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## Clean Energy: The New Revolution for Bitcoin Mining

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## Clean Energy: The New Revolution for Bitcoin Mining

Edward LU  
Senior Vice President

Hello, everyone! I'm Edward LU and I'm very pleased to be here representing Canaan and meeting with you all here. As we know, human society has entered an era of accelerated differentiation, where energy is one of its most profound topics. Oil and natural gas are affecting competition among the most powerful countries and economies worldwide, and it will have an impact on our era in the long run.

Such impact can also be felt in Bitcoin mining industry. As we are all aware, Bitcoin mining has brought us not only the opportunity to change our lives but also the responsibilities that come with such changes. For the Bitcoin mining industry to be accepted as a mainstream product in the market, the sustainability of this industry becomes a threshold that needs to be overcome. In fact, it also closely relates to the future of humanity.



what exactly is Bitcoin mining. As you all know, NG. Zhang is the first person in the world to invent the ASIC miner. He pointed to a box of chips on the table and said, "Edward, the secret of the future and wealth is hidden within these square pieces the size of your fingernail." According to NG, "a single miner has the capacity of performing 100 trillion calculations per second, but at this very moment, when it comes to my iPhone, that figure is only 5 trillion calculations per second".

Bitcoin's development can be compared to a movie called "the fast and the furious". Since the creation of the first Genesis block in 2009, computing efficiency has rapidly increased to trillions of calculations per second and triggered a number of industrial revolutions. As the first and currently the only NASDAQ-listed miner manufacturer, Canaan has seen the emergence of Bitcoin exchanges and hundreds of mining companies in the capital market, facilitating the entry of institutional actors into the bitcoin mining space.

Looking ahead, compliance and standardisation within Bitcoin mining are about to further accelerate. It's essential to shape an eco-friendly mining industry, which requires not only new liquid cooling technology and low power consumption circuit engineering, but also a more developed mining infrastructure as well as an ever-increasing proportion of renewable energy among its power sources.



Here I'd like to build on Mr. John F. Kennedy's famous saying with one of our own: "Ask not what your society can do for you, ask what you can do for your society". In the US, a growing number of listed miner manufacturers are incorporating ESG into market value associated metrics. Besides, many mining organisations have launched initiatives like Crypto Climate Accord. Not only are these efforts aimed at reducing carbon footprint an important method to obtain recognition by society, they are connected to the future of mankind as well.

With carbon offset becoming a global topic, we undertake the responsibility of creating a green mining industry based on clean energy. For this, we need to improve energy efficiency, provide stronger computational capacity, reduce carbon emission and increase renewable energy usage. Yes, we have a lot to do.



committed to building a greener Bitcoin mining industry. Starting with our products, our R&D engineers spent thousands of hours finding a fine balance between high-performance computing and low power consumption, including process improvement in chips, new product packaging, low power consumption technology as well as cooling solutions.

Avalon Made welcomes commercial cooperation with more "green mines", whose infrastructures will be entirely or partially powered by clean energy.

Avalon Made is also setting up Canaan Service Centers (CSC) worldwide to offer localised and timely response, and provide technical support including machine deployment and maintenance for mines capable of clean energy mining.

 **Avalon Made – 1266 & 1246I**

CAN | Nasdaq Listed

**Avalon Made 1266**

- High Hash Rate:** 100TH/s
- High Efficiency:** 35J/T
- Sturdy and Durable:** Structural optimisation makes mining more stable and reliable
- Smart and Flexible:** Intelligent software makes mining easier and friendlier to use
- Environment-Adapted & Eco-Friendly

**Avalon Immersion Cooling MinerA1246I**

Avalon Made has done a great deal in terms of miner efficiency improvement. Today, we officially launch Avalon Made 1266. This is our first miner that has achieved a hash rate of 100TH/s and an energy efficiency of 35J/T, currently one of the best performers in air-cooled miners.

Avalon Made also made new inroads into product form factor. Compared with traditional fan cooling, liquid cooling can reduce machine heat loss faster

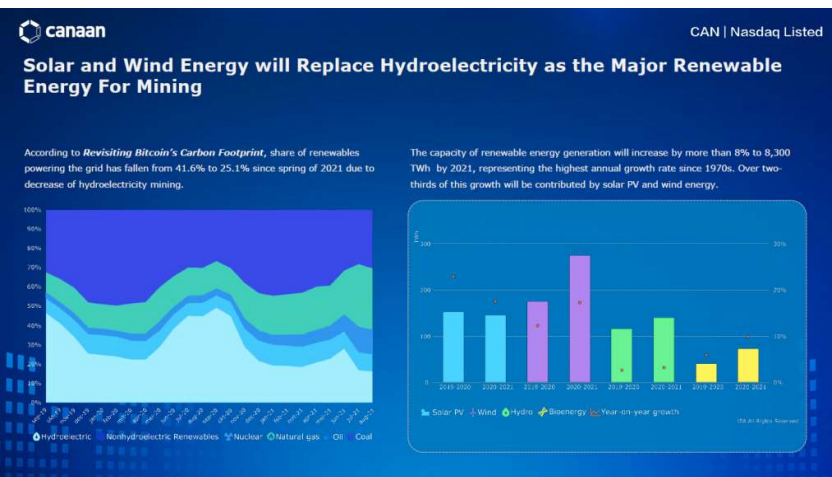
upgrading of mining infrastructure thanks to a unique deployment method. Specifically, energy-intensive cooling equipment such as water curtain and negative-pressure fan in mines may be totally replaced by low-cost and reusable systems. This is expected to be one of the most promising blueprints for future developments in the mining industry.



Green energy is linked to the future of the Bitcoin mining industry and also human society. We will take a closer look at the reciprocal relationship between green energy grid and the Bitcoin mining industry as well as the changes taking place in the energy mix of green power grid.

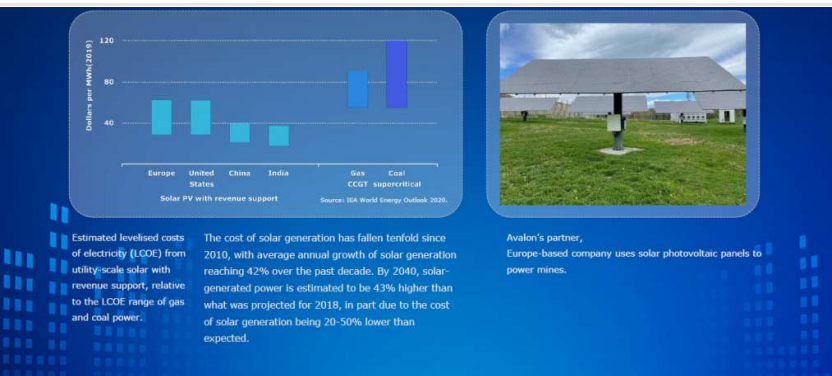
On the one hand, green energy lowers the electric power cost for miners, benefiting the development of the mining industry. On the other hand, the Bitcoin mining industry can serve as a flexible load in the green energy grid. As far as I know, some state governments have invested heavily in green energy projects to mitigate the impact of extreme climate changes on the grid, such as ice and snow storms or heatwaves in summer. In general, electric power supply exceeds local demand, whereas the Bitcoin mining industry is able to convert excess capacities into storable value.

authorised in their contracts to disconnect mining facilities and release electric power back into the grid. Meanwhile, miners will be compensated with discounts on electric power. In this way, the symbiotic relationship between green energy grid and the mining industry comes into being.



The share of green energy electricity in the mining industry has shifted dramatically since last spring. Renewable energy used for Bitcoin mining dropped from 42% to 25% due to the prohibition of mining facilities in Sichuan province and other areas in China. This means that the utilisation of solar and wind energy will rise substantially in green electricity sources of the future mining industry.

This makes sense from the perspective of global energy structure. International Energy Agency (IEA) anticipates that by 2021, the capacity of renewable energy generation will increase by more than 8%, two-thirds of which will be contributed by solar PV and wind energy.



Statistics from International Energy Agency (IEA) show that the cost of solar generation has fallen tenfold since 2010, with average annual growth of solar generation reaching 42% over the past decade. By 2040, solar-generated power is estimated to be 43% higher than what was projected for 2018, in part due to the cost of solar generation being 20-50% lower than expected.

So you can see that solar energy will be a key factor driving sustainable mining, and the development of photovoltaic equipment has paved the way for transformation of the mining industry. In this regard, Avalon Made already has a partnership entered into with a European company focused on solar-based bitcoin mining. Going forward, we will continue to prioritize sustainable mining, working more with mining companies that deploy clean energy in their mining operations.



together towards a more sustainable mining industry.

Thank you!

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