O token.

Hydro power station leasing/electricity:	15%
Hardware:	55%
Operations:	15%
ICO Costs:	10%
Marketing:	4%
Legal:	1%
BNT Reserve Fund	1%

Mining Proceeds

Each token can be exchanged to 5 kWh of mining power for a specific time (24 months). The resulting net mining proceeds are paid out to the user’s HydroMiner platform wallet daily. Net proceeds are mining proceeds minus operational expenses and hardware repurchases. Depending on the market, we expect that net proceeds will be 20-40% of gross revenue.

10% of the mining net profits are distributed to the team.



HydroMiner Team



• **Nadine Damblon: CEO**

Nadine co-founded HydroMiner in 2016 with her sister, Nicole. Her main responsibilities at HydroMiner are business development, strategic planning, and networking. Nadine started crypto mining back in 2014 and holds a degree in media studies.



• **Nicole Damblon: CFO**

Nicole Damblon started crypto mining with her sister Nadine in Düsseldorf back in 2014 and helped expand their venture from the beginnings in their apartment to two hydro power stations. In 2016, she moved to Vienna to work as HydroMiner's CFO. She studied East Asian art history and holds a Bachelor of Arts.



• **Christian Vogl: CTO**

Christian Vogl is an expert in hardware supply, network infrastructure, server migrations and energy supply. He started his own profitable mining business back in 2012. In 2016, he joined HydroMiner as CTO and is responsible for the technology and cryptographic strategy.



• **Sebastian Kastner: Lead Engineer**

Sebastian is responsible for HydroMiner's cooling technology and mining hardware. With three years' experience in designing mining infrastructure for HydroMiner's facilities, Sebastian is also an expert in managing many aspects of the mining process such as management software, pools, and improving mining hardware at the core.



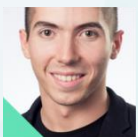
• **Philip Dimitrov: Chief Marketing Officer**

Philip joined the Blockchain world in 2015. Since then he has helped many marketing campaigns succeed and has published tons of news and videos about the happenings in the crypto currency world. For HydroMiner, he leads marketing and content creation.



• **Kevin Benckendorf: Public Relations**

Being intrigued by the magic of the Blockchain since early 2016. Kevin is a PR Specialist who thrives on managing excellent relationships with clients and employees. Research on the socioeconomic impact is where he performs best.



• **Alexander Dimitrov: Developer**

Alex has been around in the crypto-sphere for the past 3 years. He is the co-founder and main developer of CoinStaker.com. Currently, he is finishing his bachelor's degree in informatics at the University of Vienna. He will be developing the upcoming HydroMiner platform and helping with the design of the Smart Contract.

Advisors



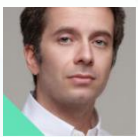
• Tobias Ratschiller: ICO Advisor

Tobias has been active in the Internet industry for the past 20 years as entrepreneur, advisor, and investor. Through his company Senza Limiti, he invests in digital assets such as domains and websites. Tobias is an active crypto currency investor since 2012. In a previous life, he created the Open Source tools phpMyAdmin and phpAds (now OpenX).



• Reuben Godfrey: ICO Advisor

Reuben has worked in sales, business development, finance, and operations roles for major multinationals and start-ups in the tech, telecoms and pharmaceutical industries globally. He has worked as a journalist and is frequently interviewed and asked for comments by tech and mainstream media as well as speaking at and hosting seminars and conferences. He is co-founder of the Blockchain Association of Ireland and the Irish Chamber of Commerce in Slovakia.



• Michael Marcovici: Advisor

Michael's is Managing Director of Digital Developers Fund, an investment fund focusing on digital assets. His expertise in the Internet business stretches back to 1991 when there was no WWW or domains. In the 90s, Michael was the founder of the Austria Börsenbrief, a financial investment magazine, and was a private equity fund manager.



• Jonas Sevel Karlberg: ICO Advisor

Jonas is co-founder of the Nordic Blockchain Association and a community manager for Bancor, Stox, and bitJob. He is also on the advisory board of Sharpe Capital. Jonas has more than 20 years commercial experience working with some of the world's largest consumer brands. He has significant management and leadership experience as well as experience in building and scaling organizations, primarily within the retail sector in Denmark.



• Michele Roscelli: Advisor

Based in London, Michele has been involved in crypto mining since 2013. He's behind a large Italian mining community and develops mining optimization software. Michele spent the last seven years designing and developing data analytics and planning/forecasting applications for major corporates, as he works for a leading software vendor in the field.



• Simon Cocking: Advisor

Simon is an award-winning writer, who has been writing for three decades, now focusing on tech, innovation, cryptocurrencies and anything else that is new and worth sharing. He is Senior Editor at Irish Tech News, co-founder and Editor in Chief at CryptoCoin.News and an ICO advisor to Bit India.



• Raphael Beaumont: Advisor

Raphael is an energy consultant based in Brussels. He is currently developing the negawatt-token to improve energy efficiency. Previously, Raphael has worked in project finance for renewables, operational manager in the humanitarian sector and as a data analyst for Google. Additionally, he is contributing to the BioPhys Economics think tank.