

icechain

"Always remember: Never accept the world as it appears to be, dare to see it for what it could be."

Dr. Harold Winston



Improve the way we use energy.



To be the global energy company that uses blockchain technology to create a better world for everyone.



- Sustainability
- Commitment
- Honesty
- Transparency
- Co-operation



EXECUTIVE **SUMMARY**

Icechain works on the utilities energy field, it's a community integrated by green energy suppliers, big energy consumers and general public. The Icechain is a block-chain-based green platform, which means its ecosystem is trustworthy, transparent and secure. Through the ICE Token the platform allows the execution of smart contracts to facilitate an efficient fulfillment of the obligations by the integrating parts. The Icechain community fosters renewable energy consumption through economic benefits for its participants and investment in new technologies from potential and already available energy suppliers.

We believe that blockchain technology has the potential to change the world as we know it, but to do it has to become sustainable first. Icechain makes Blockchain sustainable in a way you have never seen before.

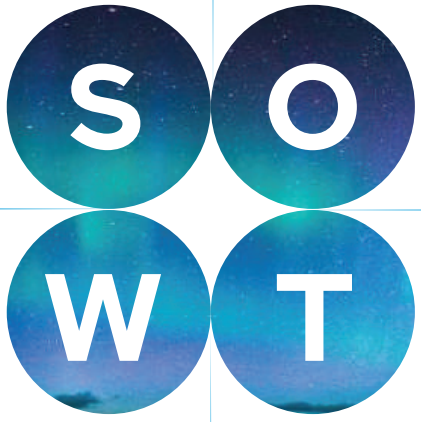


STRENGTHS

1.Community that fosters the use of renewable energies.
2. Security based on the use of block-chain.
3. Usage of smart contracts.
4. Ease to receiving investment.
5. No need for middlemen.

OPPORTUNITIES

1. Growing demand of energy.
2. Growing investments in block-chain.
3. Growing usage of cryptocurren-cies around the world.



WEAKNESSES

1. Few experience as a company.
2. Technologies required for optimal operations under constant improve-ment and development.

THREATS

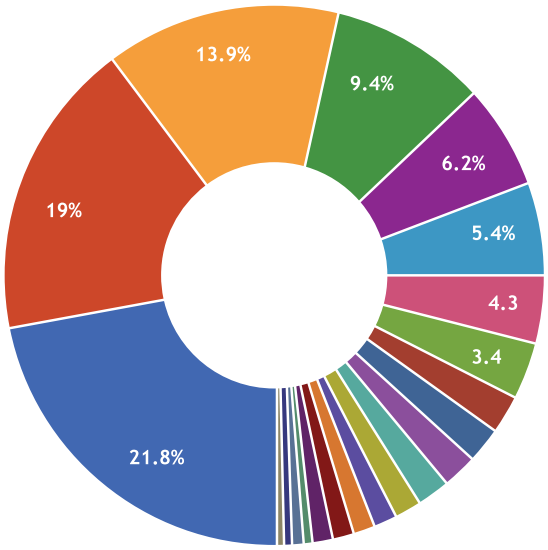
1. Take part in an unconsolidated market but of high competitiveness.
2. Cryptocurrencies are still being seen as a risky investment.



CRYPTOCURRENCIES MARKET

Even though cryptocurrencies have been labeled as 'the currency of the future' or as a 'revolution', the lack of a sustainable solution to the excess consumption and the following demand over the existing power grid's offer, might slow down the growth of blockchain in the years to come.

ICOs by Category 2018



- Communications 21.8% ($969,953,6000)
- Finance 18.0% ($799,701,539)
- Trading & investing 13.9% ($617,237,136)
- Gaming & VR 9.4% ($416,049,113)
- Commerce & Advertising 6.2% ($275,965,500)
- Payments 5.4% ($240,025,329)
- Infraestructur 4.3% ($190,628,000)
- Machine Learning & ai 3.4% ($149,931,776)
- Energy & Utilities 2.3% ($101,500,000)
- Mining 2.3% ($100,000,000)
- Supply & logistics 2.0% ($90,166,668)
- Drugs & Healthcare 2.0% ($89,178,011)
- Data Storage 1.6% ($69,000,000)
- Privacy & Security 1.5% ($66,793,221)
- Social Network 1.4% ($60,017,000)
- Data Analytics 1.3% ($57,017,078)
- Compliance & security 0.9% ($39,544,101)
- Transport 0.7% (29,500,000)

1/2

(Chart 1: ICO categories for 2018)



Analyzing Chart 1, there are many categories present at this year's ICOs, but none of them is focused on the environment. This means that this new technology seeks to solve many problems the world has like power centralization and restriction of information that exists today, but none of them focuses on solving its biggest issue, sustainable development of blockchain. As the lector can see in the Chart 1 the Energy & Utilities sector had a 2,3% share of the total capital invested in ICOs accounting for a total of 101,500,000 USD.

SECTOR **BEHAVIOR**

The launch of a new token happens within what's called an Token Generation Event (TGE). This instance is a financing mechanism required for the execution of a project.

The 'pre-sale' is the instance in which the Token is introduced to the world and gathers the capital needed to start its execution. At this point the project is introduced, including the 'White paper'.

People acquire the token because they believe in the project, receiving in exchange 'ICE coins' which gives them participation in the community.

So far, 78 ICOs from different categories have been introduced throughout 2018, including: communications, finance, commerce, tourism, medicine, between others. It is possible to observe in Charts 2 and 3, that within the 78 introduced projects, almost 3 billion dollars have been gathered. The highest investment gathered this year for one project was 850 million USD.

Total: $2,947,568,888

Total Number ICOs of 2018

Top Ten ICOs of 2018

Position	Project	Total Raised
1	Telegram ICO (Pre-sale 1)	$850,000,000
2	Huabi token	$300,000,000
3	Bankera	$150,949,194
4	Envian	$100,000,000
5	Neuromation	$71 669 400
6	Crypterium	$51,656,963
7	SwissBorg	$50,000,000
8	Lendrroid	$47,500,000
9	Iungo	$45,978,800
10	Fusion	$42,185,216

(Chart 2: Total investment for each currency as of 03/09/2018)

Total: $3,880,018,203

Total Number ICOs of 2010

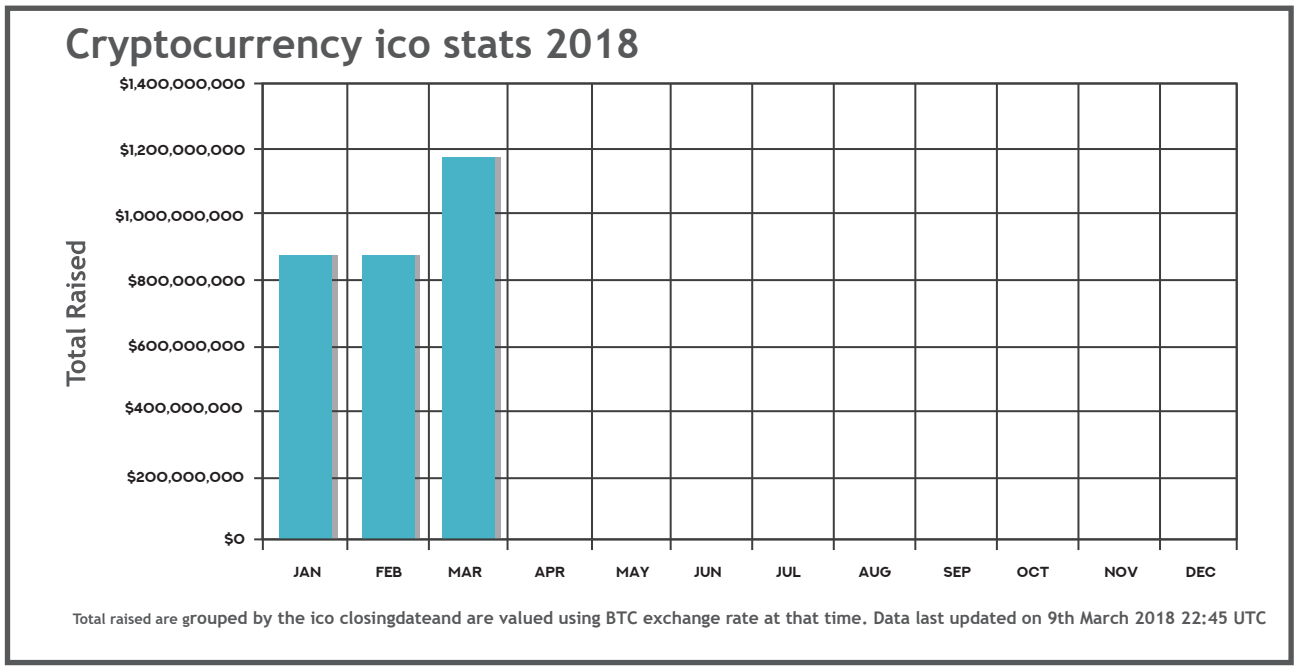
Top Ten ICOs of 2017

position	Project	Total Raised
1	Hsac	$258,000,000
2	Filecoin	$257,000,000
3	EOS Stage 1	$185,000,000
4	Paragon	$183,157,275
5	Bancor	$153,000,000
6	Status	$90,000,000
7	BANKEX	$70,600,000
8	TenX	$64,000,000
9	nebulas	$60,000,000
10	MobileGO	$53,069,235

(Chart 3: Total investment for each currency 2017)

In Chart 4, the investments from the first quarter of 2018 have grown considerably in respect to those that were done throughout 2017. We can also establish that in the first quarter of 2018 a 76% of the total investments for 2018 have been raised.

Compared to the total investments from 2016, the running year, within the first 3 months, has gathered 3 times more.



(Chart 4: Investments by month on ICO stages through the first 3 months of 2018. Source: https://www.coinschedule.com/stats.html)



This clearly shows the ease with which BlockChain can be used in different categories and the amount of investment that is gathered within this first stage. Nevertheless, its massiveness rises the severity of the energy problem, related to the use of fossil fuels to supply the sector's huge energy demand, for which 'Icechain' is presented as a solution within blockchain.

Consumption estimations for each type of energy indicate since 2014 an average world consumption of 80% fossil fuels energy, representing that the world´s energetic grid and the present demand is greatly covered by environment contaminating energies. From this community we contribute to the development of alternatives that allow joining world efforts in the search for global warming solutions.

(Source: OCDE/AIE http://www.iea.org/stats/index.asp)

The use of Blockchain allows for management to be

•Autonomous: Through the use of smart contracts.

•Transparent: All community transactions are open and safe.

•Reliable: Each participant is a member of it.

People that wish to take part of Icechain will have to acquire the token, called 'ICE', through which participation in the community is given. People will be able to invest in the community within the comfort of their home, they just need a computer and a credit card.

Ease of investment also translates into ease of money transfer. As it was mentioned before, the community will work through the contribution of all its participants, especially massive energy consumers and renewable energy suppliers.

The community also redistributes the benefits generated by it, between all its participants, in an efficient and transparent way.

Aiming to earn trust and give security to all its participants, the community was designed within blockchain's cryptographic structure.



BLOCKCHAIN'S GROWTH IMPACT ON THE ENERGY INDUSTRY

Estimated energy consumption from blockchain farms and mining groups for this year was around 36,8 TWh at beginning of the year, but mining growth and the recent popularity of cryptocurrency discarded this prediction.

Morgan Stanley estimates that Taiwan Semiconductor Manufacturing Company has orders from Bitcoin ASIC to produce between 15.000 and 20.000 wafer-starts per month for the first quarter of 2018. With each wafer capable of supplying chips for 27-30 blockchain mining rigs, the total block-chain mining pool could see up to 5-7.5 million new rigs added.

This exponential growth in the number of blockchain miners has a direct repercussion on energy consumption. If the production of wafer-starts for the following 3 quarters of the year maintain the predictions for the first quarter, a 120 to 140 TWh of yearly energy consumption can be guaranteed by the end of the year, this equals to a 0,6% of the world's energy consumption and accounts for the same yearly consumption of Argentina.



SUPPLYING **PARTNERS**

It is essential for the functioning of the community to have partners that supply clean energy, initially through the generation of pulsed and solar energy.

The functionality of Pulsed Generated energy for the Icechain Community consists of deploying generators developed to reduce grid energy consumption, to a maximum of 90%. This revolutionary invention has the capacity to solve one of the biggest problems that the energy field faces and does it since the moment it is installed. The energy destined to the consumption needed for the creation of cryptocurrencies mainly attached to the mining activity, can be covered by the use of these devices in a more efficient way.

The functionality of Solar PV energy for the 'Icechain' community consists of the earnings, generated thanks to the construction of Solar Farms, that are redistributed within the community. From the total revenue generated 50% is distributed among the community's participants, while the remaining 50% goes to the development of new sources of renewable energy.

A portion of the investment received at the TGE stage is destined to the creation of an ICE-Solar photovoltaic energy farm; this type of compounds produce Megawatts of clean energy, thus helping to the reduction of fossil-fired energy.

Also, the revenues generated by the 'ICE-farms' go back to the community increasing the total benefit generated, creating a superior benefit for all.



(Image 1: 5 MW Solar farm)

Icechain's goals for the first year of operation are: the reduction of greenhouse gases generated by blockchain, the development of renewable sources of energy and the evolution of blockchain technology.

By using ICE-devices everyone can improve the way energy is used. Through Icechain's platform the blockchain ecosystem can solve its current situation and become sustainable.

MARKET **NICHE**

Given the average consumption of the mining rigs, we will analyze potential beneficiaries of the ICE-G devices dividing them into 2 groups:

Mining groups: Within this group we can establish 3 categories by their energy consumption.

•Small: conformed by people that, generally speaking, install a small amount of mining rigs in some place of their homes. For the sake of this analysis, we will consider a number of rigs that doesn't exceed 500 units. This groups' monthly consumption accounts for a maximum of 468.000 kWh. (Image 2).



(Image 2: Small mining group)

•Medium: Conformed by people that build compounds specifically for mining blockchain. The amount of installed rigs goes up to 5.000 units and its monthly consumption is around 4.680.000 kWh. (Image 3).



(Image 3: Medium mining group)



(Image 4: Large mining groups)

•Large: Conformed by groups of people and/or companies that, as Medium groups do, have the capital to invest in operating their mining rigs within especially conditioned facilities with air filters and cooling systems to work under optimal conditions. With an estimated capacity of operating 10.000 mining rigs, this groups require up to 9.360.000 kWh of monthly energy consumption (Image 5).



(Image 5: Mining pool, Bitmain facilities)

As the lector can see below, the use of energy inside theses warehouses is significantly. (Image 6)



(Image 6: Inside Mining pool, Bitmain facilities)

The data expressed only accounts for the power consumption of the mining rigs. It is necessary to mention that the power consumption destined for the cooling systems in medium size and large groups increases power consumption largely.

Nowadays there are some less than practical solutions that try to handle the energy consumption issue like the one from 'Ice rock mining'. But this case, among others, tries to reduce the energy consumption from the cooling systems to lower operational costs. But they don't seek for real solutions to the consumption problem. Icechain appears to cover this problem in an eco-friendly way, helping to make blockchain sustainable.



In order to demonstrate the importance of this solution the following calculations are made, taking as a reference the Bitcoin protocol, as it is the prevailing currency in the crypto market (40% of the cryptocurrency market as of March 2018) and the one with the largest energy consumption. Its excessive energy consumption owes to its way of working, named 'proof-of-work', which requires large processing power to work.

We will use as a reference one of the most efficient mining rigs for the 2018 market, Bitmain's Antminer S9. According to the manufacturer's specifications, this rig consumes 1,3 kW.

The following parameter is established for this analysis. These rigs operate 24 hours a day, generating a daily consumption of 31,2 kWh. Working an average of 30 days a month, they give a monthly consumption of 936 kWh each.

As a reference an average cost ratio of 0,1 USD/kWh is taken in order to illustrate the following example, taking into account the expected return of the following calculations for any category.

The ICE-G device is a generator that works with pulsed energy. It takes 15 kWh from the grid, and by an internal process it gives out 150 kWh. With a 24-hour activity over 30 days of operation, the monthly power generation averages 108.000 kWh.

This invention is already working and the auditory of the functionality of the devices could be consulted in the report that is attached to this research.

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ICECHAIN BENEFIT GENERATED (ICEBG)

Small groups (100 rigs):

1) Initial consumption: 93.600 kWh

2) Initial cost: USD$ 9360

Icechain's Participation (1 ICE-G device 150 kWh):

•Final consumption: 10.800 Kwh

•Final cost: $1.080 USD

Equation (ICEBG) = = {(Xi - Xf)/2 }

Being expressed initial cost (Xi) and final cost (Xf) we can assert:

ICEBG = ($9.360 – $1.080) / 2

ICEBG = $ 4.140 USD (community return)

•Operating partner's total costs: Xf + ICEB

Initial cost: $9.360 USD

Cost with Icechain: $ 5.140 USD



It is possible to observe, through participative integration, the following benefits:

•Energy consumption reduced up to 90 %.

•Costs reduced up to 40 %.

•Value growth: the community makes a proportional payment of the total benefit generated as an operative participation.

The benefits obtained from the moment the devices are installed are clear. Considering as direct benefits the ones obtained by using the devices and indirect those benefits that rise from the participation in the community.

The use of BlockChain technology allows creating an ecosystem that brings transparency, reliability and security to all our members.

ICECHAIN'S ENVIRONMENTAL IMPACT

Blockchain mining is highly energy intensive. Most of blockchain's biggest mining facilities are located in countries that produce energy mostly by fossil fuel power plants, liberating huge amounts of greenhouse gases to our atmosphere.



If we consider a hypothetical total of operating mining rigs equal to 10 million. One percent of market penetration for Icechain will lower 90% of energy consumption for 100.000 mining rigs. Bitmain's Antminer S9, one of the most power efficient mining rigs of today, has a power consumption of 1,32 KW.



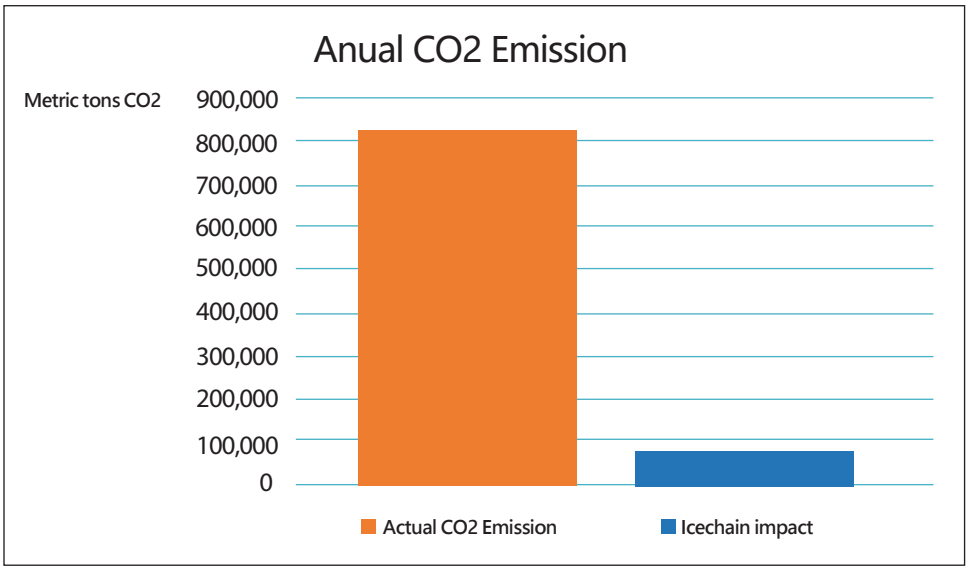
The consumption for those rigs is calculated as follows:

Monthly: 100.000 rigs x 1,32 kW x 24hs x 30 days = 95,040 MWh

Annually: 100.000 rigs x 1,32 kW x 24hs x 30 days x 12 months = 1,140,480 MWh

According to the EPA agency, for each MWh of fossil-fired generation, the CO2 emission factor is 0,744 metric tons CO2/MWh. So, the generated energy required to power this hypothetical percentage of mining rigs produces 70,710 metric tons of CO2 per month and 848,517 metric tons of CO2 annually.

Energy consumption from miners operating ICE-G devices reduces greetnhouse gases emissions from the fossil-fired power stations by 90%. Environmental impact reduces accordingly, and the figures are promising.



According to the EPA's Greenhouse Gas Equivalencies Calculator, the reduction equals 7,160,909 gallons of burned gasoline in the monthly scale and 85,930,573 gallons annually.

The facts above are based on a working product that is already operating, these numbers are based on very conservative projections, so as the lector can see the environmental impact that Icechain can make is significant.



COMMUNICATION

The communication will be scheduled in stages depending on the objective of each one:

Soft Cap stage

For the communication of this stage the following platforms are required:

1.Web page.

2.Institutional mails.

3.Business plan.

¿How do we contact large investors?

The main platform used to contact investors in this stage will be through advertising in several digital media such as LinkedIn.

•Sponsored InMail: a private mail is forwarded to certain people related to blockchain and the development of sustainability technologies.

•CPM: Cost per mile.

TGE stage

For the communication of this stage the following platforms are required:

1.YouTube

2.Google AdWords

3.Telegram,Twiter, Reddit, Bitcointalk, Etc.

4.Conferences.

This way a flow of activity generates towards Icechain web page, where all the information about the project will be found. The content of the publications will be of an informative nature, mainly about our business, but they will also inform about the projects that the Icechain Foundation develops. This will increase the possibilities for those who wish to take part of this project.



Later Go-Live of the community

At this stage the business consolidates its reliability towards investors. In order to attain this, we will have complete information about obtained energy savings, revenues generated, development projects will be published.

Also, being a business that fosters new technologies developed for renewable energies and saving consumption, these reports will include pages to inform people about them.

The main-net launch will be 180 days after the Token Generator Event finishes. In this period of time the Icechain Foundation will secure and manage the entire ecosystem to guarantee the optimal performance of the community.

The goals for the first year of operation are: the reduction of greenhouse gases generated by the mining activity, the development of renewable energy and the evolution of blockchain technology. This way Icechain creates a virtuous circle where the benefit is global, integrating energetic demands, suppliers and participants from all over the world.

ICE TOKEN: FINANCIAL SUMMARY

The Token is used by the community as a mean of financing to foster the investment on renewable energies; it also allows for managing the smart contracts that are part of the community's structure.

It itself credits participation within the community, allowing access to the benefits created by it.

The Token's value is indexed to

The ability to generate benefits for its owners through the payment gathered from the operating partners (those that use the pulsed energy generating devices) and from the supplying partners (managers of the solar farms). From the income generated by the community, 50% is redistributed among its participants and the remaining 50% is bound to investigation and creation of new sources of clean energy.



Token Generation Event (TGE)

- Initial release of ICE TOKEN
- Soft-Cap: US$ 13.000.000,00
- Project 1: Production of 50 Pulsed Energy Generators ECOFT-ICE.
- Project 2: Installation of 5MW powered Solar PV Farms.

Projects' Schedule

-From 180 days after the TGE: Operativity of 50 Generators.

-From 360 days after the TGE: Operativity of 250 Generators.

-From 360 days after the TGE: 5 MW Solar PV farm.

Community ROI:

Based on the previous investigation, reports from our partnerships and the analysis on market prices it is possible to formulate the following projections.

100 operating generators estimate:

- US$ 500.000/month

250 operating generators estimate:

- US$ 1.300.000/month

To understand this, the reader may analyze the equation presented in this report. (Page 12).



Also, it is necessary to add to the benefit generated by the community (ICEBG), starting from 360 days after the ICO, the income generated by the community's solar farms.

Estimate with an operating 5 MW solar farm

-US$ 50.000/month

(Variation is expected given the exponential growth of income over the growing number of operative partners, over the growth of energy consumption and kW/h price in high-demanding markets).



INVESTMENT ROAD MAP

Initial stage

This round of investment is aimed towards investors that value the opportunity of being a part of a something great with the potential of make a real an impact in the market.

Icechain invites those who share our vision to be part of the project, through a 7% participation exchange as a funding partner.

The investment in this stage is aimed towards 3F, BAN and Venture Capital investor type.

Pre-sale stage

This stage is aimed, with the token's pre-sale, towards connecting the resources with our vision to program and create the blockchain structure, communication management, logistics, financial administration and legal, giving security and reliability to all the participants.

TGE stage

After reaching the market capitalization we are going to appoint the Icechain Foundation as the operative manager for the direction, control and security of the Icechain platform. This is established aiming to give transparency and consolidate a trustworthy community.



Conclusion

We consider blockchain as a technology with the potential for changing the world, though some issues must be solved for this to happen. Through the Icechain platform the blockchain ecosystem can solve his current situation and become sustainable.

Icechain raises as one of the milestones companies in the world because it has an special sense of purpose; we work to secure the environment for us and for the next generations. By improving the way we use energy, Icechain transforms waste into value. This value is reinvested to develop new renewable sources of energy creating this way an ecosystem that is financially sustainable and eco-friendly.

For more information join us: www.icechain.org

