

HydroMiner

H3O Token Pre-Sale Whitepaper



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Disclaimer

This whitepaper is marketing material only. Information provided herein is for information purposes only and neither constitutes an offer nor a solicitation to purchase securities, it merely serves as a non-binding information and it is not intended as a substitute for the advice on the purchase and sale of securities.

This whitepaper gives an overview of certain aspects of HydroMiner IT-Services GmbH ("HydroMiner") and its intended operations. If you decide to participate in the H3O Pre-ICO (token presale) as a form of investment, HydroMiner expressly warns you that an investment in HydroMiner carries a high degree of risk. For a description of the associated risks, see the chapter "RISK FACTORS."

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 H3O, and the growth of its 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 that could cause actual developments to differ materially from and be worse than expected or assumed or described in these forward-looking statements. Accordingly, anyone interested in participating in the private placement is strongly advised to read the chapter "RISK FACTORS." This chapter includes more detailed descriptions of factors that might have a negative impact on HydroMiner and H3O. In light of these risks, uncertainties, and assumptions, future events described in this whitepaper may not occur.

The tokenized ,H3O' participation rights can be subscribed with a minimum nominal value of US\$ 200 000 at a price of 70% of the nominal value (US\$ 140 000). The offer of participation rights is made under recourse to § 2 para. (1) item 9 KMG (Austrian Capital Markets Act) without prior publication of an approved capital market prospectus. A description of the offer and its associated risks are also available in a later section of this document.

Disclaimer for US-Investors

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The Participation Rights described on this website have not been and will not be registered under the United States Securities Act of 1933, as amended (the "Securities Act"), or any United States state securities laws or the laws of any foreign jurisdiction. The Participation Rights will be offered and sold under the exemption provided by Section 4(A)(2) of the Securities Act and Regulation D promulgated thereunder, or to non-U.S. Persons who are not purchasing for the account or benefit of a U.S. Person as defined under Regulation S under the Securities Act, and other exemptions of similar import in the laws of the states and other jurisdictions where the offering will be made. Irrespective of jurisdiction, no offer to sell or solicitation of an offer to buy securities may be made to any person to whom it is unlawful to make such an offer or sale. The Issuer will not be registered as an investment company under the United States Investment Company Act of 1940, as amended (the "Investment Company Act"). Consequently, investors will not be afforded the protections of the Investment Company Act.

The Participation Rights are subject to restrictions on transferability and resale and may not be transferred or resold for at least one year. Investors should be aware that they will be required to bear the financial risks of this investment for an indefinite period of time.

An investment in the Participation Rights involves a high degree of risk, volatility and illiquidity. A prospective purchaser should thoroughly review the confidential information contained herein and the terms of the Participation Rights, and carefully consider whether an investment in the Participation Rights is suitable to the investor's financial situation and goals.

Letter from the CEO

Cryptocurrency mining consumes energy. Many of you have also read that bitcoin mining consumes more energy than a few large countries combined. Bitcoin mining is considered an environmental disaster by many governments and environmental groups.

I want to clarify this issue. First, energy consumption is essential for decentralized cryptocurrencies. Cryptocurrencies are economic goods that improve our lives.

Cryptocurrencies enable the exchange of value through a peer-to-peer system without relying on intermediaries, and this is in high demand by people all around the world. In order to satisfy this demand, it is reasonable to use resources. In my opinion, the large amounts of “dirty” energy used for mining is a problem that the market will eventually solve by turning to sustainable resources. My sister and I recognized this problem years ago, and we found a solution: deploying mining hardware directly in hydropower stations where the energy is green and affordable. Worldwide, there is hardly a shortage of renewable energy. Other miners also benefit from the abundance of affordable hydropower, for example in Canada and Iceland. Many miners have turned to green energy because it is affordable, and there is plenty of it in colder regions, further reducing the costs of mining as hardware cooling is partially performed by nature. Sustainable electricity in colder regions offers the perfect conditions for crypto mining.

Regarding the current developments in Iceland, where it is said that there will not be enough energy left for the country’s citizens because of cryptocurrency mining, there is one caveat. If energy sources become scarce, energy will become more expensive, which will incentivize miners to move to other countries where they will again be able to obtain cheap energy. Miners do this in order to stay competitive. Sometimes, there are even opportunities to make use of huge amounts of excess energy.

However, affordable energy is not always clean energy. Today, the majority of mining is still fueled by unsustainable energy sources. This leads me to my second point: what if coal and nuclear energy are cheaper than renewable energy sources?

This illustrates the importance of companies like HydroMiner. HydroMiner offers to participate in a promising mining operation based on renewable energy sources. Investors can support a sustainable energy approach while benefiting from participating in our mining operation.

The environmental cost of energy consumption is important to us and to many other people. By choosing HydroMiner over a coal-fueled mining operation, investors make a choice for more sustainability in the mining sector.

Mining is still a very young sector and has seen a large variety of approaches taken by people jumping on the bandwagon and trying to build a business out of nothing. Many of these cases have been based on unrealistic economic models, promising fantastic returns and monthly dividends, which makes it impossible for a young company to reinvest and grow over time so that it can generate reliable profits.

For investors, especially for those who are not familiar with crypto, it is hard to decide whether a mining company can deliver what they are promising because data for comparison

to other mining facilities are unavailable. In most cases, there is operation running during the first capital round. Therefore, investors cannot verify the performance and real returns of the mining operation. HydroMiner does its best to stand out in many ways. My team and I are highly experienced in setting up and running a mining operation, as we have been doing it for years. Over time, we have established a reliable hardware supply chain, which is crucial to guarantee a stable operation, as the market currently faces an ongoing shortage of mining equipment.

In February of 2018, we implemented a mining portal where mining contracts granting weekly payouts can be purchased over a two-year period. In the process of searching out the most suitable power stations for our operations, we have become familiar with the Austrian energy market and the people involved in it. We are often approached by mainstream energy suppliers who are curious how to deal with this new and disruptive technology. Over time, we have built up a reliable infrastructure, starting with a small mining farm at home, then moving to data centers, and now mining in hydropower plants. Scaling up and achieving credibility has meant learning through trial and error as our operation grew hand in hand with the crypto-market. I realized that the most important factor for long-term success was to utilize our assets to their full potential. In addition, I see many profitable future scenarios for fully equipped mining operations connected to affordable and renewable energy sources. To name a few, there are various use cases for mining hardware, including data rendering, artificial intelligence, and medical calculations. This can have a great impact on global markets. There is the option to mine for end customers who buy mining time, to sell refurbished equipment, and to make use of our network and knowledge to set up joint ventures. HydroMiner is active in all these areas and is flexible enough to switch between them to generate a steady cash flow. It is in the power of the participants in the cryptocurrency sector to decide in which direction the mining business will develop. Everything is there for a green mining revolution: affordable energy from renewable sources, and people who want to support a sustainable approach. Let's make crypto mining green!

Abstract

During HydroMiner's successful ICO in fall 2017, more than US\$ 3 million were raised. The funds were used to establish a cryptocurrency mining operation in Austria that uses clean hydropower. After this initial success, HydroMiner is ready for the next step: H3O. H3O is a compliant security token. The aim is to provide the buyers in this presale with a token that allows them to participate directly in the company's future development. Moreover, this new kind of security token will be tradable on a variety of crypto exchanges once listed. HydroMiner IT-Services GmbH plans to apply for a listing on the AIM stock exchange in London (or on another comparably regulated stock exchange in Europe) preferable already by the end of 2018 or the first half of 2019. A successful listing would help to broaden the company's investor base, improve the company's international visibility and reputation, and increase the level of equity capital, thus raising funding for further operations. Investors will have the chance to be part of the green mining revolution that HydroMiner is pursuing. Through participating in the presale, the H3O token investors will be able to benefit

from a profitable and sustainable business through a new form of security token that HydroMiner has designed for their investors.

Due to regulatory requirements, the exact details and timing of the upcoming main ICO are subject to the prior approval of a capital market prospectus by the Austrian Financial Market Authority (FMA). The main ICO requires a published capital market prospectus, which was approved by the FMA no later than one banking day before the public offering starts.

This whitepaper explains the current pre-ICO token sale, which is open only to investors who invest the equivalent of US\$ 140,000 (reflecting a nominal value of token of US\$ 200,000) or more. Further updates and news about the intended main ICO token sale will be published in the coming months.

Token Presale H3O - Key Facts

Underlying instrument	HydroMiner Participation Rights with performance participation and tag along rights
Whitelisting period	March 15 2018 12:00:00 UTC until May 15 2018 12:00:00 UTC
Subscription period	April 15 2018 12:00:00 UTC to May 15 2018 12:00:00 UTC
Hard cap	US\$ 7 million
Soft cap	US\$ 1 million
Token type	ERC-20
Token name	H3O
Total tokens released in presale	100 million tokens
Price of token in presale	US\$ 0.07
Minimum investment amount	US\$ 140,000
Unsold tokens	burned
Distribution of tokens	Within the first 120 hours of main sale or October 31 2018, whichever is earlier
Distribution method	Manually by internal coins *
KYC	Name, address, ID
US citizens and residents	Accredited investors only by confirmation letter
Exempt countries	China, Kazakhstan, Iran, North Korea

* After deploying the smart contract for the main ICO the H3O tokens will be distributed to the pre ICO buyers.

Tokenized Security

The tokenized H3O securities will combine the legal characteristics of participation rights with the advantages of the blockchain.

Tokenized securities—unlike utility tokens—don't give the investor access to a future product or service of a company. The investors participate in the performance of the company itself. Thus, the H3O token will be subject to the Austrian Capital Markets Act, which is why HydroMiner will release a full prospectus during our ICO, which has to be approved by the Austrian Financial Market Authority (FMA). In the Subscription Form, every investor is provided with a detailed description, drafted by our lawyer, of the rights the H3O token grants them. The security token will be based on a participation right (Genussrecht) according to Austrian law. As the holder of the participation right, you are entitled to participate in the performance of the issuer as well as its hidden reserves, the goodwill or the liquidation proceeds, in case of a termination of the issuer. During the pre-ICO phase, we will issue up to 100,000,000 participation rights with a nominal value of US\$ 0.10 each. The issue price is 70% of the nominal value, thereby raising up to US\$ 7,000,000 in participation capital. This means that for tokens with a value of US\$ 200,000, you will pay US\$ 140,000. In other words: pre-ICO investors receive a 30% discount compared to investors in the main ICO.

Participation in Performance

HydroMiner can decide whether it will pay out any profits or reinvest them. Reinvesting is planned in the first years because cryptocurrency mining requires frequent hardware renewal. It is of great importance to reinvest part of the profits in order to stay up to date with the newest technology and improve the balance sheet value of the company at the same time—this is a pledge HydroMiner is willing to make.

Additionally, the H3O token will be tradable on crypto exchanges once listed, raising its value if the balance sheet value rises.

Termination Rights

The token and the underlying participation rights are generally issued for an indefinite period of time. The participation rights may be cancelled by both parties subject to notice period of six months as at 31 December of each calendar year. For a period of 10 years, both you as a holder as well as HydroMiner as the issuer waive the right to terminate the participation right (minimum term). If you wish to terminate, you will be refunded the balance sheet value of the participation right; in simple terms, this is the nominal amount plus undistributed profits less losses. If HydroMiner wishes to terminate the participation rights, you will receive the pro rata enterprise value as compensation for the termination, but at a minimum the balance sheet value of the participation rights.

Tag along right

You have a special redemption right if at least three quarters of HydroMiner's current shareholders sell their shares together to another investor. In that case, you can cancel the token and the underlying participation rights and demand a compensation that is calculated based on the purchase price. That means that you can also profit in case of a successful sale of the company.

Voting Rights

The H3O token holder have no voting rights but the issuer may voluntarily decide otherwise on important decisions. The results of such votings are not binding for the issuer.

To summarize, H3O token holders will have a position similar to shareholders. Especially, H3O holder will participate in HydroMiner's future performance. Nevertheless, the token holders are not to be considered shareholders of the issuer.

The H3O Token: Aligning Interest

The H3O token follows a completely new approach in token design. HydroMiner already has experience with its previous token and its team has been involved in many other ICOs.

The usual token in ICOs actually creates a conflict of interests between the token issuer and the token buyer. After careful evaluation of many ICOs, we decided that the only way to design a sustainable token in the future would be to have our interest aligned with that of the token buyers.

Besides minable assets, which are a group distinct from the usual ICO tokens, there are currently three types of tokens. All three create conflicting interests between the issuers and the buyers or investors.

Regarding utility tokens, the issuing company hopes to raise money or obtain money for their services, but has already pre sold the tokens for its services, so any use of their token will not result in further income. The exception, of course, is if the issuer has kept a large number of tokens and then again becomes a major seller, which can cause the market to dip or even collapse. The issuer has centralized control of the price, while the buyers must hope that the issuer does not sell off its tokens, or even worse lose them to a security breach. On top of these problems, the issuer is bound to a business model that might have to change over time but cannot, as in this case it would perhaps render the tokens worthless and create even more troubles for the buyer.

As regards voucher models, the issue is very simple. The company pre-sells vouchers for the later purchase of its products. At some point, the products will become available to the general public and the voucher owners.

This again creates conflicting interests, as the company wants to sell its products to new buyers that will bring in more revenue, while on the other hand it needs to sell its product at a usually lower price to the voucher owners, which does not bring in any new money. In addition, there might be the typical conflict with the issuer retaining a large number of coins, threatening buyers with compromising the coins' value if they sell off a large number or lose the coins to a security breach.

Dividend coins, in our opinion, have even more troublesome features. First, promising dividends from a startup company seems like a bad idea. New companies are usually either in need of money for expansion because the business requires more investment than initially planned, or they are in need of investment because the business model is sound, and it makes sense to invest more into the business before the competition takes over the expansion opportunities and puts the startup out of business because of a lack of investment. In addition, paying out dividends in a regular company (funds would be the exception here) can be the result of a highly creative bookkeeping methods, so that investors might end up with a much smaller dividend than anticipated. In any case, it's clear that interests are not aligned at all in a dividend token. When a company wants to use its earnings to expand, while investors want dividends, conflicts are unavoidable.

The tag along token

HydroMiner takes an entirely new approach to this issue. The H3O token completely aligns the interests of the team, shareholders, and token buyers. All three groups will only make money when the company works well and has earnings. This community approach shall help to avoid discussions about dividends, conflicts over product prices or the need for „creative“ bookkeeping methods.

The main features of the H3O tag along token are:

- H3O is a participatory right to the performance (profits and losses) of the company.

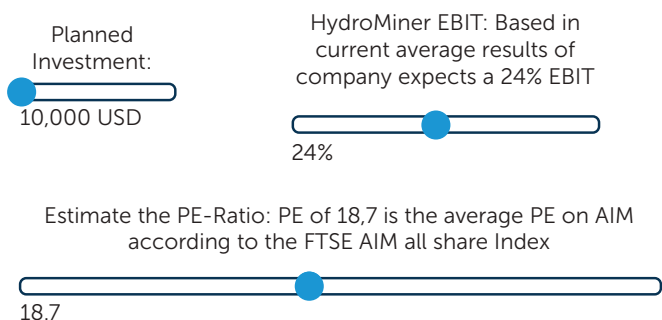
This way, HydroMiner believes that in every step of the company's evolution, the interests of the founders and shareholders are in line with

The H3O Value Calculator

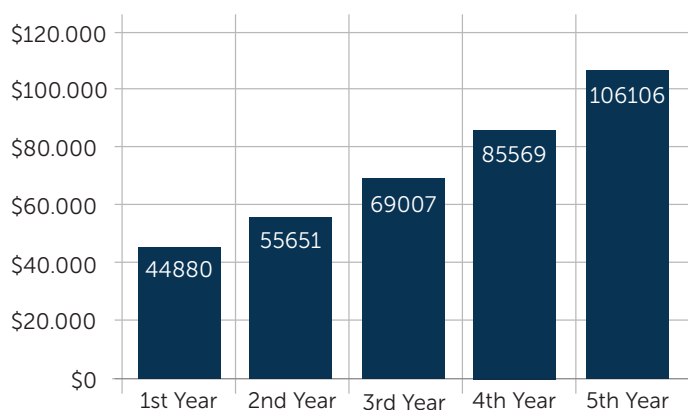
The usual way to evaluate projects in the ICO space is currently the market cap. In fact, however, nobody has yet determined exactly how to measure the success of a venture in terms of market cap. In addition, the usual list of coins on websites like coinmarketcap.com is a mix of very different asset types, including minable assets, vouchers, utilities, and securities. At least when it comes to securities, there is a long established method of evaluation, the price-earnings (P/E) ratio. Besides many other factors, the P/E ratio is the most widely known and used way to quickly determine the over- or undervaluation of a stock, at least relative to other stocks of companies of the same size or in the same industry. Simply put, the P/E ratio is the price of a share dividend by the earnings per share. Amazon currently has a P/E of 64, Nvidia 33, Volkswagen 13. In essence, this means that the company will need X years to earn out its current stock price. It is also possible to evaluate a security token in the same way.

H3O Price Earning Calculator

Select your planned investment and estimate the expected HydroMiner EBIT. Compare the result with other organisations like Amazon, NVIDIA, Siemens.



H3O Price Earning Chart



Let's look at how the price of the H3O token could develop based on our results as of December 2017 and January 2018 (which can change in both directions!). With an investment of US\$ 1 million, our real time results in the existing mining operations show us that we would be able to earn 24% return on the capital over one year.

Use of Proceeds

The presale of H3O aims to raise funds in order to place a maximum of tokens in the main sale.

Fixed amounts

Up to US\$ 1.2 million will be used for marketing and the preparation of the marketing campaign for the H3O main sale. This includes advertising, influencers, marketing, and development of campaign materials such as videos, banners, articles and more.

After the threshold of US\$ 1.2 million has been reached, money above US\$ 1.2 million will be used as follows:

- 25% marketing and advertising of HydroMiner
- 75% expansion of mining facilities/new facilities

Restrictions on Investors

We believe that cryptocurrencies should be as open and inclusive as possible. That's why the H3O token will be one of the first tokens to rely on a full capital market prospectus in accordance with Austrian capital market law, allowing it to be transparent, safe, and open as almost no other token has been.

We will not however issue a prospectus in the pre-ICO phase, because if investors have to acquire securities for a total consideration of at least EUR 100,000 per investor and for each separate offer, such offerings are excluded from the prospectus obligation according to Austrian law (§ 3 para (1) item 9 of the Austrian Capital Markets Act). That is the reason, why the pre-ICO sale will only be accessible to investors with a minimum investment of US\$ 140,000. Additionally, there are some countries that have restrictions or it is prohibited to invest in an ICO altogether. All investors shall be strongly advised to inform themselves about and to observe any such restrictions. We will accept investments into the H3O token for the following categories of investors:

1. Investors who
 - invest a minimum of US\$ 140,000
2. Investors who
 - do not hold a United States, Chinese, Kazakh, Iranian, or North Korean Passport
 - do not have residence in United States, China, Kazakhstan, Iran, or North Korea

In order to prove that investors do not fall under the above mentioned restrictions, investors are required to submit an ID and declare that they do not hold a US, Chinese, Kazakh, Iranian, or North Korean passport; do not have a residence in the US, China, Kazakhstan, Iran, or North Korea; and are not US Green Card holders.

Status Quo of the Cryptocurrency Mining Sector

Energy consumption of crypto mining

- The proof-of-work validation process requires expensive hardware and energy in order to safely validate blockchains.
- Energy consumption is high, but far from the levels presented in the media. According to our calculation, the total energy used for mining all minable assets corresponds to the output of 2 nuclear reactors.
- Energy consumption and energy prices are a very important ingredient in the current mining process, but we expect the focus to shift away from energy towards hardware cost over time.

Energy sources

- The majority of mining operations run on energy from fossil fuels.
- Hydropower is becoming more and more attractive for miners due to the vast resources, cheap prices, and natural cooling in regions where it is abundant.
- Unsteady energy sources like solar and wind are generally unfit for crypto mining, which requires a stable energy supply 24/7.

Market situation

- Due to technological advances, the market will shift toward bigger players who can obtain low energy prices and mining hardware.
- As future market developments are unpredictable, flexible business cases are needed to thrive in a volatile market situation.
- As future regulations can't be predicted, it is important to settle in jurisdictions that are crypto-friendly.

Hardware

- Demand currently outstrips supply by far, approximately by a factor of 10 (which can be seen in stock market prices).
- New chips are being developed that are only available for companies that order in large batches (and sign NDAs).

Non-transparency

- Many obscure companies claim to have a mining farm or offer cloud mining services, but with no proof of existing hardware or location.
- Because of secretiveness, it is difficult to gain a comprehensive view of the whole mining industry.

The HydroMiner solution

A green solution

- Deployment of mining hardware in hydropower stations where HydroMiner gets electricity inexpensively
- Two farms already up and running in Austria

A proven business case that is flexible and dynamic

- Mining with Asics and GPUs
- Portal for mining contracts
- Hardware shop
- Mining for the company

A functioning supply chain

- State-of-the-art hardware for the most profitable minable assets
- Excellent hardware connections established over years of trading with mining hardware
- NDA signed with a new chip developer

Optimizing hardware and cooling technology

- Improving cooling through a proprietary solution

Future use cases for older hardware

- Mining with cheap but unsteady power sources (e.g. wind power)
- Selling computational capacity for rendering, cloud storage, medical analysis

A safe legal framework and transparency

- Complying with European financial market regulations
- Austrian company based in Europe
- Guided tours of mining farms

What is (Hydro)Mining?

The HydroMiner project is about mining bitcoin, Ethereum, and other cryptocurrencies in an eco-friendly way. But how exactly does crypto-mining work?

Mining is intentionally designed to be resource-intensive and difficult so that the number of blocks found each day by miners remains steady. Miners participate in a race to validate these blocks. The first miner to validate a block receives a fraction of the cryptocurrency as a reward.

In the early days of cryptocurrencies, you could mine on your home computer, but these days are long gone. Now you need to order highly specialized hardware that consumes vast amounts of energy.

New bitcoins, for example, are created roughly every 10 minutes in batches of 12.5 coins. The intervals are slightly different with other cryptocurrencies. For Ethereum, the block time for instance is 14-15 seconds, but the principle is the same for all. Mining computers race each other to unlock and claim the next batch. The size of each batch of bitcoins drops by half roughly every four years, and on May 7, 2141, it will be cut to zero, capping the total number of bitcoins in circulation at 21 million.

Proof-of-Work

Cryptocurrencies also rely – as the name implies – on cryptography.

To add a new block to the chain, a miner has to finish a cryptographic proof-of-work problem.

The only way to solve these kinds of mathematical problems is to use brute force.

The computational problem is different for every block in the chain, and it involves a particular kind of algorithm called a **hash function**.

The hash function Bitcoin relies on is called SHA-256 and always produces a result that is 64 characters long, no matter the input. It's currently impossible to reverse a hash function.

The proof-of-work problem that miners have to solve involves taking a hash of the contents of the block that they are working on plus a random number called a nonce. Their goal is to find a hash that has at least a certain number of leading zeroes.

That constraint is what makes the problem more or less difficult. More leading zeros mean fewer possible solutions, and more time required to solve the problem. Every 2,016 blocks (roughly two weeks), that difficulty is reset. If it took miners less than 10 minutes on average to solve those 2,016 blocks, then the difficulty is automatically increased. If it took longer, then the difficulty is decreased.

Miners search for an acceptable hash by choosing a nonce, running the hash function, and checking. If the hash doesn't have the right number of leading zeroes, they change the nonce, run the hash function, and check again.

When a miner is finally lucky enough to find a working nonce and wins the block, that nonce gets appended to the end of the block along with the resulting hash.

The whole block then gets sent out to every other miner in the network, each of whom can then run the hash function with the winner's nonce and verify that it works. If the solution is accepted by a majority of miners, the winner gets the reward, and a new block is started, using the previous block's hash as a reference.

Company History

HydroMiner was founded in 2016 by the two sisters Nicole and Nadine Damblon, who had started mining in 2014. They soon realized the potential but also the inherent problems of the mining business.

Mining is designed to be a resource-intensive process, so vast amounts of energy are needed. By using only renewable energy for cryptocurrency mining in order to relieve pressure on the environment, the idea of HydroMiner was born.

Nadine and Nicole Damblon came together with cryptocurrency miners and investors in Vienna to implement their idea of a sustainable mining operation. They rented their first hydropower station in Schönberg an der Kamp, in Lower Austria, and deployed their hardware, consisting of around 800 GPU cards, in the hydropower station. More hydropower stations followed.

With this step, they were able to solve the environmental problem of massive fossil fuel-based energy consumption caused by crypto mining and were simultaneously able to obtain a competitive energy price, since they approached only hydropower stations that no longer received subsidies.

Since then, the team has continuously worked on their vision of becoming the largest sustainable crypto mining operation. Their aim is to provide the infrastructure for blockchain technology by developing more efficient hardware; their goal for this hardware is to guarantee the most efficient energy usage for crypto mining and the production of computational power, both of which will be needed in the future.

Team

Team and Advisors

HydroMiner currently has 16 core team members and 12 advisors from across five countries, most of them are located in Vienna, Austria, where HydroMiner's headquarter is located. We bring together mining experts, cooling technicians, energy consultants and finance professionals, each of us highly motivated to achieve our vision becoming global market leader in sustainable cryptocurrency mining. Communication is critical within a growing team. We are in constant contact with one another in order to enlarge and develop the most efficient and profitable mining operation possible. Our aim is to build the next generation mining operation.

Nadine Damblon, Founder and CEO



Nadine founded HydroMiner in 2016 with her sister and is the managing director of HydroMiner. She holds a degree in media studies and started mining back in 2014. She soon realized the potential of this new business field. Since then she has worked continuously on her idea for large scale, sustainable mining operations and expanded the team to achieve her vision. Her main responsibilities are strategic planning and communication.

Michael Marcovici, Co-CEO



Michael's expertise in online business stretches back to 1991, when the Internet still worked without WWW or domains. Back then, he published the Austria Börsenbrief, a magazine for financial experts, and was a private equity fund manager. In the 2000s, Michael established a trading company that grew into eBay's biggest power seller worldwide. Michael became involved with domains in 2002. He started to register valuable domains and grew a sizeable portfolio. Within a few years, the domain venture grew into the Domain Developers Fund, a Cayman Island-based investment company. Beginning as the first investor in HydroMiner, he is now in charge of business development and strategic partnerships for the company.

Davies Guttman, CFO



Davies has 30 years' experience in alternative investments and private equity. Together with Michael Marcovici, he was co-publisher of the "Bitcoin Bible" in 2013 and predicted a bitcoin price of US\$ 10,000 within 5 years. Since 2012, Davies Guttman has been a director of Financial Fairplay AG in Switzerland, providing consulting services on alternative portfolios and digital trading. He is in charge of financial strategies.



Christian Vogl, CTO

Christian is an expert in hardware supply, network infrastructure, server migrations, and energy supply. His experience in crypto mining goes began in 2012, when he started his own profitable mining operation. In 2016, he joined HydroMiner as CTO and is managing all technical aspects while implementing and adapting new technologies and cryptographic strategies.



Nicole Damblon, Co-Founder

Nicole started mining cryptocurrencies together with her sister Nadine in Düsseldorf in 2014 and since then has accompanied her sister in expanding their venture. Her background was in the arts, but she was intrigued by the possibilities of the blockchain technology. During the early days of HydroMiner, she was in charge of financial strategy, and now she focuses on investor relations and business development.



Alexander Azmann, Marketing

Alex started his career in the financial industry at the age of 16. After his apprenticeship he worked as an Assistant to the Management Board with specialisation in Marketing, Corporate Communications and Investor Relations. Internships in London and Basel complete his profile. His last station was Verlagsgruppe News, Austria's leading magazine publisher. There he was Marketing, Creative Strategy and Operations Manager for the business magazine trend. At Hydrominer he is responsible for all marketing activities.



Helmut Schindlwick, Volunteer Technical Consultant

Helmut holds an advanced technical degree, an MBA, and a Master of Science degree. His MSc study and his master's thesis "IT Governance" brought him to blockchain technology in 2016. Since then, Helmut has sought to apply his knowledge in various international projects and cryptocurrency startups, looking for ways to make the blockchain and related cryptocurrencies more user-friendly and more sustainable. For over 10 years, Helmut has tried to live an organic, less energy-intensive lifestyle, and therefore supports the HydroMiner team in their ambition to bring green energy to cryptocurrencies for the consumer market.



Sebastian Kastner, Technician

Sebastian is responsible for developing and maintaining Hydrominers cooling technology and identifying risks and improvement opportunities of the operation. With three years' experience in designing mining infrastructure, 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.



Benjamin Guttman, Project Manager

Benjamin has been involved in the crypto world for more than four years. He edited one of the first books on Bitcoin, "The Bitcoin Bible," in 2013, which predicted a Bitcoin price of US\$ 10,000 within five years. Bini is currently studying law at the University of Vienna with a special focus on blockchain technology. He will be doing project management for HydroMiner, including research, marketing, and legal advice.



Karl Maurer, Logistics

Karl has been involved in the field of logistics and transportation for many years. At HydroMiner, he is in charge of the service and maintenance of mining equipment and supports the deployment of hardware and applications.



Michele Roscelli, Developer

Michele has been working as a principal solutions engineer and business analyst on various global projects. He is involved in the analysis and design of complete solutions, from the system architecture to the application data model, taking advantage of his strong technical presence in combination with his business analysis experience. Michele helped HydroMiner to successfully issue its ICO by writing and engineering the Cloud Mining user portal.

Alexander Valtingojer, Smart Contract Developer



Alexander is studying International Business Administration with the specialization in Entrepreneurship and Innovation at the University of Economics and Business in Vienna.

Prior to studying in Vienna, he graduated in computer science from the technical high school „Max Valier“. This enabled Alexander to develop a high technical understanding. His interest in innovative solutions, as well as Blockchain-Technology, led to a high engagement in several projects and developing Blockchain solutions for them.

Florian Pircher, Smart Contract Developer



Florian is studying International Business Administration with the specialization in Cross-Functional Management at the University of Economics and Business in Vienna. Prior to studying in Vienna, he graduated in computer science from the technical high school „Max Valier“. His technical skills allowed Florian to participate in the Italian computer science Olympics. Due to his high interest in Blockchain-Technology, he quickly developed an expertise in Smart Contracts.

Andreas Achleithner, Operations engineer



Andreas graduated with a B.S. in engineering from the University of Nevada, Reno in the United States. Prior to living in Austria, he spent the past four years working at a respected engineering firm in Nevada.

During this time, Andreas was active in the cryptocurrency community. He joins the Hydrominer team as an Operations Engineer to assist in the day to day activities of the company and help further the cryptocurrency agenda in Austria.

Bryan Hollmann, Advisor



Bryan Hollmann is a New York attorney and counsel at Stadler Völkel Attorneys at Law. He specializes in U.S. securities law and cryptocurrency law. He advises Hydrominer on the legal structure of the H3O Token, particularly in regard to exempt securities offerings in the United States.

Demelza Hayes, Advisor



Demelza Hayes is a Ph.D. student in the Business Economics program at the University of Liechtenstein, where she is working on blockchain technology and bitcoin, focusing on the role of cryptocurrency in asset management. She has recently been published in Forbes Magazine and TSEconomist and is a regular contributor to mises.org, as well as giving lectures on bitcoin and blockchain technology at the University of Liechtenstein. She advises HydroMiner on the cryptocurrency market situation.

Harald Steinbichler, Advisor



Harald comes from the banking sector and is now managing director at axxesum GmbH, where he is responsible for the fields of investment and consulting. Since 2005 he has supervised institutional clients in the German-speaking area of Europe. He founded the institutional sales entity Falcon Europe for Falcon Private Bank. At HydroMiner, he was one of the first shareholders and now supports the company in the institutional sector.

Dr. Oliver Völkel LL.M., Legal Advisor



Oliver is a partner at Stadler Völkel Attorneys at Law and is one of the leading attorneys in the field of cryptocurrencies in Austria. He assisted several successful ICOs, all governed by Austrian laws. He supports HydroMiner in legal matters and constructed the H2O Token for their ICO. Now he is working on the legal structure of the H3O token.

Arthur Stadler, Legal Advisor



Arthur is a partner at Stadler Völkel Attorneys at Law. He advised HydroMiner's first Initial Token Offering (ITO), which is entirely governed by Austrian law. His legal fields are payment services, cryptocurrencies, and bitcoin, among other things. He advises HydroMiner in legal matters, especially for the upcoming secondary token sale.

John Holland, Financial Advisor



John has over 22 years of experience advising companies about stock market flotation. He spent 11 years in senior roles at the London Stock Exchange, including heading the UK regional operations, where he was responsible for alternative investment and the main market. He also chaired the London Stock Exchange Regional Advisory Groups, which help to formulate the future strategy of the UK stock markets. Holland Bendelow was launched in 2006 and has since then become the UK's leading flotation consultancy, advising various companies on flotations and fundraising on the UK stock markets. John is supporting HydroMiner's listing on a stock exchange.

Anuj Khanna, Financial Advisor



Anuj Khanna is a highly respected Fintech industry influencer and expert in crypto currencies and has developed relationships with large communities of blockchain, crypto and ICO investors. Anuj Khanna is the CEO of London based Peak State Consulting and is an advisory board member of leading tech companies. For the past two decades, Anuj has been helping over 50 high-tech businesses to achieve success, enjoy exponential growth and reach their Peak State. Anuj is interviewed regularly by leading publications such as a CNBC, BBC Technology and WIRED Magazine.

He has published several research papers and reports over the last 20 years.

Christian S. Dennstedt, Financial Advisor



Christian S. Dennstedt is a prolific entrepreneur and angel investor who operates across a wide range of industries, including biotechnology and medical diagnostics.

He has set up several successful global biotech startups, and co-founded Tectonic Slide Entertainment and Gravity. Christian is the primary investor and business advisor for those companies, and is bolstering their endeavors with his visionary approach to business development, sales, licensing, and product brand marketing. A biotech startup he advises just recently received a 2.5 Mio EUR governmental funding from an EU sponsorship program.

Christian Daimer, Financial Advisor



Christian is founding partner at Stoneriver Advisors and has over 20 years experience in banking, covering Private Equity-, Structured Finance-, Derivatives- and Private Banking transactions for Merrill Lynch, UBS and was lately CEO of a specialist Swiss Private Bank in Austria and Central Europe. Due to his extensive international background and his deep understanding of the industry Christian brings HydroMiner a network of specialists and decision makers, as well as a vast and independent "sounding board" for challenging situations.

Troy Linforth, Security Advisor



With several years experience in CSR and CSM Troy has had front-line experience working with Australia's largest provider of telecommunications and has been privy to the failings of current security systems that safeguard most of today's industries. Troy set out to enhance community security in the developing field of public key cryptography, and by chance fell in love with Ethereum-based smart contracts. As CCO of several ICO venture and Communications Consultant to blockchain related startups, Troy experienced first hand the issues that plague the ICO community and set out on a mission to create a safer eco-system for crowdfunding.

Phillip Nunn, Advisor



Entrepreneur, CEO and international speaker on Blockchain, Cryptocurrency and fintech.

Phillip Nunn founded The Blackmore Group in 2013. Today it's grown into a business with substantial assets under management and a suite of investment products across multiple classes for individuals and institutions in the UK and overseas.

With more than 15 years' experience in financial services, Phillip specialises in wealth management, angel investment, commercial property investment and financial technology.

Phillip has become a well-known, online influencer in the blockchain and crypto space and has travelled the world evangelising and talking on these subjects.

Kellee Bergendahl, Advisor



Ms. Bergendahl serves Ascendant Capital Markets as a Managing Director, and is responsible for researching and identifying prospective investment opportunities in the micro-cap and small-cap public markets. Ms. Bergendahl has over fifteen years of experience in the financial markets and has significant knowledge and expertise in underwriting, transaction due diligence, and portfolio management. During her career, she has provided capital to hundreds of clients while developing long-standing relationships with both traditional and alternative capital and investment resources.

Jeff Dillman, Advisor



Mr. Dillman serves Ascendant Capital Markets as a Managing Director in the firm's Investment Banking, Mergers & Acquisitions, and Advisory practice. Mr. Dillman has 5 years of experience executing M&A transactions as an investment banker. During that time, he has initiated and closed the sale or recapitalization of numerous privately-owned businesses. He has worked in a multitude of sectors and is a critical thinker that enjoys digging in to how companies operate, figuring out where operational improvements can be implemented, then troubleshooting, problem solving, and developing strategic and financial plans for the company.

Nikolay Shkilev, Advisor



Crypto enthusiast and mentor.
Rated Top 10 in People of Blockchain.
Has 20 years of experience in large-scale transaction projects. He has many awards and titles in the IT business. Self-Made Russia award. Tech guru. Super TOP award etc. Founder and CEO of Private Business Club. His Holding received „Enterprise of the Year“ award in the Kremlin. Has a business in various directions. Co-Founder „Top ICO advisors“.

Vladimir Nikitin, Advisor



World-class professional and legal consulting with over ten years' experience in the legal, finance, retail, and IT industries. Renown cryptocurrency expert and ICO advisor (Top-5 worldwide ICObench Certified Expert). As an active supporter and advocate of blockchain technology, I provide consultancy and advice to selected ICOs in the CIS region. My network in the crypto community counts over 30 000 members.

Partners

Company Partners

With our partners in the industry, we are working on developing the most efficient strategies for cryptocurrency mining, including cooling solutions and hardware improvement. Strategic partnerships with main players throughout the sector, allow HydroMiner to ensure the substantial growth of its infrastructure. We see the best way to achieve the greatest impact on the evolution of cryptocurrencies in collaboration. For trading the H3O token, HydroMiner is discussing listing options with several suitable crypto exchanges, which will be announced in a timely manner.



COSS.IO

H2O is listed on the crypto exchange coss.io.



EtherDelta

H2O is listed on the crypto exchange [etherdelta](https://etherdelta.com) (etherdelta.com).



KPMG are HydroMiner's auditors.
<https://home.kpmg.com>
Porzellangasse 51, 1090
Vienna, Austria



HydroMiner works together with Green Revolution Cooling to develop innovative cooling strategies.
GRC Headquarters
11525 Stonehollow Dr.
Suite A-150
Austin, TX 78758
<https://www.grcooling.com>

STADLER VÖLKE
RECHTSANWÄLTE - ATTORNEYS AT LAW

Stadler Völkel law attorneys are HydroMiner's legal advisors.
Seilerstätte 24
1010 Vienna
Austria
www.svlaw.at



ASKG Steuerberatung are HydroMiners tax advisors.
ASKG Steuerberatungs GmbH
Marxergasse 25/4
A-1030 Vienna
Austria
www.as-steuerberatung.at



Ascendant Capital Markets, LLC is a full-service boutique investment banking firm providing corporate finance, M&A advisory, equity research, market making, and institutional sales and trading services, representing Hydrominer for accredited investors.

18881 Von Karman Avenue,
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Peak state Consulting is advising HydroMiner in business strategy and investment appraisal. Peak State Ltd, No 1, Bell Street, Maidenhead SL6 1BU, UK

Timeline

Founding of HydroMiner

HydroMiner was founded by a group of miners who came together in Vienna. Together they decided to move their mining equipment directly to the energy source – into hydropower stations, where they could avoid grid costs, obtain energy inexpensively, and use only renewable energy.

Early business model

HydroMiner starts deploying mining hardware into shipping containers that are acquired by private investors. For a fee, HydroMiner installs the containers at hydropower stations and hosts the containers.

First power station in Schönberg

HydroMiner rents its first hydropower station in Schönberg with an output of up to 250 kWh. Around 800 GPU cards are deployed there.

Successful ICO

HydroMiner raises 8676 Ether during their ICO. Participants are able to buy H2O tokens, which are vouchers for mining time in the mining facilities of HydroMiner. With the funds, a new power station near Waidhofen an der Ybbs is equipped with GPU cards and around 250 Antminer S9s.

Second mining farm near Waidhofen an der Ybbs

HydroMiner builds a second facility with 250 Antminer S9s and a container with 144 mining units (1152 GPU cards), with a constant energy supply of 600 kW.

Mining portal

In February 2018, HydroMiner begins offering redemption of H2O tokens in their online mining portal for mining contracts that last two years. Mining contracts can also be purchased with fiat money, bitcoin, Ethereum, and other cryptocurrencies. Currently (February 2018), customers can choose if they want to mine bitcoin, bitcoin cash, Ether or Ether classic. Other currencies will follow.

Joint Venture

In an upcoming joint venture with a group of renowned Austrian investors, HydroMiner plans to equip its third hydropower station, again near Waidhofen an der Ybbs in Lower Austria.

Presale H3O – a compliant security token

The H3O pre-ICO is described in this whitepaper.

H3O token main sale

The main sale of the compliant security token H3O, under a full capital market prospectus. H2O token holders can change their H2O tokens into H3O tokens following the creation of a capital market prospectus. (Anticipated Q2 2018)

Building of new mining farms

In Q3, HydroMiner will build new mining facilities. Currently the team is looking at hydropower stations in Georgia and Canada. With funds from the second ICO, these power stations will then be equipped with mining hardware.

Depending on the amount raised, HydroMiner may purchase the hydropower stations.

Otherwise the consumed energy will be paid. The output of the hydropower stations the team is currently looking at ranges from 2 MW to 25 MW.

Implementing of new cooling technology

In 2019, we plan to implement our proprietary cooling solution in all new hydropower stations and whenever hardware changes are necessary at one of the current hydropower stations.

ICO H2O

In the first ICO, which started on October 18 and ended on November 15, HydroMiner was able to raise 8676 Ether. With the funds raised, a second mining farm was built in a hydropower station near Waidhofen an der Ybbs. Antminer S9s and GPU units were deployed. Parallel to this, the mining portal was developed and opened according to the timeline in February 2018.

People were able to buy H2O tokens, which act as vouchers for mining time in the new facility. The H2O token holders can redeem their H2O tokens through the mining portal for a two-year mining contract. One H2O token represents the right to a minimum of 5 kWh of mining power from these facilities.

H2O token holders can choose from different cryptocurrencies they want to mine in the HydroMiner facilities (currently BTC, BCH, ETH and ETC).

The H2O token is currently trading on the cryptocurrency exchanges coss.io, etherdelta.com, nebula.exchange (launch expected in February-March 2018) and blockbid (launch expected in March). The token exchange rate during the ICO was 1 H2O = 0.01 Eth.

The smart contract details for the H2O token are as follows:

Address: 0xFeeD1a53bd53FFE453D265FC6E70dD85f8e993b6

Decimals: 18

Token name: H2O

ETH address: hydrominer.eth

IPO Plans

HydroMiner plans to conduct an Initial Public Offering (IPO) on a regulated stock exchange. At the moment, the AIM in London is a leading candidate.

We see several good reasons to plan this step:

- We want our H3O token holders to become real shareholders. We think an IPO would be an excellent way to expand our capital basis. There are many traditional investors who are looking for crypto exposure, but are not willing or ready or allowed to invest directly in ICOs, to open accounts on crypto-exchanges, to make wallets, etc. HydroMiner shares listed on an exchange could be the perfect instrument for these investors.
- Crypto- or blockchain-related stocks have exploded in the last few months even when a cryptocurrency-related term was only part of the company name. This shows that there is huge demand for these stocks, even more so if they have a profitable cryptocurrency business model like HydroMiner.

Austrian Capital Market Regulation

The H3O token is a security token based on a participatory right (Genussrecht) for HydroMiner IT-Services GmbH.

Participatory rights resemble the rights a shareholder typically holds. The rules governing the issuing of participatory rights are statutorily regulated by § 174 para. 3 AktG (Austrian Securities Act). The holders of participation rights participate by means of the law of obligations in the profit and loss of HydroMiner IT-Services GmbH as well as in hidden reserves and any liquidation proceeds.

The participatory right also includes a “tag along right” which gives investors the chance to redeem their participatory right in case more than 75% of the shares of the company are sold. A termination right after ten years is also included, which gives Investors the chance to terminate their contract while entitling them to a certain payment in return.

This participatory right will be set up by an Austrian lawyer. In the pre-ICO, no capital markets prospectus will be issued. For the main sale a capital market prospectus will be drafted and—according to the applicable regulations—submitted to the Austrian Financial Market Authority (FMA), which is responsible for supervising the capital market in Austria.

According to § 2 KMG (Austrian Capital Markets Act), HydroMiner will issue a security and is therefore obliged to issue a full prospectus according to Austrian laws. HydroMiner will publish a full prospectus at least one banking day before the main sale of the ICO starts. According to § 3 para (1) item 9 KMG however, there is no obligation for a prospectus if only investors who acquire securities have to invest a total consideration of at least EUR 100,000 per investor and for each separate offer.

In our pre-ICO, only investors who will invest more than US\$ 200,000 nominal value (that is, US\$ 140,000 with the pre-ICO discount) will participate. Therefore the full capital market prospectus will only be released before the main sale of the ICO.

The Mining Portal

The mining portal is a custom solution that has been developed based on the HydroMiner specifications to meet investors' mining needs as well as fulfilling the legal obligations of HydroMiner.

The mining portal is connected to the hydrominer.org website and the embedded online purchase system. There are two main use cases for the mining portal:

1. A H2O token holder can redeem their tokens and select or start their mining contract.
2. A shop user can purchase a mining contract in the online shop using fiat money or cryptocurrencies.

With the mining portal, the user is accessing the HydroMiner mining facilities and retrieves live data that can be visualized in various charts on the mining portal's dashboard .

The main features of the HydroMiner mining portal are:

- Registration, Login, Change user profile, and Enable/disable two factor authentication (2FA).
- Know Your Customer (KYC) page where users are required to verify their identity. The HydroMiner team verifies and approves each request. Only after a successful approval can the user start using the mining portal and its functionality.
- Redeem H2O allows the user to send H2O tokens to his user account.
- Mining Contracts is the page where a user can select the mining contract he wants to start with. Various contracts are offered, and the user can select how many H2O tokens he would like to redeem for each contract. After confirmation, the mining contract will start at midnight (CET time) and the first mining results will show up after 24 hours.
- Balance and Payouts shows the current value of each mining contract in US\$ and Euros. Once the minimum threshold for payout has been reached, the user can request payout to a wallet address of his choice.

The mining portal features above are the same for H2O token holders as well as for shop users. The only difference is that shop users who have purchased a mining contract do not need to redeem any H2O tokens, as their purchased contracts will be ready to start in the "Mining Contracts" page.

The HydroMiner team is aware of the risks of providing a cloud mining portal to the public and has established various security measures that we will not disclose. The following chapter explains the high level architecture of the mining portal.

Architecture

The overall architecture of the HydroMiner solution integrates the web site, the online shop, the affiliate system, the mining portal, and mining farms.

At the bottom of the image are different sites with their mining equipment, which is connected via mining pools. These mining pools providing live statistical data to the mining portal, where the end user can view them in various tables and dashboards.

Every connection is encrypted and secured with firewalls and other mechanism to protect the HydroMiner mining operation.

The mining portal architecture, shown on the right side of the image, is a three tier layer architecture.

- The data layer consists of SQL databases and various cryptocurrency nodes.
- The logical layer has been implemented with Python and PHP.
- The presentation layer uses HTML5, Wordpress, Support Portal, Woocommerce (Shop) and idevAffiliate (Affiliate System).

As a user, you can access the HydroMiner website with the shop and mining portal.

Affiliate partners can drive traffic and earn sales commissions. The HydroMiner team is managing the site with different administration tools on the backend to ensure smooth operation.

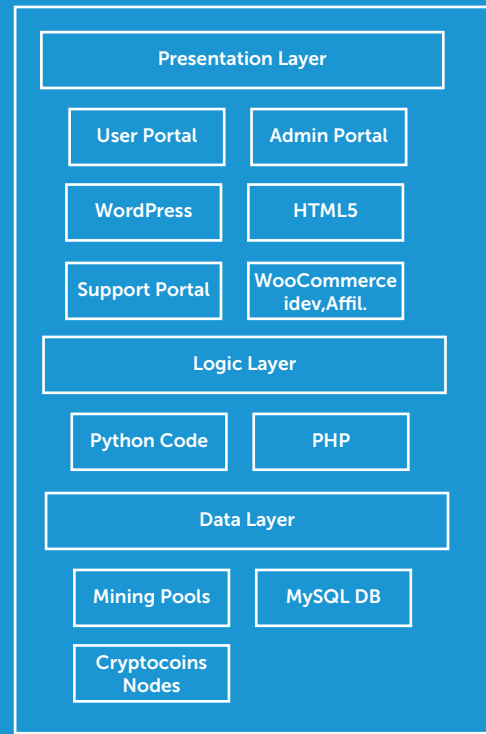
System monitoring and intrusion detection are in place to safeguard the critical equipment. There is an onsite and offsite backup strategy in place to ensure a minimal time to restore our service.



H2O Token Holder



Mining Portal Architecture



Mining Portal Features

1. User Registration
2. Redeem H2O Tokens
3. KYC
4. Select Mining Mix
5. Start Mining Contract
6. Manage Pay-Outs
7. Online Shop

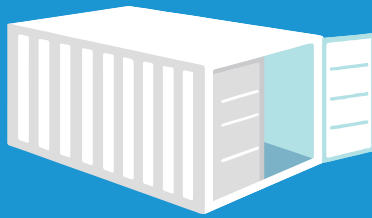


Secure Internet Connection

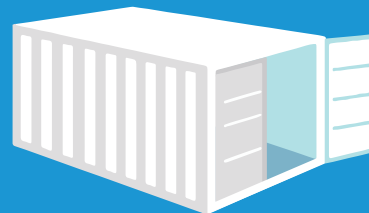


Water Power Plant

Green Sustainable Electricity



ETH, ETC



BTC, BCH

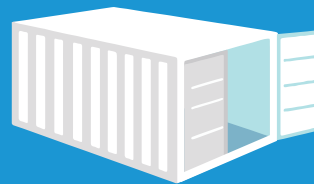
Mobile Mining Units (Plant 1)



ETH



ZEC



ETH, BTC



ETH, ZEC

Mobile Mining Units (Plant 2,3,4...)

Business

Cloud mining contracts have been around almost as long as cryptocurrencies. The customer purchases the mining power from the provider and pays in advance, usually for two years. Whatever the hardware produces is what the customer will receive over these two years. The usual calculation includes the hardware, energy, marketing and sales costs and a markup that is basically a fixed fee. Looking at the basic mining business model, the company that provides the cloud mining does not seem much involved in the actual mining process and its risk, as the customer pays in advance and bears the risk. However, the provider does need to pre-purchase the hardware long before customers pay for the hardware and assume the mining risk.

By mining for itself, HydroMiner is in a very favorable position to be able to create mining contracts when the company decides to do so. In this way, HydroMiner is able to manage capacity and risk, as well as investments and cash flow, between its own capacities and the capacities it offers to customers.

The mining portal is expected to have a profitability between 12% and 18% over the course of the contract, but will also pre-purchase energy so that it creates cash flow for HydroMiner. Our expectations for cloud mining contract turnover (not counting H2O redemption) for the upcoming years is:

2018 US\$ 3 million

2019 US\$ 12 million

2020 US\$ 25 million

HydroMiner's Green Mining Operations

Right now, HydroMiner rents two power stations, both operational and fully equipped with mining hardware. In an upcoming joint venture with a group of renowned Austrian investors, HydroMiner plans to equip its third hydropower station, again near Waidhofen an der Ybbs in Lower Austria. This hydro station will be equipped and ready for mining in May 2018.

Schönberg in Lower Austria (Hydro 1)

In Langenlois, the HydroMiner team has equipped a 290 kW hydropower station with a total of 120 units, each with between 6 and 10 GPUs, containing 800 GPU cards in total. 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 perfect 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 (YBBS1)

Near Waidhofen, HydroMiner equipped a power station with a basic capacity of 600 kW. This project was implemented on the premises of the hydropower station and in a 20-foot container with 144 GPU-based units containing 1152 GPU cards and 250 Bitcoin S9 miners. The facility is a large hydropower station and has just recently been overhauled. In this location, HydroMiner has an energy purchase contract with a variable price over time.



HydroMiner's facility near Waidhofen an der Ybbs, currently equipped with 250 ASIC miners (on view here) and 1152 GPU cards.

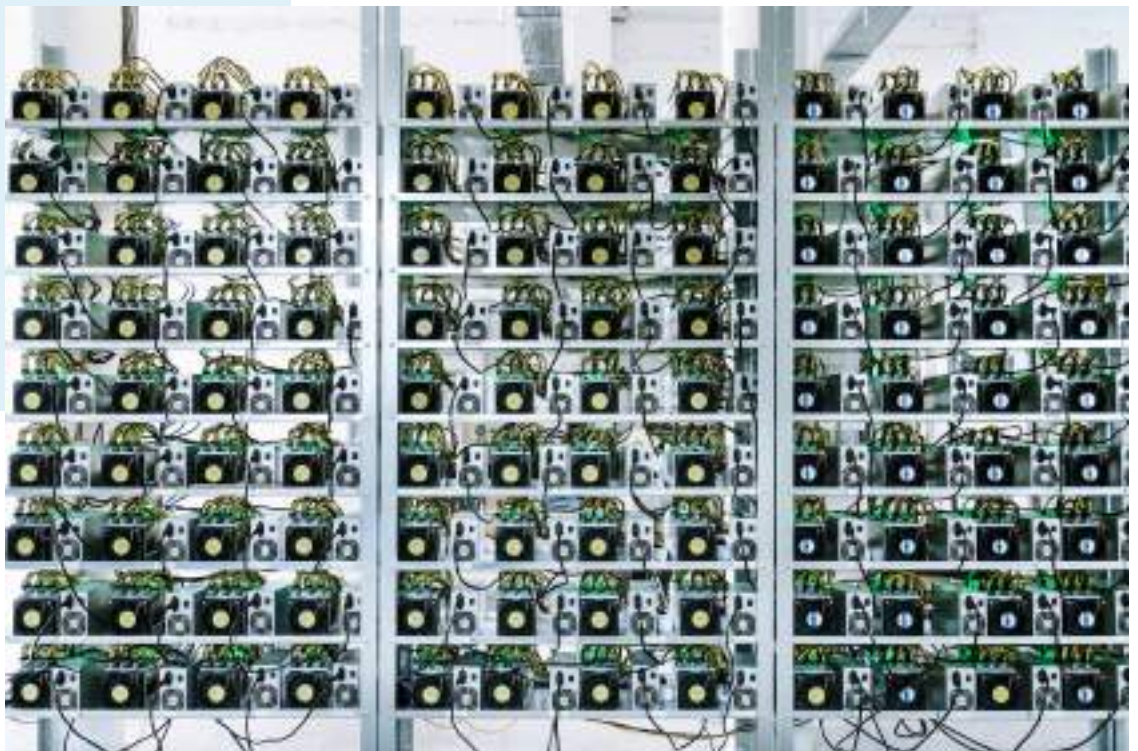


250 AntMiner S9s are deployed in HydroMiner's power station near



HydroMiner's container equipped with 1152 GPU cards and power connection distributing energy to the equipment inside the hydropower station.

250 Antminer S9s deployed in HydroMiner's facility, mining Bitcoin and Bitcoin Cash 24/7.



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 hydropower stations are ideal for crypto mining because energy costs are low and the water can also be used for cooling, which makes mining in hydropower stations even more profitable. If the water cannot be used directly, the typical locations of hydropower stations are easier cooled due to the lower temperatures from the river and often also due to the higher elevation of the stations above sea level. Furthermore, using containers is also a solution from which the whole mining facility can profit in a variety of ways, including flexibility, density, and also profitability, and it can be implemented in almost every location. Besides its air cooled systems, HydroMiner is also working with 3M Novec 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.

Using 3M's liquid cooling also enable us to run the most demanding mining software on GPUs as well as on CPUs without stressing the material or impacting its quality or life span. One of the most positive effects of this cooling method is that PCI slots and the PSU last longer, as especially PCI slots and the PSU suffer when temperatures are higher. This can result in standby times and reduced profitability.

In Canada, we are planning a new farm at a large hydropower station where we plan to use a new type of cooling using mineral oil. This approach is much cheaper than 3M liquids, as the liquid does not evaporate as easily. The disadvantage is that the equipment is messy after use. However since the hardware is usually not being used after the end of its lifecycle, this does not represent a disadvantage.

We have identified two locations with very inexpensive energy where this type of cooling would make sense and where efficient air cooling is not possible. This particular location has no way of moving enough air for the cooling and also has problems with noise issues related to air cooling.

Another option for cooling is to use the river's cold water by pumping it through copper tubes that run between rigs, or to use it to cool the mineral oil that is used for cooling. This method enables us to lower temperatures without massive 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 because noise can pose a problem to the surrounding environment.

he 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 hydropower stations or dam operators. Because power supply is the most important factor, the main task lies in solving these complications. That's why the HydroMiner team has implemented various systems to ensure continuous operation. These systems range from diesel-based UPSs, to special contracts with power grid operators, to automated shutdown and sequential booting operations.

The Internet connections to the hydropower stations are usually managed with the carrier networks of at least two independent carriers using different infrastructures.

Operating Models/Types of Facilities

Mobile containers

HydroMiner builds most of its mining equipment inside standard sea freight containers. This gives us a major advantage in several categories: First, after the containers have been equipped at headquarters, it takes very little effort to transport them to the power stations. Second, HydroMiner has a proven method for equipping containers with mining gear using extremely effective cooling and ventilation equipment. These cooling methods only work in containers because of the containers' properties. Depending on the power supply at the hydropower station, containers are always similarly equipped, e.g. the containers placed in Waidhofen an der Ybbs contain 150 GPU-based units. Each contains 6-10 GPUs and 250 Bitcoin S9 miners. Although mobility is stressed in the business model of mining, we do not want to overstate the usefulness of moving containers often. First, there are almost no power stations that are equipped to make use of energy at the station right away. Usually the energy is delivered to the grid so that making use of the energy needs the installation of a transformer (at 50% of stations) and an electric meter (at 90% of stations) as well as cabling from the transformer to the container (at 100% of stations). These construction projects usually require licensed electricians and construction companies as well permission from the municipality, often requiring sound tests with neighbors who could be disturbed by the noise. Therefore once a suitable location is found, we do not plan to move containers.

Offshore locations

As already mentioned, HydroMiner is currently in touch with a large European energy provider to equip a wind park with a mining facility. The mining rigs will be placed on a ship adjacent to the station. This station as well the ship will be placed in a so-called Exclusive Economic Zone in the North Sea. At this location, the energy cost are very low. That is why we plan to use older equipment, as it would still be profitable, and further this will give us the opportunity to reuse or recycle our old mining equipment whenever we update hardware at one of our locations.

Facilities at power stations

HydroMiner also sets up mining facilities outside of containers and mobile entities if more space and energy are available at the power stations. This gives HydroMiner the opportunity for a 100% usage of all available resources. At the moment, the facilities outside of the containers in Waidhofen an der Ybbs contain 50 GPU units with 6-8 GPUs per unit. HydroMiner also operates an extra 290 S9 Antminers outside of the containers in Waidhofen.

Supply Chain

One of the most important things in mining is to have a well-functioning supply chain. This is why we have several people in China, Germany, and other countries from whom we order and purchase our hardware.

HydroMiner purchases mining equipment in three ways:

Preorders are placed with the well-known companies in the field, usually two or three months ahead of delivery. This is usually done with about 30% of the funds.

Spot orders give us the most flexibility to react to changes in the market, and this is true for ASIC as well as for GPU and other miners. HydroMiner has a person based in Beijing, China, who performs live testing of equipment directly at the OEM manufacturer. We usually do this live together with the team in Vienna, and if the equipment is fine, we organize payment on the spot, usually in crypto. Within a short time, our logistics partner picks up the goods on the spot and organizes transport to our power stations or to Vienna for mounting in containers.

New sources. HydroMiner also seeks out new opportunities. In Germany, for example, we have an ASIC supplier under NDA where we already have a purchase planned for Q4 of 2018. Besides this, we scan the market for specialized equipment such as masternodes, and ASICs for new currencies are continuously tested by HydroMiner.

Cooling Technology

A certain level of temperature in the mining facility must be reached and held. This is why our team is working unceasingly on new cooling technologies or on ways to improve the ones we have already implemented. HydroMiner has implemented a variety of cooling methods that are used depending on the facility, location, and capacity.

A: Standard air cooling at facilities inside power stations. For suitable mining facilities, we have developed a suitable cooling solution using an efficient air ventilation system. In more challenging environments, we work together with greenmining.com. If the power stations' outside temperature is appropriate, we also use standard air cooling systems to keep the equipment cold. The advantage is that hydropower stations usually are located in a cool environment and cooling can be provided quite easily, even in the summer.

B: Container cooling. Inside of containers, we have a proven system of cooling using a combination of air ventilation and heat exchangers that uses water from the river to cool the facility and reduce temperature levels. Depending on the weather and river temperature, this technology keeps the temperature of the container room between 30 and 55 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 60 x 60 x 30cm in size. This solution also saves up to 20% in energy and increases the mining output as well. This solution can be applied using dedicated mining GPUs only. HydroMiner is in the final phase of experiments with Novec liquids from 3M. The goal is to save space and energy during the GPU cooling process. The right layout for each facility is one of the most important tasks. It is crucial for the lifecycle of the hardware, and optimizing it allows us to run the most profitable mining software.

D: Using a specialized mineral oil for cooling the so called Large Scale Liquid Cooling Solution (LASCO) provides us with new ways of cooling, including using either water from the river or air. The advantage of mineral oil cooling is its low cost of approximately US\$ 5/liter in comparison to almost US\$ 90/liter of Novec. Because the mining equipment is not designed to be liquid-cooled, those techniques use up much more space.

E: Using the hot air. All hydropower stations are located on agricultural land. We plan to designate a small team to make use of the hot air from the cooling process. The plans include drying wood, fruits, and vegetables and/or heating nearby facilities such as industrial plants or storage. Another possibility is the production of warm water, which can also be achieved with the hot air from the cooling process. However, to make this profitable, we believe it will take a number of years to pay off the initial investment.

Monitoring and Maintenance

System monitoring: determine the right hashrate

If the hashrate behaves strangely and/or crosses a certain threshold (upper and lower bounds), our web interface program will alert us. This means whenever the hashrate behaves irregularly, for example the rate drops beneath our lower bound, the system will respond by sending an error message to the team that is currently monitoring and to our technicians. The limits or thresholds are set by a profitability calculation that determines limits to reduce losses or irregular behaviour.

Undermine failures

To reduce failures, we have created a register where each error is listed so that in case of a repeated failure, the problem can be solved much faster and more efficiently. In addition, because reliability, maintainability, and security (including modularity and control) are very important when working with mining hardware, we monitor our mining farms 24/7 from several workspaces via a web interface to ensure that IP, temperature, hashrate, wattage, fans, and memory are all operating at maximum efficiency.

Monitoring the power stations

For monitoring the power station, there are cameras installed so that every part of the mining farm is viewable. We have also installed thermographic cameras to not only observe the temperature of the miners but also to spot unusual movements or behavior (of course this is also true of the normal cameras as well). We do not disclose the exact locations, as we want to prevent theft and we also do not want to give our competitors the chance to outbid us on energy prices.

Maintenance

For maintaining purposes, a well-schooled team of technicians 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 90 minutes from our headquarters. In most power stations, there is also personnel available for smaller tasks at the facility if necessary. Early in the lifecycle of a new facility, there is usually much work to be done in terms of monitoring and maintenance until the optimal cooling air flow can be determined and implemented. Once everything is set up and the hardware has been mining for a certain amount of time, the work required for monitoring and maintenance decreases.

Facility Specifications

	HYDRO 1 (Schönberg)	HYDRO 2 (Waidhofen)
STRUCTURE	Reinforced concrete building	20' container plus equipment within the station
TRANSFORMER	ATS / ELIN	ATS / Siemens
ON SITE PERSONNEL	Reachable from Vienna	10 minutes from the station
COOLING TYPE	Free air cooling	Free air cooling
AIRFLOW	34000 m ³	179000 m ³
VENTILATION	Soler & Palau	Soler & Palau
POWER CONSUMPTION	170 KW	550 KW
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
TEMPERATURE	20 to 24 C	24 to 30 C
HUMIDITY	30 to 60%	30 to 60%
FIRE	Gas extinguishing fire supr	Gas extinguishing fire supr.
INTRUSION	Detection with sensors, video	Detection with sensors, video
SURVEILLANCE	Video, alarm system	Video, Group4, alarm system
INSURANCE	Fire, Water, Damage, Theft	Fire, Water, Damage, Theft
INSURER	Uniqa	Uniqa & Allianz

Sensor Arrays

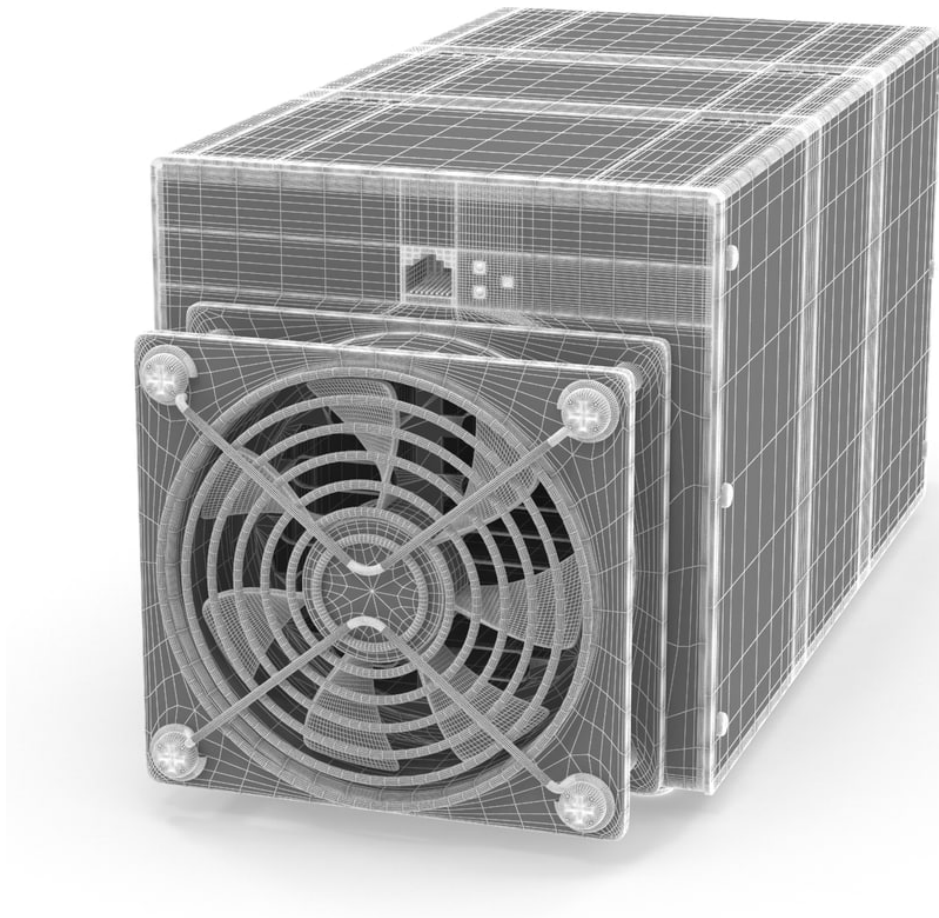
It is very important for us to minimize time spent on things which can be done automatically and without manpower, this saves a lot of time, effort and of course money which can then later be invested in more hardware or other important purchases. Because of that we at HydroMiner use sensors which are connected to our web interface software.

Climate sensors					
Duty	Inner temperature	Outside temperature	Inner air pressure	Outside air pressure	Inside humidity
Function	Calculating cooling efficiencies	Climate and temperature measurement	Estimate airflow	Estimate airflow	Avoiding condensation
Sensors	SensorPush wireless thermometer	SensorPush wireless thermometer	Bosch BMP280 barometric pressure sensor	Bosch BMP280 barometric pressure sensor	SensorPush wireless thermometer
Transmission	Real time access	Real time access	Real time access	Real time access	Real time access

Energy sensors			
Duty	Monitoring incoming power	Monitoring the power of single units within the station	Control of single units
Function	Verifying power supply	Efficiency gains and calculations	Restart unit
Sensors	Rotating transformer	Xiaomi Mi smart WiFi socket plug	Xiaomi Mi smart WiFi socket plug
Transmission	Data transmission every 15 minutes	Real time	Real time

Monitoring computing performance			
Duty	Single entity computing performance	Core temperature of single entity	Single entity software and hardware adjustments
Function	Optimization and early problem recognition	Optimization and early problem recognition	Optimization and early problem recognition
Sensors	Within hardware	Within hardware	Within hardware
Transmission	Real time	Real time	Real time

Hardware



Asic Mining



To mine Bitcoin, HydroMiner uses ASICs (application-specific integrated circuits). This is a chip customized for a particular use rather than intended for general-purpose use. In Bitcoin mining hardware, ASICs were the next step of development after CPUs, GPUs, and FPGAs. Capable of easily outperforming the prior platforms for Bitcoin mining in both speed and efficiency, all practical Bitcoin mining hardware will make use of ASICs.

Bitcoin ASIC chips generally can only be used for Bitcoin (or Bitcoin Cash) mining. For Litecoin, for example, one would need a different ASIC.

The choice of ASIC chip largely determines the cost and efficiency of a given miner, as ASIC development and manufacture are very expensive processes, and the ASIC chips themselves are often the components that require the most power in a Bitcoin miner.

At the time of writing this whitepaper (March 2018), Samsung has announced the release of a chip for Bitcoin and Bitcoin DNA coins (Bitcoin and all Bitcoin DNA coins which are running on the SHA-256 algorithm). Because at the moment there is no reliable information available other than the announcement that Samsung will release this chip soon, HydroMiner is currently being cautious about commitments until the specifications of this chip are provided in an official press release.

GPU Mining

In GPU mining, GPUs are pushed to their absolute performance limit, as the cards need to perform a process that requires a great deal of computing power. Because these operations sometimes overtax the GPU, it is very important to eliminate cards that require a lot of maintenance, as maintenance costs money, time, and power. Therefore it is a priority to always stay on track and figure out which cards perform well without requiring a lot of maintenance.

AMD has been considered the leader in the GPU mining market for a long time due to the high hashrate per watt of its RX 4xx and 5xx chips. With specific custom BIOSes, it is possible to set up (using a real example) a 160 MH/s Ethereum mining rig with less than 700W power consumption using six RX580s mining at 26 to 28 MH/s average per ~100W each.

Moreover, AMD has released a new driver that boosts the mining performance of its RX chips by preventing them from losing effectiveness on DAG changes. For the first time, we are seeing a GPU manufacturer officially backing the cryptocurrency environment.

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

Because of this, miners have started looking at NVIDIA cards, which in comparison are much easier to purchase due to higher production by manufacturers. After various optimizations to mining software, we now have a situation where the GTX1070 from NVIDIA challenges the top AMD cards and in many cases can surpass them in terms of hashrate per watt.

More powerful cards from NVIDIA, like the 1080 and 1080 ti, are not a good fit for mining because of the memory specs – the mining algorithms usually fit the GDDR5 latency characteristics better than those of GDDR5X often found with higher-end GPUs.

We at HydroMiner are not only equipped with GPUs. Our mining farms also contain Antminers and Baikal Giant-B miners, which gives us the perfect environment for always choosing the most profitable coins to mine.

Baikal Miners

The Baikal miner specification depends on which algorithm runs on the miner. This means that it can run a different algorithm for different currencies. We at HydroMiner are using the so-called Lbry algorithm, which allows us to mine with a hashrate of 40GH/s \pm 10% at the usage of 400W \pm 5%. This creates an optimum for mining.¹

Antminers

HydroMiner has a variety of Antminers including S9, D3 and A3 miners, which are set up for Bitcoin and Bitcoin Cash mining. HydroMiner also uses Antminer for Siacoin, Peercoin, and Dash mining. The A3, for example, can mine up to a total hashrate of 815 GH/s \pm 5% and consumes 1275W +7%, which is why the A3 is perfect for mining Siacoins. The S9 miner on the other hand is one of the most stable and efficient Bitcoin miners now available on the market. It can mine up to 12TH/s \pm 5% by using just 1419W.²

The minted coins that have been generated in HydroMiner's facilities are transferred from the mining pools, which mostly have a daily payout setting, to multisignature and multifactor or multisignature and multiparty wallets. On a weekly basis, funds from these wallets are transferred to the cold storage wallets (first tier).

1 <https://www.baikalminer.com/product10.php> (13.02.2018)

2 https://shop.bitmain.com/antminer_s9_asic_bitcoin_miner.htm?flag=specifications, <https://shop.bitmain.com/productDetail.htm?pid=00020180129095202674bwQAJFdr06CB>, (13.02.2018)

Distribution of mining profits

A percentage of the coins that HydroMiner mines will be reinvested in order to grow operations and to generate more profit. The rest of the coins will be stored in first-tier wallets for long-term investment in the cryptocurrencies HydroMiner has generated. This allocation is subject to change depending on the market situation and many more factors that the management team will consider before making a decision.

Coin Handling and Investment/Operation Process

Operational process of mining

A common approach for miners today is to pool their resources and share hashing power with other pool members so that their mining profit becomes more easily calculable.

HydroMiner currently chooses the mining pools it participates by considering the fees that have to be paid to the facilitator, the payout terms, and the security measures pool has deployed. Once HydroMiner has reached a certain threshold of hashing power, we will open up our own pool.

Electricity

Finding inexpensive electricity is the next factor. As described earlier in this WP, there are various options for affordable electricity. We have identified hydropower stations within Europe as our first target. Hydropower in other countries would be our next step. Georgia, Canada, and a few other nations have large hydropower stations and competitive tax regimes. We believe we can find sufficient energy sources and hydropower stations to connect even more than US\$ 250 million in equipment.

Deployment

Deployment depends largely on the availability of trained workers, suitable facilities in or near hydropower stations, and cooling. If these are available in a reasonable way, hardware can be deployed very rapidly. A team of five from HydroMiner together with a team of two involving the hydropower station's electrician can easily deploy US\$ 1 million in hardware in one week. By forming a couple of teams, we would easily be able to reach our scalability target of US\$ 250 million in hardware within a year.

Mining Performance

On the Internet, there are many “mining calculators” that estimate hypothetical expectations. Our mining performance, on the other hand, is based on real results in our own mining operations in Austria during December of 2017 and January of 2018.

We have all the facts to build a calculation:

- The real cost of mining equipment (Bitcoin miners as well as GPU miners).
- The cost of setting up operations.
- The cost of electricity and cooling.
- How much each miner actually produced in these 2 months.

This information enables us to produce a very accurate “snapshot” of our current mining performance.

Obviously the future is uncertain. This is true for every investment, but even more in the crypto space, where prices and developments are very volatile. Please keep in mind: All expectations and calculations can change significantly (for good or bad) very quickly!

As difficulty is increasing continuously and new and better hardware is being developed, we calculate that the output of our miners will decrease by about 4% per month on average. That means that after about 3 years, it is no longer profitable to continue using the miners, so the expected life cycle of a miner is about 3 years.

We don't try to guess the development of cryptocurrency prices, so the calculations are based on current prices (at the time of this calculation, the bitcoin price is around US\$ 12,000). In general, we believe the cryptocurrency sector will grow significantly in the coming years, as explained elsewhere in this whitepaper. We also believe that there will be a reward for decentralized validation, so we expect cryptocurrency mining to stay profitable (hopefully very profitable if the crypto markets continue to behave as they have in recent years).

Storage of minted coins

A crucial part of our mining operation is the storage of the minted coins. They are split into three storage tiers, which have different levels of safety and convenience of use.

After an extensive market analysis and coin analysis, the team decides which cryptocurrencies are stored for long-term investment. There will also provisionally be a possibility for H3O token holders to vote on the coins HydroMiner will store.

First tier

Coins are stored in cryptocurrency hardware wallets. These devices are not connected to the Internet and are pin and password protected with mnemonic phrases that are secured in safe places. Every week, transfers from the wallets where the mining rewards are credited are then made to these secure devices.

Second tier

Multisignature and multifactor, or multisignature and multiparty wallets, for which several devices are needed to sign in to the wallet.

Third tier

The last and least secure layer (hot storage) is the storage in our cryptocurrency exchange accounts, where HydroMiner stores about 3% of the coins in order to make minor, everyday transactions. Exchanges into fiat money are made on the day of or the day before payment is to be made, depending on the transfer times.

Scalability

The scalability of the mining business depends on various factors. From today's perspective, it would seem that cryptomining is one of the most scalable businesses in existence. The need for mining with proof of work has been described earlier in this document. To meet the increasing demand and to scale HydroMiner's business, these are the factors to consider:

Hardware

Availability of hardware is an absolute necessity for mining. Necessary hardware includes the mining equipment itself, currently ASIC and GPU miners, but it is not limited to these. Mining also requires other hardware related to power management such as transformers, power meters, and special cabling. HydroMiner has shown that it can easily obtain all of these in a reasonable time and in the required quantity. We expect to be able to deploy up to US\$ 250 million in hardware within a year's time.

Based on all current facts and (uncertain) expectations, our mining performance model shows a profit of 24% in the first year of operation from mining proceeds.

We plan to reinvest parts of the mining proceeds in new miners and in setting up new mining projects in additional hydropower stations. Doing so will increase the level of mining proceeds, although the performance of the existing miners decreases constantly, as explained above.

By applying this strategy, based on current assumptions, we hope to be able to triple investments within a "lifecycle" of three years. That means investing US\$ 1 million into a hydropower mining farm might bring us US\$ 3 million after three years.

Again: this might be realistic if market conditions remain similar over the next three years, or results might be much better if cryptocurrency prices keep rising like they did in 2017, **but results might be much worse if cryptocurrency prices fall or even crash, or there are regulatory problems or other risk factors take effect, as explained in this whitepaper.**

Mining in the Future

Over the next five years, mining will move in the direction of large mining farms that gain from economies of scale in infrastructure and capital expenditures. Mining will become a specialized trade that takes place 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 the pools will limit membership. Limiting membership will signal to investors that any one pool is not able to perform a 51% attack on the cryptocurrency. By limiting membership and computing power, mining pools will actually be able to increase profits.

Mining hardware can expect considerable improvements over the next few years. Cryptocurrencies such as Ethereum have expressed interest in using other consensus algorithms, such as proof of stake and proof of authority. However, these algorithms pose more problems than solutions, as mentioned in a previous section. Instead, entrepreneurs will look for the ways to increase the hashrate and lower the energy consumption of GPUs. In the market for graphic cards, AMD is the unquestioned leader at the moment. AMD has consistently developed both hardware and software that serve the needs of miners. Currently, AMD's Radeon GPU is the best choice for mining cryptocurrency. However, in the future, competitors such as Nvidia may try to increase market share.

Some coins can still be mined with regular CPUs installed on home computers and laptops. In the future, more cryptocurrencies may try to limit ASIC and GPU mining in order to increase decentralization in the network. For coins like Ethereum, miners quickly began employing GPU processors in order to achieve better results. Mining with GPU processors allows miners to swiftly switch to mining the most profitable cryptocurrency at any moment. In the future, more competitive algorithms will be created that can quickly determine to which cryptocurrencies the processing power of hardware GPUs should be dedicated.

Current returns can be used to forecast the future returns of GPU mining. The two leading GPUs are from AMD and Nvidia:

- Radeon R9 295X2: 46 MH/s, uses 500 kWh and costs around \$650
- Nvidia GeForce GTX 1080: 23 MH/s, uses 180 kW/h and costs as low as \$500

Figures 1 and 2 below show the profit trajectory for mining Ether on the Ethereum blockchain, which as of February, 2018, had a value of approximately \$825 per coin.

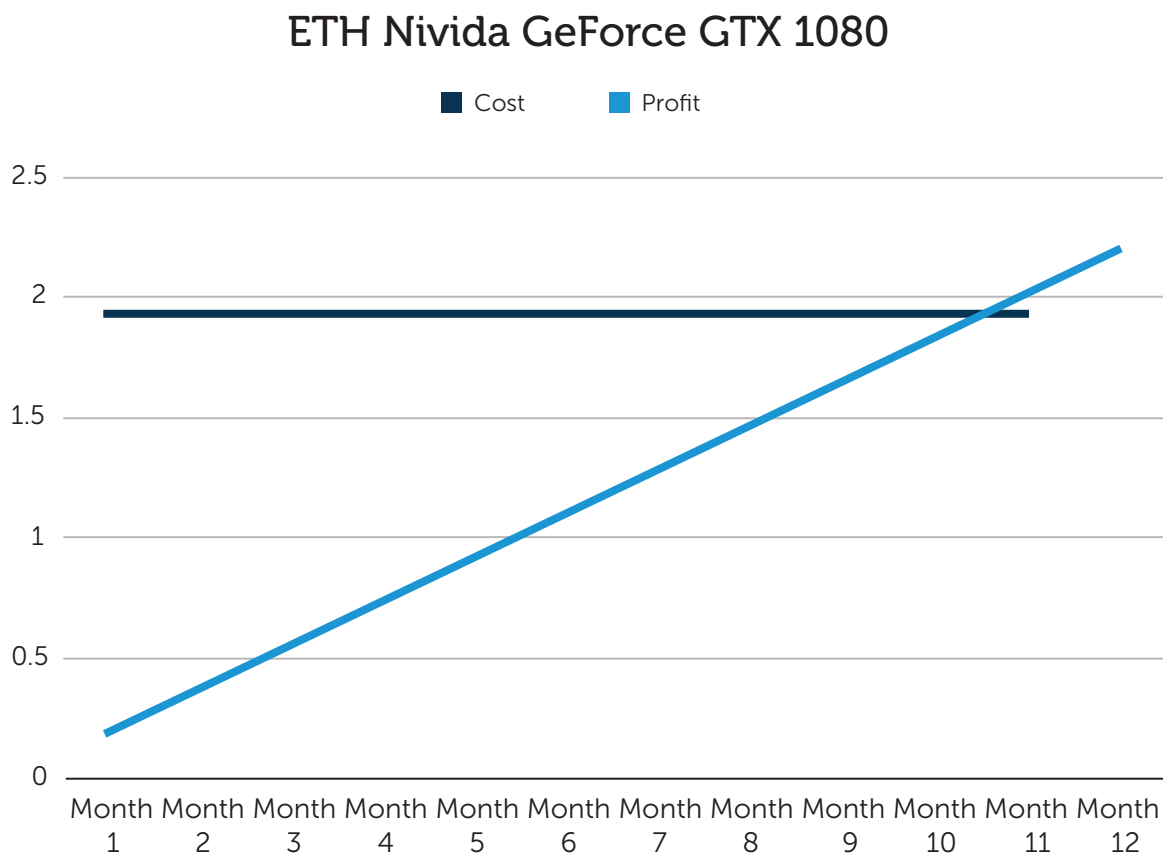
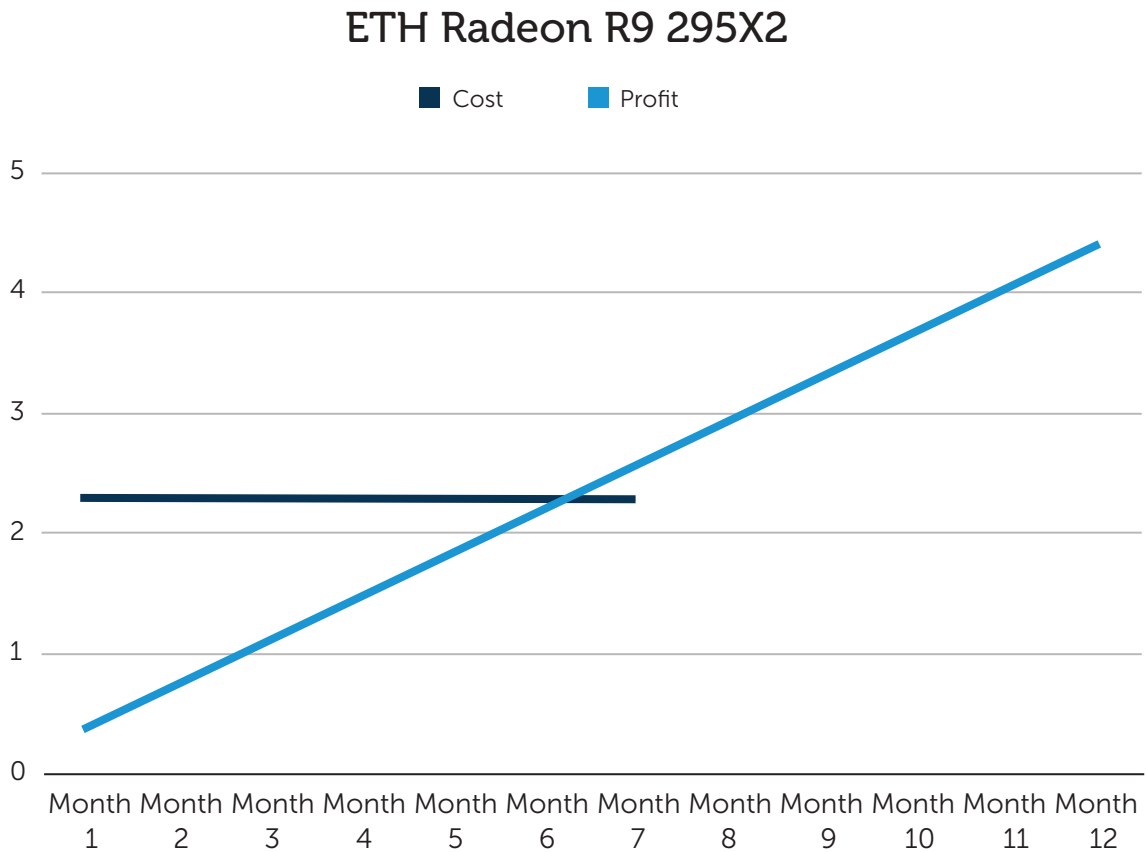


Fig. 1. — Nvidia reaches break-even point in 10 months

Fig. 2. — Radeon reaches break-even point in 6 months.

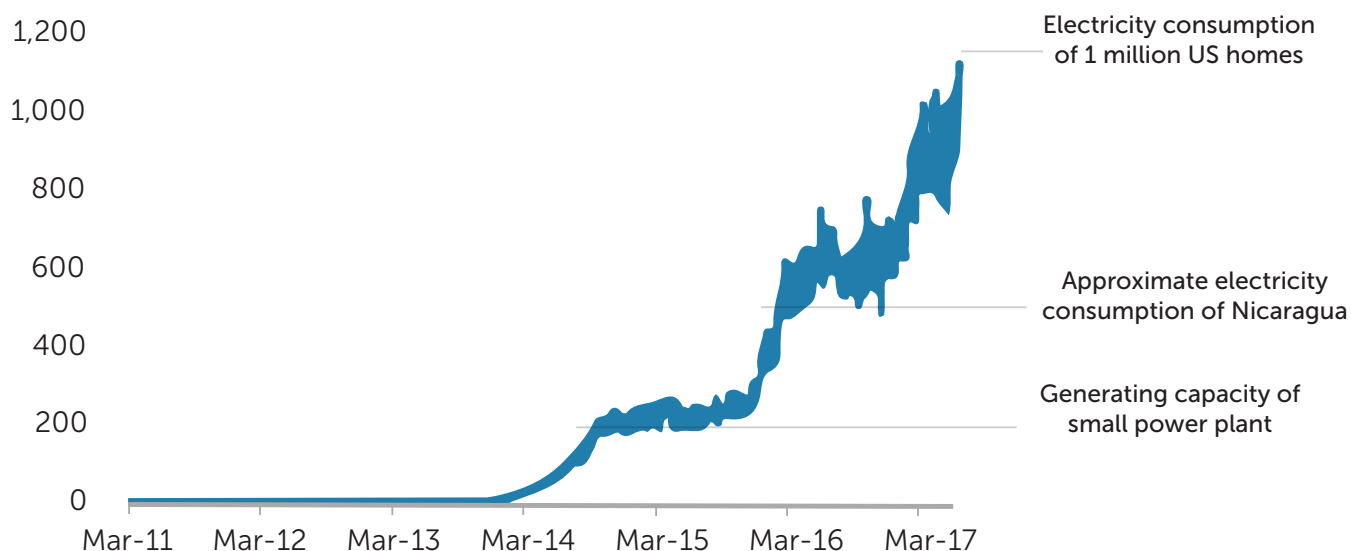


As you can see, despite being slightly more expensive, the Radeon GPU has twice the hashrate as Nvidia. In addition, AMD has just released a special pack of drivers for cryptocurrency miners who use Radeon GPUs. These drivers were designed to further increase the hashrate without additional investment.

Exhibit 26:

A drawback of Bitcoin's Proof-of-Work based model is the increasing electricity usage it creates

Global Bitcoin Mining Energy Consumption (Megawatts)



Note: Energy consumption estimated based on global mining hash rate multiplied by average Joule/gigahash/s energy usage, which we assume declines linearly from 1.5 in 2014 to 0.2 in 2017

Source: blockchaininfo, Morgan Stanley estimates

Fig. 3 – Global Bitcoin mining Energy Consumption

As more transactions are fulfilled on distributed blockchains, the demand for miners will increase. As shown in Figure 3, there is a clear uptrend in the amount of computing power dedicated to proof-of-work mining. In the future, smart cities will adapt to mining facilities by using the heat to warm living quarters or water for their citizens. Also, certain governments may try to attract mining companies by offering subsidies for electricity plants. The EBRD (European Bank for Reconstruction and Development) is aiding energy-generating plants in the CIS and Eastern Europe if they follow certain rules. For example, in Georgia, if the power plant can deliver a certain amount of energy, the EBRD will significantly invest in its renovation. Therefore mining may develop in countries like Georgia where electricity is forecast to become less expensive. Major mining facilities may even be able to make arrangements with hydropower plants for free electricity if the economy can benefit from the economic stimulus.

In the future, besides mining cryptocurrencies, miners will also work on private blockchains and on many different types of public ledgers, from IP to medical records, from distributed exchanges to escrow and notaries.

Energy Market

Since energy prices are paramount to the process of mining and the main cost factor over time, HydroMiner has conducted extensive 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.

Relatively little attention has been paid to the consequences of market liberalization since 1998, and in particular, how it shifted risk allocation. In a nutshell, whereas previously almost all the risks of different kinds were borne 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 power plants, few if any new conventional stations will be built, so the challenges relate to making the correct decisions about the existing facilities.

These challenges show how the operating environment is becoming more difficult for the power sector. It faces so many different and changing requirements that it is difficult to obtain the necessary consistency and stability for the industry to function efficiently and be financially positioned to make required investments. The imperative of decarbonization is clear, now that the main guidelines have been set, including the ambitious intermediate target of achieving 40% decarbonization in 2030 compared to 1990 levels (i.e. a 20% reduction over a decade as compared to the same reduction over three decades through 2020 – and that was with the benefit of closing inefficient factories in Eastern Europe).

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 energy generation are going to be favored over forms of energy generation that cause high carbon emissions. It is to be expected that the European Commission will impose more taxes and regulation 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.

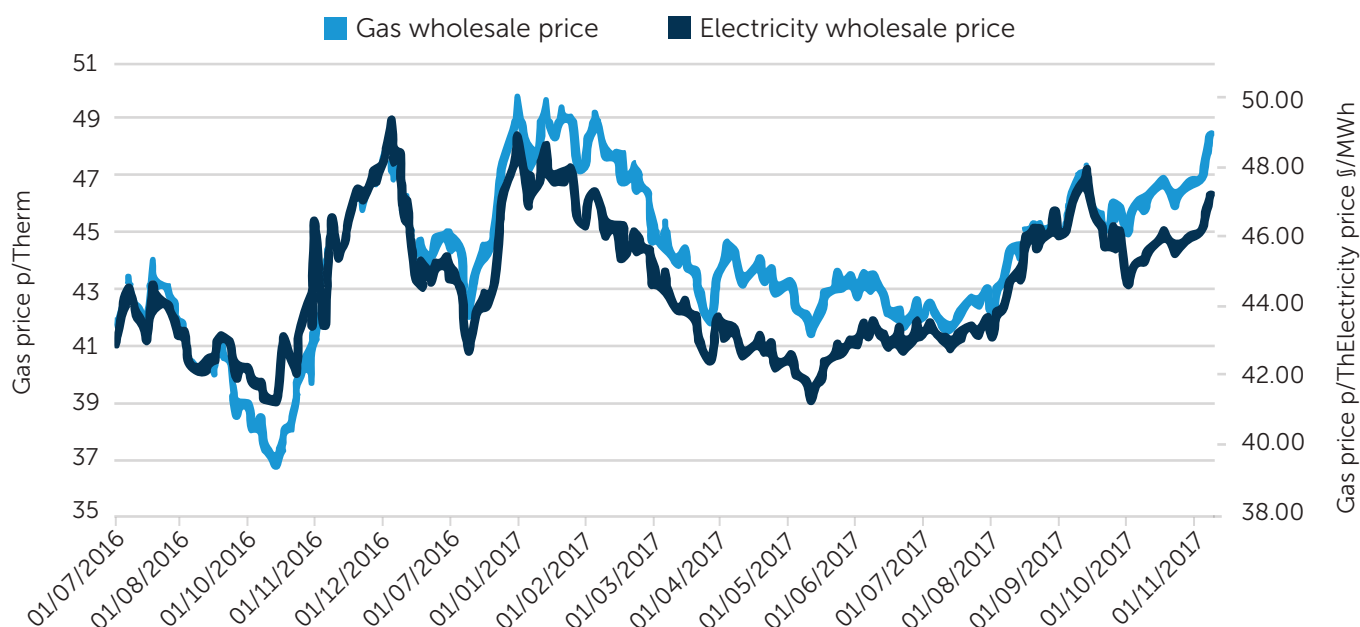
Therefore HydroMiner has chosen to rely on environmentally friendly forms of energy production. Since wind and solar power do not produce a steady supply of energy, we are left with either biogas or hydropower (apart from a few exceptions in special areas). In the biogas sector in most of Europe, energy production is heavily subsidized so that net prices range between 6 and 8 cents per kWh. In the hydropower 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.

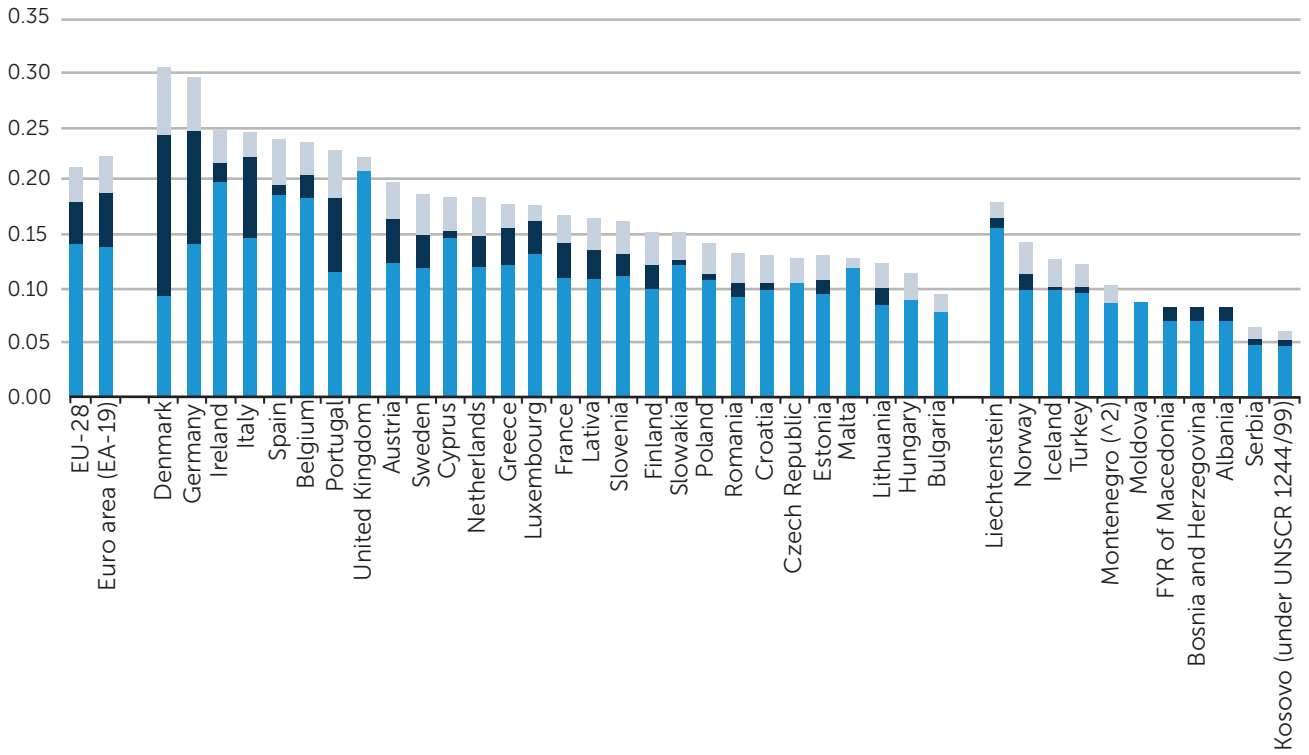
The retreat from nuclear energy, which many expect to cause a rise in energy prices in general, will probably not substantially affect the market. Most of this sector's contraction, in terms of decommissioning old facilities, has already taken place, so current facilities are considered safe and will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

Energy Wholesale Prices

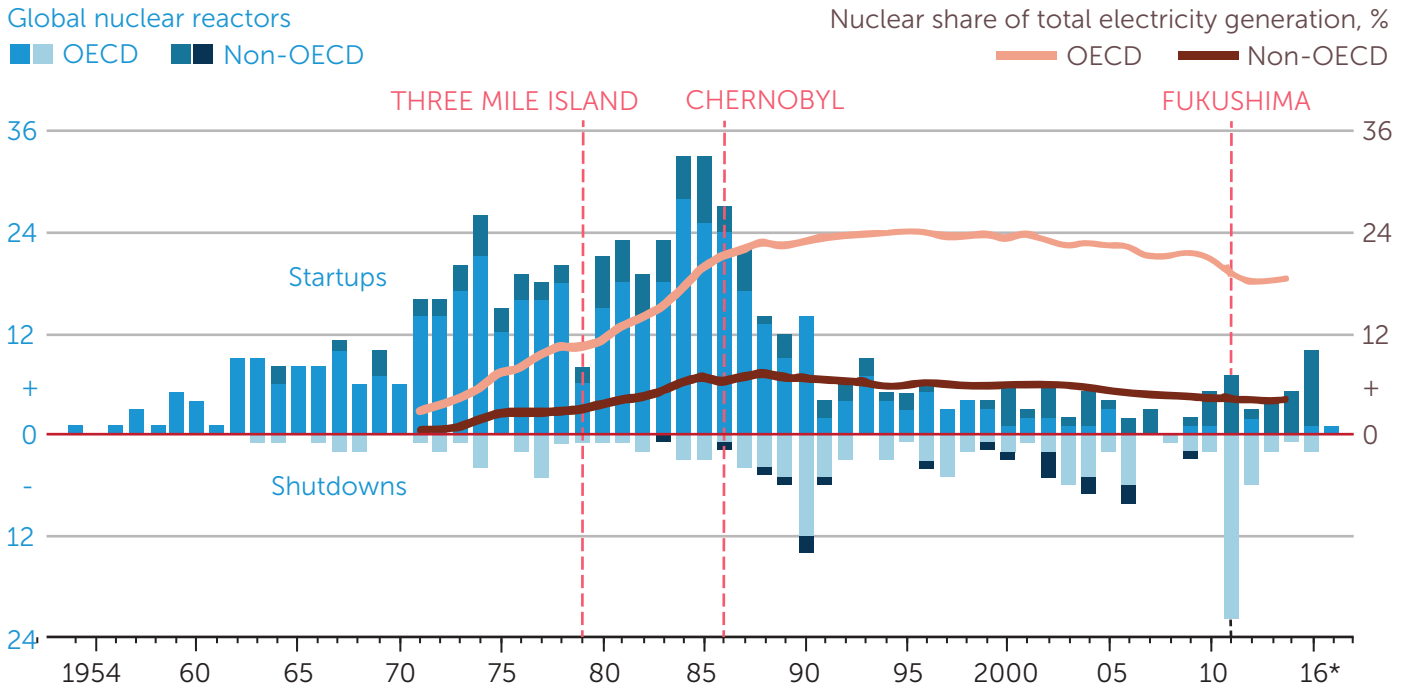
Over time, we expect to see mining vanish from all areas with higher energy prices. In Europe, private mining rigs in Germany, France, Denmark, and the Netherlands will be the first to become unprofitable. Mining will probably next become unprofitable wherever miners have to bear the cost of electric 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.

Latest years energy wholesale prices





Meltdown



Sources: IEA; World Nuclear Industry Status Report 2015
Economist.com

*To March 8th

The Case for Energy

Because there is so much discussion and so many different views on the topic of using energy to produce cryptocurrencies with the proof-of-work concept, we also wanted to share our view on the subject. In the following discussion, bear in mind that we concentrate on hydropower 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.

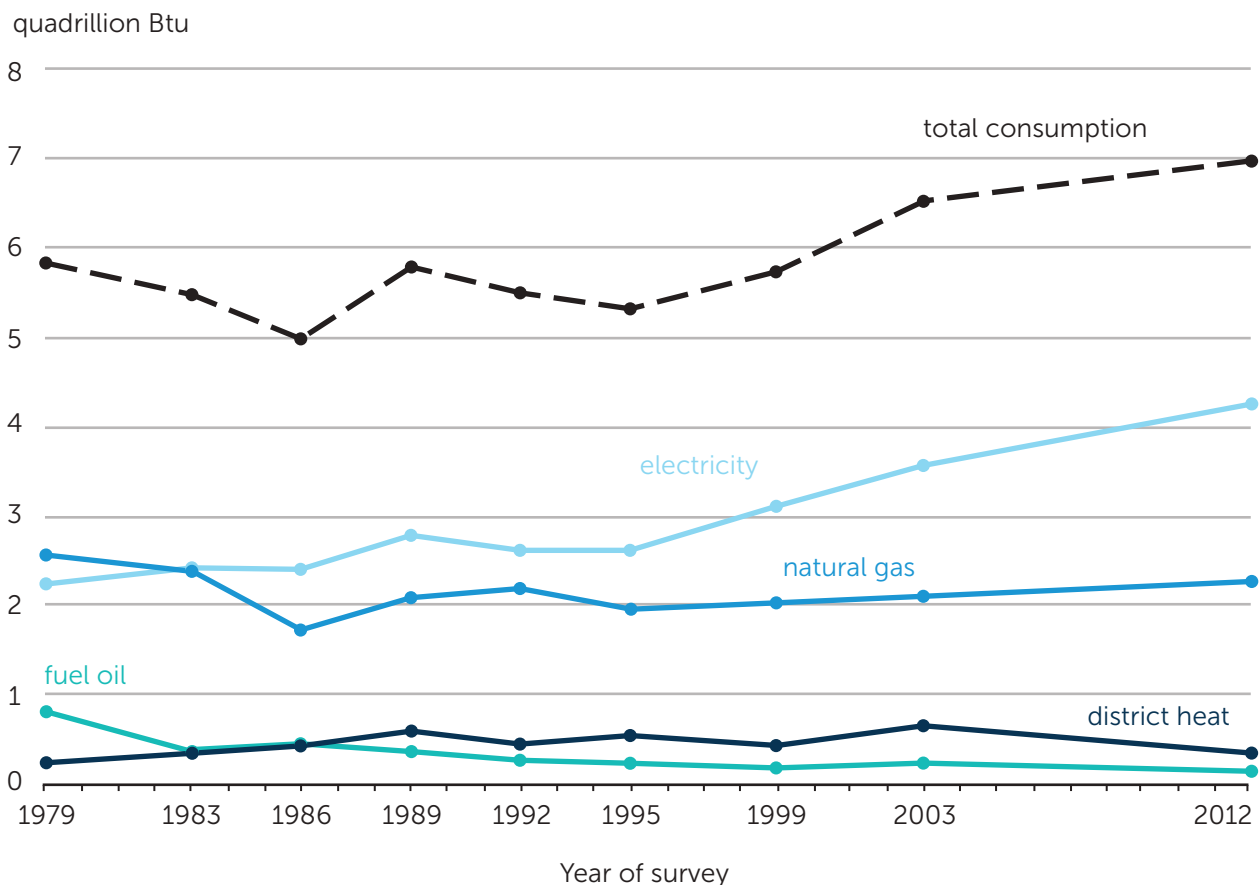
If there are concerns about using energy for mining, please consider the following:

1. Cryptocurrencies have 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 cryptocurrency, as it is a valuable product for which some people express a clear need.
2. The use of electricity 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 health, higher quality of life, and longer lifespans.
3. While resources are often considered to be scarce, it only depends on how one looks at the problem. Almost every product will be replaced by another over time, usually with 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 have all 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 occurs. This can be observed happening with 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.

Proof of Work vs. Proof of Stake

We at HydroMiner are convinced that proof of work is so far the best and most effectively designed process to achieve consensus in a network without a central authority. For achieving this consensus in the network, computational power is needed to perform a certain amount of work. Through this, an investment of capital in the form of energy and hardware costs is made. This incentivizes miners to endorse only correct blocks and to act for the benefit of the network. They would lose their invested capital if they propagated blocks that are not correct, and which no other miner then would propagate.

Total electricity usage has increased more than the other energy sources since 2003



Source: U.S. Energy Information Administration, Commercial Buildings Energy Consumption Survey

The VAT Issue

There is one particular tax issue that strongly affects mining operations. In almost all countries, banks and financial institutions are exempt from the value-added tax (VAT). This means that they do not have to charge VAT on their products. However, if they purchase goods that include VAT, they do not get this VAT back. This means that all costs for mining come with a 20% tax cost on top. While there are a very few countries where this is different, most of these countries are not in a position to deliver affordable energy in a suitable climate. Currently, some mining companies are using workarounds to overcome the issue. However, we believe that these workarounds will not endure over the long term, and so they are not a suitable basis for establishing a business model. Therefore we prefer to either pay the tax where it applies, or to find politically stable countries that allow mining to operate as a VAT exempt business. We are in contact with these countries and the appropriate government agencies. One of the few such nations currently known is Georgia, which does allow special arrangements with its national investment agency. Therefore HydroMiner also plans to set up mining in Georgia, where energy is inexpensive and 78% of the country's energy is produced from hydropower.

The Political Point of View

Crypto society is divided into two sides. One is a more libertarian group who believe that blockchain technology is going to create a world with less governmental influence and more power exercised by the people, where individuals will regain control over their lives and affairs and drive back the governmental drive to micromanage their lives. This side hopes that blockchain applications will replace government-organized, centralized authorities, and that they will vanish and be replaced by decentralized systems organized by blockchain technology.

The other side can usually be identified as strong believers in the blockchain technology, but with less faith in Bitcoin and other cryptocurrencies. This group believes that governments and centralized authorities will adapt to the new technology. Governments will try to find ways to regulate new currencies, ICOs, crypto exchanges, etc.

The good news for miners is that we do not need to take a position in this debate. In both cases, we will see an increasing number of applications for blockchain technology, either regulated by governmental agencies or decentralized. Because of the increase in proof-of-work based blockchain applications that are based on mining, a variety of new possibilities are opening up for us, with more to follow. All applications based on the blockchain will have a verification process that is needed to operate in a proof-of-work environment, and this verification process is performed by mining (using computing power).

We can supply the computing power needed for the verification process sustainably and inexpensively.

Application and opportunities can be almost instantly independently verified, including:

- Supply chain management, logistics coordination (e.g. payments and financial terms), and auditing (e.g. records and/or transcripts)
- Healthcare and medical: drug supply chain integrity, patent databases
- Public transport and car sharing applications: payment processes for tickets, data verification (e.g. drivers, users)
- Real estate: property information verification, decentralized property records
- Travel: passenger identification, boarding, passport verification
- Government: reducing corruption and increasing transparency for government spending

Blockchain



Media / Healthcare

Drug Supply Chain Integrity
Patient Databases/Indexes on blockchain
Claims Adjudication
Medical Supply Chain Management
Transparency and Automation within the patient-to-hospital or patient-to-doctor transactions
Clinical trial provenance-integrity with an auditable trail of data exchange
Efficiency, privacy and ownership of patient health data



Charity

Tracking donation allocation, accountability, integrity
Reduce overhead and complexity of donation payment processing



Music Streaming

Prevent illegal downloading of music
Provide proper compensation for purchased songs to artists



Cloud Storage

Increased security with a shift from centralized data security to decentralized network
Lower transactional costs within a decentralized network
Crowdsourcing unused cloud storage



Public Transportation/Ride Sharing

Streamline public transportation
Provide more accurate payment for ride, gas, and wear and tear



Commercial Vehicles and Transportation

Tracking journey stops; paired with IoT to create an immutable ledger of trip data



Real Estate

Transparency within agreements
Verify Property information, update and decentralize records
Reduce paperwork, digitize transactional processes
Record, track, transfer land titles



Credit History

Make credit reports more accurate, transparent, and accessible



Travel

Passenger Identification, boarding, passport, payment, and other documentation digitized and verified
Loyalty programs digitization and tracking



Automotive

Track truthful, full history of vehicle from pre-production to sale
Supply chain parts management



Wills and Inheritances

Smart contracts to determine validity of will and allocation of inheritances



Banking, Financial, Fintech

Streamline payments processing with high efficiency, fast and secure transactions
Empower global transactions, tearing down national currency borders
Minimize auditing complexity for any financial ledger



Cybersecurity

Fight hacking with immutability of ledger
Guarantee validity with data integrity
No Single Point of Failure (decrease in IP-based DDoS attack success)



Government and Voting

Reduce voter fraud, inefficiencies with verifiable audit trails
Minimize government fraud, digitize most processes
Increase accountability and compliance for government officials
Identity validation; integrity of citizen registry data



Donations

Provide auditable trail for donations to prevent fraud
Ensure crowdfunded campaigns receive donations and contributors are compensated



Gun Safety

Tracking gun ownership and possession related information
Tracking criminal ID history and attempts to purchase



Education

Digitizing, verifying academic credentials
Federated repository of academic information



Human Resources

Background checks: Verification of identity, employment history
Payment and benefits process validation - smart contracts



Energy

Bypass public grids to allow for cheaper, peer to peer energy transfer
Smart utility meeting



Insurance

Improve multi-party contracts
Streamline risk contract efficiency
Streamline claims adjudication
Reduce disputes with transparency of shared data



Forecasting

Combined with machine learning algorithms, blockchain can provide a decentralized forecasting tool



IOT

Ability for IoT applications to contribute transactional data to blockchains
Implications across industries (trucking/transportation, supply chain integrity).



Legal

Smart contracts with defined rules, expiration, and accessibility for relevant parties.



Law Enforcement

Integrity of evidence, resistance to falsification of case data
Documentation of time-stamped, chronological chain of facts



Marketing

Bypass intermediaries, providing more cost-effective advertising



Media

Control of ownership rights
Anti-piracy / copyright infringement
Use of smart contracts for artist compensation / legal proceedings
Payments processing - cryptographic, secure, and anti-3rd party (this opens up content availability internationally)

Unique Selling Proposition

Mining cryptocurrencies is currently a profitable business – if you do it the right way.

HydroMiner takes a professional approach to purchasing, equipment setup and maintenance, choosing cryptocurrencies to mine, security issues, and – last but not least – obtaining energy prices that are significantly lower than those of most other miners.

A study by Elitefixtures identified the average cost in US\$ to mine a single bitcoin in a list of countries. In real time results from December 2017, HydroMiner spent US\$ 1,654 to mine one bitcoin in its mining operation in Austria due to its special deals with hydropower stations.

This is lower than in almost all other countries in the world (for individual miners) and only about 11.5% of the power cost a private miner would incur in Germany, and even less than 50% of the energy cost of an individual mining in the “mining haven” Canada.

When cryptocurrency prices are high, everyone can earn money by mining, although those with low energy costs will make more money. But when conditions become more competitive, the situation changes. Individual miners without a professional setup will start losing money and stop mining. The ones with low energy costs and a professional setup will still be profitable.

Proof of work and decentralized validation will only be possible as long as some miners still earn money. With its very low energy costs and professional setup, HydroMiner expects to remain in the profitable group when most others are forced to turn out the lights.

Strengths

- Direct connection to hydropower plants saves grid charges
- Sustainable, stable energy supply and safe basis in the heart of Europe
- Successful proof of concept, business already operating
- Professional mining of cryptocurrencies is currently very profitable
- Unique advantage in proprietary cooling technology
- Optimization of cryptocurrency mining portfolio
- Cloud-mining as a future-proof investment mode



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Weaknesses

- Capital-intensive expansion plans
- Dependency on key managers
- Dependency on hardware supply



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Opportunities

- Blockchain sector is growing rapidly, so more mining will be needed
- Even lower energy prices in destinations targeted for expansion
- Customers with high environmental consciousness makes HydroMiner the perfect investment opportunity
- Increasing popularity of cloud-mining as an investment opportunity
- Joint ventures and online shop as lucrative business opportunities



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Threats

- Ambiguity in legal situation and taxation
- Regulations may diminish profits
- Extremely high volatility in the cryptocurrency markets
- Availability, procurement, maintenance, and depreciation of the utilized hardware
- Proof of stake as Ethereum's potential new system



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Appendix

RISK FACTORS

The following is a disclosure of principal risk factors that are considered to be material. Participants in the H3O pre-ICO should consider these risk factors alongside all other information provided in this document and are advised to consult with their own professional advisers (including their financial, accounting, legal, and tax advisers) before deciding to invest in HydroMiner or the H3O token. In addition, participants should be aware that the risks described herein may combine and thus intensify one another.

Insufficient or faulty consultation can lead to unintended or unforeseen tax, legal, and economic consequences. The absence of advice from experts such as financial advisors, lawyers, and tax consultants can have detrimental consequences for a participant in this H3O pre-ICO.

Prospective participants should carefully consider the following risks together with their expert advisers before deciding whether a participation in the H3O Pre-ICO is suitable for them or not.

- Prices for bitcoin and/or other cryptocurrencies might develop in a way (decrease dramatically) that would make mining unprofitable.
- Hardware prices for mining equipment might increase in a way that would make mining unprofitable.
- The hardware needed for (profitable) mining might change completely. It might be impossible to buy such new mining equipment at all, or at reasonable prices.
- Regulatory issues might make it impossible to continue mining (profitably).

HydroMiner is a company that is in continuing competition with other similar companies around the world. Many of the risk factors described in this document have the potential to severely impede the ability of HydroMiner to conduct its business profitably. However, as with any other business, continued profitability is a prerequisite for HydroMiner to be able to continue offering its services to token holders.

In the long term, the income of HydroMiner is largely dependent on factors that are outside of its influence, such as, in particular, technological advances in mining technology, global competition, and changes to the protocols of blockchains that can negatively affect HydroMiner.

In this context, one should be aware of proposals currently discussed on the EU level to regulate virtual currencies – in particular proposals to amend Directive 2015/849/EU for the prevention of money laundering and financing of terrorism. The proposed changes include stricter requirements for trade in virtual currencies such as increased transparency, due diligence, and more competencies for public authorities. It is therefore likely that in the near future (in 2018 or 2019), regulations for virtual currencies will enter into force both on the EU level and in Austria. However, in which form virtual currencies will be regulated is currently unclear.

If a licensing, registration, or concessionary requirement is imposed on HydroMiner, the developer will strive to obtain such a license, registration, or concession. However, it is possible that HydroMiner cannot fulfil certain requirements in time or may not receive the necessary approval at all. In this case, HydroMiner might have to limit or even cease its business operations. Furthermore, legal or regulatory changes might lead to complaints, claims, obligations, or other legal burdens that affect the financial situation of HydroMiner in a negative way. There is a remote possibility that the Austrian or European legislature might decide to declare the trading of virtual currencies or tokens illegal.

All these risks may have a significant negative impact on the ability of HydroMiner to continue its business operations.

Also, exchange platforms for virtual currencies or tokens might cease to operate. There is no legal protection, deposit guarantee, or protection for participants when an exchange platform ceases its operation.

As there is still no clear legal regulation and institution supervising virtual currencies or tokens, there is also no deposit guarantee such as banks provide for savings deposits. Exchange platforms are not banks, which need to be prepared for certain risks. Capital adequacy regulations such as the European Capital Requirements Directive IV or the Capital Requirements Regulation are not applicable to virtual currency exchanges, increasing the risk of insolvency for a virtual currency exchange.

The volatility of virtual currencies and tokens makes it very difficult to provide a reliable forecast for the future exchange rates of these currencies, even considering the known factors determining the price. It is not possible to foresee the economic and technical development of virtual currencies and tokens in the future. Historic developments are not a sufficient indicator for forecasts. HydroMiner stresses that it does not provide any forecast of the development of bitcoin or any other cryptocurrency. Virtual currencies and tokens are very volatile and the market value of a given virtual currency or token can swing dramatically. There are no institutions like central banks that back the system of virtual currencies or tokens in times of crisis.

During crises, the market value of virtual currencies or tokens may therefore significantly decrease. An institution supervising and controlling the economy for virtual currencies or tokens does not exist. Therefore, it is currently not possible for state institutions to influence the exchange rates of virtual currencies or tokens. Stability and control mechanisms that are normally at the disposal of central banks are not available in this context. In case of economic recession or a drop in the exchange rate of a virtual currency or token, there is no possibility to apply counter measures. Therefore, in times of crisis, the lack of institutional control could result in enormous economic damage as virtual currencies or tokens lose value. Usually states support banks in times of crisis and prevent the monetary system from failing. This is not the case with virtual currencies or tokens. This may have a significant negative impact on the market value of cryptocurrencies.

Any of the risks described herein has the potential to severely impede HydroMiner's ability to expand its business operation as projected or to even to continue its business.

If the Ethereum platform switches from a proof-of-work concept to a proof-of-stake concept, Ether mining would stop in its current form. If the proof-of-stake concept were to be introduced to other blockchains as well, the whole business model of mining in its current form could end.

Mining is the process of validating transactions on a blockchain. By finding complex solutions to hash functions, miners prove to the network of a blockchain that they have invested work. This concept is therefore also called proof of work (PoW). PoW currently requires massive amounts of calculation power. Currently, a switch to other methods of verifying transactions is under discussion. In particular regarding the Ethereum blockchain, a switch to a so-called proof-of-stake model (PoS) is under discussion. With PoS, virtual miners known as validators would commit Ether to the system when mining, with the understanding that they would forfeit their deposits if they were not to follow the consensus rules (e.g., if they were to validate corrupt transaction requests). The Ethereum community is divided on the matter. A shift to PoS would make energy-intensive mining hardware useless. If Ethereum and/or other blockchains were to switch to a mining system that would no longer require powerful mining hardware, the whole industry of mining could be rendered pointless. Any singly virtual currency switching to a PoS mining method could severely impede HydroMiner Holding AG's ability to expand or even continue its business operations.

With its business model, HydroMiner is directly influenced by the Austrian Green Electricity Act of 2012 (Ökostromgesetzes 2012) and the tariffs set out in the Green Electricity Tariff Regulation (Ökostrom-Einspeisetarif-Verordnung). Hydropower plants produce renewable energy and it should be noted that the Austrian market for renewable energy is regulated to a large extent by law. The relevant Green Electricity Act of 2012 and the Green Electricity Tariff Regulation pose a number of risks for HydroMiner.

HydroMiner's business model is based on its ability to purchase electricity not from suppliers through the general electricity network, but directly from hydropower plants at the current market price of approximately EUR 0.05-0.07. Risks arise in connection with the Austrian system of subsidizing renewable energy.

The central contracting party for the feed-in of renewable energy is the Green Electricity Handling Agency (Ökostromabwicklungsstelle). In accordance with existing contractual obligations, the agency has to contract the electricity generated by renewable energy sources such as hydropower plants. The subsidized tariff that is paid for the energy generated is defined in the current Green Electricity Tariff Regulation. Generally speaking, a subsidized tariff is much higher than the regular free market price of currently EUR 0.03.

If a contract has been concluded for a certain tariff, the tariff is generally applicable for a period of 13 years from the date of the conclusion of the contract or from the date of the start of the grant if this date is later. After this period of time, generally no subsidized tariff is paid. If, in the future, the Austrian legislature were to apply additional funds for existing hydropower stations where HydroMiner has deployed mining hardware, the hydropower plant could be able to sell the electricity generated for the subsidized price.

If this were the case, or if the free market price for electricity in Austria were to rise substantially due to market forces, the business model of HydroMiner could be rendered unsustainable. This in turn could have a negative impact on HydroMiner Holding AG's ability to offer mining services.

Under current Austrian law, there are no licensing, registration, or concessionary requirements for the production, custody, trading, and/or sale of virtual currencies.

However, at the EU level as well as in certain countries, governments have already started to adopt legislation and regulate virtual currencies and tokens. Even if virtual currencies and tokens are not subject to limiting regulation today, the legal regime in Austria may change and Austria may also restrictively regulate virtual currencies and tokens in the future.

Also, Ethereum is a young technology. A possible hacking attack cannot be ruled out.

A discontinuation of Ethereum could lead to a severe drop in the market value or even the discontinuation of cryptocurrencies mined by HydroMiner or its subsidiaries.

Hackers may target the Ethereum blockchain. The attacks of these hackers may be difficult to trace and the damage to the individual token holder would likely have to be borne by themselves. Usually, insurance companies will not offer insurance for these risks. Furthermore, it is unclear if exchange platforms fulfil reasonable safety standards which are necessary to defend against attacks. Thieves may try to steal the private keys associated with cryptocurrencies or try to get user data by using malware. It is likely that more attacks will occur as virtual currencies and tokens gain popularity.

Virtual currencies and tokens and the blockchain technology are still in their initial stage.

Software applications that may be used in connection with the H3O token may not have been developed for the mass market and may technically be not well adapted. No superior institution corrects errors that occur when trading with virtual currencies or tokens.

If problems arise in this context, the participant may lose H3O tokens.

A discontinuation of the Ethereum blockchain or technical difficulties such as software bugs could lead to a severe drop in the market value or to discontinuation of Ethereum-based cryptocurrencies.

Legally non-binding statements by governments and public authorities can also have a strong influence on the market value of tokens.

Alarming statements by governments and public authorities like a banking regulator or supervisor can heavily influence the exchange rates of any virtual currency or token. In this context, it is unclear how banks will react to the increasing popularity of virtual currencies or tokens. Banks and public authorities may be open to the concept; however, it is possible that banks and public authorities will express that they are in favor of strict regulation and supervision by an authority. Any such statements by governments and public authorities (even if they are only opinions and not legally binding) have the potential to significantly influence the market value of virtual currencies or tokens.

An institution like a bank or another public authority that is responsible for the safekeeping of virtual currencies does not currently exist. Many virtual currencies are stored on the Ethereum blockchain, which uses private keys to validate transactions. There is no possibility to get a refund for transactions made by accident. This may lead to an increased risk of losses when a transaction is sent to the wrong recipient. In many cases it will be impossible to undo a mistake transaction.

Also, the tokenized participation rights are subject to certain risks and the market value of the participation rights may be subject to fluctuations on the financial market over which the issuer has no influence. Income generated in the past is not an indication of future income of the issuer.

You bear the issuer's credit risk with regard to payments. Credit risk refers to the risk that the Issuer may fail to meet its obligations, or only partially.

The participation rights do not provide for a minimum return and you not only participate in the profits but also in the losses of the issuer. If the issuer generates losses, this reduces the balance sheet value of your participation right, so you will receive less if you cancel your participation rights yourself. However, you are not obligated to a payment of additional funds. The participation rights are qualified subordinated. Due to the subordinate nature of the obligations under the participation rights, the claims participation rights holders in the event of an insolvency of the Issuer will only be fulfilled after all claims of non-subordinated creditors of the issuer have been fulfilled. In addition, you cannot claim payment if the payment would result in the insolvency of the issuer. There is the possibility of a total loss of the capital invested.

Your participation in the profit or loss as participation right holder is determined by the ratio of the issuer's equity to the participation capital. The issuer has the right at all times to take measures that lead to a change in its capital structure. If this results in an increase in equity, this means that a smaller part of the profit or loss is attributable to the holders of participation rights.

The transfer of participation rights by way of an assignment agreement may trigger the obligation to pay a legal transaction fee under the Austrian Fees Act (Gebührengesetz) if a deed is created for the transaction. Pursuant to § 33 TP 21 of the Act, the fee for assignments of such debt claims is 0.8% of the consideration.

The issuer assumes that the tokenized participation rights are transferable securities within the meaning of Directive 2004/39/EC. If you intend to sell the Participation rights, please note that a public offer of the participation rights by you may be inadmissible and punishable by a criminal court if you resell the profit participation rights in smaller denominations and there is no valid capital market prospectus published.

In the next few months, the Issuer plans a public offer of participation rights which forms a uniform series with these participation rights subject to a capital market prospectus.

The delivery of the tokens for the Participation rights offered now takes place on a bank working day after an approved capital market prospectus has been published for this subsequent public offer. If no prospectus is published due to regulatory obstacles, the Issuer is free to decide whether the participation rights will be tokenized or not. If no tokenization occurs, the profit participation rights might be difficult to trade.

All payments to the issuer can be made by using virtual currencies and distributions from the issuer to the participation rights holders are made exclusively via the Ethereum Platform using Ether. Ether and other virtual currencies are currently subject to high price fluctuations.

If you receive distributions in virtual currencies, there is a substantial risk of price fluctuations when you are not exchanging the received distributions in virtual currencies for a fiat currency.

Participation Right Conditions

Please make sure, that you carefully read the Participation Right Conditions to be found on the website of the issuer: www.hydrominer.org/h3o-presale/



HYDROMINER