

RESTART  
ENERGY

BRINGING YOU  
RED

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If you decide to contribute to MWAT development, please note that your contribution to MWAT does not involve the exchange of cryptocurrencies for any form of securities, investment units and/or form of ordinary shares in MWAT or any other company, MWAT token holder does not receive any form of dividend or other revenue right that is guaranteed or it participates in profit sharing scheme.

Due to legal and regulatory uncertainty in the United States of America, the citizens and green card holders of and persons residing in the United States of America are not allowed to provide contributions and obtain MWAT tokens. Citizens and green card holders of and persons residing in the United States of America that participate in the fundraiser by providing false information about their citizenship, residency place and nationality will breach Restart Energy Democracy SRL terms and conditions and would entitle Restart Energy Democracy SRL to request such persons to compensate any damages and/or losses suffered due to this violation. The whitepaper, information provided on Restart Energy Democracy SRL web page and any Restart Energy Democracy SRL terms and conditions published by Restart Energy Democracy SRL any part thereof and any copy thereof must not be taken or transmitted to any country where distribution or dissemination of this documents/information is prohibited or restricted.

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# 1 EXECUTIVE SUMMARY

## 1.1 Overview

**From the same company that developed the only retail energy franchise in the European Union:  
"The first crypto token that enables users to Send and Receive Energy Worldwide"**

Restart Energy, an independent European Union electricity and gas supply company with 20 million USD in current annual revenue that developed the first energy retail franchise is building a global decentralized and delocalized electrical energy supply platform and ecosystem.

Restart Energy is the fastest growing private energy and gas provider operating in an EU country (Romania), offering an innovative online and customer-centric service with greater transparency. The current customer base (December 2017) of Restart Energy includes over 3,000 SMEs and multinational companies for energy, gas and fuel packages; and over 27,000 household customers for energy and gas. Restart Energy is the first energy supplier in Europe to accept energy invoice payments in Bitcoin (September 2017).

### Company key numbers

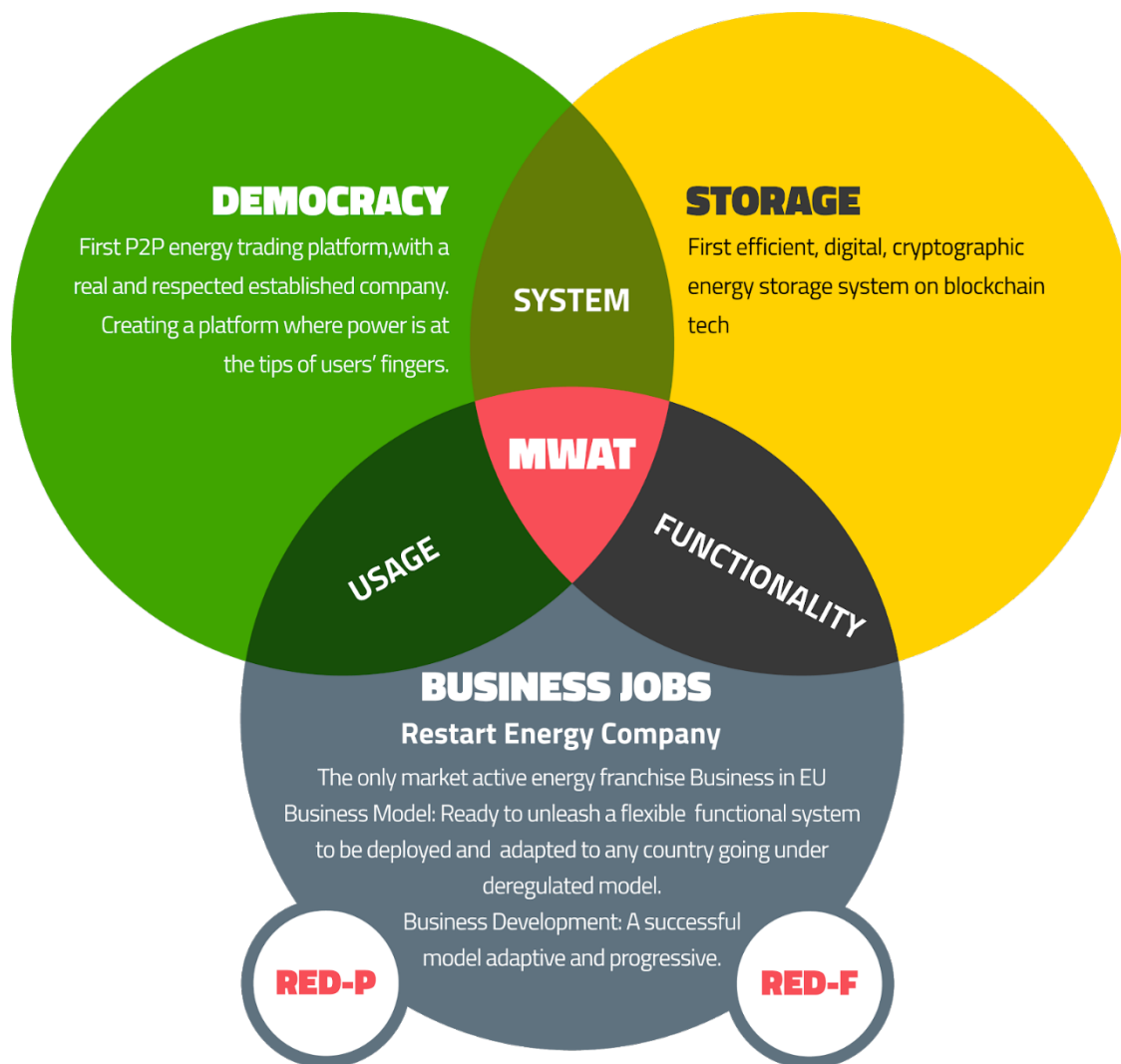
- Revenues in 2016: 5.45 million USD (>400% growth from 2015)
- Revenues estimated for 2017: 20 million USD (+425%) and revenue forecast for 2018 is 50 million USD (+250%)
- 30,000 customers (27,000 households + 3,000 companies)
- 40,000 payment locations in Romania
- +300 energy franchises sold to business partners in Romania
- Monthly growth rate is over 10%
- Strong partners: PATRES + ROSENC + GOTHAEER + Euro GSM + Inter Broker + GRS + AMVV

**Restart Energy has been ranked as the number one independent supplier in the deregulated household gas market and number two in the deregulated energy household market in Romania.**

### Restart Energy Democracy (RED):

1) RED MegaWatt Tokens	2) RED Platform	3) RED Franchise
<ul style="list-style-type: none"> <li>✓ Restart Energy Democracy (RED) will issue its own digital cryptocurrency called MWAT in a token crowdsale of 30 Million USD.</li> <li>✓ Each MWAT will cost equivalent of 0.10 USD in ETH</li> <li>✓ The RED MegaWatt (MWAT) Tokens are ERC20 utility tokens that give access to the RED Platform Software and to the RED Franchise.</li> </ul>	<ul style="list-style-type: none"> <li>✓ The RED Platform Software is a blockchain based decentralized energy trading platform</li> <li>✓ Peer to Peer direct energy trading between consumers and energy producers</li> <li>✓ Awards green certificates to consumers using renewable energy</li> </ul>	<ul style="list-style-type: none"> <li>✓ The RED Franchise is the first power retail franchise that makes it simple and easy to start and operate your own power utility company.</li> <li>✓ Allows token holders to develop their own power retail business and earn revenues by selling energy to retail households and business consumers</li> </ul>

This summary is and should be read as an introduction to the Whitepaper; any decision to perform any transaction should be based on consideration of the Whitepaper as a whole; no liability shall attach to any person, on the basis of the summary, including any translation thereof.

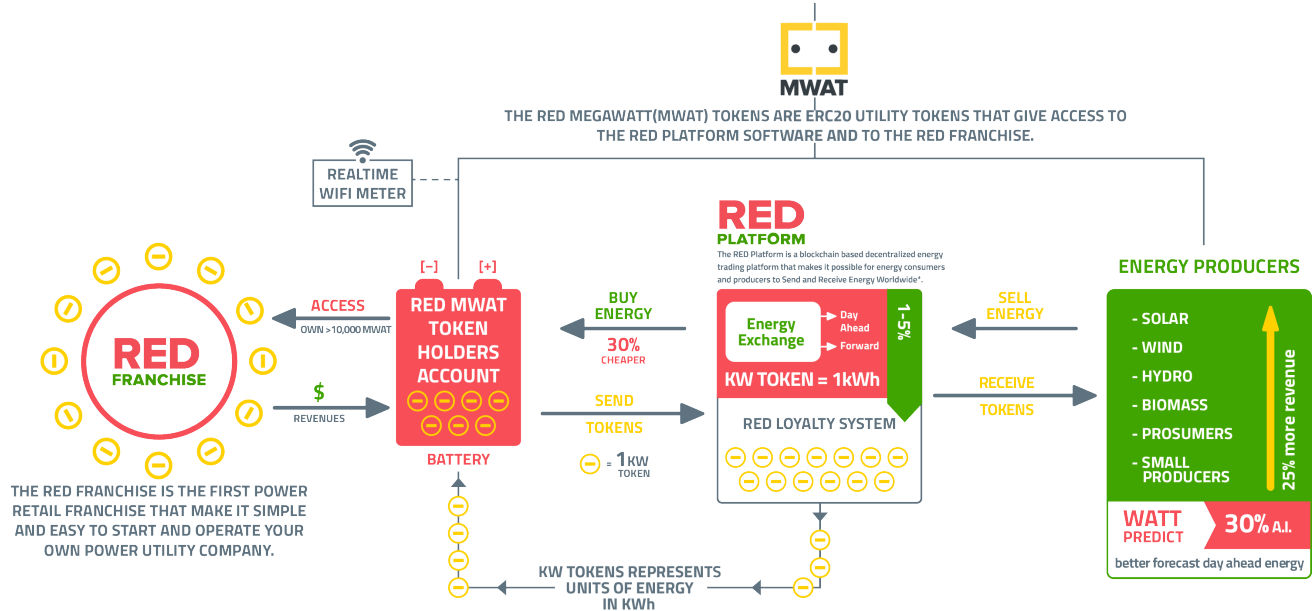


Restart Energy is building a global energy supply platform using blockchain protocol to democratize a sector burdened by bureaucracy and transaction costs, freeing up capital, saving consumers money, helping local small producers earn more and allowing real peer to peer direct energy trading using existing infrastructure.

Energy demand globally is expected to nearly double by 2030. With finite resources and the commitment to the UN SDGs, nations must innovate to generate power in a socially, economically, and environmentally sustainable manner. The European Union Member States and the United States have begun piloting reforms through energy market deregulation, allowing private companies to operate in the power retail sector. Countries across Asia such as Japan, South Korea, Taiwan, Malaysia, Thailand, Philippines and Singapore have opted for market deregulation in a bid to create sustainability while China and India are slated to follow from 2018.

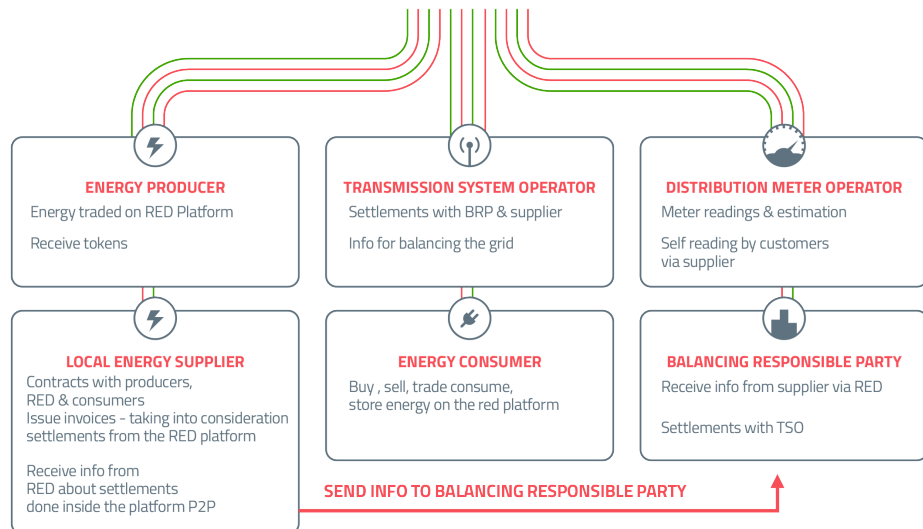
## RED ECOSYSTEM

### SEND AND RECEIVE ENERGY WORLDWIDE\* USING MWAT TOKEN



\*The tokenized energy traded on the RED Platform can be physically delivered at local rates in countries with deregulated energy markets where Restart Energy will be present directly or through franchise.

### PLATFORM USES BLOCKCHAIN FOR SETTLEMENTS AND ASSIGNING BALANCING RESPONSIBILITY



## Our vision

We envision a vibrant, sustainable world where affordable energy is created and consumed by anyone anywhere.

## Our mission

Our mission is to become the leading global energy supplier, innovating and democratizing the sector.

## Our goals

Restart Energy is committed to achieving the following goals:

- Raise 30 million USD, in order to finish RED development and expand globally
- Expand energy retail business by franchising to more than 45 countries with deregulated markets, representing 70 percent of the world's energy consumption through 2022

## Restart Energy Democracy Platform (RED-P)

RED-P is a software platform for global decentralized energy supply.

Consumers and producers register to use the RED-P to gain access to 1) global energy supply; 2) intelligent wifi meters; 3) watt prediction software; 4) peer-to-peer (P2P) energy exchange; 5) potential to earn green certificates.

### Innovative features of RED-P include:

- Any registered user can buy or sell from any other registered user
- Some consumers are also generators (e.g. wind/solar) as large power stations (gas, coal, nuclear) are being replaced with thousands of consumer-generators (prosumers).
- P2P: All parties in our ecosystem are able to trade directly with each other.
- Consumers will be awarded with RED-standard green certificates for using renewable energy.

With the new platform, we anticipate energy companies to adapt to the new economy. Energy companies will start to take payment of energy bills in tokens as there will be a market for those tokens.

Finally, RED-P will increase competition in the electricity market. For instance, with our model, consumers will be able to "auto-switch" their energy supplier every 30 days. The system will tender consumer contracts every 30 days seamlessly, ensuring a more competitive marketplace and truly market-reflective prices.

## RED MegaWatt Token's Utility (MWAT)

The RED MegaWatt (MWAT) Tokens are ERC20 utility tokens that give access to the RED Platform Software and to the RED Franchise. The RED Platform is a blockchain based decentralized energy trading platform that makes it possible for energy consumers, prosumers, and producers to send and receive energy, worldwide. The tokenized energy traded on the RED Platform can be physically delivered at local rates in countries with deregulated energy markets where Restart Energy will be present directly or through its franchises. The RED Franchise is the first power retail franchise that makes it simple and easy to start and operate your own power utility company.

MWAT is the first token backed by real opportunity. Each MWAT allows users to buy or sell up to 1,000 KW Tokens per month, on the RED Platform Software. KW tokens (KWT) are tradable exclusively on the platform and can hold a virtual energy charge.



Here at Restart Energy we believe in giving back to the community and as such, we have devised the RED Loyalty System; through which producers transfer platform-exclusive KWT to MWAT holders for registering and keeping MWAT tokens on the RED-Platform.

Through the RED Loyalty System, energy producers shall provide each MWAT that registers on the platform with an initial and one-time charge of 0.11 KWT, once registration is complete.

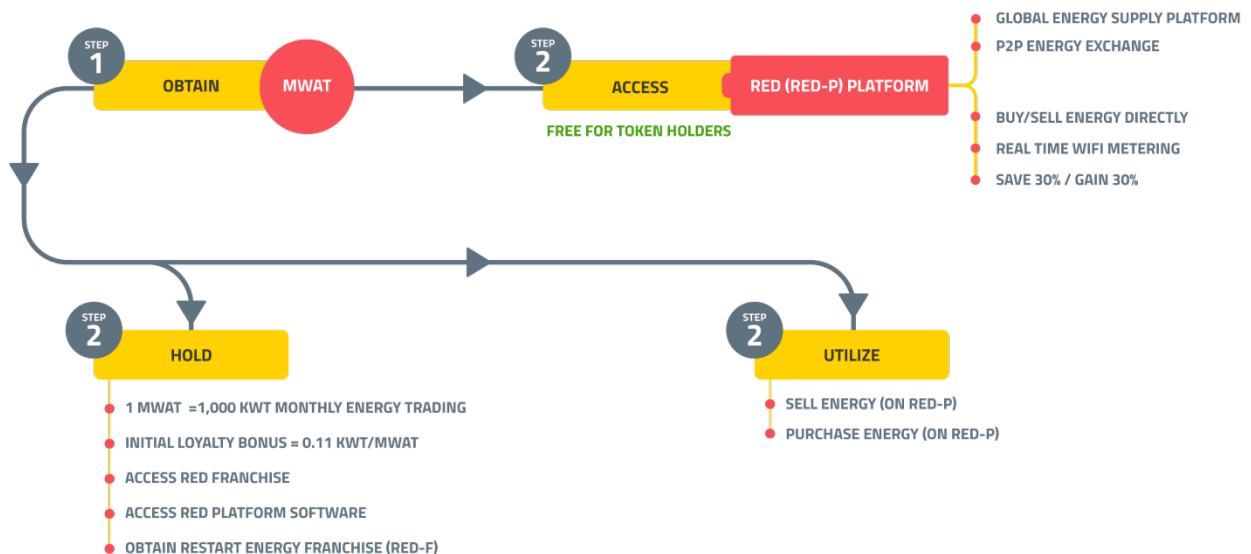
More in-depth details about token mechanics can be found on page 63.

## Token acquisition/usage

How to obtain MWAT Tokens	Hold and Utilize MWAT Tokens in order to
<ul style="list-style-type: none"> <li>Purchasing at the Token Generation Event (TGE)</li> <li>Purchasing from an exchange after the TGE</li> </ul>	<ul style="list-style-type: none"> <li>Access the RED platform software (RED-P)</li> <li>Buy &amp; consume energy from producers on RED-P</li> <li>Sell energy to other users on the RED-P</li> <li>Obtain Restart Energy Franchise</li> <li>Gain access to the RED Loyalty System</li> </ul>

Access to the RED platform will be granted only to MWAT token holders.

## RESTART ENERGY MWAT - KWT - RED-P - RED-F DECENTRALIZED CRYPTOGRAPHIC SYSTEM



## 1.2 Restart Energy Franchise (RED-F)

Restart Energy developed the first franchise on the European Union energy market that easily allows any person to own a power retail business and earn revenues by selling energy & gas to retail consumers.

Owning sufficient MWAT tokens grants the holder access to the RED Franchises and to the income from selling energy supply contracts. The following numbers are for Type B franchises - brokers/resellers (this is not a fee - the tokens only need to be held in an account):

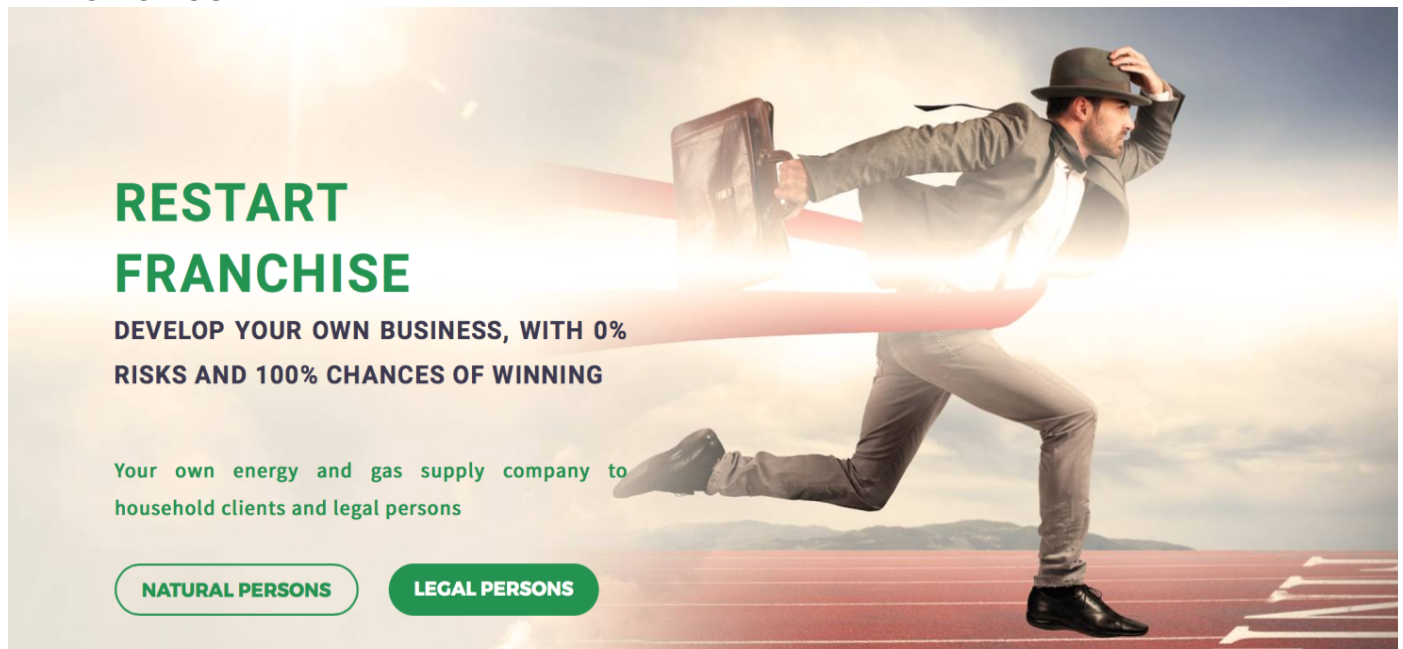
- 10,000 MWAT** - **RED City Franchise** - Allows the token holder to broker energy sales in their city of choice within their country of residence.
- 100,000 MWAT** - **RED Regional Franchise** - Allows the token holder to broker energy sales in an entire region of their country of residence.
- 1,000,000 MWAT** - **Red Country Franchise** - Allows the token holder to broker energy sales in their entire country of residence.
- ~10,000,000 MWAT** - **RED Master Franchise** - Gives the token holder country exclusivity regarding the brokering of energy sales and the option to create sub-franchises inside their country of residence (can be more or less than 10,000,000MWAT, depending on country population).

FRANCHISE MODEL

### RESTART ENERGY

### FRANCHISE MODEL IN DETAIL

BRINGING YOU **RED**



**RESTART  
FRANCHISE**

**DEVELOP YOUR OWN BUSINESS, WITH 0%  
RISKS AND 100% CHANCES OF WINNING**

Your own energy and gas supply company to  
household clients and legal persons

**NATURAL PERSONS** **LEGAL PERSONS**

Would you buy a McDonald's franchise now if you had the chance?

## Introducing the RED Franchise

**Be the first to secure** your retail energy franchise in your country and resell it to other private suppliers or companies after the Token Generation Event (TGE).

As we move forward, and as we have already successfully done in the past, we will focus our efforts on growing our franchise network - this time on a global scale. *Every franchise* needs to own a certain number of **MWAT** tokens to operate – this is not a payment to Restart Energy; full functionality for MWAT tokens applies.

If you're interested in entering the energy sector, then Restart Energy's franchise program is a unique opportunity to become personally involved in our mission to re-invent the way energy is bought, sold, and traded globally – through the RED ecosystem – a global, privatized, decentralized energy supply platform.

## What is the RED Franchise?

The RED Franchise (RED-F) is an *exclusive business opportunity available to MWAT Token holders*. It is an innovative, tested, and working idea that is already being used within the European Union. By allowing MWAT holders to create and run their own energy retail business, we are merging decentralization blockchain technology with free market principles.

## RED Franchise Types & Tiers

There are two franchise models that exist within the RED ecosystem:

### Type A - Franchise Owner of a Power Retail Company

Only one per country and it represents Restart Energy within that country.

In a Type A franchise, Restart Energy would work together with the franchisee to help set-up his own power retail company, and the franchisee would be the one to enter into a new market and establish his business. The franchisee would take on all risk and expenses to create a market, and Restart Energy would provide technical, infrastructural, process automation, marketing and sales support. The franchisee would need to provide the financial and management capacity for setting up his power retail company.

Type A franchise owners will receive the following:

**Assistance** for creation & operation of own power retail company

**Right to use Restart Energy's brand and business model** including software and franchise infrastructure

**Control** over revenues

**Technical Training** for all staff and employees

**Marketing and Branding package**

**Country Promotion** for the months leading up to and after launch, paid for by Restart Energy, in order to promote the RED ecosystem and franchise business

**Access to Complete Energy Supply CRM Software with 100% process automation**

**Access to Restart Energy specialized personnel and management** to assist and fully support the franchise and its owners

**Energy & gas trading, balancing and forecasting technical support**

**Pros:** Higher profits ; ownership of power retail company ; cross selling to existing customer database ; high process automation to deal with large numbers of low volume consumers with high margins ; unique selling points and ecosystem ; flexible products and services

**Cons:** Higher capital requirements; Franchisee takes the risk of expansion to new markets

### Type A Franchise Token Requirement by Country

In addition to holding the required amount of MWAT tokens, Type A franchise owners also have to meet Restart Energy minimum capital requirements and pass business conduct and reputation due diligence. The tokens required do not represent a payment and retain the full functionality of MWAT tokens.

Please see the below table for country minimum token requirements.

### Type A Franchise Token Requirement by Country

Region	No.	Country	Population	Franchise	Deregulated Market
				Type A	
				Min Tokens	
Europe	1	Austria	8,690,076	2,172,519	Y
	2	Belgium	11,311,117	2,827,779	Y
	3	Bulgaria	7,153,784	1,788,446	Y
	4	Croatia	4,190,669	1,047,667	Y
	5	Cyprus	848,319	212,080	Y
	6	Czech Republic	10,553,843	2,638,461	Y
	7	Denmark	5,707,251	1,426,813	Y
	8	Estonia	1,315,944	328,986	Y
	9	Finland	5,487,308	1,371,827	Y
	10	France	66,759,950	16,689,988	Y
	11	Germany	82,175,684	20,543,921	Y
	12	Greece	10,783,748	2,695,937	Y
	13	Hungary	9,830,485	2,457,621	YN
	14	Ireland	4,724,720	1,181,180	Y
	15	Italy	60,665,551	15,166,388	Y
	16	Latvia	1,968,957	492,239	Y
	17	Lithuania	2,888,558	722,140	Y
	18	Luxembourg	576,249	144,062	Y
	19	Malta	434,403	108,601	Y
	20	Netherlands	16,979,120	4,244,780	Y
	21	Poland	37,967,209	9,491,802	Y



	22	Portugal	10,341,330	2,585,333	Y
	23	Romania	19,760,314	4,940,079	Y
	24	Slovakia	5,426,252	1,356,563	Y
	25	Slovenia	2,064,188	516,047	Y
	26	Spain	46,440,099	11,610,025	Y
	27	Sweden	9,851,017	2,462,754	Y
	28	United Kingdom	65,382,556	16,345,639	Y
	29	Iceland	332,529	83,132	Y
	30	Liechtenstein	37,622	9,406	Y
	31	Norway	5,210,721	1,302,680	Y
	32	Switzerland	8,327,126	2,081,782	Y
	33	Montenegro	622,218	155,555	Y
	34	Macedonia	2,071,278	517,820	N
	35	Albania	2,886,026	721,507	Y
	36	Serbia	7,076,372	1,769,093	Y
	37	Turkey	78,741,053	19,685,263	N
	38	Bosnia and Herzegovina	3,839,265	959,816	N
	39	Kosovo	1,771,604	442,901	N
	40	Moldova	3,555,159	888,790	N
	41	Ukraine	42,590,879	10,647,720	N
	42	Armenia	2,998,577	749,644	N
	43	Azerbaijan	9,705,643	2,426,411	N
	44	Georgia	3,720,400	930,110	N
N America	45	US	323,127,513	80,781,878	Y
	46	Canada	36,290,000	9,072,500	Y
Asia-Pacific	47	Australia	24,130,000	6,032,500	Y
	48	New Zealand	4,693,000	1,173,250	Y
	49	Japan	127,000,000	25,750,000	Y
	50	South Korea	51,250,000	12,812,500	N
	51	Singapore	5,607,000	1,401,750	Y
	52	Thailand	68,860,000	17,215,000	N

	53	Vietnam	92,700,000	23,175,000	YN
	54	Mongolia	3,027,000	756,750	N
	55	Russia	144,300,000	36,075,000	N
	56	India	1,324,000,000	-	N
	57	Indonesia	264,882,526	20,125,000	YN
	58	Taiwan	23,647,920	5,911,980	Y
	59	Brazil	200,361,925	50,090,481	N
	60	China	1,411,278,927	-	N
	61	Philippines	105,424,010	26,356,003	YN
Africa	62	South Africa	48,810,427	12,202,607	Y
		<b>Total</b>	<b>4,894,344,994</b>	<b>499,873,492*</b>	

Source: Eurostat, OECD, World Energy Council

Y = deregulated energy market

N = monopolistic energy market (not deregulated)

YN = partially deregulated energy market or advanced in the process of completing deregulation

\* Restart Energy reserves the right to lower the required amount of tokens franchises need to hold, if the percentage of MWAT locked in franchise accounts becomes too high and hampers smooth platform operations.

## **Type B – Reseller / Broker**

Only Master Franchise tier is exclusive.

Restart Energy would be the one to enter into a new market and establish the company. The company would take on all risks and expenses to create a market, and the franchise owner would simply act as a retailer or broker with our full support.

Master Franchise owner would receive:

**Right to create and sell sub-franchises**

**Part of revenues from all sub-franchises**

**A comprehensive franchise kit**, detailing all relevant information for the target market, modeled after our already successful franchise kits provided to European partners.

**Training** for all staff and employees

**Marketing and Branding**

**Local Promotion** for the months leading up to and after the launch, paid for by Restart Energy to promote the RED ecosystem and franchise business

**Access to the Agent Module**, offering the ability to add new franchises, see energy consumption and manage clients

**Access to the Front Desk Module of RED CRM**

**Access to Restart Energy management**, from where we can assist and fully support the franchise and its owners

As a Master Tier reseller/broker, you would be entitled to a percentage of all revenues made by all other franchises in the target country (**typically 10%**), plus the revenues generated from direct sales, in the form of signing premium plus passive consumption commission.

**Pros:** Very low risk, Restart Energy takes on cost of expansion

**Cons:** Lower margin compared to full franchise ownership

## Type B Franchise Tiers

Owning a certain number of MWAT grants holders access to one of four Type B Franchise tiers and to the income from reselling energy contracts. It is important to note that it is only required that a franchise owner *hold* a certain amount of tokens. It is **not** a form of payment to Restart Energy.

**10,000 MWAT - RED City Franchise** –Allows the token holder to broker energy sales in their city of choice, within their country of residence. Multiple city franchises can operate within the same city and will be coordinated by Restart Energy or the Type A Franchise that operates within that country.

**100,000 MWAT - RED Regional Franchise** - Allows the token holder to broker energy sales in an entire region of their country of residence. Same as with City Franchises, multiple regional franchises can coexist.

**1,000,000 MWAT - Red Country Franchise** - Allows token holders to sell energy in their entire country of residence. As per the previous tiers, multiple country franchises can coexist.

**+10,000,000 MWAT - RED Master Franchise** - Gives the token holders exclusive rights to their country of residence and the option to create sub-franchises inside it - meaning there can only be one Master Franchise per country. The amount is dependent on the country's population.

Type B franchises require either a Type A franchise or Restart Energy itself present in the country in order to resell their energy supply packages.

## Type C Franchise

This is a franchise especially designed for companies that want to develop renewable energy projects and services, where RED offers access to its RED Platform engineering support and a business plan for the development of renewable energy systems in countries or states that support green energy. The token requirement for a Type C franchise is the same as that for a Type B Master Franchise.

Type C Franchises will have access to the RED Decentralized Marketplace for selling their renewable energy products and services to RED users globally and to the RED Crowdfunding Module for financing their new renewable developments on the blockchain.

## Existing Franchise Partners

As mentioned above, Restart Energy is *already* using the Franchise model proposed in our Whitepaper. A big part of the company's success to date has been based on its ability to successfully develop a multi-channel sales strategy, by quickly identifying market opportunities and leveraging local resources, such as micro-entrepreneurs, through the first retail energy franchise in the European Union.

## Current non-blockchain model

The success of a franchise owner is our success as well. We work hard to ensure all franchises are fully supported via multiple sales channels for energy retail. As an example, in Romania, we are leveraging multiple sales channels for the supply of energy and gas with the following efforts:

1. **Local distribution partners** who acquire a franchise and sell energy to their longstanding customers. This strategy has proven very successful so far and will be a major contribution to our global expansion plans.
2. **Formation of local D2D teams** around our best local franchise partners.( +200 D2D agents employed by franchisee's)
3. **Our own sales force** that currently includes: 1 National Sales Manager, 1 Logistics Manager, 8-person Contracting Department, 7 Regional Sales Managers, 70 D2D sales agents (commission-based).
4. **Partnerships with national companies** like Euro GSM (largest ORANGE telecom dealer), Inter Broker (3rd largest insurance broker), GRS (largest auto insurance broker), Cashback World (largest cash-back shopping network), Romanian Post (5000+ country locations), TVSat (largest regional media & telecom company), Romanian War Veterans Organization, etc.

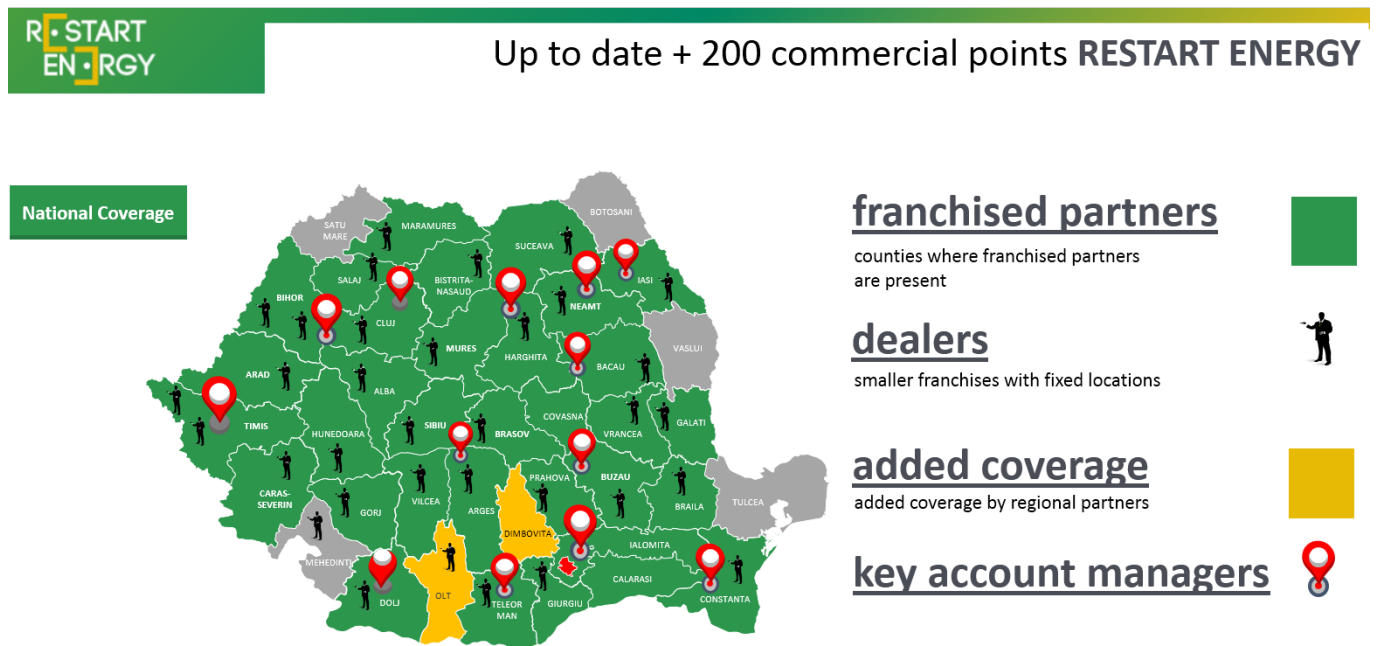


Fig. 1 Romanian franchise coverage

## Becoming a Franchise Owner

With a successful franchise model already in place, Restart Energy is well equipped to help all individuals and companies transition to the retail energy sector.

## RESTART ENERGY SUPPORTS YOU 100%

By providing marketing and brand identity materials, courses designed to train specialized personnel for our franchise partners, local promotion on media channels, access to Franchise/Agent and Front Desk modules, the My Restart portal, the marketing, social media and web platforms, and the option of installing smart wireless meters for clients contracted by the franchised entity, based on their contractual terms.

**Note: The franchised entities** must agree to meet energy retail targets for the first year of operation. Restart Energy will work with clients to ensure targets are manageable and reasonable.



## **Key benefits:**

### **Power retail business in a shell**

**Cheaper renewable energy & gas** to households

**Cheaper renewable energy & gas** to businesses

**Access to RED ecosystem and franchisee's**

**Access to Complete Energy Supply CRM Software with 100% process automation**

**Access to Restart Energy specialized personnel and management** to assist and fully support the franchise and its owners

**Energy & gas trading, balancing and forecasting technical support**

**Marketing and Branding packages**

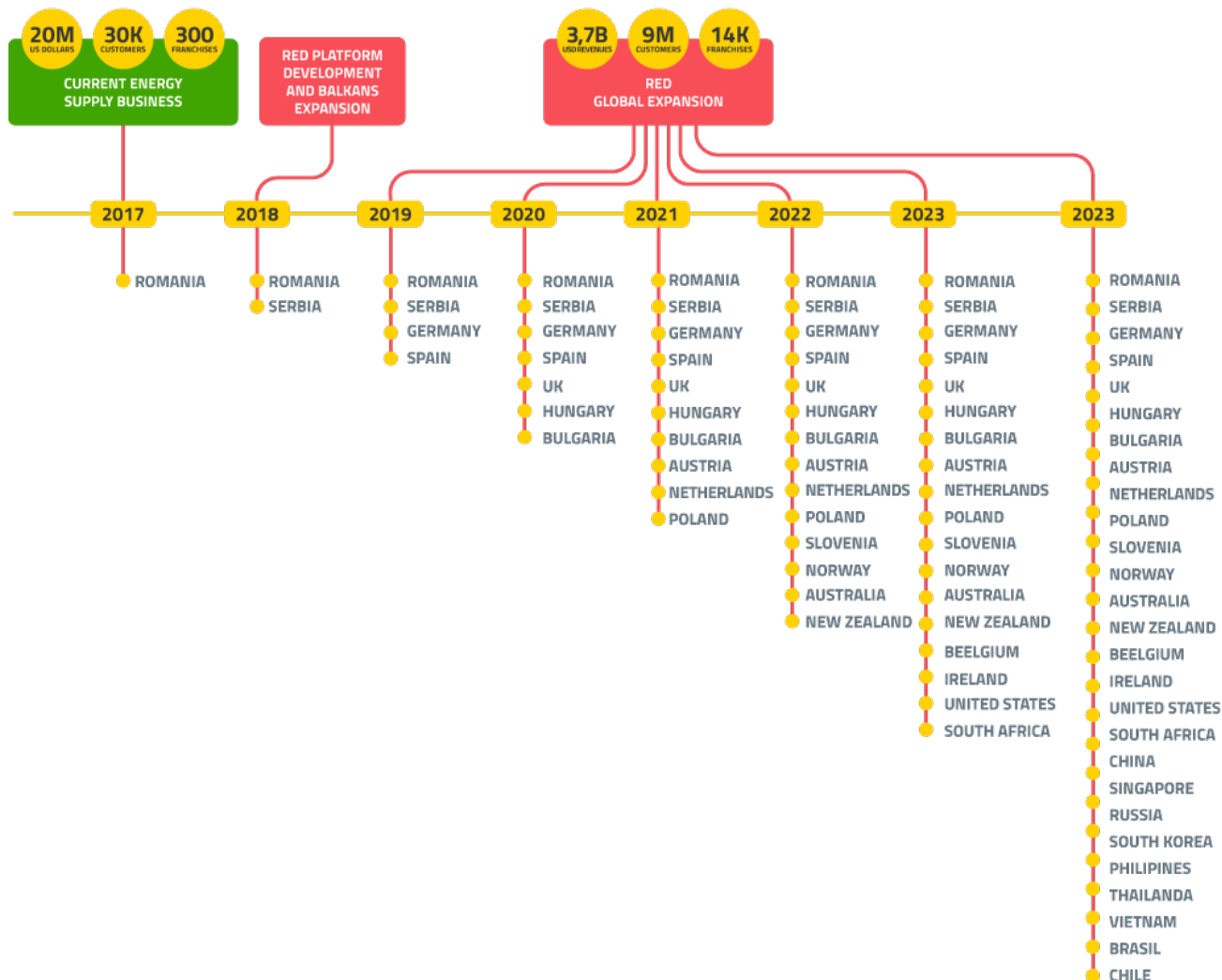
**Energy efficiency** products and services

**Renewable energy** products and services

**Mobile app's access**

**Access to P2P Energy Exchange** on the RED Platform

## ROADMAP



## Detailed Company Overview

Restart Energy is the fastest growing energy and gas provider operating in an EU-regulated environment - Romania - offering an innovative and customer-centric service with greater transparency.

### Facts:

- Operated in an EU-regulated environment in the fastest growing economy in Europe
- 30,000 Customers Base (27,000 Households and 3,000 Companies)
- 20 million USD revenue in 2017
- 200+ commercial locations
- 300+ franchise business partners
- 40,000+ payment points
- Customized technology unique in the energy sector

- Offering up to 100% renewable energy supply
- A job-creating, micro-entrepreneurship sales model
- Restart Energy has the highest customer satisfaction rate among energy providers and was voted the supplier with the most responsive customer care in 2016 by the users of the 'Energy Platform'.
- Restart Energy is the first energy supplier in Europe to accept energy invoice payments in Bitcoin.

Since its inception in 2015, Restart Energy has had remarkable market traction coupled with exponential growth. It achieved a 400% sales growth in 2016 as compared to 2015, reached revenues of 5.45 million USD in 2016 in an EU-regulated environment, and forecast revenues of 20 million USD in 2017.

**Restart Energy offers 24-hour support** through telephone and multiple online platforms:

- ✓ Facebook Messenger, Mobile App, Facebook Bot and WhatsApp.
- ✓ Facebook customer rating - score 4.9/5 out of 187 evaluations - highest score among energy companies.

Restart Energy is expected to grow by 425% in 2017, reaching 20 million USD in revenues and anticipates 500% growth in 2018, with a forecast in excess of 100 million USD for 2018.

Due to its spectacular growth, Restart Energy was awarded the "Exponential Growth Award" from the Renewable Energy Cluster, ROSENC and was voted having the fastest response time by the users of the "Energy Platform" in Romania.



Restart Energy offers integrated energy, gas, and fuel packages to households, SMEs, and multinational companies helping them effortlessly achieve greater savings on all forms of energy consumed. It purchases renewable energy directly from solar, wind and hydro producers by providing them bankable energy and green certificates with offtake agreements.

It enables its user to switch suppliers through its mobile app within 5 minutes. It focuses on eliminating bureaucracy in all activities of its value chain. Customers can opt for up to 100% renewable energy consumption. Restart Energy's online portal and mobile app has helped users towards easier fuel management and savings with the highest level of transparency.

Restart Energy currently employs more than 70 people directly at its head offices in Timisoara, and Bucharest, and over 1,000 indirectly through 300 business franchise partners in the 200+ commercial locations where it sells energy and gas subscriptions to households and SMEs.

**The Company has been recognized by:**

ROSENC: Special distinction for spectacular exponential growth. (2016)

Energy Platform: Voted as the Provider with the fastest response time. (2016)

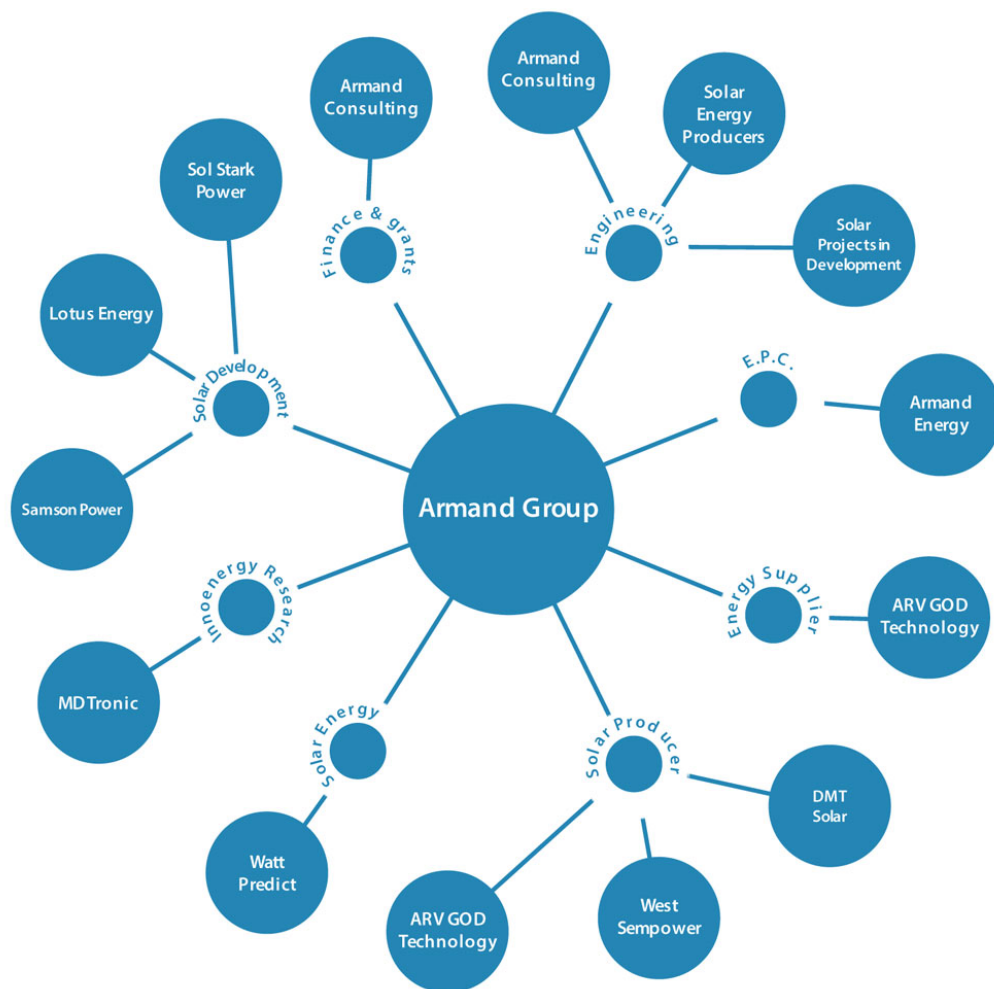
## 1.3 Accomplishments to Date



2009 Founding of Armand Group

Armand Group was founded in 2009 and soon became one of the important players on the market of **renewable energy**, both in Romania and in Europe. In time we branched out and followed new paths for development but our goal remains the same – a better world and a sustainable future.

Armand Group is specialized in **renewable energy** and **constructions** and we brought the best, most dedicated professionals on board with us – experiencing years of constant growth.





**Fig. 2** Armand Group

2015

Founding of Restart Energy Company by Armand Doru Domuta, as part of Armand Group

- Acquiring : Energy Supply License, Gas Supply License and ISO Certification, Cross Border Serbia Energy Supply License

2016

- February - Acquired its first group of customers
- Reaching 10,000 customers by the end of the year
- Revenues in 2016: 5.45 million USD (> 400% growth from 2015)

2017

- Revenues forecast for 2017: 20 million USD (+425% growth from 2016)
- 30,000 customers base (27,000 households and 3,000 companies)
- 40,000 payment locations in Romania
- Over 2000 new customers per month
- Monthly growth rate is over 10%
- Strong partners: Euro GSM (Orange) + Inter Broker + GRS + AMVV

2018

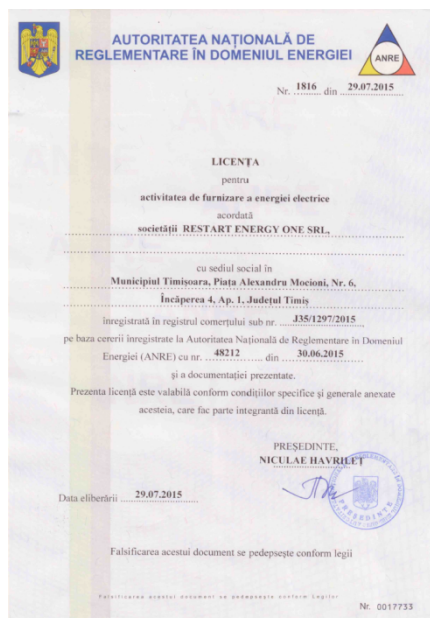
- Revenue forecast for 2018: 100 million USD (500% growth from 2017)

**Given below is a timeline of Restart Energy's milestones**

Timeline	Milestone
<b>2015 Aug</b>	Acquired Energy Supply License Nr.1816
<b>2015 Dec</b>	Acquired Gas Supply License Nr.2015
<b>2015 Dec</b>	Acquired Fuel Supply License : RO9103735EN01/2016
<b>2015 Dec</b>	Acquired Cross Border Serbia Energy Supply License : 168/2015
<b>2016 Feb</b>	Acquired its first group of customers
<b>2016 Dec</b>	Reached 10,000 customers
<b>2017 Apr</b>	Launched online and mobile switching app
<b>2017 May</b>	Launched fuel card system
<b>2017 Jun</b>	Reached 1 million USD monthly turnover
<b>2017 Jul</b>	Launched messenger bot for switching and support
<b>2017 Aug</b>	Reached 200+ commercial locations
<b>2017 Sep</b>	Launched WhatsApp Support and Home Appliance Insurance
<b>2017 Oct</b>	Planted the Restart Customer Forest of 10,000 trees
<b>2017 Nov</b>	Surpassed 2 million USD monthly turnover
<b>2017 Dec</b>	Reached 30,000 customers

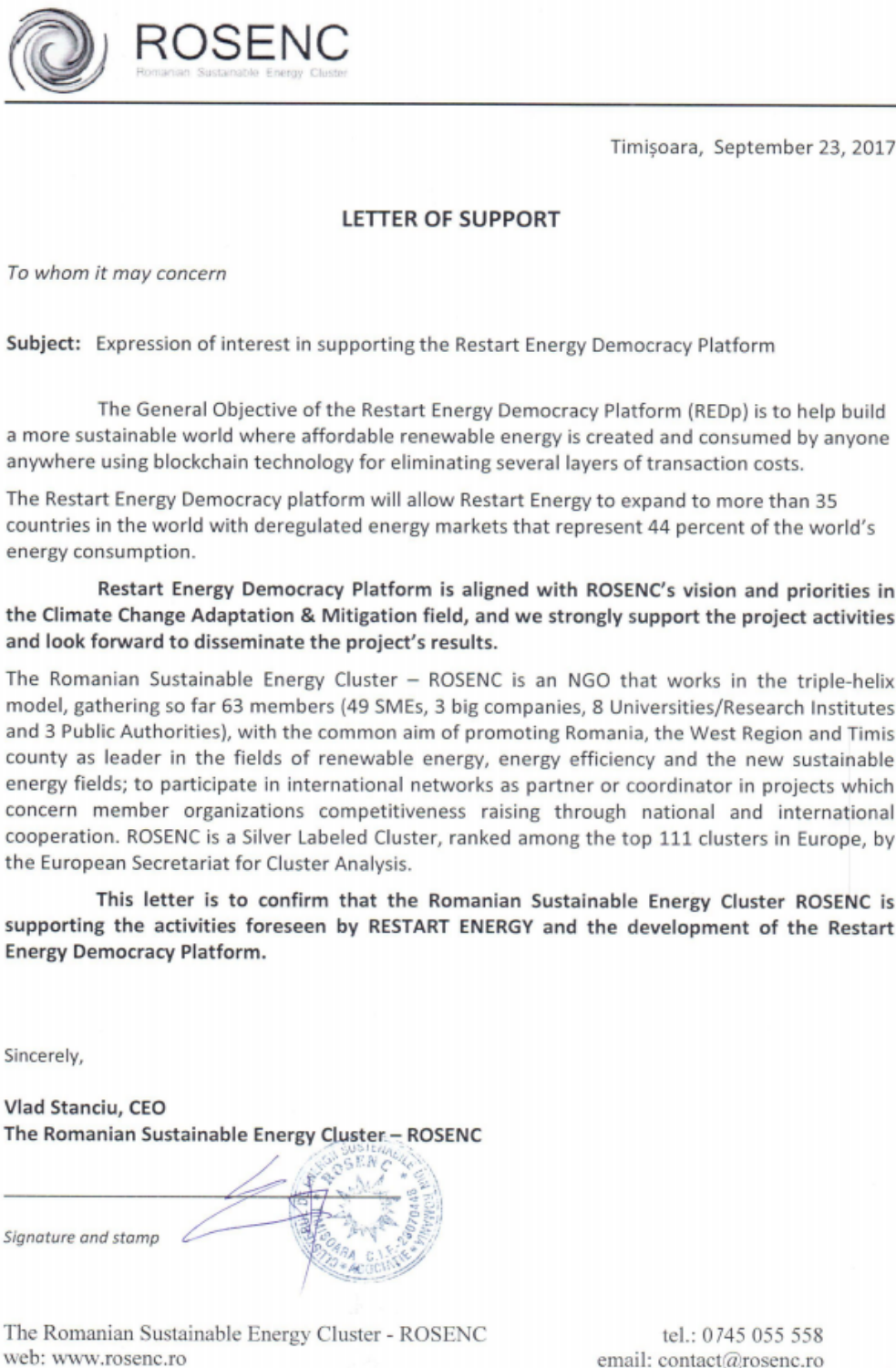
**Restart Energy has been ranked number one independent supplier in the deregulated household gas market and number two in the deregulated energy household market in Romania**

**Fig. 3** Snapshot of Energy Supply License, Gas Supply License and ISO Certification



The Romanian Sustainable Energy Cluster ROSENC has also expressed its support for the Restart Energy Democracy Platform.

**Fig. 4** Snapshot of Letter of support Romanian Sustainable Energy Cluster ROSENC



## 2 RESTART ENERGY TEAM

### 2.1 Contributors

Restart Energy is owned 82% by Armand Group, the most successful renewable project developer in Romania with more than 500 MW of solar and other renewable sources developed through its subsidiary Armand Consulting, and 18% by TVSat Group, which is the largest regional Media & Telecom Company in Romania.



### 2.2 Executive Team

#### Armand Doru Domuta, Founder & CEO

Armand has scaled Restart Energy in the last years into a diversified energy company in Romania. His achievements include developing 500 MW renewable energy projects (PV, hydro and biomass), managing 30 ANRE-licensed engineers, building an EPC over 30 projects (many of them still operational); including dispatching, balancing and trading energy from these and other assets. Further achievements: Developed a system for optimized prediction of Restart Energy's production and pioneered a smart metering system. He holds a Master's degree in Accounting and Finance, and a Bachelor's degree in Marketing Management.



#### Renato Doicaru, Co-Founder & Head of Energy Acquisitions

Renato is responsible for performing all activities of procuring and trading electricity. He has worked with Armand Group from the beginning, building and operating power plants, getting licensed on all Romanian electricity platforms, including DAMAS of Transelectrica for Cross-border trading, where he exceeded 1 TWh of trading to date. He has been involved in several research projects for developing improved energy forecast models together with ESA (European Space Agency).



#### Cristian Bogdan, CFO

14 years track record in financial industry, mostly in top banks, brought Cristian a comprehensive understanding of business and people management. Experienced in corporate business and financial analysis, business strategy, credit deals structuring, credit risk and daily business operations. He acted in the corporate banking market with Raiffeisen Bank. Seven years later, became Corporate Director at ERSTE BCR Timis. After three years he was directly steering all business lines at BRD Societe Generale, Timis, with direct responsibility over both retail and corporate segments.



#### Vali Malinoiu, CTO

Vali has over 10 years' experience working in blockchain - having been there from the start. He is a polyglot and a self-described poly-paradigm software engineer who has personally contributed to numerous open-source projects, including Bitcoin's early architecture, evidencing his specialty in software architecture, software design, distributed systems, and security. During his career, he has finalized a number of projects, including a blockchain IDE, automatic audit systems through Smart Contracts, blockchain security systems, and is currently leading the SWAZM custom blockchain development platform that is the basis for the RED Platform! Vali is also a prolific speaker and has participated in numerous specialized conferences including Codecamp, Owasp, No Time For Downtime, and TEDx amongst others.





### **Adrian Stratulat, Lead Evangelist & RED PM**

Diplomat by training and social entrepreneur by heart, Adrian Stratulat has over 6 years of experience in business development, management, and entrepreneurship. Holding a PhD in energy security, he has an in-depth knowledge of the energy market and over one year of experience in digital marketing as co-founder of another blockchain project. Currently, he is also COO of SWAZM and Executive Manager for the Romanian Blockchain Association; developing educational and public affairs programs for the entire blockchain industry in Romania.

### **Andreea Petrica, Head of Marketing**

With over 10 years of specific marketing and communications experience, Andreea can draw upon a vast pool of knowledge that includes working for internationally recognized brands such as TEDx, leadership experts like Robin Sharma, collaborating with several national advertising agencies for nearly five years, as well as helping international clients with their marketing needs. Her personal motto is: "Every great dream begins with a dreamer. Always remember, you have within you the strength, the patience, and the passion to reach for the stars and change the world."



### **Denis Rouă, Chief Editor**

While having several years' worth of editorial and publishing experience, RED's Chief Editor's foremost qualifications are his dogged perfectionism, critical eye, adaptability, and capability. Being somewhat of a polymath, Denis has worked in several fields, both as an employee and for himself, fulfilling several roles over the years - everything from management of assets to retail, IT to marketing, or freelance translator to copy & layout editor. As an Anglo- and Germanophile, he has always held to the maxim "Anything worth doing is worth doing well." and such has served him well. His time at RED has added a sizeable knowledge-base centered around blockchain and energy to an already expansive understanding of history, the sciences, and philosophy.



### **Catalin Scurtu, COO**

Catalin is dedicated to both personal and professional growth and has worked at the corporate giant, Continental, for 8 years. This has provided Catalin with a wealth of experience in project management. Catalin's optimism and creativity are reflected in his favorite quote by Mahatma Gandhi - "Be the change that you wish to see in the world".



### **Alexandru Tarcu, Online Sales Manager**

Head of online sales, with direct experience in sales and purchasing fields over the past 15 years, graded with professional proficiency in 3 languages. Alex has a Master's degree in Business Administration and Management from the University of Economic Studies in Bucharest, as well as having earned and completed an Erasmus scholarship from the prestigious Université des Sciences Sociales of Toulouse. As a former trade and merchandising manager, he is a goal-oriented expert with a passion for programming and IT, with experience in online and commercial sales. He has worked for successful brands such as Cora, Auchan, K&K Electronics, and DOMO. Recently joined the team after finishing the delivery of a custom built online marketplace platform.





### Eng. Viorica Gheorghe, Chief of Markets

Viorica is Chief of Markets and Forecast specialist with 12 years' experience in operating OPCOM markets.



### Eng. Mara Grigore , Head of Large Accounts

Mara is Head of Large Accounts with 20 years of experience as Key Account Manager for top energy companies like Arelco Power.

### Eng. Marian Iriza Voinea, Head of Gas Supply

Marian is Head of Gas Supply with 6 years of gas distribution experience and 10 years of gas supply experience.



## 2.3 Ambassadors

### Adriana Istrate

Adriana Istrate set a new world record for completing 7 marathons and 7 ultra-marathons on 7 continents, her own 7-7-7 project. She was also the first Romanian woman to run in Antarctica and 6th in the world for finishing the race. Adriana is also a philanthropist and has raised over 15,000 RON for her chosen charity, HOSPICE, which assists terminally ill children and their families.



### Susaye Greene

Susaye's well-known career in music and art industry - R&B, pop, and dance-pop - in the '70s was a great success as she was the last member to join the Motown girl group The Supremes. Along with art and music work, she has always expressed her support for STEM education (Science, Technology, Engineering, Math) and in 2016 was an advisor to the only Canadian team competing in Google Lunar XPrize Team PlanB Canada, with 30 million dollars in prize money. Due to her tremendous passion in bringing the world together for peace and prosperity, she finds her vision aligned with the Restart Energy Democracy project - to give people the ability to buy and sell energy, worldwide, using Blockchain P2P technology and thereby reduce energy poverty through affordable green energy sources.





## 2.4 Advisors



### **Cătălin Sorin Ivan**

MEP for the last 9 years, with 15 years of political experience. Blockchain advocate with a Master's in International Business. Cătălin is one of the youngest members to ever grace the halls of Brussels and he aims to spearhead blockchain and deregulation efforts in the heart of the EU. Before getting into politics, he studied and earned a Master's degree in International Business - a solid background for blockchain and deregulation advocacy. He has been a member of 14 Special committees and has held two vice-chair positions during his time as MEP: the vice-chair of the delegation for relations with the countries of the Andean Community (2011-2014), and the vice-chair of the committee on Budgetary Control (2017).

### **Dr. Vlad Trifa, IoT & Blockchain Expert**

Vlad Trifa is an experienced technologist, entrepreneur and author who has been at the forefront of the Internet of Things (IoT) revolution for over a decade. Most recently, he launched and led the Swisscom Digital Lab - a leading innovation center in enterprise digitalization for the largest Swiss telecommunication provider, which helps late companies harness the latest technologies such as AI, Blockchain and IoT. Before that, he co-founded and led the product & R&D departments EVERYTHING, an award-winning industry-grade IoT cloud platform used by numerous Fortune 100 companies. As the founder of WebofThings.org, he is a well-respected author and researcher and wrote numerous patents and articles about the intersection of Web technologies and IoT. The results of his PhD research carried out at MIT, ETH Zurich, and SAP played a central role in W3C efforts to create a standard for the Web of Things. Vlad graduated with a PhD in computer science from ETH Zurich, an MSc in Robotics and Artificial Intelligence from EPFL.



### **Michael Enescu, Energy Adaptive Networks Expert**

Michael Enescu is Chairman and Co-founder of EAN, responsible for development of network virtualization technology based on smart grid research from Caltech. He has a broad range of experience having developed and delivered dozens of enterprise and consumer software products.

## 3 THE CHALLENGE

Despite the deregulation of energy markets, several challenges prevent market entry for private electricity suppliers. With legacy players continuing to hold the majority share of the market, little has changed since the deregulation.

Obstacles to entering the household and SME energy markets include capital-intensive infrastructure and process automation necessary to handle large numbers of low volume consumption orders. Current service models do not provide direct connection between producers of renewable energy to consumers, resulting in the inability to profit and grow business, save, and choose between renewable and fossil fuels. Government subsidies for renewable energy are designed to jumpstart markets until the necessary economies of scale for grid parity are reached, but in reality, there are very few countries where renewable energy has reached grid parity.

Now, after the drop in subsidies, the world is looking for a new distributed energy development model to directly connect end users to producers to allow consumers direct access to accountable, cheaper energy, while also providing producers with increased incentives for faster renewable energy deployment around the world. Small consumers and producers are usually trapped in contracts with suppliers that provide limited services at high costs for the end users. Currently, the limited blockchain energy schemes have focused on incentivizing renewable energy generation. This model does not solve the main issues in the market raised above.

### 3.1 Our Solution

Restart Energy Democracy (RED): The first global online energy provider.

Restart Energy is developing a blockchain-based platform with a single, intuitive user interface allowing for global energy supply that will help it become the next generation utility company.

More than 3 billion energy consumers all over the world in deregulating markets will be able to switch their current energy provider with Restart Energy or a RED Franchise in an online, transparent environment using our platform, in less than 5 minutes. The platform will provide for all of their energy needs in a superior user-friendly way for real time consumption, invoices, payments and, most importantly, it will allow for direct peer to peer energy associated rights exchanged between consumers, prosumers and producers of any kind.

The Restart Energy Democracy Platform (RED) connects energy producers and traders with retail customers around the globe in a transparent, decentralized manner; creating added value for all the parties by employing blockchain to remove several layers of costs associated with bureaucracy and transaction costs.

By rearranging the way transactions are settled, in a transparent manner using blockchain, producers will be able to sell their energy at a price 30% higher compared to the wholesale price to high numbers of low-volume retail customers, who will then pay 30% less using existing grid infrastructure and the RED platform administered by Restart Energy.

Furthermore, we intend to develop a new standard of cryptographic green certificates, using blockchain that will be awarded to the consumers of renewable energy. The green certificates will store information about the source of energy, the producer, the consumer/user and the owner of the certificates. We believe that by creating a transparent and accountable standard of user-owned cryptographic green certificates, tradable on secondary markets, we incentivize the consumption of green energy and thus demand for renewable power sources through free market principles – this, in turn, increases the rate of adoption of renewables and ultimately leads to increased revenues for green energy producers and a more sustainable energy future for everyone.

## CURRENT MARKET ROLES

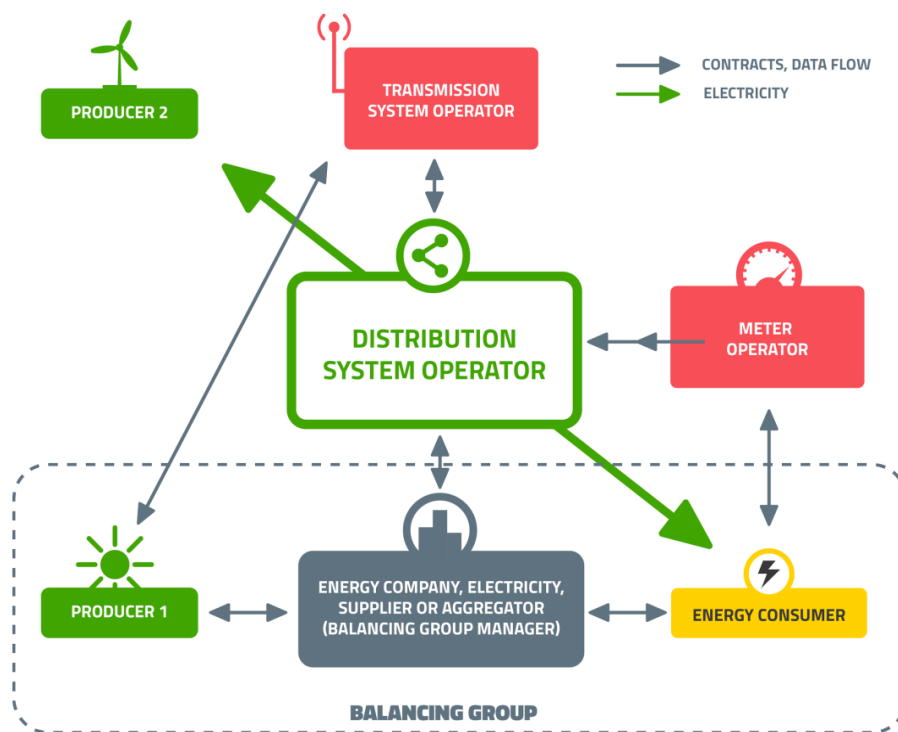


Fig. 5 Current market roles

### 3.2 How Electricity is Traded Now

At present, electricity is traded through exchanges or over-the-counter transactions (OTC). In many markets, more than 75% of the electricity volume is traded over the counter. As a result, bids and offers are managed by financial brokers, and therefore, are often executed outside of exchanges. This, in turn, reduces the visibility and transparency of the transactions. In addition, the centralized model of trading with a small number of large-scale energy companies dominating the market further limits improvements toward visibility and transparency of trades.

The global trends and latest technologies in renewable energy generation has enabled individual consumers to generate energy on their own and this has pushed the energy markets toward decentralization. In addition,

improvements in the battery technologies have enabled efficient storage of energy, providing more opportunities for consumers to become independent in their energy management.

In conclusion, the current transaction model remains a barrier to trade: consumers must still use the traditional methods to purchase and sell their excess energy requirements from their own generation.

### 3.3 Current System

- 1) Consumer: takes energy from the grid; pays retail price for energy; usually cannot choose his energy source; low accountability; low incentive to invest in renewable energy.
- 2) Prosumer: a consumer that also produces energy; a prosumer produces more energy with solar than needed, so sells some back to the grid at a very low price - low because these small quantities are very difficult to forecast, and legacy energy providers have no incentives to offer such services because their own supply and revenue from consumers would be reduced.
- 3) Producer: injects energy into the grid; gets wholesale price for the energy; very low return on investment means low incentive to invest without subsidies.

### 3.4 New System: Restart Energy Democracy Platform (RED-P)

RED-P is a global, decentralized energy supply platform software.

Consumers and producers register to use the RED-P to gain access to 1) global energy supply; 2) intelligent WiFi meters; 3) watt prediction software; 4) peer-to-peer (P2P) energy exchange; 5) potential to earn green certificates.

#### Innovative features of RED-P include:

- Any registered user can buy or sell from any other registered user
- Some consumers are also generators (e.g. wind/solar) as large power stations (gas, coal, nuclear) are being replaced with thousands of consumer-generators (prosumers).
- P2P: All parties in our ecosystem are able to trade directly with each other.

With the new platform, we anticipate energy companies to adapt to the new economy. Energy companies will start to take payment of energy bills in tokens as there will be a market for those tokens and a value associated with them. Blockchain is appealing to energy companies as it will allow the energy companies to address the administrative burden of connecting to retail market consumers, energy producers, balancing responsible parties and other bodies through the blockchain. It would also automate payments daily or weekly, with lower levels of debt.

Finally, RED-P will increase competition in the electricity market. For instance, with our model, consumers will be able to "auto-switch" their energy supplier every 30 days. The system will tender consumer contracts every 30 days seamlessly, ensuring a more competitive marketplace and truly market-reflective prices.

MWAT holders purchasing energy from the RED platform will also receive 1 Green Certificate for each 1 MWh of green energy consumed. The green certificates will be automatically allocated to their respective consumer accounts and will help in accounting for how much green energy they have consumed.

A secondary platform for green certificates will be developed on the RED platform where companies that want to support renewable energy production and help the planet end fossil fuel pollution may purchase the green certificates from the consumers according to free-market principles. The companies will be able to use the purchased green certificates globally to reduce their carbon footprint and prove their green credentials in a transparent manner.

Each green certificate on blockchain will contain information of the production source, issue date and will allow the general public to track ownership.

These green certificates represent an additional income source for the owners and incentivize the Consumers to use the RED platform for purchasing green energy.

### 3.5 Size of the Market

By 2016, the worldwide electricity consumption reached 21,190 TWh (Terawatt hours). Asia and Americas accounted for 43% and 27% of the total respectively. Of the Asian consumption, China accounted for 58% while India accounted for 12%. In other words, China has consumed approximately 25% of the world's electricity in 2016.

The global power market is currently worth around 2 trillion USD per annum.

The extent of deregulation of energy trading largely varies according to the country/territory, however, the majority of the world's largest energy markets are already deregulated, and some others are moving towards deregulation. Most of the Middle East and Africa markets remain highly regulated though, which account for around 8% of the global consumption.

Further, it is important to note that China has recently announced<sup>1</sup> its plan of deregulating its 500 billion USD electricity market in just a few years' time.

### 3.6 Energy Markets Regulations

- 35 countries in the world accounting for 44 percent of the world's energy consumption have already embraced deregulated energy markets and many other markets will follow
- Japan recently deregulated its energy market because power became substantially more expensive after Fukushima and citizens no longer trusted the energy monopolies, making the idea of open markets more appealing
- India is experimenting with deregulated energy markets
- China is planning to open its 500 billion USD energy market

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<sup>1</sup> <http://globalriskinsights.com/2016/06/chinas-energy-deregulation-overshadows-aramco-ipo/>  
[http://www.creden.univ-montp1.fr/Reseau/DOCS%20COLLOQUE/Lefevre\\_Todoc.pdf](http://www.creden.univ-montp1.fr/Reseau/DOCS%20COLLOQUE/Lefevre_Todoc.pdf)  
<https://www.japantimes.co.jp/opinion/2016/09/14/editorials/power-retail-deregulation/>  
<https://cpianalysis.org/2015/11/20/chinas-new-chapter-on-its-electricity-market-reform/>  
<https://www.engerati.com/article/energy-deregulation-transforming-asia's-energy-sector>

A deregulated electricity market would generally allow the market forces (demand and supply) to determine the price while providing opportunities for the private sector to participate in the market. Similarly, the European Union is also in the process of creating a unified market across its member countries/territories with the objective of creating an integrated energy ecosystem that will increase the efficiency of the market, allowing cheaper energy prices for its people in a more sustainable and manageable energy network. However, the extent of the deregulation can vary according to the country.

At present, Western and Northern European markets are already deregulated to a great extent, while Southern and Eastern European markets are less deregulated.

The United States usually have a highly deregulated market but not all states have separated the retail from the distribution operator; Canada also has deregulated markets with Alberta and Ontario being the most deregulated provinces. In Oceania, both Australia and New Zealand have highly deregulated markets in electricity with active involvement of the private sector.

Countries across Asia such as Japan, South Korea, Taiwan, Malaysia, Thailand, Philippines and Singapore have opted for market deregulation in a bid to create sustainability.

Japan is aiming for a complete deregulation of its retail market by 2017 with reforms in electricity and gas markets. The Fukushima event was the main driver of the energy policy being revisited.

Japan initiated its electricity market deregulation process last year April and it is steadily becoming one of the world's largest deregulated electricity markets. If successful, the change could result in a vastly modernized energy sector resulting in lower rates and a more prosperous economy overall. The deregulation could see Japan advance innovation and even become a model for the Asian region.

Malaysia has introduced deregulation to its gas and power sector and has paved the way for the introduction of Independent Power Producers (IPPs) to the supply function of the sector, helping the government to reduce the costs and administration involved in the exploration of new natural gas fields.

Thailand, as a part of International Monetary Fund and World Bank recommendations, unbundled the Electricity Generating Authority (EGAT) assets and introduced laws for market deregulation. Since 2010, it offers new financial products that target huge market capitalization.

The Philippines's Energy Regulatory Commission facilitated the privatization of the National Power Corporation which worked very well in the urban centers, with fully liberated markets benefitting urban consumers. However, providing services to rural markets competitively remains a challenge.

The national electricity market of Singapore, under the supervision of the Electricity Market Authority (EMA), facilitates the competitive sale of electricity to wholesale and retail markets. It introduced large consumers to the retail electricity industry with contestability reaching 45% by 2010 with a view of to eventually achieving 100% by 2020.

Pollution and overcapacity is China's reason for market deregulation. Pollution is a major driving force behind China's reform as cheap coal and overcapacity encourage wasteful consumption patterns. This stands in the way of the government's efforts to improve energy efficiency and cut pollution.

China's large scale investments in wind and solar energy are being under-used within the current system, which is too static to effectively incorporate fluctuating green energy generation rates, resulting in waste and the threat of power cuts.

The country is a big energy consumer, representing 25% of the world's energy consumption. Electricity distribution and transmission are critical to China's growing economy.

The electricity reforms began with a pilot project in Shenzhen, in 2014, and where expanded to five more regions in 2015, with enterprises seeing savings of 854.6 million USD as result. Similarly, direct energy sales were expanded to seven more cities in 2015. The government is set to expand the program to ten more provincials, and one to two regional power grids in 2016 (including Beijing, Tianjin, Chongqing, and Guangdong), and the whole country by 2017. The government will be monitoring the progress of the pilot project until 2018.

The regulator aims to complete the revamp of transmission and distribution tariffs by the end of this year, and will start trial spot market power trading by the end of 2018 and fully operate it in 2020. It also aims to complete work related to the opening of the retail market to new players after state-run monopolies are fragmented.

By shifting to a deregulated market, the government wants to use market forces to phase out inefficient and less environmentally friendly producers out of the market.

With the market setting prices at various bidding increments, efficient producers will now be given the chance to properly use their assets, under-bidding less competitive producers. As a result, China's ageing and "dirty" generators will be forced to operate at peak consumption hours, thereby reducing pollution levels.

Although the world is moving towards deregulation, most of the markets have not yet seen an efficient and effective competition as these markets are still dominated by a small number of large companies. In fact, this issue has been identified by most regulators who are actively encouraging the new market entrants and especially new technologies to transform the market and its operation, leading to a higher level of competition and transparency benefiting the consumers.



## 4 THE PROBLEM IN DETAIL

### 4.1 Monopolistic Players

Legacy, vertically integrated players still hold majority shares of the deregulated energy market in the world, which has often created monopolistic behaviors leading to poor customer service and unreasonable and arbitrary pricing. With limited transparency between the producers and consumers, market inefficiencies are often transferred to small renewable energy producers and end customers.

Vertical integration is a model common to many European energy markets. In theory, vertical integration delivers efficiencies and reduces costs to the company. The nature of electricity generation assets, which are expensive to build and have a long life, makes vertical integration an attractive structure for companies to help reduce future risks. This is because the electricity generator will always have a buyer for some or all of its output at a price that the generator determines. This provides a high-level hedge for fluctuating relative profitability across the wholesale and retail sides of the electricity market. Vertically integrated companies can also avoid credit and collateral costs. But as well as helping manage risk, vertical integration is a business model that inherently lacks transparency. The different divisions or businesses – electricity generation, gas production, energy retail – can be sister businesses or divisions within the same company. While there will be separate management for each business division, these all fall within the management of a single group board. As a result, it is impossible to see the dynamic or relationship between the different business divisions. For example, to what extent is one business arm exerting pressure on the other? The dynamics between the different divisions will affect the price consumers pay and may differ between companies.

In addition, monopolistic behaviors can affect the consumers negatively as follows:

- Monopolies restrict output onto the market to exploit its dominant position over a period, or to drive up the price.
- There is asymmetric information. The monopolist may know more than the consumer and it can exploit this knowledge to its own advantage.
- Monopolies have no incentive to reduce average costs to a minimum.
- Monopolies can create barriers to entry for new entrants due to high startup capital costs and economies of scale with their high volumes.

### 4.2 Inefficient Operating Environment and Trading Platforms

The nature of electricity adds complexity to the wholesale electricity market. This is because electricity is unlike other commodities. It is impossible to trace electricity from a particular generator to a particular customer and electricity is rarely stored (storage is very expensive and where it does occur tends to be in the form of hydro). In addition, there are very tight physical parameters, such as frequency and voltage, that must be maintained when it is transported via the grid system that requires second by second management across the system. The energy trading in most countries is highly regulated, technical, and capital intensive. For instance, during the trading process on day-ahead markets, electricity producers who want to sell power to the spot market must send their sale offers (for the amount of electricity they are prepared to deliver at various prices during the 24 hours of the following day) to the power exchange by noon on the day before the power is delivered to the grid. This may lead to the reliance on erratic pricing in the energy trading by energy providers.

Therefore, there are many problems in retail electricity and gas supply today:

- The current energy-trading environment has limited the access to a few, specialized wholesale energy traders. On the other hand, it does not create any direct connection between energy producers and energy consumers, limiting the potential transparency between the parties.
- Market entry for the household and SME consumer segment for private electricity suppliers is currently not viable because of the expensive infrastructure and process automation necessary to handle a large number of consumption places and the long pay-back periods behind the low volumes.
- Hectic, complicated tariffs systems are confusing for the final customers.

## 5 DETAILS OF THE SOLUTION

### 5.1 Amazon of Energy

#### How will this work?

The Restart Energy Democracy Platform connects energy producers and traders with retail customers around the globe in a transparent, decentralized manner that creates value for all the parties by employing a) blockchain to remove several layers of costs associated with bureaucracy and transactions costs and b) a decentralized supply service to end customers. The inherent structure of the system is designed for fast scalability and global applicability in all deregulated energy markets using the same proven methods that helped the company to achieve its fast growth in EU market.

Producers will be able to sell their energy at a price 30% higher compared to the wholesale price due to high numbers of low volume retail customers that in turn will pay 30% less using existing grid infrastructure by rearranging the way transactions are settled in a transparent manner using blockchain.

Energy virtually sold by producers to consumers on the RED Platform is tokenized and delivered worldwide. The RED Platform software automatically matches the value of internal KW Tokens depending on local energy rates.

#### Energy supply as a service

Existing private energy providers and energy producers in deregulated markets will have to purchase MWAT Tokens to gain access to the RED-P and will benefit from the process automation and retail customer base with better margins without associated transaction capital costs and zero risks.

Electricity and gas consumers and producers accessing RED-P will be represented by Restart Energy when switching energy providers, payments, and other related services. At the same time, Restart Energy will sign contracts with local electricity and gas suppliers for providing the energy supply as a service, sales, marketing, IT and process automation infrastructure to supply to large numbers of low volume consumers.

## MARKET ROLES UNDER A DECENTRALIZED TRANSACTION MODEL

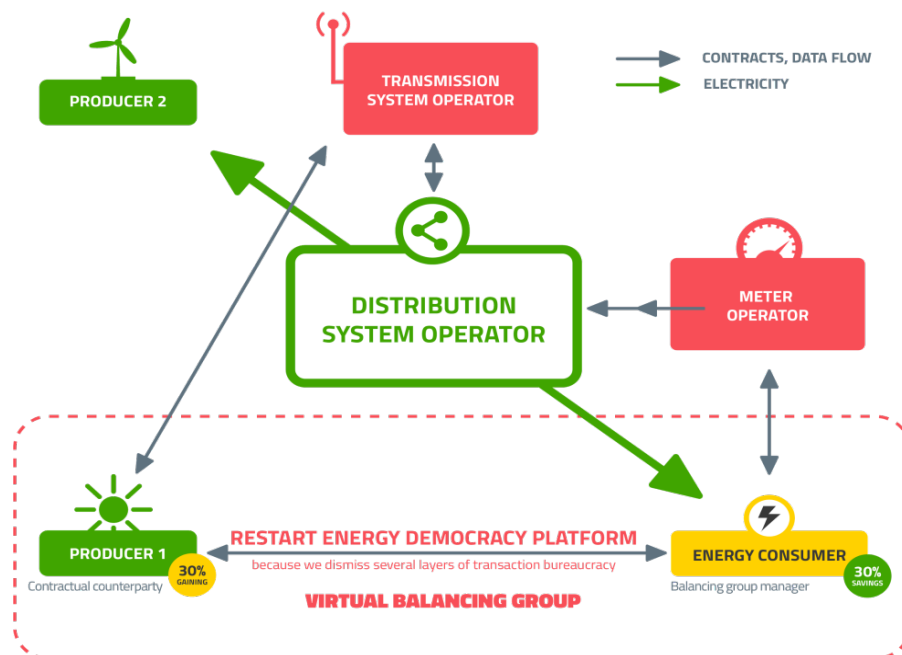


Fig. 8 Market roles under a decentralized transaction model

### 5.2 Restart Energy Democracy Platform (RED-P)

The global Restart Energy Democracy platform (RED-P) software allows consumers and producers to register and change supplier, compare tariffs, see consumptions and pay invoices with cryptocurrency and tokens. The platform empowers users to buy, sell and trade energy among each other – worldwide.

Restart Energy, provides the sales, marketing and other infrastructure including invoicing systems and process automation systems necessary for supplying energy to a large number of consumers to local private energy providers around the world while receiving a fee per unit of consumption as its revenue.

RED-P provides transparency and improves efficiency throughout the value chain under its control. It uses several innovative systems and processes, including web and mobile apps, wireless metering and effortless online switching of suppliers with superior customer service and zero bureaucracy, enabling consumers to effectively acquire and manage their energy needs and achieve savings.

Restart Energy uses the blockchain technology as the basis of this platform to apply its inherent nature of transparency, decentralization, and security.

The model is one that works in a global context and will be implemented across all power markets, which are becoming increasingly deregulated. The Chinese power market, which has always been closed is also opening a 500 billion USD market in 2020.

Restart Energy brings the following features/benefits to its consumers, which has resulted in a far superior service compared to the legacy players:

- **Web and mobile app:** All our services are accessible via a web interface through a web browser and via a smartphone through Restart Energy mobile app supporting both iOS and Android.
- **P2P energy exchange:** The decentralized energy platform will enable anyone to trade energy products using tokens, transforming the energy sector.
- **Wireless metering:** Energy consumption metering is available online via the web and mobile app and therefore accessible from anywhere. In addition, consumers can set notifications when the consumption exceeds certain thresholds.
- **Online switching of suppliers:** Switching energy or gas supplier will be done online
- **Transparent & simple invoicing:** Restart Energy has implemented a simple and transparent invoicing system which can be easily understood by any non-technical person.
- **Zero bureaucracy:** Restart Energy has optimized all its customer engagement points throughout its value chain to eliminate any bureaucracies.
- **Excellent customer service:** Restart Energy provides its customer support via phone, email, and online chat 24/7.
- **Reduced costs:** By removing several layers of transaction costs, consumers will purchase energy 30% cheaper while producers will sell energy at a price that is 30% higher than the wholesale price adding value to all the parties.
- **100% renewable energy:** Consumers have the option to choose up to 100% renewable energy service.

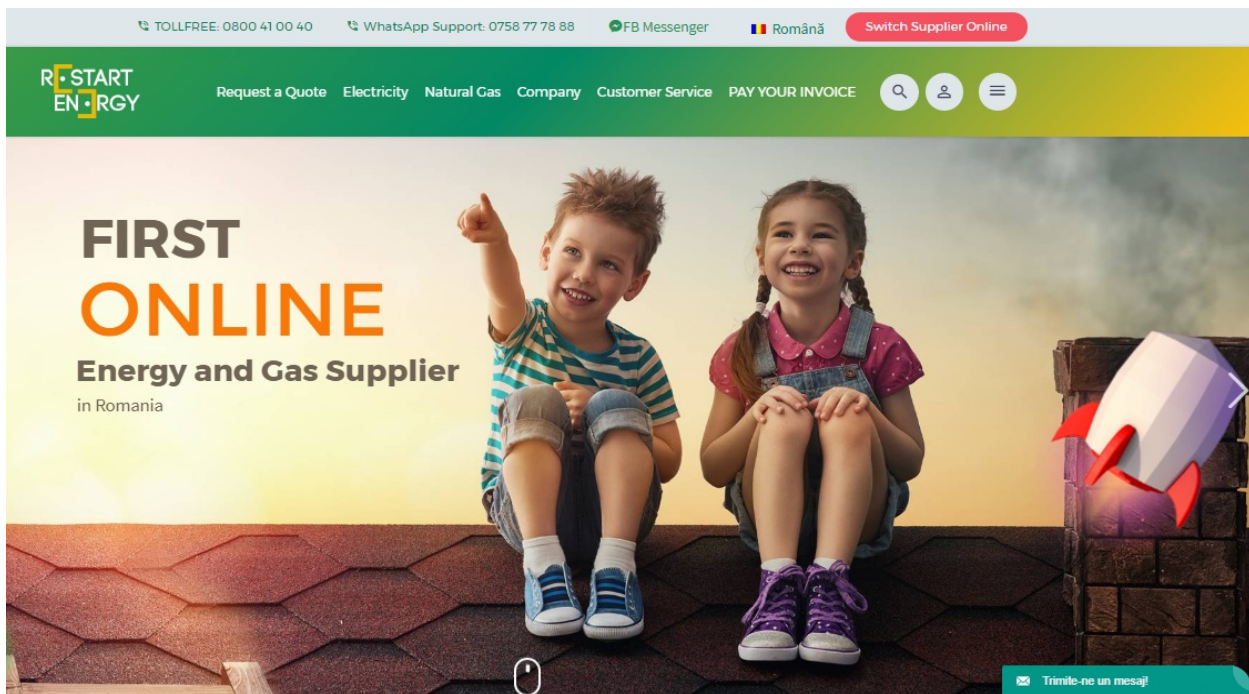


Fig. 9 Image Restart Energy website ([restartenergy.ro](http://restartenergy.ro))

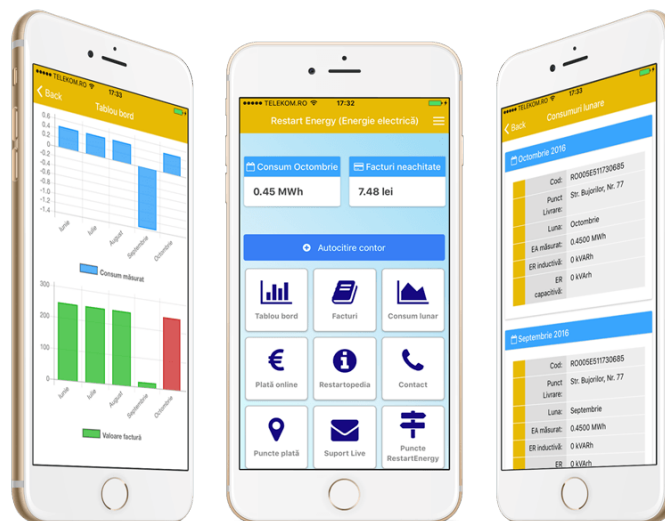


Fig. 10 Image Restart Energy mobile app

Restart Energy enables its customers to pay their bills for both energy and gas through the Zebra Pay<sup>2</sup> cash terminals with Bitcoin. Zebra pay provides a possibility to buy Bitcoin at large network of terminals in Romania, where users can buy Bitcoins for cash at more than 350+ physical locations. Bitcoins are transferred immediately at the moment of purchase.

<sup>2</sup>Zebra Pay is a universal payment service based in Romania that operates the largest network of self-service terminals in Romania.

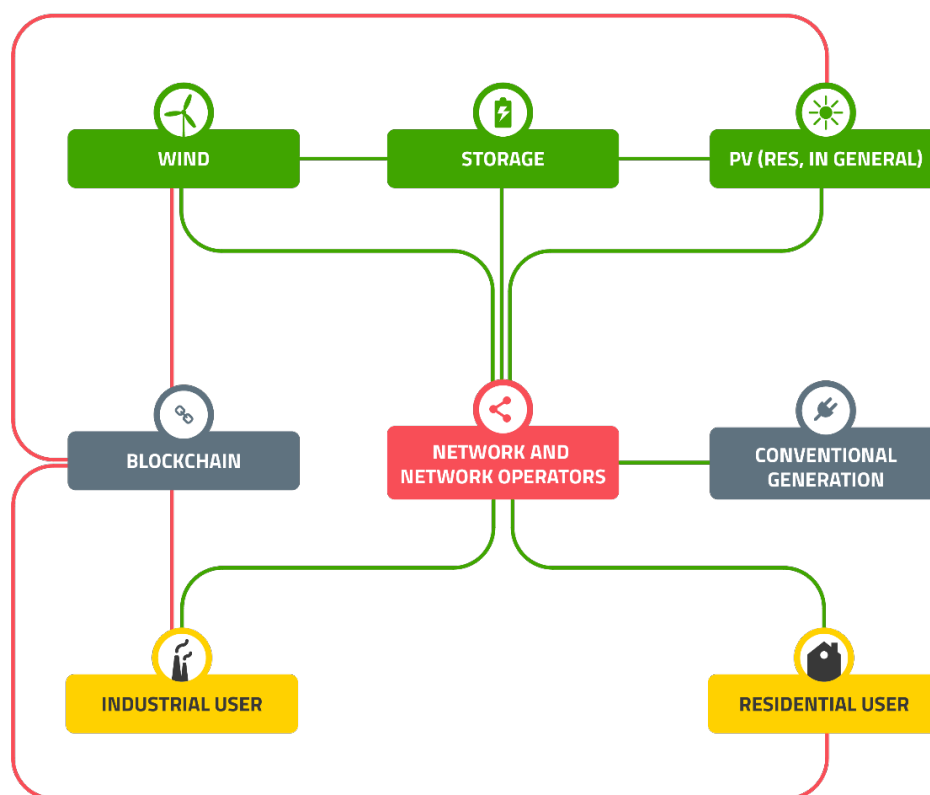
### 5.3 Decentralized Energy Trading Platform

Restart Energy is setting up a decentralized energy trading platform (RED-P) based on blockchain technology, which will enable anyone to trade energy using the tokens or fiat currencies in any deregulated energy market in the world. This will revolutionize the way people purchase their energy needs and the way energy producers sell their production.

**The proposed platform in its very nature will provide the following benefits:**

- Power to the people: everyone will be able to register, buy, sell, consume and trade energy through MWAT on the crypto-energy trading platform
- Open an entire new market: facilitate and secure a transparent peer-to-peer exchange and contribute to developing cryptocurrencies as a payment instrument increasing demand
- Restart Energy will also be able to provide delivery and offtake of purchased and sold energy

### PROCESSES IN A BLOCKCHAIN-BASED SYSTEM



### TRADING PLATFORM – RESTART ENERGY DEMOCRACY PLATFORM

— ELECTRICITY  
— PAYMENT/FEE

**Fig. 11** Processes in a blockchain-based system

The platform will work as a global integrated energy services platform for retail energy customers, energy producers, and suppliers.

## 5.4 Virtual Balancing

Many TGE's related to direct peer to peer energy exchange seem to lack the knowledge of how these transfers can be physically executed and accounted for considering that any kind of energy exchange needs to pass through the existing grid and requires accounting and balancing responsibility. The key to being able to provide direct energy exchanges between consumers and producers is closely related to the way the energy systems are balanced by the transport network operators (TSO).

One of the main features of the RED-P is that it will provide virtual balancing for suppliers, consumers and producers in the same country (group) and assign balancing responsibility between the parties so that they may exchange energy among them that will be accounted in the final settlements without affecting the total quantities of energy inside the same balancing group.

In other words, if Consumer A purchases energy directly from Producer B, the quantity of active energy that was directly purchased will not appear in the monthly supply invoice. This system is only possible if all the ingredients are present mainly real time energy metering and smart AI energy forecasting that can accurately predict intermittent energy production and consumption coming from renewable sources.



## 5.5 Elements of the RED-P Ecosystem

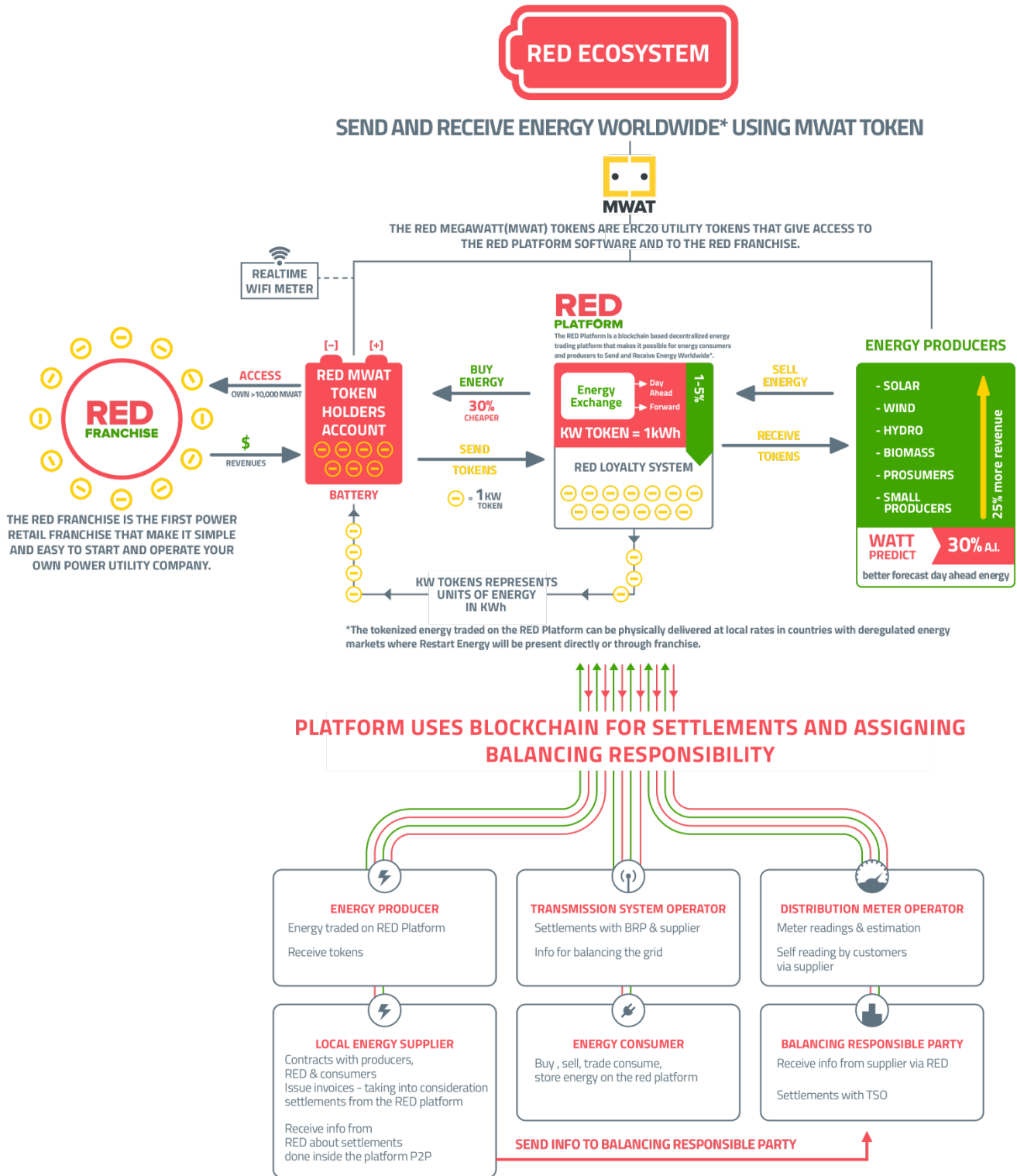


Fig. 12 RED Ecosystem

## WiFi Meters provide real time energy consumption/production

Restart Energy One provides its customers with the real time energy consumption viewing service on restartenergy.ro web site or on the mobile phone app by downloading the Restart Energy App for Android or IOS.

The specially developed Restart Energy WiFi smart meters have 0.1% precision class and are installed in the general circuit board, without any changes to the existing meter, belonging to the distribution operator, they send data regarding power quality and energy consumption in real time to Restart Energy servers. You can see this data in real time on the phone/pc. Thus, the user knows at any moment its energy consumption and cost, as well as the instant active power. This is a great tool to increase public awareness about energy efficiency and how much electric power home appliances use.

By monitoring and recording features related to the power quality distributed by the area distribution operator, namely voltage and power variations, frequency variations, harmonics, flickers, outages, Restart Energy servers automatically send notifications to the customer and the distribution operator whenever there are deviations from the Power Quality Standard.

Customers have access to various charts and data about the historical energy consumption and the consumption profile.

## Watt Predict Solar Energy Forecast Software



Watt Predict is an innovative AI learning software designed for superior solar energy forecasting. It is a system that is able to estimate electrical energy production for the next day.

[Watt Predict](#) develops a software for a more precise estimation of the quantity of energy produced by photovoltaic (PV) parks. Their mission is reducing costs and thus significantly decreasing the invoices issued by institutions responsible for imbalances for photovoltaic systems by providing a forecasting service with high accuracy and financial accessibility.

[Watt Predict](#) offers a new calculation method for forecasting the energy production from PV. In the forecast solar radiation, the most difficult component is forecasting cloudy appearance spontaneous mainframe systems and their evolution over time and space. To remove this drawback, it created and implemented:

- a mathematical forecasting the appearance of clouds by detecting areas of convergence and areas of frontier.
- a soft radar information from previous measurements to identify and anticipate the movement of cloud systems.

Developing and combining these two components, constitutes the novelty in terms of solar radiation forecast by step timetable.

The project received EU grants for research and is currently used in a research project in partnership with the European Space Agency.

Our application is based on numerical weather prediction, more specifically done with open-source WRF-ARW regional weather prediction system initiated with GFS (Global Forecast System initial data and lateral boundary conditions). We use optimization techniques such as genetic algorithms in order to better represent the nebulosity (the main impediment in forecasting the incoming radiation).

The energy produced by Solar PV parks is sold on energy markets 1 day in advance, thus a precise estimation of the quantity of energy is of supreme importance for the producers.

**Media:**

<http://armandgroup.eu/en/energy/cercetare/watt-predict/>

<http://ricap.ro/blog/companii-participante-2/watt-predict/>

<http://www.zf.ro/business-hi-tech/un-start-up-a-creat-un-sistem-care-estimeaza-productia-de-energie-a-panourilor-solare-15091843>

## 6 INDUSTRY ANALYSIS

### 6.1 Global Perspective

By 2016, the total worldwide electricity consumption reached 21,190 TWh (Terawatt hours), with 43% of the consumption coming from Asia and 27% of the consumption coming from the Americas. China and India were responsible for most of Asia's consumption: China at 58% and India at 12% respectively. In other words, China alone accounted for approximately 25% of global electricity in 2016.

Global power market is worth around 2 trillion USD per annum. The deregulation of this market largely depends on country/territory. Most of the major markets are either already deregulated or in the process of deregulating. However, the Middle East and Africa still remain largely regulated. But these two regions make up less than 8% of global electricity consumption. It is important to note that China has also recently announced that it would be starting the process of deregulation of its huge 500 billion USD electricity market by 2018.

Using power source as a metric of civilization, world energy consumption has significant implications for humanity's socio-economic-political sphere<sup>3</sup>. The world's primary energy supply amounted to 155,481 terawatt-hours (TWh) or 13,541 Mtoe<sup>4</sup> in 2014, while the final global energy consumption was 109,613 TWh or about 29.5% less than the total supply. World final energy consumption includes products such as lubricants, asphalt, and petrochemicals which have chemical energy content but are not used as fuel. This non-energy use amounted to 9,404 TWh (809 Mtoe) in 2012.

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<sup>3</sup>[https://en.wikipedia.org/wiki/World\\_energy\\_consumption](https://en.wikipedia.org/wiki/World_energy_consumption)

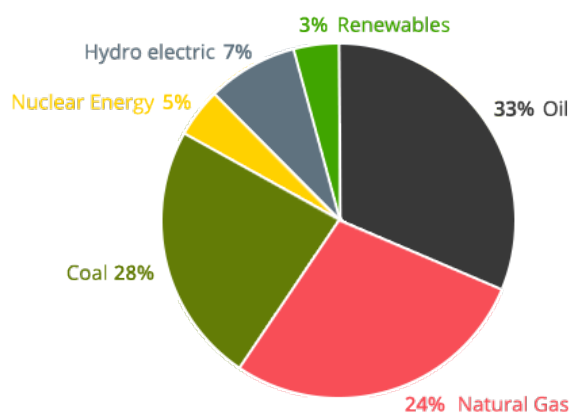
<sup>4</sup>Million Tons of Oil Equivalent

## Globally, Primary Energy: Consumption by fuel\* in 2016:

Million tonnes oil equivalent	Oil	Natural Gas	Coal	Nuclear Energy	Hydro electric	Renew-ables	Total
Total World	4418.2	3204.1	3732.0	592.1	910.3	419.6	13276.3

- Notes: Oil consumption is measured in million tons; other fuels in million tons of oil equivalent.

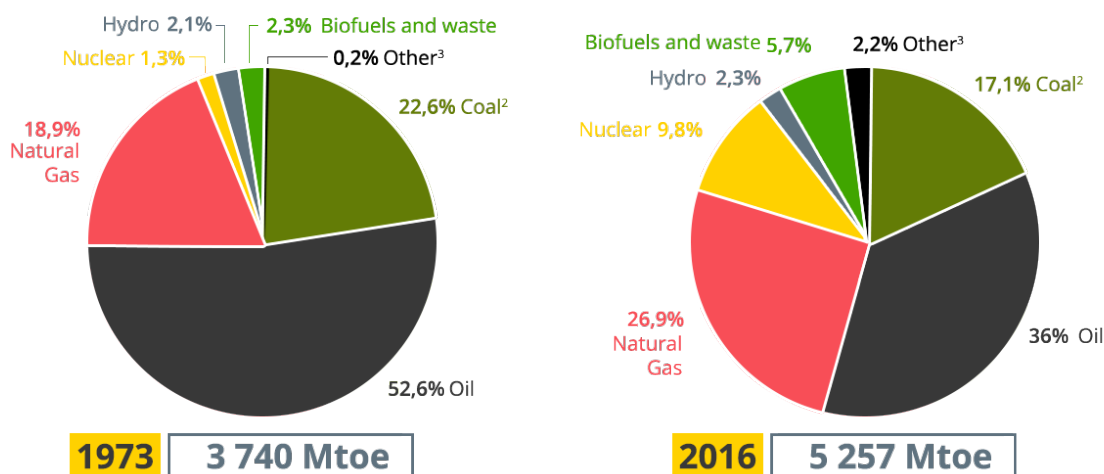
## Total Primary Energy Supply



**Fig. 13** Total primary energy supply of 13,276.3 million tons of oil equivalent by source in 2016 (BP, 2017)

Source: <https://www.bp.com/content/dam/bp/en/corporate/pdf/energy-economics/statistical-review-2017/bp-statistical-review-of-world-energy-2017-full-report.pdf>

## 1973 and 2016 fuel shares of TPES



1. Excludes electricity trade.  
 2. In these graphs, peat and oil shale are aggregated with coal.  
 3. Includes geothermal, solar, wind, tide/wave/ocean, heat and other.

**Fig. 14** Comparison 1973 and 2016 fuel shares of TPES<sup>5</sup>

Source: *iea.org*

According to the 2017 Global Energy Market Trends Report<sup>6</sup> by Schneider Electric, the global energy landscape is continuing to evolve. The level of complexity makes it increasingly difficult for organizations to anticipate and react to the variables that will have the greatest impact on their business. Within those same companies, these effects are likely to be felt across multiple departments across stakeholders around the world.

### Renewable Energy Industry Outlook<sup>7</sup>

Throughout 2016, renewables effectively competed against fossil fuel generation in power markets and for procurement contracts around the world. It is clear that renewable energy resources have outgrown the "alternative" label.

Due to the declining costs of solar and wind technologies as well as the anticipation of a more carbon-constrained future, today the global growth of renewable energy is increasingly driven by voluntary procurement by utilities and corporations. We have seen an especially rapid decline in the global levelized cost of electricity (LCOE) of solar photovoltaic (PV) generation as well as onshore and offshore wind.

These improving economics are empowering many customers to seek greater control over their energy choices, and a movement toward localized energy procurement seems to be underway. We're seeing many municipalities across the world take advantage of community choice aggregation (CCA) policies, and community solar has taken off too. It is this strong demand from customers and communities that seem to have allowed renewables to shed the "alternative" label and transition into mainstream resources.

<sup>5</sup><https://www.iea.org/publications/freepublications/publication/KeyWorld2017.pdf>

TPES - Total primary energy supply

<sup>6</sup><http://www.se-library.com/2017-global-trends.pdf>

<sup>7</sup><https://www2.deloitte.com/us/en/pages/energy-and-resources/articles/renewable-energy-outlook.html>

## 6.2 Local Perspective

Romania is the largest oil and gas producer in Central and Eastern Europe<sup>8,9</sup>, but a net importer on both counts. According to BP's Statistical Review of World Energy (2016)<sup>10</sup>, Romania's proved reserves at the end of 2015 were 100 million tons of oil (with a reserve to production ratio of 19.5) and 100 billion cubic meters (bcm) of gas (with a reserve to production ratio of 10.4). Domestic gas production covered in excess of 95% (97.61%) of total consumption in 2015.

The main sources of electricity generation in Romania (approximate percentages valid for 2015) are as follows: Coal 27.63%; Hydro 27.15%; Nuclear 18.27%; Gas 14.34%; and Renewable sources (other than Hydro) 12.51%. Although numerous facilities have been commissioned in the last five to seven years, only 12.51% of the total electricity generated and dispatched into the grid in 2015 was produced by energy facilities other than hydropower. CEZ owns the biggest onshore wind farm from the EU in Romania, the Fântânele-Cogealac wind park, with a capacity of 600 MW.

The main electricity generation companies are state-owned: Nuclearelectrica, the operator of the only nuclear power plant in Romania, having a capacity of 1,400 MW; Hidroelectrica's system of hydropower plants; and around 20 thermal coal-fuelled power plants. All these companies together generate around 70% of the country's total electricity production.

According to data published by TSO Transelectrica, Romania produced 8.1 TWh of electricity from renewable energy sources in 2015, a 3% increase from the previous year. Renewable energy thus accounted for 16% of the 51.74 TWh used in 2015. According to the Energy Ministry, Romania has met its objective of reaching a total renewable energy of 24% for 2018; Romania has already reached 27%.

## 6.3 Competition

Current competitors of Restart Energy are the legacy energy suppliers owning distribution companies that also are licensed to sell their electricity and natural gas. By April 25, 2017, there were 258 licensed companies for supplying electric power and/or natural gas. Of them, 173 are registered for supplying electric power, 128 for natural gas (43 companies are licensed for both services).<sup>11</sup>

There are eight major distribution and system operators (DSOs) for electric power, one per region, which supplies to other regional distributors or companies. Some of them are state-owned while others are privately owned. Below are the privately owned companies:

1. **Enel** (<https://www.enel.ro>): Enel is a global, vertically integrated energy company that manages and upgrades the electricity networks in the three regions of Banat, Dobrogea and South Muntenia.
2. **CEZ** (<http://www.cez.ro/ro>): CEZ is the Czech national energy company that owns one distribution region in Romania.
3. **E.ON** (<https://www.eon-energie-romania.ro/>): Eon is a German, vertically integrated energy company that supplies natural gas and electricity in Romania.
4. **Electrica** (<https://www.electrica.ro/>): Electrica is a leader in the electricity distribution and supply market in Romania, as well as one of the most important companies in the energy services sector.

<sup>8</sup><https://www.globallegalinsights.com/practice-areas/energy/global-legal-insights---energy-5th-ed./romania>

<sup>9</sup>[https://ec.europa.eu/energy/sites/ener/files/documents/2014\\_energy\\_market\\_en\\_0.pdf](https://ec.europa.eu/energy/sites/ener/files/documents/2014_energy_market_en_0.pdf)

<sup>10</sup> <https://www.bp.com/content/dam/bp/pdf/energy-economics/statistical-review-2016/bp-statistical-review-of-world-energy-2016-full-report.pdf>

<sup>11</sup><https://www.export.gov/article?id=Romania-Energy>

After the launch of RED-P, Restart Energy will enter more than 45 deregulated energy markets around the world to serve the household and SME consumer segments.

### Other decentralized energy platforms

There are several other projects that aim to bring innovation to the energy market/trading with the use of the blockchain technology. These projects have raised, or are in the process of raising, funds through token sales.

Some of the notable projects are:

- **WePower** (wepower.network): We Power aims to build a decentralized green energy trading platform. WePower is planning to launch its activity in Spain in 2018.
- **Energi Mine** (energimine.com): Energi Mine aims to build a decentralizing global energy market by rewarding energy efficient behavior.
- **Power Ledger** (powerledger.io): The Power Ledger aims to build a decentralized platform that enables interoperability between diverse market management/pricing mechanisms and units of electricity by way of tokens.

**Table** Comparison of RED-P with the other proposed platforms

Parameter	Restart Energy	Wepower	Power Ledger	Energi Mine
Licensed EU Energy Provider	Yes	No	No	No
Company with revenues and track record	Yes	No	No	Yes
Existing substantial customer base	Yes	No	No	No
Loyalty Bonus once registered	Yes	No	No	No
Tokens give access to Energy Franchise Business	Yes	No	No	No
Job creating business ecosystem	Yes	No	No	No
Agreements in place with energy producers for transferring energy to own token holders	Yes	Yes	No	No
Provides a decentralized energy trading platform for P2P direct exchange	Yes	Yes	Yes	Yes
Blockchain-based, smart contract token	Yes	Yes	Yes	Yes
Token can be used to settle energy bills	Yes	Yes	Yes	Yes
Allows physical delivery of energy	Yes	No	No	No
Allows energy producer to raise funds	Yes	Yes	No	No
Global scalability of business model	Yes	No	No	No
Deploy its own smart WiFi meter	Yes	No	No	No



Allows online switching of existing supplier	Yes	No	No	No
AI-based software for prediction of Solar energy production	Yes	No	No	No
Token can be used by companies as reward to onboard new customers	No	No	No	Yes
Allow third party applications on its platform	No	No	Yes	No
First mover advantage with market ready system	Yes	No	No	No
Consumers receive green certificates for using renewable energy	Yes	No	No	No
Company develops own standard green certificates	Yes	No	No	No
Project implementation depends on regulatory or system changes	No	Yes	Yes	Yes

## 7 WHY BLOCKCHAIN

A [public] blockchain is a continuously growing public ledger of records that is an independent, decentralized, verifiable, and permanent database coexisting in multiple locations shared by a community<sup>12</sup>. The records are arranged in data batches called blocks that follow a cryptographic validation method. That means each block references and identifies the previous block by a hashing function, forming an unbroken chain.

Functionally, a blockchain can serve as an open, distributed ledger that can record transactions between two parties efficiently and in a verifiable and permanent way. For use as a distributed ledger, a blockchain is typically managed by a peer-to-peer network collectively adhering to a protocol for validating new blocks. Once recorded, the data in any given block cannot be altered retroactively without the alteration of all subsequent blocks and a collusion of the network majority, which is nearly impossible.

### 7.1 How Blockchain Works

There are three main components that need to be combined to create a [public] blockchain. They are:

1. Private key cryptography
2. A distributed network with a shared ledger
3. An incentive to service the network

#### Private Key cryptography

The main purpose of this component of blockchain technology is to create a secure digital identity reference. Identity is based on possession of a combination of private and public cryptographic keys. Each party that wishes to transact over the internet will hold a private key and a public key. The combination of these keys can

<sup>12</sup><https://en.wikipedia.org/wiki/Blockchain>

be seen as a dexterous form of consent, creating extremely useful digital signatures. In turn, this digital signature provides strong control of ownership.

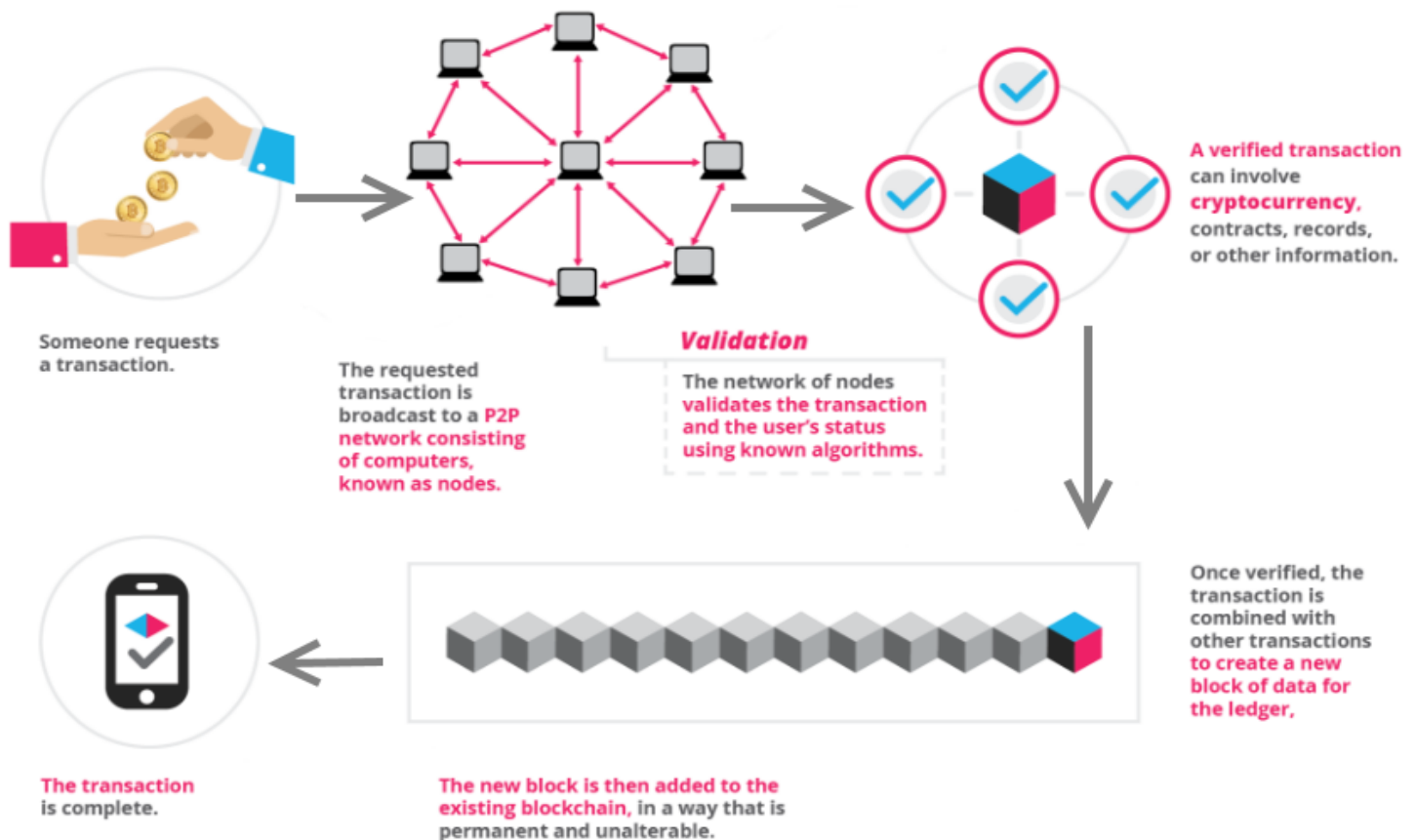
### A distributed network with a shared ledger

A network of so-called computing "nodes" is required to maintain a blockchain. A node can be any computer connected to the blockchain network using a client that performs the task of validating and relaying transactions. A node gets a copy of the blockchain, which is downloaded automatically upon joining the blockchain network. When cryptographic keys are combined with this network, a useful form of digital interactions emerges. The process begins with one party broadcasting a block containing a digital signature, timestamp and relevant information to all nodes in the network.

### An incentive to service the network

The nodes in a blockchain offer computer-processing power to service the network. There is a reward available for the nodes typically in cryptocurrency in exchange for their service.

Cryptocurrency units must be unique to be owned and have value. To achieve this, the nodes serving the network create and maintain a history of transactions for each currency unit by working to solve proof-of-work mathematical problems and voting with their CPU power, expressing their agreement about new blocks or rejecting invalid blocks. This process is often called mining. When a majority of the miners arrives at the same solution, they add a new block to the chain. This block is time stamped and can also contain data or messages. The type, amount and verification type can be different for each blockchain. It is a matter of the blockchain's protocol – or rules for what is and is not a valid transaction or a valid creation of a new block. The process of verification can be tailored for each blockchain. Any needed rules and incentives can be created when enough nodes arrive at a consensus on how transactions ought to be verified.



**Fig. 15** Infographic: How blockchain works

Source: *blockgeeks.com*

## 7.2 Advantages of Blockchain Technology

Blockchain technology has the following inherent advantages.

**Immutability:** Nothing on the blockchain can be changed without the consensus of the network. Any confirmed transactions on the blockchain cannot be changed.

- ✓ **Permanence:** What happens on the blockchain stays on the blockchain. A public blockchain will act as a public ledger, meaning that as long as the blockchain remains operative, the data on it will be accessible.
- ✓ **Removal of intermediaries:** The P2P nature of the blockchain does away with the need for intermediaries and users to interact directly with one another. With the removal of intermediaries and the distributed ledger being updated in real-time by the miners, any data inputted on the blockchain is transmitted and stored automatically.
- ✓ **Decentralization of consensus:** With no central authority acting as a clearinghouse for transaction validation, the effort required to reach consensus is shared between the miners.
- ✓ **Transparency (pseudonymity):** Public blockchains can offer full transparency of the transactions carried out on the network while safeguarding the privacy of its users through pseudonymity since only the transacting addresses are shown.
- ✓ **Speed:** Blockchain results in a much faster process than a centrally controlled ledger.
- ✓ **Lower costs:** The removal of intermediaries will result in lower transaction costs.
- ✓ **Security:** With the encryption through cryptography, no one other than the sender and recipient can access the data sent across the blockchain.

## 7.3 Blockchain Smart Contracts

Blockchain technology enables the coding of simple contracts known as "smart contracts" that will execute when specified conditions are met. It is capable of facilitating, executing, and enforcing the negotiation or performance of a contract/agreement. The entire process is automated and can act as a complement, or substitute, for legal contracts with superior security to traditional contract laws and reduce other transaction costs associated with contracting.

Smart contracts are a very useful feature for the blockchain technology that can pave the way to a completely new scope of commercial and other applications of the blockchain technology as it can remove the intermediary required in commercial transactions.

```

/* Allow another contract to spend some tokens in your behalf */
function approve(address _spender, uint256 _value)
    returns (bool success) {
    allowance[msg.sender][_spender] = _value;
    return true;
}

/* Approve and then communicate the approved contract in a single tx */
function approveAndCall(address _spender, uint256 _value, bytes _extraData)
    returns (bool success) {
    tokenRecipient spender = tokenRecipient(_spender);
    if (approve(_spender, _value)) {
        spender.receiveApproval(msg.sender, _value, this, _extraData);
        return true;
    }
}

/* A contract attempts to get the coins */
function transferFrom(address _from, address _to, uint256 _value) returns (bool success) {
    if (balanceOf[_from] < _value) throw; // Check if the sender has enough
    if (balanceOf[_to] + _value < balanceOf[_to]) throw; // Check for overflows
    if (_value > allowance[_from][msg.sender]) throw; // Check allowance
    balanceOf[_from] -= _value; // Subtract from the sender
    balanceOf[_to] += _value; // Add the same to the recipient
    allowance[_from][msg.sender] -= _value;
    Transfer(_from, _to, _value);
    return true;
}

/* This unnamed function is called whenever someone tries to send ether to it */
function () {
    throw; // Prevents accidental sending of ether
}

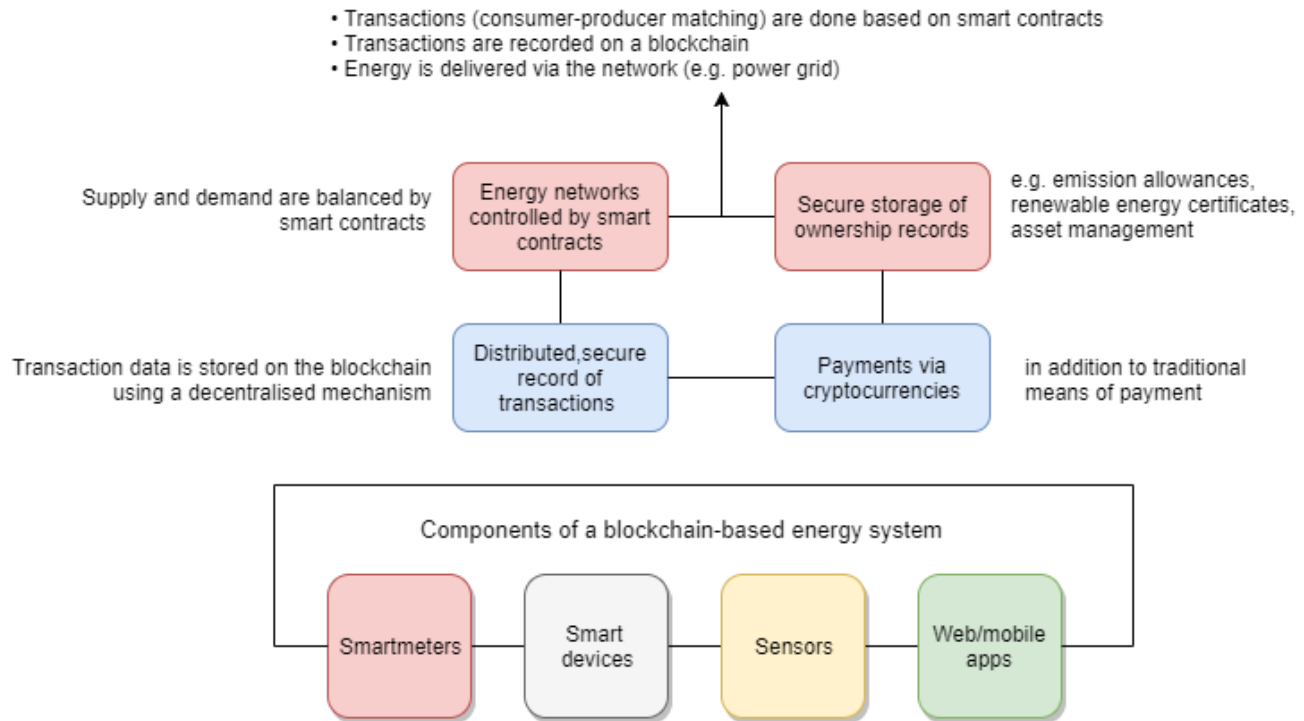
```

**Fig. 16 Image** An example smart contract code on Ethereum blockchain

Source: [blockgeeks.com](http://blockgeeks.com)

## 7.4 The RED Platform Design

Restart Energy Democracy platform (RED-P) will connect the final consumer to the producer directly using the existing grid via smart contracts within the frame and license of local private energy providers by managing their entire supply activity as a service and including them in the same virtual balancing group managed by the system.



**Fig. 17** Schematic of RED-P

An energy supplier buys energy and sells it in retail, ensuring that production and consumption are matched with hourly settlements. Otherwise, it can lose money by not gaining the extra energy that was not consumed and by paying a high bill for the energy it did not have.

Individual quantities exchanged inside the system will not affect the total energy balance because they are settled inside the system. This means it is possible for someone who owns an on-grid solar rooftop PV system to sell the energy he injects into the grid at peak times to someone who auctions for that energy on the RED-P using blockchain and the intelligent wireless meters and watt predict technology developed by Restart Energy to track and account for these energy exchanges inside the same virtual delimited balancing group.

It will enable its users to buy, sell, trade electrical energy using KW tokens issued by the company. Restart Energy will allow physical delivery and offtake of the purchased or sold energy in the states where the company is licensed to supply or has agreements in place with local suppliers.

Restart Energy's wireless intelligent meters work together with the RED-P. The wireless meters developed by Restart Energy will measure produced and consumed energy and send this data using existing WiFi connections in real time to Restart Energy servers and the RED-P allowing for instantaneous P2P trading.

### **Intelligent WiFi metering system**

Restart Energy invested in a wireless, smart metering system that estimates power production for the next day. It takes data from different sources such as historical trends of sunlight and solar radiation, cloudy days at different time and location. The system recognizes the previously measured information, and the radar software anticipates the cloud movement.

To make its RED-P more efficient and accurate, Restart Energy will integrate its smart metering system with the Watt Predict software with producers for hourly settlement. This system alone will help to predict the energy output and will allow for 30% more efficient energy transactions, settlements, supply, and trade.

### **Existing energy supply software suite**

Our software engineers have developed the first integrated software suite for the Romanian power and gas markets.

### **myRestart Mobile App**

Restart Energy developed a mobile application for Android and IOS to service its energy customers. The Restart Energy mobile app allows customers to see their energy consumption in real time (if they have wifi meters installed), send meter reading, view historical consumption, see and pay invoices, 24h support, send messages and notifications, update personal info, view scheduled grid repairs and latest news on Restartopedia.

The application can be downloaded here:

<https://play.google.com/store/apps/details?id=ro.restartenergy.app>

## 8 PROMOTION STRATEGY AND MARKET TRACTION

The market development of Central and Eastern Europe is at an intermediate phase between Western markets and quickly growing emerging markets. Different stages being already accomplished we can find different levels of market maturity present.

Evolving rhythms are different from market to market and also Balkans countries are characterized by being significantly more fragmented compared to Western Europe.

Restart Energy development started on Romanian market, the biggest market in the Balkans.



Romania, as part of the European Union single market, is a fast developing, upper-middle income mixed economy with a skilled labor force. It is the 16th largest in the European Union by total nominal GDP and the 13th largest based on purchasing power parity.

The Romanian economy is the 49th-largest economy in the world (out of 190 countries measured by IMF) with 204,943 billion USD annual output, and ranks 63rd in the world within terms of GDP per capita measured by purchasing power parity<sup>13</sup>. Romanian economy is expected to grow by 7% in 2017. Based on current economic growth, it's expected to hit 1 trillion of USD PPP before 2035. Romania continues to be one of the leading nations in Central and Eastern Europe for attracting foreign direct investment (FDI): the inward FDI in the country with a cumulative FDI totaling more than 170 billion USD since 1989.

<sup>13</sup> <https://www.imf.org/external/pubs/ft/weo/2017/02/weodata/weoselco.aspx?g=2001&sg=All+countries>



Romania is the largest electronics producer in Central and Eastern Europe.

Up until the late 2000s financial crisis, the Romanian economy had been referred to as a "Tiger" due to its high growth rates and rapid development. Until 2009, Romanian economic growth was among the fastest in Europe (officially 8.4% in 2008 and more than three times the EU average). Romania is rich in iron ore, oil, salt, uranium, nickel, copper and natural gas. The country is a regional leader in multiple fields, such as IT and motor vehicle production.

Bucharest, the capital city, is one of the largest financial and industrial centers in Eastern Europe. According to Eurostat Romania posted the biggest economic growth in EU in 2016 by more than 6% increase of GDP.

The projections for economic growth in Romania for 2018 and 2019 were both lifted by 0.3 percentage points to 3.7% and 3.5%, respectively, the World Bank said in its June 2017 Global Economic Prospects (GEP) report. Restart Energy's strategy outlined below is designed and used for the Romanian market. For the global expansion of RED to more than 35 countries, Restart Energy will develop a sales strategy tailored to each country's needs and ecosystem.

Since its inception, Restart Energy continues to grow aggressively. It has successfully developed a multichannel sales strategy by quickly identifying market opportunities and leveraging local resources such as micro-entrepreneurs through the first retail energy franchise in the European Union. Sales channels currently used for supplying energy and gas in Romania are as below:

1. **Local distribution partners** who acquire a franchise and sell energy to their long-standing customer. This strategy has proved very successful so far and will be a major contribution to the national expansion.
2. **Formation of local D2D teams** around the best local franchised partners.
3. **Own Sales Force** that includes 1 National Sales Manager, 1 Logistics Manager, 8-person Contracting Department, 7 Regional Sales Managers, 70 D2D own sales agents on a commission basis.
4. **Partnerships** with national companies like Euro GSM (largest ORANGE telecom dealer), Inter Broker (3rd largest insurance broker), GRS (largest auto insurance broker), Cashback World (largest cash-back shopping network), Romanian Post (5000+ country locations), TVSat (largest regional media & telecom company), Romanian War Veterans Organization, etc.

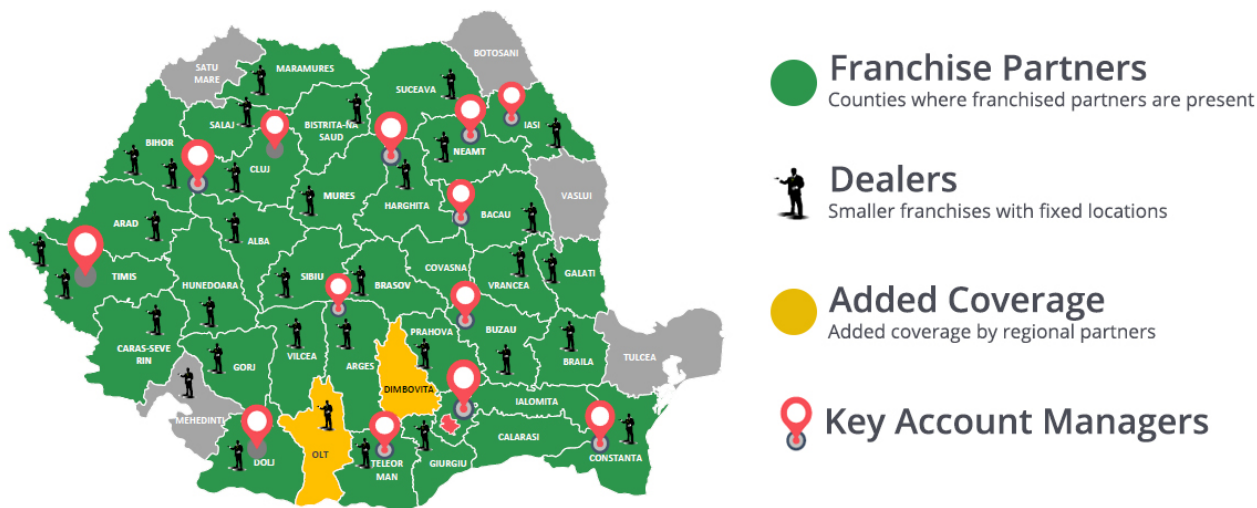


Fig. 18 Romanian National coverage

## 9 TOKEN MODEL

Restart Energy is committed to building a socially responsible business. The token generation event, in addition to being structured in accordance with all regulatory requirements, is established as a reward based crowdfunding campaign, where contributors will receive MWAT Tokens in a sale of 30 million USD. A minimum raised amount does not exist, as the company's products and services are already functional on the market.

The token model takes into consideration that energy producers will be able to sell their energy on the RED-P to smaller household and SME consumers at retail prices 30% higher compared to wholesale prices while the consumers will purchase that energy 30% cheaper compared to the normal retail price.

In exchange for access to the RED platform, energy producers and prosumers allocate between 1% and 5% of all the energy they trade on the RED platform through the RED Loyalty System to registered MWAT users. Thus, by allocating 1-5% of their energy tradings through the RED Loyalty System to the community, energy producers will be able to sell peer-to-peer the remaining 95-99% of their annual production at a price that's 30% higher than the market wholesale price (18.75% gain).

Restart Energy has agreements with energy producers currently operating more than 300 MW of renewable generation capacity to start their collaboration with the RED platform and provide energy in exchange for access to the platform and to MWAT holders. Restart Energy is in discussions for an additional 2,000 MW of existing renewable generation capacities to enter the RED-P after its implementation.

### 9.1 MWAT: Real Utility from an EU Energy Provider

MWAT will be issued by Restart Energy in the TGE (Token Generation Event) and will be necessary to access the RED platform software and the RED franchise. In addition, MWAT may be found on popular cryptocurrency exchanges, after the conclusion of the TGE, where they can be traded as desired. The initial price of MWAT will be 0.1 USD (10 US cents), during the sale.

The RED platform will provide access to green energy which the token holder can buy, use or sell to another MWAT holder with the vehicle of transfer being KW tokens (KWT). Each KWT carries a virtual charge of 1 kWh.

Token holders can consume their owned KWT or sell them on the RED platform at any time - an important feature especially if token holders happen to be located in countries where Restart Energy has not yet connected to the energy infrastructure and doesn't have a franchise in place, thus cannot deliver the energy via supply contracts.

Each MWAT token can hold up to 1,000 KWT and also enables the buying or selling of 1,000 KWT per month on the RED Platform. Thus, it can be said that MWAT tokens are a vehicle for storing and trading KWT.

Through the RED Loyalty System, energy producers on the platform will supply each MWAT that registers to the RED-P software with 0.11 KWT, once the registration process is complete.

Owning sufficient MWAT grants the holders' free access to the RED Franchises as follows:

- 10,000 MWAT** - **RED City Franchise** - allows the token holder to broker energy sales in their city of choice within their country of residence
- 100,000 MWAT** - **RED Regional Franchise** - allows the token holder to broker energy sales in an entire region of their country of residence
- 1,000,000 MWAT** - **RED Country Franchise** - allows the token holder to broker energy sales in their entire country of residence
- ~10,000,000 MWAT** - **RED Master Franchise** - gives the token holder country exclusivity regarding the brokering of energy sales and the option to create sub-franchises inside their country of residence (can be more or less than 10,000,000 MWAT, depending on country population).

## 9.2 KW Token

Transactions on the RED platform will be done using KW tokens(KWT). 1 KWT = 1 kWh and it can be purchased by the users of the RED platform with crypto and fiat currencies, in order to be consumed or sold on the RED platform.

Users can also pay their energy invoices on the RED Platform, and with partnered energy producers, with their KWT.

A user on the RED Platform can only ever store an amount of KWT equal to his MWAT balance. That is, 1,000 KWT for each 1 MWAT.

All KWT associated with an account will undergo a full reset-to-zero once each year.

## 9.3 RED Loyalty System

The nature of the platform has allowed Restart Energy to give back to the community through the RED Loyalty System, through which producers transfer platform-exclusive KWT to MWAT holders.

Through the RED Loyalty System, every MWAT that is registered on the platform will receive an initial 0.11 KWT charge from the energy producers upon completion of the registration process.

In addition to the initial charge, the RED Loyalty System facilitates the transfer of 1-5% of the monthly energy traded by producers on the platform to registered MWAT token holder accounts every month, directly proportional to the amount of MWAT tokens held compared to the total registered amount. By accessing a large retail base of p2p customers, energy producers will be able to sell their energy at a price 30% higher than the market wholesale price.

Year	2017	2018	2019	2020	2021	2022	2023
Annual Estimated RED Loyalty Bonus in KWT per MWAT	0	0.11	0.15	0.22	0.35	0.77	0.99

## 10 TGE (TOKEN GENERATION EVENT) STRUCTURE

### 10.1 Token Price

We will create roughly 500 Million MWAT. One MWAT will be worth 0.1 USD (10 US cents) denominated in ETH during the TGE.

### 10.2 Bonus

The Pre-sale TGE starting date is January 15<sup>th</sup> and will end on February 12<sup>th</sup>, 2018.

- During the pre-sale period of the TGE, MWAT Tokens will be sold applying a bonus of 20% with a minimum contribution of 10,000 USD.

The TGE sale will start on February 14<sup>th</sup> and will end on March 14<sup>th</sup>, 2018.

- During Day 1 of the TGE sale period, the bonus will be 15%. Each day the bonus will go down by 1% down to a minimum of 0%.
- The last 15 days of the TGE there will be no more bonus.

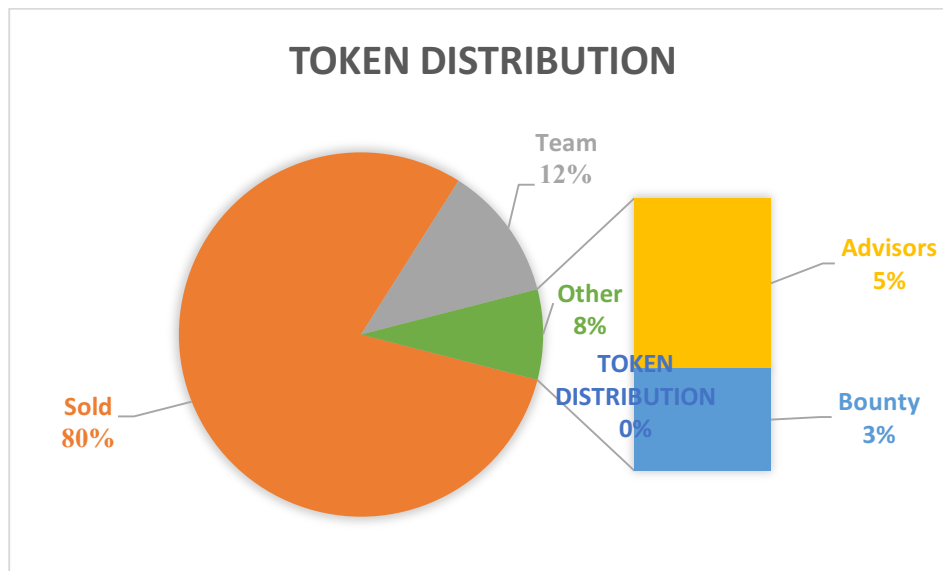
### 10.3 Acceptable Cryptocurrencies for MWAT Token Sale

We will accept ETH, BTC, ETC, BCH, LTC, XRP. The ETH payments will be accepted via a smart contract. All BTC, ETC, BCH, LTC, XRP participants need to also provide an ETH wallet address to receive the MWAT tokens.

### 10.4 Token Distribution

The following is how the coins are going to be distributed:

- Issued: 80% of the coins will be sold in the TGE(token generation event)
- Team: 12% will be kept by the team in a lockup structure for team incentivization
- Advisors : 5% will be given to advisors in a lockup structure
- Bounty : 3% will be awarded for the Bounty Program



## 10.5 Use and Lockup of Team Tokens (12%)

Use and lockup of team tokens (12%) 50% of them will be available in the same time as for the public, roughly 1 week after the TGE. 25% of them will be locked for 6 months and 25% will be locked for 12 months. The locking period has been put in place in order to demonstrate faith in the long-term prospects of the token and project, aligning the team's incentives with the token holder's interest.

## 10.6 Token Distribution and Secondary Markets

Tokens are distributed immediately after payment confirmation, via smart contracts, including BTC payments, please note that the confirmation of payments on Bitcoin network might take longer than on Ethereum. They will be available for use 7-14 days post crowdsale token launch depending on the listed platform.

## 10.7 Token Contract Address

Will be available and published only at <https://restartenergy.io>  
Only registered users that have passed KYC and AML will be able to see the token address on the website.

## 10.8 Unsold Tokens

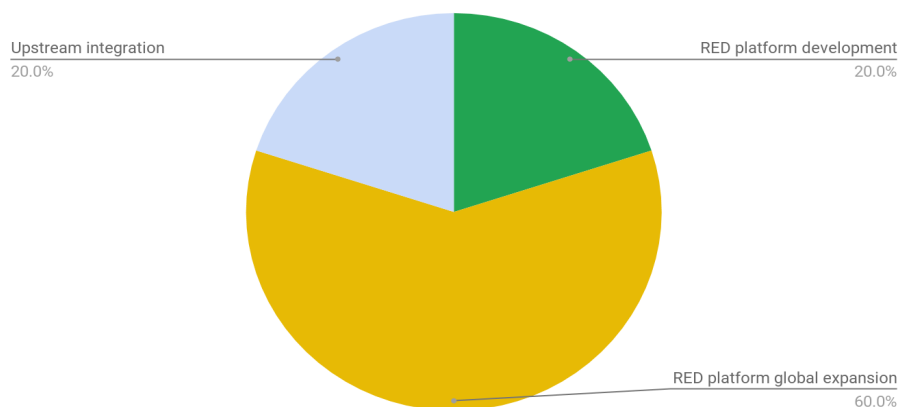
Unsold tokens will be burned.

## 10.9 Use of Funds

Restart Energy will contribute 20% of the token proceeds for consolidating the current business of supplying energy and gas to 27,000 households and 3,000 companies in Romania by integrating upstream integration through the acquisition of 10 MW operational solar and small hydro power plants. It will immediately start activity in other energy deregulated EU countries using the successful franchised-based, micro-entrepreneurial, job-creating, organic growth business model.

10% of the annual energy production of the newly purchased 10 MW renewable power plants (over 1 million kWh) will be transferred through the RED Loyalty System to registered MWAT holders, directly proportional to MWAT tokens held.

20% of the token proceeds will be utilized for the development of the RED platform and 60% of the funds will be used to expand the RED business model to more than 45 global markets.



**Fig. 20** Use of funds

## 10.10 Token Economics

Year	2017	2018	2019	2020	2021	2022	2023
<b>Countries</b>	1	2	4	7	10	14	18
<b>Franchises</b>	300	400	500	700	1000	1400	1800
<b>Customers</b>	30000	40000	90000	250000	420000	600000	945000
<b>RED Revenues in MM USD</b>	20	50	100	200	380	600	780
<b>Energy Supplied MWh</b>	150000	270000	1800000	4500000	8400000	12000000	18900000
<b>Energy Supplied GWh</b>	150	270	1800	4500	8400	12000	18900
<b>MWAT issued (MM)</b>	500	500	500	500	500	500	500
<b>Annual estimated loyalty bonus in KWT/MWAT</b>	0	0.11	0.15	0.22	0.35	0.77	0.99

## 11 ROADMAP

### 11.1 Upstream Integration

Restart Energy is planning to acquire 10 MW of renewable energy production assets in the beginning of 2018:

- 5 MW Small Hydro Plants with 10,000,000+ kWh yearly energy production
- 5 MW Solar Parks with 6,000,000+ kWh yearly energy production
- Additionally, the company is planning the development of a 5 MW geothermal turbine in 2018, funded 75% with EU grant.
- 10% of the annual energy production will be transferred through the RED Loyalty System.

### 11.2 Restart Energy Democracy Platform Development

Restart Energy has already achieved 75% development level of the software components and process automation that will be the RED Platform. Further development of the RED Platform for blockchain integration will include the energy exchange module and small adaptations for each individual energy market.

The following applications are fully functional and in use by our personnel, customers and business partners:



## a) Advanced energy supply and trading software with full process automation

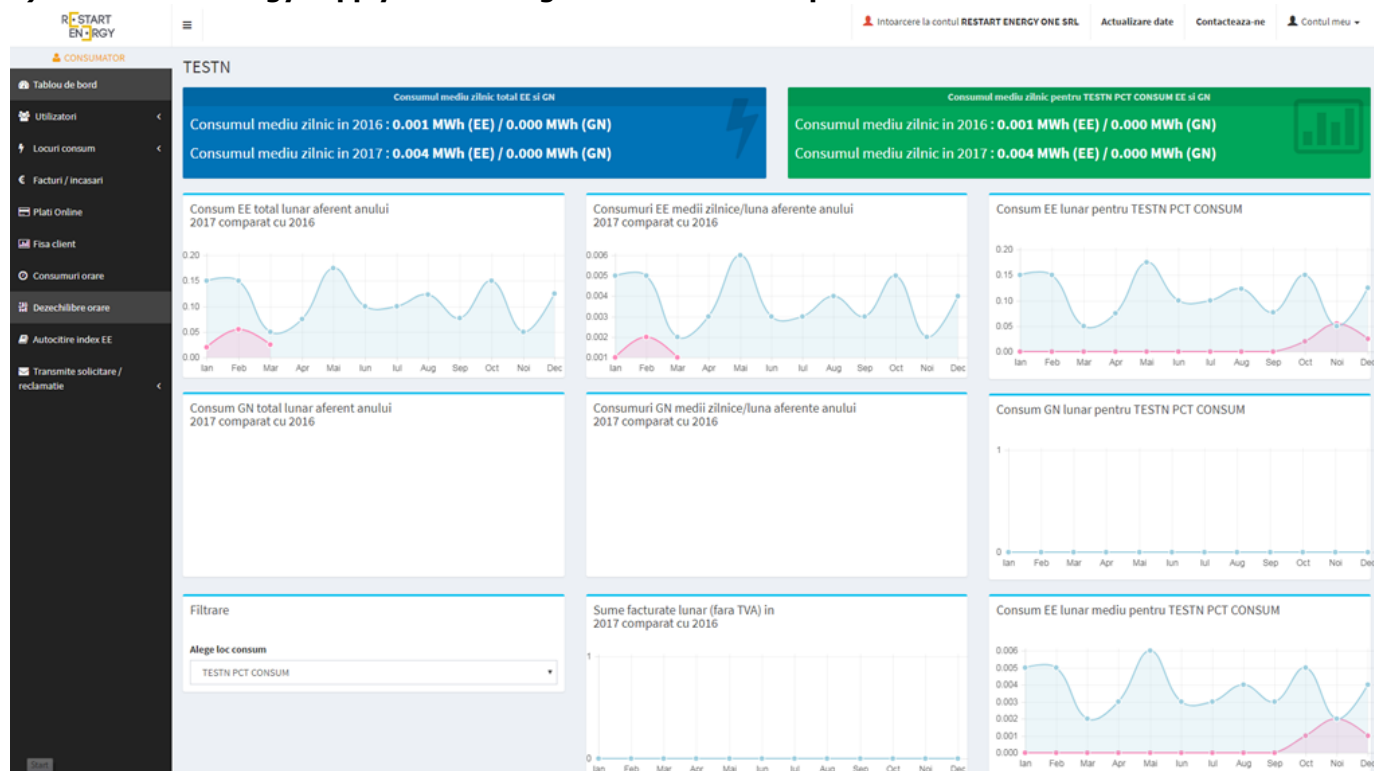


Fig. 21 Snapshot of Energy Supply Software ERP

## b) Customer online CRM



Fig. 22 Snapshot online CRM - registration page



Access link to online client portal: <https://client.restartenergy.ro/site/login>

### c) Front Desk CRM Module

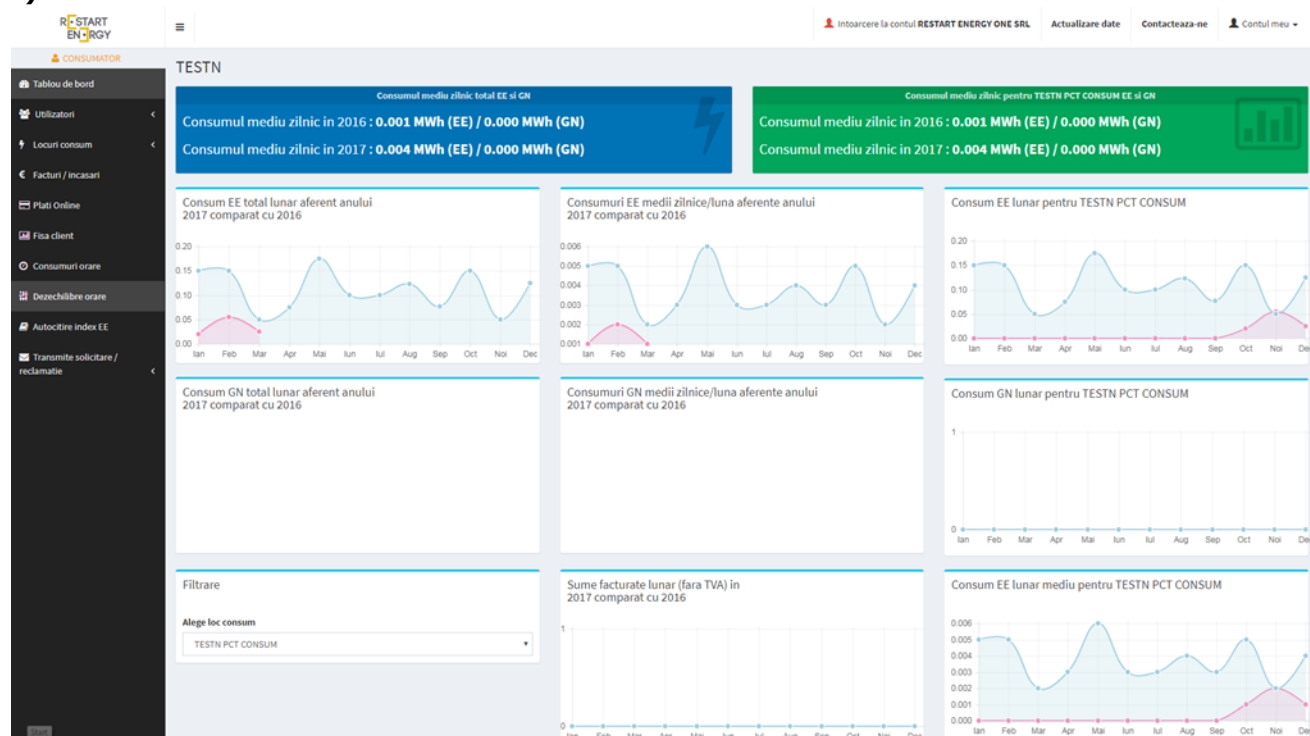


Fig. 23 Snapshot of front desk module 1

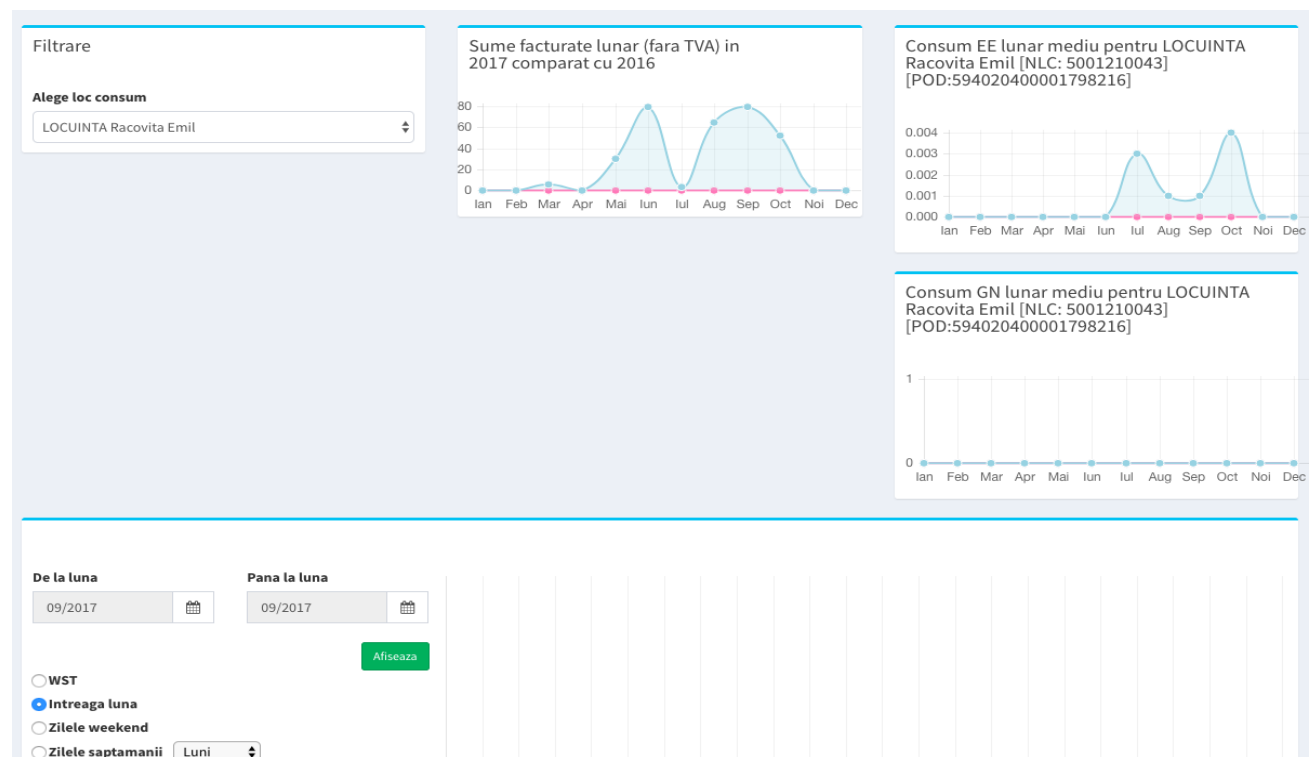


Fig. 24 Snapshot of front desk module 2

#### d) Agent/Franchise/Sales partner CRM module Figure 25 Snapshot of franchise module

#### e) myRestart Mobile App

Restart Energy developed a mobile application for Android and IOS to service its energy customers. The Restart Energy mobile app allows customers to see their energy consumption in real time (if they have wifi meters installed), send meter reading, view historical consumption, see and pay invoices, 24h support, send messages and notifications, update personal info, view scheduled grid repairs and latest news on Restartopedia.

Fig. 26 Snapshot and link to mobile app

The application can be downloaded here: <https://play.google.com/store/apps/details?id=ro.restartenergy.app>

**f) WattPredict energy forecasting software**



**g) WiFi meters software and integration with platform**



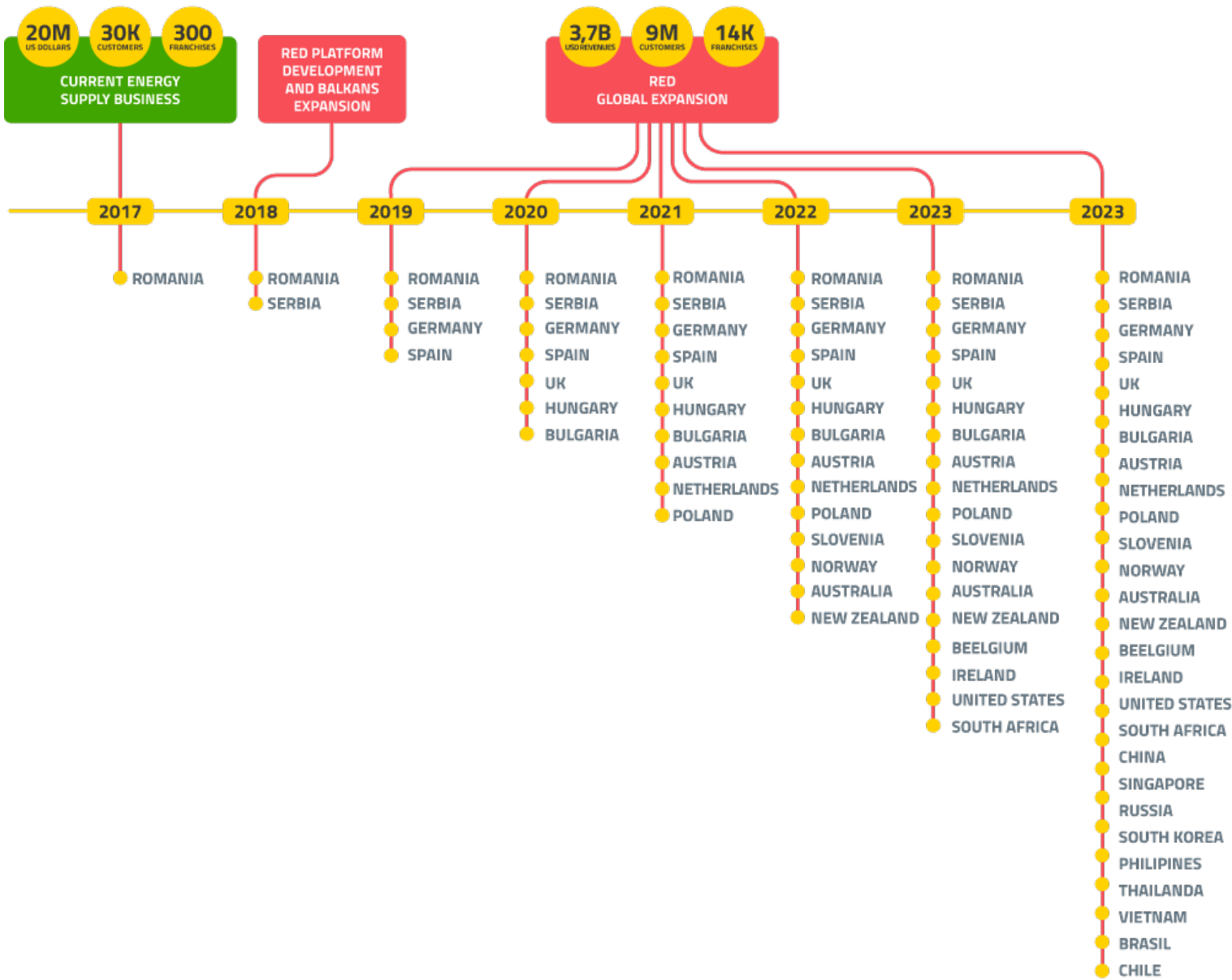
**Given below are the planned milestones in the further RED platform development.**

Timeline	Milestone
2018 Feb	Integration of blockchain in the RED platform (internal)
2018 Mar	Development of peer to peer energy exchange module (internal)
2018 Apr	MVP (Minimum Viable Product) Development (internal)
2018 May	Platform testing (internal)
2018 June	Product launch with selected producers/consumers (closed beta)
2018 Aug	Country-wide launch (public)
2018 Oct	Start of world expansion (public)

### 11.3 RED Platform Expansion Plan

Given below is the expansion plan for the RED Platform, including the markets where we want to enter. The platform will be fully developed and tested in 2018 and we expect to start its global expansion in the last quarter of the year. Until then, Restart Energy will continue its plans of expanding the actual franchised energy supplying business in the Central & Eastern Europe. The expansion plan was made taking into consideration only the jurisdictions (countries or states for US/Canada) that have at least started the liberalization process for their energy markets or publicly declared that have plans of liberalization. Given this, we mention that the presented expansion plan is subject to external factors such as changes of the energy-related legislation from the selected countries or other potential markets.

ROADMAP



## 11.4 Financial Overview of RED Business Plan

For a specific financial overview, we present below the actual estimated revenues of Restart Energy operational activity in 2017 and a snapshot of the company's forecasted revenues for 2018-2023 period. **The business plan assumes the expansion of RED platform to over 18 countries, opening over 1,800 franchises and attracting over 1 million customers. By doing this we estimate that the revenues will reach 0.78bn. USD in 2023, posting a 161% compounded annual growth rate.**

Year	2017	2018	2019	2020	2021	2022	2023
Countries	1	2	4	7	10	14	18
Franchises	300	400	500	700	1000	1400	1800
Customers	30000	40000	90000	250000	420000	600000	945000
RED Revenues in MM USD	20	50	100	200	380	600	780
Energy Supplied MWh	150000	270000	1800000	4500000	8400000	12000000	18900000
Energy Supplied GWh	150	270	1800	4500	8400	12000	18900
MWAT issued (MM)	500	500	500	500	500	500	500
Annual estimated loyalty bonus in KWT/MWAT	0	0.11	0.15	0.22	0.35	0.77	0.99

\*Franchise incomes are only estimated and depend on local market conditions and type of franchise.

## 12 MEDIA COVERAGE

Restart Energy featured on CNN and Huffington Post after announcing EU MEP as latest advisor

- <https://www.ccn.com/member-european-parliament-joins-restart-energy/>
- [https://www.huffingtonpost.com/entry/restart-energy-ico-adds-a-member-of-the-eu-parliament\\_us\\_5a59f57ee4b0a233482e0b90](https://www.huffingtonpost.com/entry/restart-energy-ico-adds-a-member-of-the-eu-parliament_us_5a59f57ee4b0a233482e0b90)

Restart Energy makes waves with its cryptocoin on Huffington Post

- [https://m.huffpost.com/us/entry/us\\_5a535aa6e4b0cd114bdb34e0](https://m.huffpost.com/us/entry/us_5a535aa6e4b0cd114bdb34e0)

Restart Energy Welcomes IoT Pioneer Dr. Vlad Trifa as Advisor

- <http://dailytelescope.com/pr/restart-energy-welcomes-iot-pioneer-dr-vlad-trifa-as-advisor/33733>
- <http://daemoniaca.com/2017/12/19/restart-energy-welcomes-iot-pioneer-dr-vlad-trifa-as-advisor/>

Restart Energy taps LDJ Capital and William Davis III for Help with ICO

- <https://geekcrunch.reviews/restart-energy-taps-ldj-capital-william-davis-iii-help-ico/>

Restart Energy Welcomes Susaye Greene As Project Ambassador

- <http://www.digitaljournal.com/pr/3590336>
- <http://www.getnews.info/669919/restart-energy-welcomes-susaye-greene-as-project-ambassador.html>
- <http://www.4-traders.com/BLOCKCHAIN-GROUP-CO-LTD-6165838/news/Blockchain-Restart-Energy-Welcomes-Susaye-Greene-As-Project-Ambassador-25643747/>
- <http://www.nbcrightnow.com/story/37031751/restart-energy-welcomes-susaye-greene-as-project-ambassador>

Restart Energy Democracy (RED) disrupts the market with a blockchain-based energy trading ecosystem.

- <https://seekingalpha.com/instablog/22912651-daniel-jennings/5084428-red-energy-disrupts-market-blockchain-based-energy-trading-ecosystem-sustainable-future>

Restart Energy partners with Bancor; integrates Bancor Protocol into MWAT token

- <https://blog.restartenergy.io/restart-energy-will-be-joining-the-bancor-network-by-integrating-the-bancor-protocol-into-its-red-dadfbe3eb431>

Restart Energy partners with Boost IT to work on blockchain

- <https://blog.restartenergy.io/restart-energy-teams-up-with-blockchain-expert-boostit-fc08b464c5c0>

Hacked.com's Aakash Kawale analyzes the RED project

- <https://blog.restartenergy.io/hacked-ico-analysis-restart-energy-1ea1b1dc05d2>

CNBC's Jon Najarian interview's Restart Energy's CEO, Armand Doru Domuta in Geneva

- <https://blog.restartenergy.io/iico-host-jon-najarian-interviews-armand-doru-domuta-ceo-founder-restart-energy-9f22baa828b5>

RED Geneva meetup

- <https://blog.restartenergy.io/meet-restart-energy-in-geneva-on-december-18th-a885886ecec>

Restart Energy Aims to use Blockchain to Democratize Energy

- <http://marketmadhouse.com/restart-energy-aims-use-blockchain-democratize-energy/>

Tech leader Michael Enescu joins RED

- <https://blog.restartenergy.io/renowned-technology-leader-michael-enescu-joins-restart-energy-25a436b048d>

AmaZix partnership announced

- <https://blog.restartenergy.io/restart-energy-amazix-announce-strategic-partnership-49c5b33b0247>

Restart Energy largest energy company in Romania's western region

- <https://blog.restartenergy.io/restart-energy-recognized-as-largest-energy-company-in-romania-s-western-region-b1fbe01393c0>

10 million German solar prosumers could mean a big opportunity for RED

- <https://blog.restartenergy.io/10-million-solar-energy-prosumers-in-germany-until-2030-fdb0d3ec78a3>

*"The Amazon of ENERGY is here and RED MWAT is the key to this marketplace"*

- <https://blog.restartenergy.io/how-red-mwat-is-your-best-bet-on-the-future-of-energy-d1bbb6729a8>

Ethereum becomes de-facto building block for TGE's, RED stands to benefit

- <https://blog.restartenergy.io/a-review-of-the-restart-ico-and-whether-you-should-invest-a0c7008adae6>

Why RED stands out – Pillars

- <https://blog.restartenergy.io/why-red-stands-out-pillars-fefc2584f114>

Fossil fuels running on fumes, renewables the way to go – RED can help

- <https://blog.restartenergy.io/restart-and-the-end-of-fossil-fuel-monopolies-8ce2db8a42c4>

Retail franchises decentralize energy – Restart Energy leads the way

- <https://blog.restartenergy.io/how-restarts-retail-franchisees-will-democratize-energy-and-power-the-value-of-red-tokens-f2bf065dac2c>

Restart Energy Democracy Platform will help ease pains of government cutbacks to clean power

- <https://blog.restartenergy.io/how-to-continue-progress-after-the-government-cuts-down-incentives-for-renewables-in-the-uk-energy-1072ca4dc607>

France slows down nuclear power, goes green – RED can help integration of prosumers into grid

- <https://blog.restartenergy.io/france-is-leading-the-way-in-low-carbon-electricity-generation-cc3dd8b2add0>

Restart Energy's Green Certificates and turnkey expansion strategy, a winning combination

- <https://blog.restartenergy.io/restart-energy-democracy-decentralized-energy-trading-platform-with-p2p-services-going-global-b795b31306e9>

The RED Platform turns old Green Certificate ideas in favor of consumers

- <https://blog.restartenergy.io/red-platform-will-award-green-certificates-to-consumers-for-using-renewable-energy-37c3af01744>

Restart Energy and Euro GSM are developing a strategic partnership to conclude mass market contracts for electricity and natural gas at Euro GSM locations.

- [http://www.zf.ro/companii/energie/Euro\\_GSM-si-restart-energy-incep-sa-vanda-abonamente-de-curent-si-gaze-consumatorilor-romani-15577306](http://www.zf.ro/companii/energie/Euro_GSM-si-restart-energy-incep-sa-vanda-abonamente-de-curent-si-gaze-consumatorilor-romani-15577306)
- [http://www.bursa.ro/Euro\\_GSM-si-restart-energy-incep-sa-vanda-abonamente-de-curent-si-gaze-consumatorilor-romani-305162&s=print&sr=articol&id\\_articol=305162.html](http://www.bursa.ro/Euro_GSM-si-restart-energy-incep-sa-vanda-abonamente-de-curent-si-gaze-consumatorilor-romani-305162&s=print&sr=articol&id_articol=305162.html)



- [http://www.wall-street.ro/articol/Companii/201982/Euro\\_GSM-va-vinde-si-abonamente-de-electricitate-si-gaze-pentru-firma-restart-energy.html](http://www.wall-street.ro/articol/Companii/201982/Euro_GSM-va-vinde-si-abonamente-de-electricitate-si-gaze-pentru-firma-restart-energy.html)
- [http://www.comunic.ro/article/parteneriat-Euro\\_GSM-%C8%99i-restart-energy-pentru-%C3%AEncepe-comercializarea-de-abonamente-de-energie](http://www.comunic.ro/article/parteneriat-Euro_GSM-%C8%99i-restart-energy-pentru-%C3%AEncepe-comercializarea-de-abonamente-de-energie)
- [http://www.businessage.ro/stiri/Euro\\_GSM-%C8%99i-restart-energy-%C3%AEncep-s%C4%83-v%C3%A2nd%C4%83-abonamente-de-curent-%C8%99i-gaze-consumatorilor-rom%C3%A2ni](http://www.businessage.ro/stiri/Euro_GSM-%C8%99i-restart-energy-%C3%AEncep-s%C4%83-v%C3%A2nd%C4%83-abonamente-de-curent-%C8%99i-gaze-consumatorilor-rom%C3%A2ni)
- [http://voxcapital.ro/revista-presei-Euro\\_GSM-va-vinde-abonamente-de-electricitate-si-gaze-pentru-firma-restart-energy/](http://voxcapital.ro/revista-presei-Euro_GSM-va-vinde-abonamente-de-electricitate-si-gaze-pentru-firma-restart-energy/)

Restart Energy and PROFI Moldova signs a contract for the supply of electricity at commercial points.

- <http://www.comunicatedepresa.ro/restart-energy/restart-energy-si-profi-anunta-o-noua-colaborare-in-domeniul-furnizarii-energiei-electrice/>
- <http://www.promovariweb.org/2017/07/restart-energy-si-profi-anunta-o-noua-colaborare-in-domeniul-furnizarii-energiei-electrice.html>

Restart Energy supports the future of Romania, actively investing to help young people to fulfill their dreams.

- <http://www.comunicatedepresa.ro/restart-energy/restart-energy-furnizorul-de-energie-si-gaz-care-ajuta-elevii-sa-isi-atinga-adevaratul-potential/>

Restart Energy becomes the official sponsor of the Association of War Veterans and Veterans with Disabilities

- <http://www.comunicatedepresa.ro/restart-energy/furnizorul-roman-de-energie-si-gaz-restart-energy-incheie-un-parteneriat-cu-asociatia-militarilor-veterani-si-veteranilor-cu-dizabilitati/>

Market analysis demonstrates the transparency of Restart Energy prices in energy and gas supply services.

- <https://www.timponline.ro/pentru-facturi-mai-mici-la-electricitate-si-gaz-bistritenii-incep-sa-schimbe-furnizorii/>

Restart Energy Offers

- <http://www.comunicatedepresa.ro/restart-energy/schimba-furnizorul-de-energie-in-conditii-inedite-prima-luna-este-gratuita-marele-premiu-este-de-un-an-de-energie-electrica-gratuita/>
- <https://www.anuntulfinanciar.ro/Schimba-furnizorul-de-energie-in-conditii-inedite-prima-luna-este-gratuita-Marele-premiu-este-de-un-an-de-energie-electrica-gratuita/>

Cable provider SAT 2002 buys shares at Restart Energy, the Romanian energy and gas supplier with a continuous growth path

- <https://www.news.ro/economic/furnizorul-de-televiziune-prin-cablu-sat-2002-a-intrat-pe-piata-de-energie-cumparand-actiuni-la-o-firma-lansata-in-urma-cu-2-ani-1922400011002017090917200717>
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- <http://www.ziuanews.ro/revista-presei/furnizorul-de-televiziune-prin-cablu-sat-2002-a-intrat-pe-piata-de-energie-cumparand-actiuni-la-o-firma-lansata-in-urma-cu-2-ani-777741>

Miscellaneous mentions

- <http://obiectivbr.ro/content/analiza>

Social Responsibility Actions (Hospital Renovation)

- [http://adevarul.ro/locale/timisoara/vechilor-saloane-maternitatea-bega-renovate-sponsori-mana-larga-1\\_5357cf580d133766a806fd9a/index.html](http://adevarul.ro/locale/timisoara/vechilor-saloane-maternitatea-bega-renovate-sponsori-mana-larga-1_5357cf580d133766a806fd9a/index.html)
- <http://armandgroup.eu/ro/ut-enim-ad-minim-veniam-3/>

## Message to Contributors from Restart Energy Founder

Restart Energy is my legacy to the world, it's my dream of creating a transparent energy eco system that allows and encourages free and direct energy transfers between people that have the possibility to choose renewable energy without limitations from sources they can trust.



We became the fastest growing independent energy company in a European Country by tapping into the vast potential of micro entrepreneurship and creating new jobs with the Restart Energy Franchise. Restart Energy's token generation event is a black swan event for energy monopolies; it's history in the making. By buying RED MegaWatt Tokens, you get an opportunity to participate in a great business success story while also gaining access to the world-changing Restart Energy Democracy Platform - the only platform that lets you send and receive energy, worldwide.

## FAQ

### Function

#### How does RED work?

The MWAT token is an ERC20 digital cryptographic utility token issued by Restart Energy Democracy, using blockchain technology that gives access to the services provided by the RED Platform Software and the RED Franchise. This will be achieved thanks to the new service offered by Restart Energy Democracy - the RED Platform.

#### RED Platform

The RED Platform Software (RED-P) is a blockchain-based decentralized platform for Peer-to-Peer direct energy trading between consumers and energy producers worldwide. RED-P is the software where users (and Restart Energy clients) can log in and trade (buy; sell) energy directly P2P (peer-to-peer), in a decentralized and easy to use manner. Users can get access to Restart Energy services and can obtain and use electricity.

#### RED Franchise

The RED Franchise is the first power retail franchise that makes it simple and easy to start and operate your own power utility company. Allows token holders to develop its own power retail business and earn revenues by selling energy to retail households and business consumers, RED franchise is the business opportunity that owners of MWAT can get access to. It is an innovative, tested and working idea that is growing in a rapid manner. The energy franchise brings the decentralized world of energy one step closer to a truly free market in the energy sector.

## **MWAT Token Use**

### **Do we generate all tokens at once?**

Yes. Once the smart contract is created!

### **What happens with unsold MWAT Tokens?**

Unsold tokens will be burned.

### **Will there be secondary (non-RED-P) trading exchanges for RED and KW token?**

MWAT Tokens are received in your ETH wallet and they are used to access RED platform. You can sell or buy them on any of the secondary (Non-RED platform) markets where MWAT will be available.

KWT, on the other hand, is an internal use token, that has a direct report to RED Platform as a representation of an energy unit.

### **Can I refill any time my MWAT token with energy at a preferred price?**

Each MWAT token gives you access to the ability to buy or sell up to 1,000 KW Tokens/Month on the RED Platform Software.

### **Am I limited to use the MWAT token for a certain market?**

You can access the RED platform from anywhere in the world and use the P2P energy exchange, however, Restart Energy can only deliver electricity in countries where the company will be licensed as a private energy supplier or where a Type A RED Franchise is deployed.

### **Can I pay my bills with energy stored on the blockchain?**

Yes! That is the basic functionality, among others. The KW Tokens that you purchase on the RED Platform represent units of energy that will be deducted from your energy invoice if you are a customer of Restart Energy or of a RED Franchise.

### **If I choose to pay my bills using the KW token, where can I find the conversion rate?**

Calculated LIVE on our platform.

### **Are MWAT Tokens consumed if I use or sell the associated KW tokens?**

MWAT Tokens are not consumed or used if you use or sell the associated KW Tokens.

### **How can I obtain/use Green Certificates?**

Consumers holding RED Tokens will automatically receive 1 Cryptographic Green Certificate for each 1 MWh consumed from renewable sources. The green certificates will be tradable on a secondary market on the RED platform and companies/contributors around the world will have access to purchase them in order to support renewable energy consumption/production and reduce their carbon footprint.

## RED Platform Use

### **If I 'consume' MWAT Tokens do I get one-time KWT 'fill' on the RED Platform?**

MWAT Tokens grant you access to the platform (FREE), as you consume the energy in the form of KW Tokens that are deposited in the MWAT tokens, not the MWAT tokens themselves.

### **If I keep MWAT Tokens (on RED Platform) will I get monthly / yearly bonus KWT on my MWAT Tokens?**

Yes, on a monthly basis your MWAT Token account will receive a loyalty bonus in the form of KW Tokens, provided by producers on the RED Platform.

### **Can I sell MWAT on the platform at any moment?**

Yes, on secondary markets! Restart Energy will provide access to the RED Platform to its existing 30,000 customers only if they own MWAT Tokens. Owning the tokens gives access to a P2P global energy exchange platform. Restart Energy won't buy the tokens back.

## RED Franchise Use

### **What type of resources will be received as a benefit from a franchise?**

You will have the opportunity to earn energy and revenues from running the franchise business.

### **Can I upgrade a city franchise to regional/country later in time?**

Yes! The first three Type B franchises tiers are not exclusive, but for the Master Franchise, we would offer such on a first-come-first-served principle.

### **How will I benefit from an externalized service of purchasing electricity?**

Just like everybody benefits from free market principles, you will find the best prices on the decentralized network, but even better, you can optimize your energy costs by purchasing directly from producers and choose the renewable sources you want to promote.

## DISCLAIMER - RISKS AND DISCLOSURES

### Disclaimer and Main - Risks

Please read this disclaimer notice carefully. Please note that the disclaimer set out below may be altered or updated, at any time in whole or in part at the sole discretion of the Company. You should read it in full each time you visit the site.

All information is provided without any warranties of any kind and the Company. and its advisors make no representations and disclaim all express and implied warranties and conditions of any kind, including, without limitation, representations, warranties or conditions regarding accuracy, timeliness, completeness, non-infringement, suitability of the Tokens for any prospective contributor, and the Company and its employees, officers or professional advisors assume no responsibility to you or any third party for the consequence of errors or omissions.

### Regulatory Risks

The regulatory status of cryptographic tokens, digital assets, and blockchain technology is unclear or unsettled in many jurisdictions, herein included also the Romanian jurisdiction. It is difficult to predict how or whether governmental authorities will regulate such technologies or what tax implications could arise for the holders of the MWAT tokens. It is likewise difficult to predict how or whether any governmental authority may make changes to existing laws, regulations and/or rules that will affect cryptographic tokens, digital assets, blockchain technology and its applications. Such changes could negatively impact MWAT Tokens in various ways, including, for example, through a determination that MWAT Tokens are regulated financial instruments that require registration. The Company may cease the distribution of MWAT Tokens, the development of the Project or cease operations in a jurisdiction in the event that governmental actions make it unlawful or commercially undesirable to continue to do so.

The industry in which Company operates is new and may be subject to heightened oversight and scrutiny, including investigations or enforcement actions. There can be no assurance that governmental authorities will not examine the operations of Company and/or pursue enforcement actions against Company. Such governmental activities may or may not be the result of targeting Company in particular. All of this may subject Company to judgments, settlements, fines or penalties, or cause Company to restructure its operations and activities or to cease offering certain products or services, all of which could harm Company's reputation or lead to higher operational costs, which may, in turn, have a material adverse effect on the MWAT Tokens and/or the development of the Project.

### Restricted Territories

Viewing the materials available hereafter may not be lawful in certain jurisdictions. In other jurisdictions, only certain categories of person may be allowed to view such materials. Any person who wishes to view these materials must first satisfy themselves that they are not subject to any local requirements that prohibit or restrict them from doing so.

The materials are for information purposes only and do not constitute or form a part of any offer or invitation to sell or issue, or solicitation of any offer, to purchase or subscribe for the Tokens in any jurisdiction or jurisdictions in which such offers or sales are unlawful prior to registration or qualification under the securities laws of any such jurisdiction (restricted territories).

Accordingly, unless an exemption under the relevant securities law is applicable, the Tokens may not be offered, sold, pledged, taken up, exercised, resold, renounced, transferred or delivered, directly or indirectly, in or into a restricted territory where to do so would constitute a violation of the relevant laws of, or require registration thereof in, such jurisdiction.

There will be no public offering of the Tokens in the restricted territories. If you are not permitted to view materials on this webpage or are in any doubt as to whether you are permitted to view these materials, please exit this webpage.

The Company shall not have any responsibility in respect of access to it from territories whose laws prohibit such access or where any aspect of the content of the site may be illegal. Those who choose to access this site from other locations do so on their own initiative and at their own risk and are responsible for compliance with applicable local laws.

## **Currency Regulation Risks**

Governments are still grappling with public policy on the regulation of cryptocurrencies as a form of settlement in trade. Governments adverse to the proliferation of the use of cryptocurrencies in local commerce could issue laws and regulations deeming the use of cryptocurrencies a regulated activity. In recent weeks, countries such as China and Korea have issued regulations or statements prohibiting token sales, the United States allowing only certified investors to participate to the sale while other countries have sought to bring the sale of tokens within the regulator control of securities offerings. This could result in holders of MWAT tokens being unable to use their MWAT in the future without further regulatory compliance by MWAT.

## **Risks Associated with Use of RED token Network**

Use of cryptocurrency exchanges can be complex and subject to stringent qualification requirements. There is no guarantee that the developers will be able to successfully create a system that allows payment for services using global cryptocurrencies. The failure to establish a network will result in decreased liquidity of the MWAT token as a form of settlement currency within the RED MWAT token Network.

## **Risks Associated with Crowd Sale**

MWAT tokens are not investment products. Rather, MWAT tokens serve a specific function within the RED Platform Software and RED ecosystem, which is the means to access and purchase active energy at a lower cost. Without MWAT tokens, the general public may not access the MWAT token system. There is also no expectation of future profit or gain from the acquisition of MWAT tokens. For these and other reasons, we believe the sale of MWAT tokens does not constitute a public offering of securities subject to prospectus registration requirements. However, public policy towards token sales is changing, and it is conceivable that regulators may in the future seek to broaden the scope of regulation of token sales. This could make token sales subject to registration requirements in the United States and similar jurisdictions. If the MWAT token sale becomes subject to registration requirements, this would delay or potentially postpone the proposed MWAT token sale indefinitely.

## **Taxation Risks**

The use of MWAT as a form of settlement currency may or may not be subject to local income tax, capital gain taxes, VAT or other forms of taxes. This uncertainty in tax legislation may expose merchants and customers alike to unforeseen future tax consequences associated with the use of MWAT tokens, as a settlement currency, and/or the trading of tokens or MWAT tokens for capital gains.

**Capital Control Risks** Many jurisdictions, such as China impose strict controls on the cross-border flow of capital. MWAT holders may be subject to these regulations and/or arbitrary enforcement of such regulations at any time. This would make the transfer of MWAT tokens out of the local jurisdiction to overseas exchanges an unlawful activity exposing the user of MWAT tokens to government fines or other regulatory sanction.

## **CTF and Anti-Money Laundering Regulations**

The United States has issued a series of regulations to combat terrorist financing (CTF) and money-laundering activities. Many other countries have enacted similar legislation to control the flow of capital for such illicit activities. The use of crypto-currencies by bad actors would breach such regulations. Any illicit use of the MWAT

token could seriously impact the global reputation of the RED token Network. In such event, it is not inconceivable that this could trigger scrutiny by CTF and anti-money laundering regulators and potentially cause significant disruption to the distribution and circulation of tokens and MWAT token in the RED token ecosystem.

## Blockchain Risks

On the Ethereum blockchain, timing of block production is determined by proof of work so block production can occur at random times. For example, ETH contributed to the MWAT token Distribution Contract in the final seconds of a distribution period may not get included for that period. Buyer acknowledges and understands that the Ethereum blockchain may not include the Buyer's transaction at the time Buyer expects and Buyer may not receive MWAT tokens the same day Buyer sends ETH. The Ethereum blockchain is prone to periodic congestion during which transactions can be delayed or lost. Individuals may also intentionally spam the Ethereum network in an attempt to gain an advantage in purchasing cryptographic tokens. Buyer acknowledges and understands that Ethereum block producers may not include Buyer's transaction when Buyer wants or Buyer's transaction may not be included at all. MWAT token may be subject to expropriation and or/theft. Hackers or other malicious groups or organizations may attempt to interfere with the MWAT token Distribution Contract or the MWAT token in a variety of ways, including, but not limited to, malware attacks, denial of service attacks, consensus-based attacks, Sybil attacks, smurfing and spoofing. Furthermore, because the Ethereum platform rests on open source software and MWAT tokens are based on open source software, there is the risk that Ethereum smart contracts may contain intentional or unintentional bugs or weaknesses which may negatively affect MWAT tokens or result in the loss of Buyer's MWAT token, the loss of Buyer's ability to access or control Buyer's MWAT token or the loss of ETH in Buyer's account. In the event of such a software bug or weakness, there may be no remedy and holders of MWAT tokens are not guaranteed any remedy, refund or compensation. The Project and all of the matters set forth in the White Paper are new and untested. The Project might not be capable of completion, implementation or adoption. It is possible that no blockchain utilizing the Project will ever be launched and there may never be an operational platform. Even if the Project is completed, implemented and adopted, it might not function as intended, and any tokens associated with a blockchain adopting the Project may not have functionality that is desirable or valuable. Also, technology is changing rapidly, so the MWAT token and the Project may become outdated. The regulatory status of cryptographic tokens, digital assets, and blockchain technology is unclear or unsettled in many jurisdictions. It is difficult to predict how or whether governmental authorities will regulate such technologies. It is likewise difficult to predict how or whether any governmental authority may make changes to existing laws, regulations and/or rules that will affect cryptographic tokens, digital assets, blockchain technology and its applications. Such changes could negatively impact MWAT token in various ways, including, for example, through a determination that MWAT tokens are regulated financial instruments that require registration. The Company may cease the distribution of MWAT, the development of the Project or cease operations in a jurisdiction in the event that governmental actions make it unlawful or commercially undesirable to continue to do so.

## Buyer Knowledge and Risks of Project

Buyer has sufficient knowledge and experience in business and financial matters, including a sufficient understanding of blockchain or cryptographic tokens and other digital assets, smart contracts, storage mechanisms (such as digital or token wallets), blockchain-based software systems and blockchain technology, to be able to evaluate the risks and merits of Buyer's purchase of MWAT Tokens, including but not limited, to the matters set forth in this Agreement, and is able to bear the risks thereof, including loss of all amounts paid, loss of MWAT, and liability to the Company Parties and others for its acts and omissions. Buyer has obtained sufficient information in order to make an informed decision to purchase MWAT Tokens.

The Project and all of the matters set forth in the White Paper are new and untested. The Project might not be capable of completion, implementation or adoption. It is possible that no blockchain utilizing the Project will ever be launched and there may never be an operational platform. Even if the Project is completed, implemented and adopted, it might not function as intended, and any tokens associated with a blockchain adopting the Project may not have functionality that is desirable or valuable. Also, technology is changing rapidly, so the MWAT Tokens and the Project may become out-dated.



## Business Risks

The Company plans to conduct closings of sales of MWAT tokens as funds are received. If less than 5,000,000 USD is received from the sale of MWAT tokens, the Company may have insufficient cash to implement its plans as described below, and MWAT token purchasers who bought the Tokens shall be at a heightened risk of loss of their contributions. The Company's principal competitors may have greater financial resources than those available to the Company and thus be in a better position to attract talent, initiate projects and offer lower prices for electricity. The Company's ability to remain competitive may depend in part upon its ability to develop new and enhanced products or services and to introduce these products or services in a timely and cost-effective manner. In addition, product and service introductions or enhancements by the Company's competitors or the use of other technologies could cause a decline in sales or loss of market acceptance of the Company's existing products and services. There can be no assurances that the Company shall be successful in selecting, developing, and marketing new products and services or in enhancing its existing products or services. Failure to do so successfully may adversely affect the Company's business, financial condition, and results of operations. The Company's ability to realize its objectives shall be dependent on its ability to attract and retain additional, qualified personnel. Competition for such personnel can be intense, and there can be no assurance that the Company's results shall not be adversely affected by difficulty in attracting and/or retaining qualified personnel. The industry in which Company operates is new and may be subject to heightened oversight and scrutiny, including investigations or enforcement actions. There can be no assurance that governmental authorities will not examine the operations of Company and/or pursue enforcement actions against Company. Such governmental activities may or may not be the result of targeting Company in particular. All of this may subject Company to judgments, settlements, fines or penalties, or cause Company to restructure its operations and activities or to cease offering certain products or services, all of which could harm Company's reputation or lead to higher operational costs, which may, in turn, have a material adverse effect on the MWAT token and/or the development of the Project.

Further on, any transaction concluded based on this Whitepaper shall be considered as a random agreement (in Romanian language called "contract aleatoriu"), meaning that the length and even the enforceability of the rights provided herein is not known/entirely know at the moment of its signing, given that the main rights and obligations of this agreement depend on one or several future events and therefore any of the signing party bear the risk of winning or losing depending on such future events.

## Forward-Looking Statements

The Company makes no warranty whatsoever with respect to the tokens, including any: (i) warranty of merchantability; (ii) warranty of fitness for a particular purpose; (iii) warranty of title, or (iv) warranty against infringement of intellectual property rights of a third party; whether arising by law, course of dealing, course of performance, usage of trade, or otherwise. Except as expressly set forth herein, recipient acknowledges that it has not relied upon any representation or warranty made by the company, or any other person on the company's behalf.

This information contains forward-looking statements that are not historical facts, but relate to its intentions, beliefs, expectations or predictions for future events. In some cases, the Company uses the words "aim", "anticipate", "believe", "consider", "continue", "could", "estimate", "expect", "intend", "may", "plan", "potential", "predict", "project", "purpose", "seek", "shall", "should", "will", "would" and similar expressions or statements to identify forward-looking statements. These forward-looking statements include, without limitations, statements relating to:

- Our business strategies and plan of operations;
- Our capital expenditure and funding plans;
- General economic conditions;
- The trends of industry and technology, notably about blockchain and cryptocurrency industry developments; our Group's financial conditions;
- Margins, overall market trends, risk management and exchange rates;

- Other statements that are not historical fact.

These forward-looking statements are subject to risks, uncertainties, and assumptions, some of which are beyond the control of the Company. In addition, these forward-looking statements reflect the current views of the Company with respect to future events and are not a guarantee of future performance. Additional factors that could cause actual performance or achievements to differ materially include, but are not limited to those discussed under this White paper. These forward-looking statements are based on current plans and estimates and speak only as of the date they are made. The Company makes no undertaking to update or revise any forward-looking statement in light of new information, future events or otherwise. Forward-looking statements involve inherent risks and uncertainties and are subject to assumptions, some of which are beyond the control of the Company. The Company cautions you that a number important of factors could cause actual outcomes to differ or to differ materially, from those expressed in any forward-looking statements. Due to these risks, uncertainties, and assumptions, the forward-looking events and circumstances discussed in this might not occur in the way the Company expects or at all. Accordingly, you should not place undue reliance on any forward-looking information/statement. All forward-looking statements contained in this are qualifiers by reference to these cautionary statements.

### **Know Your Customer (KYC) rules:**

Considering the anti-money-laundering and anti-terrorism national and international regulations, the Company reserves the right to develop and apply KYC rules and procedure before the sale of MWAT tokens, before the trade of such MWAT tokens and before or during the execution of any transactions on the RED-P; likewise, depending on the findings of such rules and procedure or when there exists a reasonable doubt that a certain participant/interested party is involved in money-laundering or terrorism, the Company reserves the right to refuse at its sole discretion a transaction or sale, trade of MWAT to any third party and also has the right to refuse the access to RED-P and/or to suspend such access at any given moment.

### **No Withdrawal Right**

While deciding to enter and entering into any transaction based on this whitepaper the buyer/interested party is hereby informed and undertakes it will not benefit from a right of withdrawal from the transaction and his decision of entering into such transaction is final and under no circumstance, shall he be given with a withdrawal right.