



GreenHashes

Making Cryptocurrencies Mining & the World Greener...!

Whitepaper : 1st May 2018

We Strongly Believe That Future Of Earth & Humanity Lies In The Cryptocurrencies & Green Energies.

Since You Are Reading Our White Paper We Are Sure That You Care About The Quality Of Life We Will Be Offering To Our Children & Grandchildren...!

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Introduction:



"Cryptocurrency" has become the Buzz word all around the world in Techie Discussions, both in physical & digital realm. Every now & then we come across articles about how Bitcoin & Other Cryptocurrencies Mining has become one of the most profitable Businesses. At the same time we have to realise that it is consuming Huge amounts of Electricity. Many of us have also been using Bitcoin Mining Rigs or Miners as we call them, to keep our Homes or Offices warm during Cold Winters. No matter how fancy it might sound or read, the reality is that Bitcoin Mining is one of the biggest Industries around Cryptocurrencies World & it is becoming more lucrative & hence more competitive day by day... This is putting huge pressure on the Electricity Grids of the Nations like China. This immense demand for Cheap Electricity is fuelling Thermal Power Plants producing great Quantities of Electricity using Coal as primary Fuel. Our key focus here is not to make arguments about how much Electricity Consumption is right & how much is wrong. We already know that such actions are going to put health of our sons & daughters or our grandsons & granddaughters directly in danger. Hence we should take corrective measures & firm steps towards lowering the emissions due to Mining.

Bitcoin Mining & Impact on Nature:



Bitcoin Mining has emerged as one of the most lucrative but Technically Challenging Domains which supports seamless functioning of the Bitcoin Blockchain and is the main Security Feature of the Bitcoin Blockchain.

It is a process of Validating & Compiling the Transactions taking place on the Bitcoin Blockchain. This can also be looked at as an extremely complicated Mathematical Race : a Complex Computational Arms Race you are trying to win. Currently it involves ASIC i.e. Application Specific Integrated Circuits. ASIC's are customised Mining Hardware specifically designed for a single algorithm to be solved. They consume huge amounts of Electricity and dissipate a lot of Heat as well.



Chart for the Energy Consumption of Bitcoin Network:

Bitcoin Network Difficulty	1,931,136,466,944
Total Hashrate of Bitcoin Blockchain	16,223,546.039 TH/s
Hashrate of Antminer S9	14 TH/s
Total Number of Miners (Antminer S9)	1,158,824 Miners
Electricity consumption of Antminer S9	1400 Watt
Total Electricity Consumption of Mining	1,622.3546 MW
Total Number of Bitcoin Nodes	60,000
Each Node consumes	60 W
Total Electricity Consumption of Nodes	3.6 MW
Total Electricity Consumption of Bitcoin	1,625.9546 MW

****All Figures are as per 3rd January 2018.**

Explanation of above chart & calculations:

Currently the *Bitcoin Network Difficulty* is at **1,931,136,466,944** which means it takes around **1.931 Trillion Hashes** calculations to find one Block in Bitcoin Blockchain.

The *Total Hashrate of Bitcoin* is at **16,223,546.039 TH/s**

Let us consider that all the Miners being used in the World right now are the most efficient version available currently which is **Antminer S9 by Bitmain Technologies, China**. Antminer S9 can hash at **14 TH/s** and consumes around **1400 Watts**.

Since we have made an assumption that all the Bitcoin Mining is being done using Antminer S9, we can easily calculate the Total Number of Mining Devices in the World & also the Total Amount of Electricity Consumed for Bitcoin Mining.

So as per the Calculation of *Total Hashrate / Hashrate of Antminer S9*, we get *Total Number of Miners* in the world as **1,158,824 Miners**.



Each Antimier S9 consumes 1400 Watts, hence the total amount of electricity consumed by all these miners will be **1400 Watts X 1,158,824** that comes out as follows **1,622,354,603.9 Watt or 1,622,354.6 KW or 1,622.3546 MW or 1.6223546 GW..!**

But this calculation will not include the amount of Electricity being consumed by the different types of Bitcoin Nodes that are running to achieve the consensus and communication on the Bitcoin network. As per current details available & Industry Experts, there are around **10,000 Bitcoin Nodes that are clearly visible** in the Bitcoin Network and at least **50,000 Bitcoin Nodes hidden** behind protocols like Tor. So total Number of the Bitcoin Nodes functional in the World can be considered as **60,000 Nodes**. Let's consider that each of the Node consumes **60 Watts**, we get the total consumption of the Bitcoin Nodes as **36,00,000 Watts or 3600 KW or 3.6 MW** which is almost nothing compared to the Power consumption of Bitcoin Mining.

So the total Electricity Consumption of the Bitcoin Network including Mining and Nodes is **1,622.3546 MW + 3.6 MW = 1,625.9546 MW or 1.625.9546 GW**

As per experts and looking at the current scenario we came to the understanding that more **85% of Bitcoin Mining happens in China**.

So we will have to check their source of Electricity in order to understand the impact of Bitcoin Mining on the Nature. As per our research we could figure out that **more than 60% of the Electricity Produced in China is done using Coal in Thermal Power Plants**.

Lets suppose that just **50% of the whole Electricity used for Bitcoin Mining is coming from Thermal Power Plants which use Coal as fuel**.

We can directly calculate the amount of the Coal required to be burnt in order to achieve the Electricity Generation as per the current requirement. Then we can also calculate the amount of Green House Gases Emission.

We can directly calculate the amount of the Coal required to be burnt in order to achieve the Electricity Generation as per the current requirements. Then we can also calculate the amount of the Green House Gases Emmission or CO₂ Emissions.

Amount of Coal required to produce **1MW of Electricity using Coal as a Fuel is around 3750 Ton of Coal annually**.

So we are looking at a Staggering Quantity of Coal consumption for Bitcoin Mining.

Required MW for Bitcoin Mining/2 X Coal Required for 1MW

1,622.3546 divided by 2 = 812.9773 X 3750 = 3048664.875 Ton per Year

Hence we can conclude that if the Bitcoin Network Difficulty remains the same and the Number of Bitcoin Miners remain the same & the Sources of Electricity production remain the same Bitcoin Network will consume a staggering **3048664.875 Ton of Coal per Year**

Total Amount of the CO₂ produced is 8,719,181.5425 Ton per Year



Emissions Due To Bitcoin

50% of Electricity Consumption of Bitcoin	812.9773 MW
Coal Burned for 1 MW	3750 Ton per Year
Coal Burned for Bitcoin	3048664.875Ton Year
CO ₂ emitted due to 1 Ton Coal Burning	2.86 Ton
CO ₂ emitted for Bitcoin	8,719,181.5425 Ton per Year

We can also predict the Bitcoin Network Difficulty factor and do all the calculations for the Years in the future.

As the recent studies suggest, Bitcoin is currently consuming around 0.15% of the Whole Electricity of the World.

By 2019 it is expected that the Bitcoin Network will consume Electricity equal to that of United States & by the year 2020 the total consumption of Electricity of Bitcoin Network will be same as that of the Whole World....!

All the figures we have worked on are only about Bitcoin, there are around 1500 Alternative Cryptocurrencies in the world now. Many of them are mineable, so there must be some Electricity Consumption for them as well.

Hence we can consider that if the things are left to grow the way they are working right now, we might see immense demand for the Cheap Electricity and burning of Coal will not slow down. Ultimately Cryptocurrencies might end up being one of the most polluting Systems in the World within next 2 years.

From all the above facts and the figures it's clear that the greatest problem we will be facing in the future will not be scarcity of the Electricity or Water or Fuels. It will be lack of Healthy Air for our breathing.

If we take some action right now, and set an example in front of the Mining community by starting Responsible Mining we can make some progress by the time Bitcoin Network starts consuming 100% of the World's Electricity.

Let's try to cherish our Earth in the form that is not harmful to our next generations...

So the Time to Act is right now...!

Time to start Responsible Mining is Now....!



The Solution:



We propose a solution which comprises of following:

- 1) Cryptocurrencies Mining should be only done using Renewable Sources of Energies like Solar or Wind Energy.
High Quality Efficient Batteries should be deployed & used to store the excess Electricity being generated & should be used during the Zero Production Hours or some maintenance.*
- 2) New ways for Negative Emissions (Absorbing CO₂ from Air) must be developed & deployed. CO₂ should be converted to some useful & stable form or material in order to achieve completion of the Carbon Cycle to highest extent. CO₂ can be Stored (CCS) or converted to useful products (CCU).*
- 3) Heat dissipated by the Mining Hardware should be collected & utilised for some constructive purpose in the Mining Farm itself.*
- 4) Most efficient Miners should be used.*
- 5) Huge efforts need to be taken to plant Trees & achieve efficient & rapid Reforestation.*
- 6) There should be some mechanism by which we can incentivise the good actions that people take in order to save our Mother Earth.*

5 Key Elements that comprise our Project:



- 1) Build Mining Farms which will run on 100% Renewable Energies**
- 2) Research & Development in Carbon Dioxide (CO₂) absorption.
We intend to work inboth CCS (Carbon Capture & Storage) and CCU (Carbon Capture & Utilisation)**
- 3) Plant 1 Crore (10 Million) Trees**
- 4) Build System for Trading Carbon Credits with GreenHashes : ApnaCarbon.com & System for Trading Mining Power with GreenHashes: ApnaMiner.com**
- 5) Launch new Mineable Cryptocurrency: "Tulsi" which will incentivise all the Green Efforts**



The 5 Key Elements in detail:

1) Build Mining Farms which will run purely on 100% Renewable Energies:

Our CEO Shreekant Kulkarni states: "All Responsible Miners should create their own Electricity using Renewable Sources of Energy...!"

With this vision, we will first identify strategic locations and then negotiate with the local authorities / governments to acquire the land or get it on lease for good duration.

We will also acquire permission to import huge quantities of Solar Panels &/or Wind Turbines.

We have in house experts in the Solar & Wind Energies, so we will be weighing in on both the options. We will also consider the option of Hydroelectric Power, in case it can be done at good cost and in good timing. Once we have identified the right combination of the Solar, Wind & Hydroelectric Energies for the particular Mining Site, we will place order with the most efficient Products and will start readying the location for the installations. We will share the details about this on our website as the projects proceeds.

We have created super efficient designs for our Mining Farm which will very efficiently lower the losses of electricity and build most profitable Mining Farm.

This we are going to achieve through following steps:

- a) Electricity generated by the Solar Panels is DC. Most of the People convert it to AC and then use Power Supplies for the Servers which convert the AC to DC Again. A lot of Energy and Investment is lost in this.
- b) So we will just step up or step down the current according to our Server's Requirements and then use it directly after stabilising it.
- c) This will save a lot of equipment cost which can be directly used to buy more Solar Panels or More Mining Hardware.

Our Design of the Mining Farm will utilise the Natural Current of Air for Ventilation and thus minimise the costs for Cooling of the Mining Equipment.

We have also used the exterior of the Mining Farm for installing multiple Solar Panels at different angles and small Wind Turbines at specific angles which will produce some of additional Electricity that can be utilised for different small purposes.

We will be releasing a separate White Paper about Responsible Mining Farm.

2) Research & Development in Carbon Dioxide (CO₂) absorption

We have expertise in Hardware and intend to use the same in order to build new ASIC chips targeted at other Algorithms of the Altcoins / Alternative Cryptocurrencies. We will also be researching on making ASIC Miners more efficient. This will involve extremely difficult engineering feats like Chip Level Design & Development, Silicon Wafer Manufacturing & Lithography. But we are confident that if we have enough funds, we can go ahead and develop new Chips at good pricing.

We also have experts in Polymer Engineering and Materials. We intend to negate the Emissions made due to our Travels and Shipping of our Hardware.

This can be done by Carbon Dioxide Absorption from Atmosphere. We would like to deploy some of the world's leading Technologies for the Negative Emissions.



We won't stop at just Negative Emissions i.e. Absorbing CO₂ (Carbon Dioxide) but we will take it a step further by converting CO₂ to Alternative Fuels like Methanol or Ethanol. These will be used to power our Generators during the times Solar and Wind Powers are out. This will involve Very Complex Chemical Engineering Problems, but we are confident to get this right. And we will have to get this done in order to achieve our Key Goal of Running a Responsible Mining Operation. We will be making all this Technology Open Source once we are able to successfully implement and scale it up.

We will publish another White Paper on "Negative Emissions & Production of Fuels".

3) Plant 1 Crore (10 Million) Trees

The third step & our Key Goal is to plant 1 Crore Trees (10 Million Trees).

Out of these some will be planted in the vicinity of our Mining Farms & some in places provided by the local governing bodies along with some at other strategic geographical locations.

For example at the border of Deserts. A lot of desert areas are currently affecting the naturally fertile land through dust storms. Planting at such borders will eventually save the Fertile Land. This is one of the most important parts of our efforts to save the Mother Earth.

We will be releasing a separate White Paper about "Reforestation : Need & Strategies".

4) Build System for Trading Carbon Credits with GreenHashes :

ApnaCarbon.com & System for Trading Mining Power with GreenHashes: ApnaMiner.com

Our goal is to provide a platform for our Investors, Governments & Organisations to trade GreenHashes with Carbon Credits and Mining Power.

This will help all the entities which need Carbon Credits with entities which are generating.

This trading will be facilitated by ApnaCarbon.com

Similarly we also want to make trading of GreenHashes to Mining Power. This will facilitate entities which want to buy Mining Power and entities which want to lease / sell their Mining Power. This

Trading will occur using ApnaMiner.com

We are planning to launch these two platforms as soon as early January 2019.

5) Launch new Mineable Cryptocurrency: Tulsi which will incentivise all Green Efforts

This is the most important part of our Project. We will be working on setting up example by using 100% Green Energies, Carbon Capture&Reforestation. But we know it will take more than that to start the actual Conservation & Reforestation Efforts at large scale by common people.

Hence we will also work on incentivising Green Efforts like Planting Trees or installing Solar Panels or Wind Turbines.

We will be building a Revolutionary New Blockchain & the Mineable Cryptocurrency which will be called TULSI.











TULSI Testnet will be launched in September 2018 & can be mined using your Mobile Device starting 3rd January 2019.

We are publishing separate White Paper for "Tulsi" & our new Mining Algorithm called as "Proof Of Green".



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Basic Project Timelines:

3 rd January 2018		Project Announcement	
9 th May 2018		White Paper Release & Public Presale Starts	
17 th May 2018		Presale Ends	
18 th May 2018		Crowdsale Starts	
31 st May 2018		Crowdsale Ends	

Project Deliverables:

- 3rd Jan 2018 ● First Announcements are made
- 29th Jan 2018 ● First White Paper, Team, Complete Plan with the Timelines.
- April 2018 ● Brochure, Presentation & Website are published.
- May 2018 ● High Level Negotiations for Tie-Ups with the Governments for Carbon Capture, Power & Mining Begin.
- May-June 2018 ● Government Level & Other Tie-Ups are announced. First Phase Orders for the Solar Panels, Batteries and Miners are placed.
- July 2018 ● First section of the first Mining Farm goes live. Order for Tree Samplings or Seeds & other resources for plantation are placed.
- July End 2018 ● First 10 Lakh (1 Million) Trees are planted. Second Section of the First Mining Farm & First Section of Second Mining Farm go live.
- August 2018 First Half ● Second Batch of 10 Lakh Trees are planted
- August 2018 Second Half ● First Section of the Third Mining Farm goes live. Third Batch of 10 Lakh Trees are planted.
- September 2018 ● We keep on expanding the Mining Capacity and the Solar Panels in our Mining Farms further.
- September 2018 ● Tulsi Beta is revealed for testing.
- October 2018 ● We keep on planting further Trees which will achieve highest level of conservation.
- 3rd Jan 2019 ● Tulsi is launched on iOS & Android.



Total Supply of Green Hashes: 300,000,000GH

Pricing of the Green Hashes:

1) Private PreSale: Maximum 10,000,000 GH

Price before release of Updated White Paper: **1 BTC = 40,000 GH**

From 29th April 2018 to 1st May 2018 : 3 Days

Price after release of Updated White Paper: **1 BTC = 20,000 GH**

From 2nd May 2018 to 7th May 2018 : 6 Days

2) Public PreSale: Maximum 50,000,000 GH

Price: **1 BTC = 10,000 GH**

From 9th May 2018 to 17th May 2018 : 9 Days

3) CrowdSale: Maximum 240,000,000 GH

From 18th May 2018 to 31st May 2018 : 14 Days

GreenHashes Pricing Schedule during the CrowdSale:

Date		GH/1 Bitcoin		GH/1 Litecoin		GH/1 Ether
18th May		6666		116		400
20th May		5000		87		300
22nd May		4000		70		240
24th May		3333		58		200
26th May		2857		50		171
28th May		2500		43		150
31th May		2222		38		150

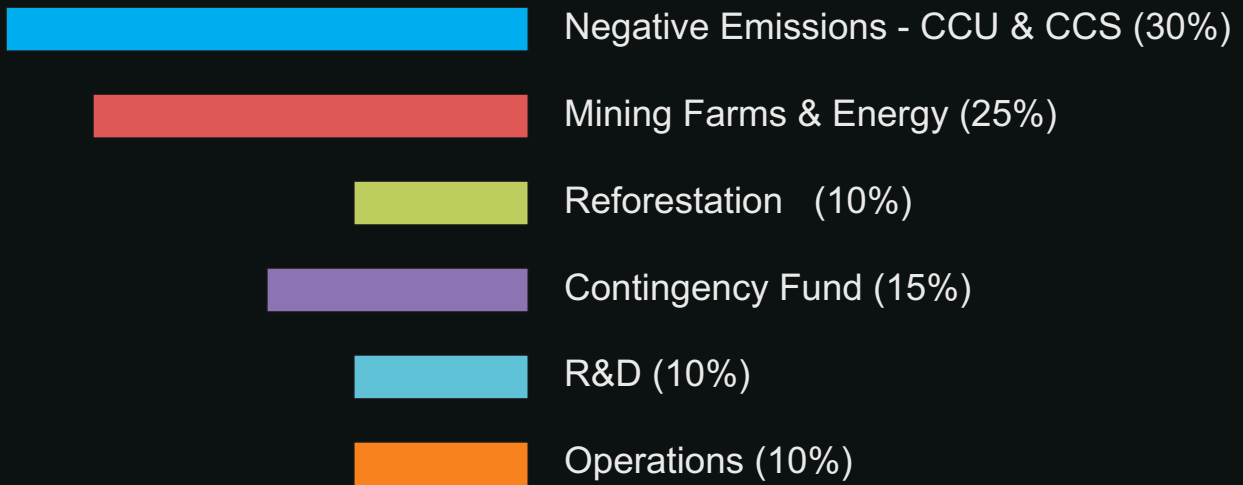
Any amount of GreenHashes not sold in the earlier Stages, will be available for Sale in the Next Stages.

If at the end of CrowdSale, there is some quantity of GreenHashes remaining, it will be all Burnt (Destroyed), and the Proof will be published on the Website.

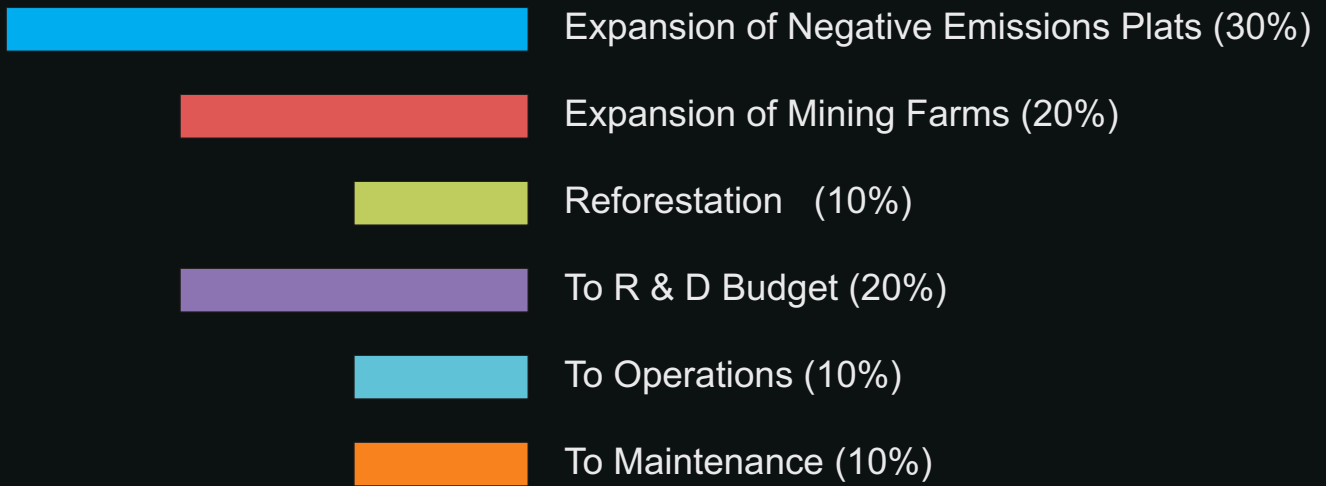


GreenHashes

Allocation of the raised Funds:



Allocation Of The Mining Outputs :



The Green Dream Team:



Shreekant Kulkarni
Founder & CEO:



Kanchan Satwik
Founder & CFO



Shreyas Kulkarni
Founder & Head of R&D



Shubham Puranik
Blockchain



Yogesh Joshi
Solar & Electrical Systems



Mohsin Sayyed
Hardware & Networking



Rahul Bhanushali
Analyst



Jasmin Sayyed
Smart Contracts



Amit Satwik
Analyst



Avani Bhokare
Accounts & Payments



Adv. Rupali Andhare
Legal & Regulatory



Rickie Anand
Full Stack

What's in it for me.....?

Investors:

- 1) GreenHashes will be listed on multiple Cryptocurrency Exchanges & can be traded easily.
- 2) Since we will be listing GreenHashes at different exchanges, there will be many Arbitrage Opportunities for the Traders.
- 3) Investors will be able to Trade the GreenHashes for Mining Power or Physical Mining Servers using [ApnaMiner.com](https://apnaminer.com)
- 4) Investors will be able to Trade the GreenHashes for Carbon Credits using [ApnaCarbon.com](https://apnacarbon.com)
- 5) We will tie up with Agriculture Companies and Renewable Energy Companies to accept GreenHashes as payment method.

Governments:

- 1) Any Excess Electricity produced by us will be given to the Grid for Free.
- 2) Our Reforestation Efforts will bring a lot of benefits to the Local community along with Carbon Credits being created will be available for the local businesses & governments for buying.
- 3) Employment will be created for locals due to our Reforestation Projects.
- 4) Our Mining Farms & Power Plants will also generate Employment.
- 5) Once we launch Tulsi, governments will be relieved because Citizens will themselves take care of Reforestation.
- 6) Since Tulsi will incentivise Green Efforts, Governments can save money by stopping subsidy for such Purchases and Installations.

Team:

- 1) Team will earn respect from the Crypto Community & others for taking the initiative in Responsible Mining and Sustainable Growth.
- 2) Team will also gain priceless experience in Mining, Power Plants & handling large scale Information Technology & Infrastructure projects along with Carbon Capture / Negative Emissions.
- 3) Team Members will earn Salary & Bonuses for the work they do at GreenHashes.

World:

- 1) World will be a better place due to our work in Negative Emissions (CCU & CCS).
- 2) Reforestation activities will create some much needed Greenery.
- 3) All our activities together will set an example & inspire other Miners, Governments & Citizens who will in turn make World a healthier place.

Why GreenHashes? How we are different?

- 1) Our Founders will Hold "Zero" GreenHashes unlike 10-20% which is standard in ICO Domain right now. This will keep all the Tokens with Investors and will hold zero risk of dumping of Huge Quantities by Founders.
- 2) We are not here to make big money for ourselves, we are here to show the world that Responsible Mining, Sustainable Growth & Conservation of Earth can be achieved.
- 3) Mining Outputs will be spent to expand the Negative Emissions Activities, Research & Development Activities along with the Mining Farms.
- 4) All GreenHashes received by us (through [ApnaMiner.com](https://apnaminer.com) & [ApnaCarbon.com](https://apnacarbon.com), will be Burnt (Destroyed). Proof of this will be published on the Website Monthly. This will ensure the following:
 - a) Prove that we don't want to sell them back again.
 - b) Keep the Supply Limited to Investors Only.
 - c) Founders won't be able to manipulate the Markets.
- 5) We will be running one of the most Transparent Operations. All Expenses (including Salaries paid to the Team) & Mining Outputs will be published on our Website each Month.
- 6) We truly believe that Conservation of Earth should be given more importance than the winning the Mathematical Race of Mining... That's the reason we are working on establishing a Carbon Capture capacity of 100 Ton Per Day by 2019



 : @GreenHashes

 : <https://t.me/joinchat/GPUPdxKbJ2rMox9jyHWkAA>

 : enquiry@greenhashes.org

Telegram

