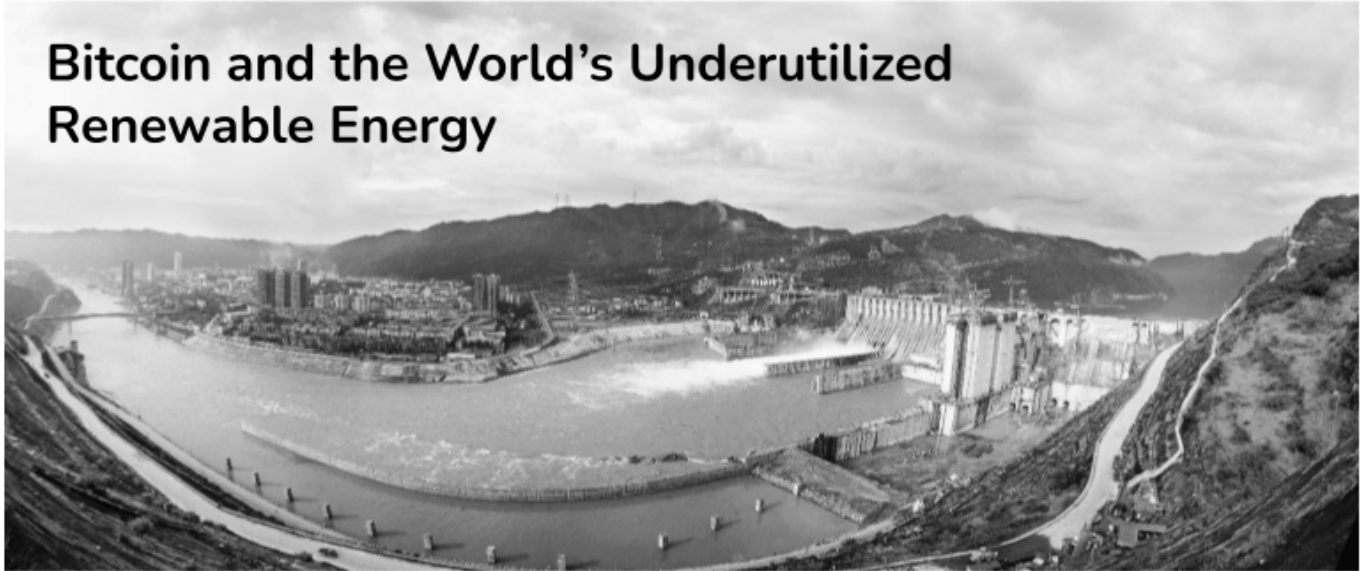


## Bitcoin and the World's Underutilized Renewable Energy



Xiangjiaba Hydropower Plant in Southwest China via [eiatlas.org](http://eiatlas.org)

By Bill Birmingham

*This is the first in a series of occasional Osprey Funds Light Papers. Like white papers, just a little lighter. We're going to try to keep these under 1000 words.*

Bitcoin is uniquely suited to capture the mis-match between the natural locations that produce the cheapest electricity in the world and their impractical distance to industrial uses. It has become the buyer of last resort for under utilized renewable electricity.

At some point, if the BTC price keeps rising, it might become exclusively powered by it.

### The Conventional Point of View

Bitcoin is a global energy hog.

Plus, [Chinese mining pools control more than 65% of Bitcoin's collective hashrate](#) and much of the computational energy requirements are powered by electricity derived from coal.


## The Emerging Reality

China does produce a lot of coal fired energy but it's dangerous to generalize complex systems and then jump to conclusions.

Per [the 2019 CoinShares Bitcoin Mining Report](#), nearly 74% of energy used in Bitcoin mining comes from renewable sources.

By mapping the IP addresses of mining capacity to their geography (assuming some leakage for masking real IDs) direct connection to Chinese coal is substantially lower.

Around 50% of global Bitcoin mining shifts between Xinjiang/Inner Mongolia in the

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sources. 

Dry Season where they use coal and solar and Sichuan/Yunnan/Guizhou in the wet season where they use hydroelectricity.

This takes advantage of the excess electricity produced by massive investments that China made in renewable hydro-electric capacity. China is the biggest hydroelectric

producer in the world, but a lot of that capacity is located far from both major population centers and industrial hubs. This seems impractical but it is great for Bitcoin mining.

Sichuan is an amazing place full of ancient temples, giant pandas, and spicy food. But it's also remote, mountainous and sparsely populated, so while hydro is an awesome resource, you run out of things to do with 90 Thousand MegaWatts of capacity in peak rainy season.

Outside of China, Bitcoin mining follows a similar pattern: the next major hubs of activity are Iceland for geothermal, Canada and Scandinavia for hydroelectricity, Siberia for hydroelectricity and natural gas, and Iran for excess natural gas.

Soon, Texas will deploy mobile mining rigs like [EZ Blockchain](#) to use flared gas from the various basins.

## What's Done Is Done

Installing all this power generating capacity in out of the way locations may not have been cost-efficient, but it has all been built, and if Bitcoin mining is the marginal user, it's preferable to dumping this electricity in a ground wire.

Outside of China, we don't see Bitcoin mining tied to major global coal basins. Wyoming is de-minimis as is Australia, India, Indonesia, Germany, and Ukraine, which adds up to around 90% of global coal reserves.

As for the Chinese mining that does still run on coal, most of that is in Inner Mongolia, [which announced, earlier this month](#), that Bitcoin mining will cease in the province by the end of May 2021 due to the environmental impact.

This capacity won't relocate to a new coal region, but will likely go to one of the renewable hubs, listed above.

## Next Up, Africa

One of the emerging regions that is primed for Bitcoin mining is Africa.

Between hydroelectric and solar, there are abundant clean energy resources that can be harnessed. And because Bitcoin draws capital from a global network, this has the potential to be a major development tool for the continent by answering this question.

How do we finance major infrastructure like solar assets when there is no regional economy to support the offtake?

Bitcoin [conferences are already being held all over Africa](#) for this reason. The potential is exciting and this is only one example.

## Allocating Capital

So who will get this global capital allocation party started?

Earlier this month, three posts were published by partners at Union Square Ventures that provide encouraging clues.

[Fred Wilson writes,](#)

*We have been addressing this topic (crypto and climate) for multiple reasons. First, because we believe the narrative in the mainstream media is too simplistic and we would like to see it evolve. And second because we know that there are many entrepreneurs out there working with crypto to help address the climate crisis and we would like to meet them.*

*Nick and Albert's posts last week opened the floodgates on the latter point and we are now talking to a number of very interesting projects as a result.*

You can read Nick Grossman and Albert Wenger's posts [here](#) and [here](#). Seems like this flurry of content from USV is a tell.

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