

ELECTRIFY

Be the power

ICO WHITEPAPER VERSION 1.8



ELECTRIFY.ASIA

ABSTRACT

60% of the world's population lives in Asia and almost half of this population live in cities; and they're all connected to central power grids. Japan liberalised its power grid in 2016, China has done so in parts and Singapore will be the first in Southeast-Asia. As more countries liberalise their electricity markets, consumers will get greater choice in choosing their electricity retailers and the way they want to consume energy.

*Annual energy expenditure in Asia is expected to grow from **US\$700 billion to US\$1.6 trillion**, by 2035.*

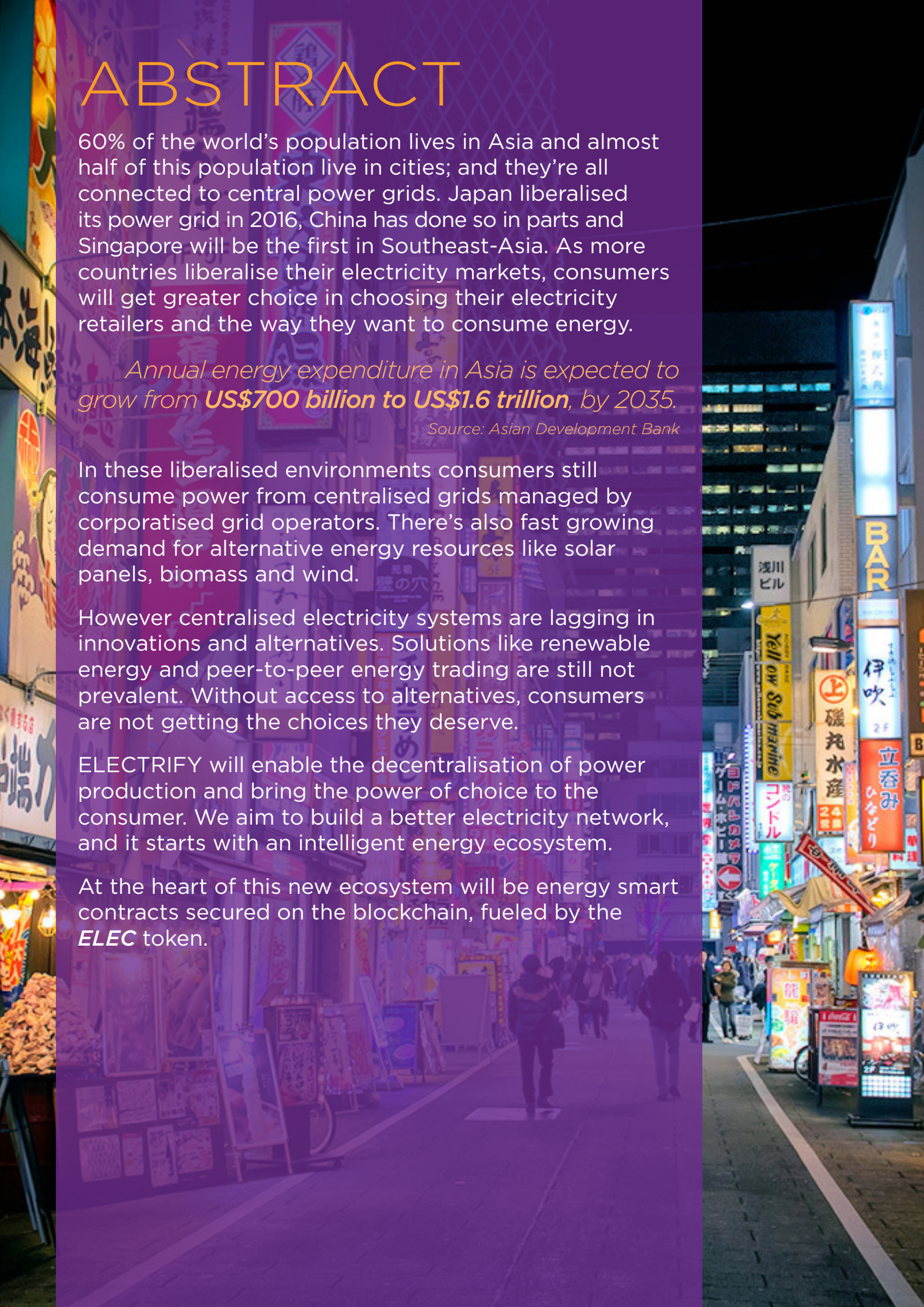
Source: Asian Development Bank

In these liberalised environments consumers still consume power from centralised grids managed by corporatised grid operators. There's also fast growing demand for alternative energy resources like solar panels, biomass and wind.

However centralised electricity systems are lagging in innovations and alternatives. Solutions like renewable energy and peer-to-peer energy trading are still not prevalent. Without access to alternatives, consumers are not getting the choices they deserve.

ELECTRIFY will enable the decentralisation of power production and bring the power of choice to the consumer. We aim to build a better electricity network, and it starts with an intelligent energy ecosystem.

At the heart of this new ecosystem will be energy smart contracts secured on the blockchain, fueled by the **ELEC** token.

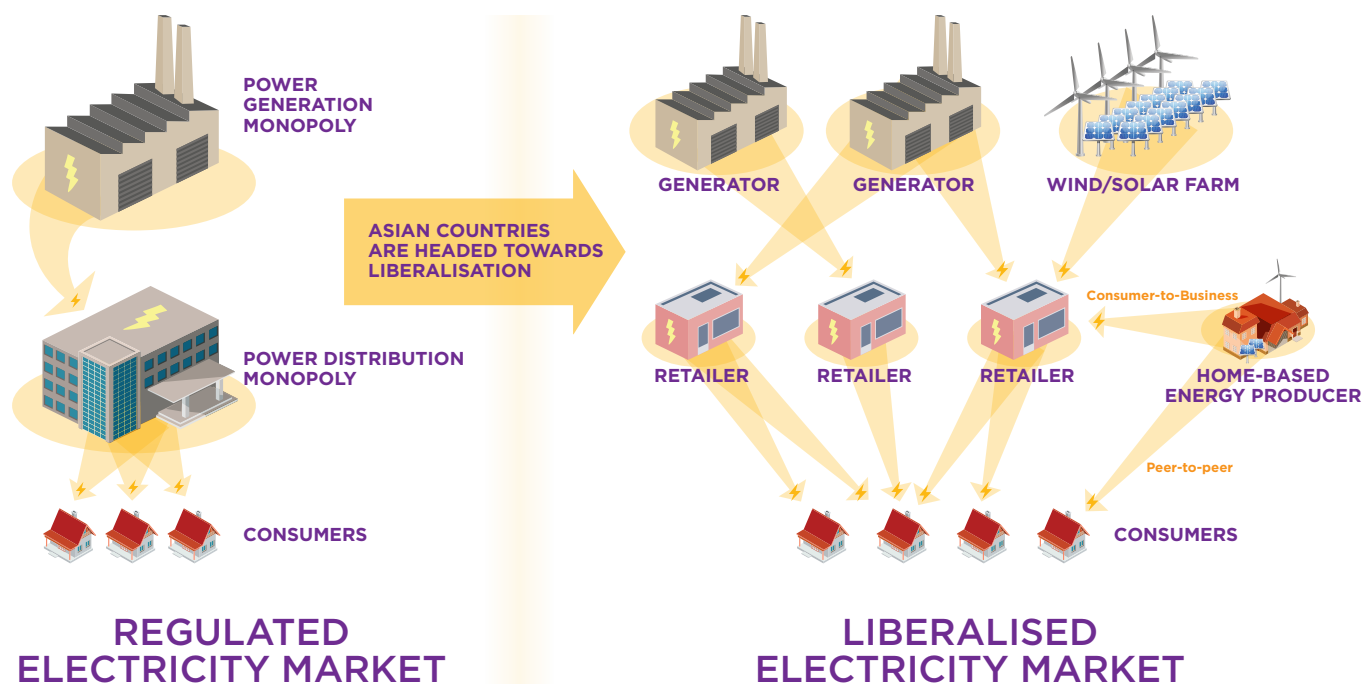


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ELECTRICITY MARKET PRIMER

REGULATED vs LIBERALISED ELECTRICITY MARKETS



PROBLEMS IN THE MARKET



LACK OF TRANSPARENCY

The lack of transparency between electricity contracts means customers may not always be clear about retail energy prices, the sources of energy and the carbon footprint.



BARRIERS TO CLEAN ENERGY

In a centralised grid infrastructure, there is no framework for a reliable peer-to-peer trading platform, making it difficult for renewable generator owners to buy or sell power



CONSUMER CREDIT RISK

Without a decentralised trustless credit database and payment platform, retailers are unable to filter out customers with a poor credit history, resulting in higher costs for all consumers.

EXISTING BUSINESS

RETAIL ELECTRICITY MARKETPLACE

Founded by two senior executives from the Singaporean energy industry in early 2017, ELECTRIFY is the first retail electricity marketplace in Southeast-Asia addressing the need for transparency and security in the energy market. With a GMV of over SGD\$5 million to date, ELECTRIFY has transacted more than 30GWh of electricity for business consumers since incorporation.

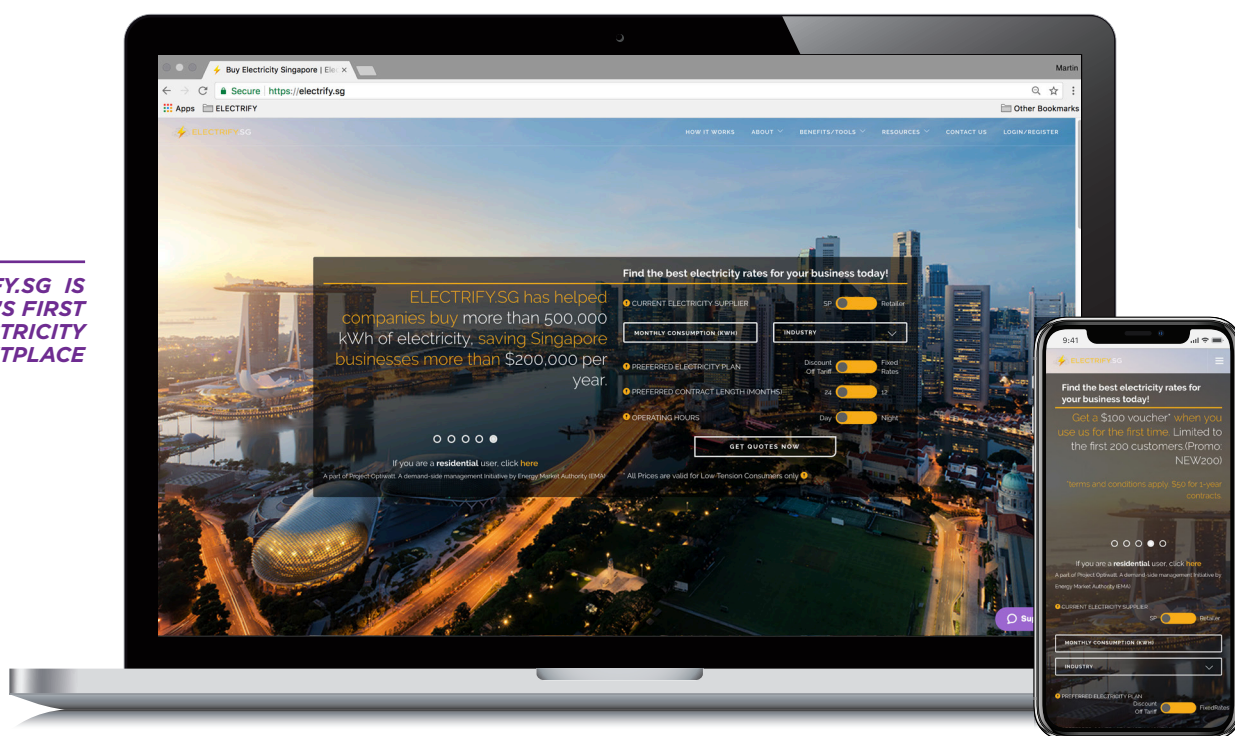
TRADITIONAL ELECTRICITY CONTRACTING



ELECTRIFY



**ELECTRIFY.SG IS
SOUTHEAST ASIA'S FIRST
RETAIL ELECTRICITY
MARKETPLACE**



ELECTRIFY ECOSYSTEM

*The ELECTRIFY ecosystem will operate as the consumer-facing, ELECTRIFY **Marketplace 2.0**, driven by smart-contracts and a peer-to-peer energy trading platform, **Synergy**.*

ELECTRIFY's existing marketplace business model will be transformed into the ELECTRIFY **Marketplace 2.0**, ensuring a legitimate use case for the **ELEC** token. With the upcoming liberalisation of the energy market across Asia, **Marketplace 2.0** will be enhanced to host retail electricity smart contracts and provide homeowners an avenue to browse and purchase electricity from a retailer or a small-scale energy producers.

Synergy, a P2P platform hosted within **Marketplace 2.0**, will connect many small-scale energy producers and consumers, ensure price certainty and cut out the middleman.

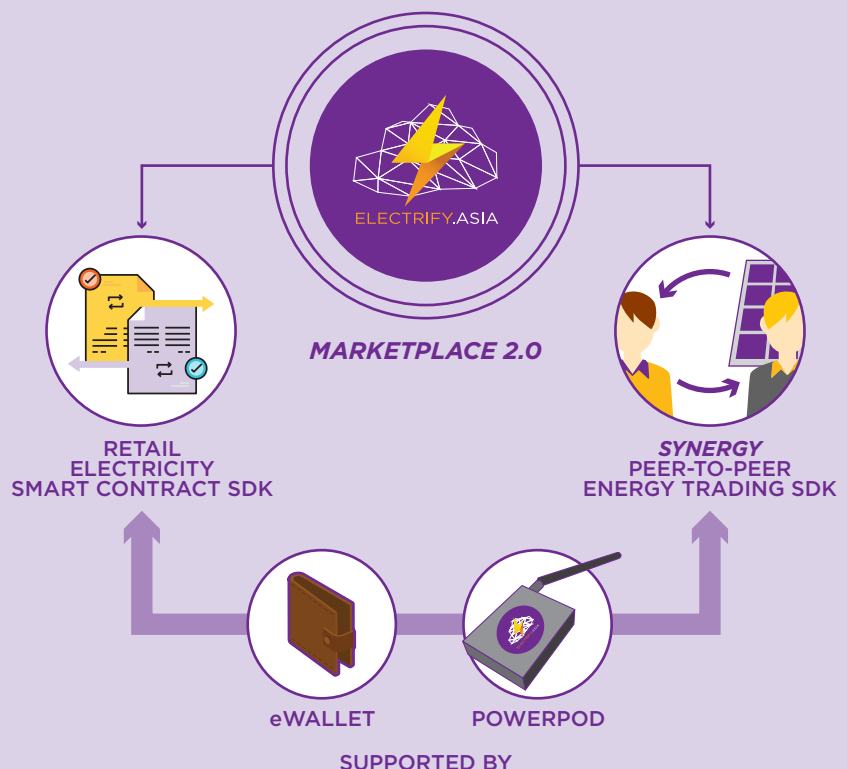
Synergy will allow the ELECTRIFY to rapidly expand into other geographies, using the P2P platform to promote an active energy ecosystem.

ENERGY MARKETPLACE (Current business)



WEB APPLICATION

ELECTRIFY ECOSYSTEM (To be developed)

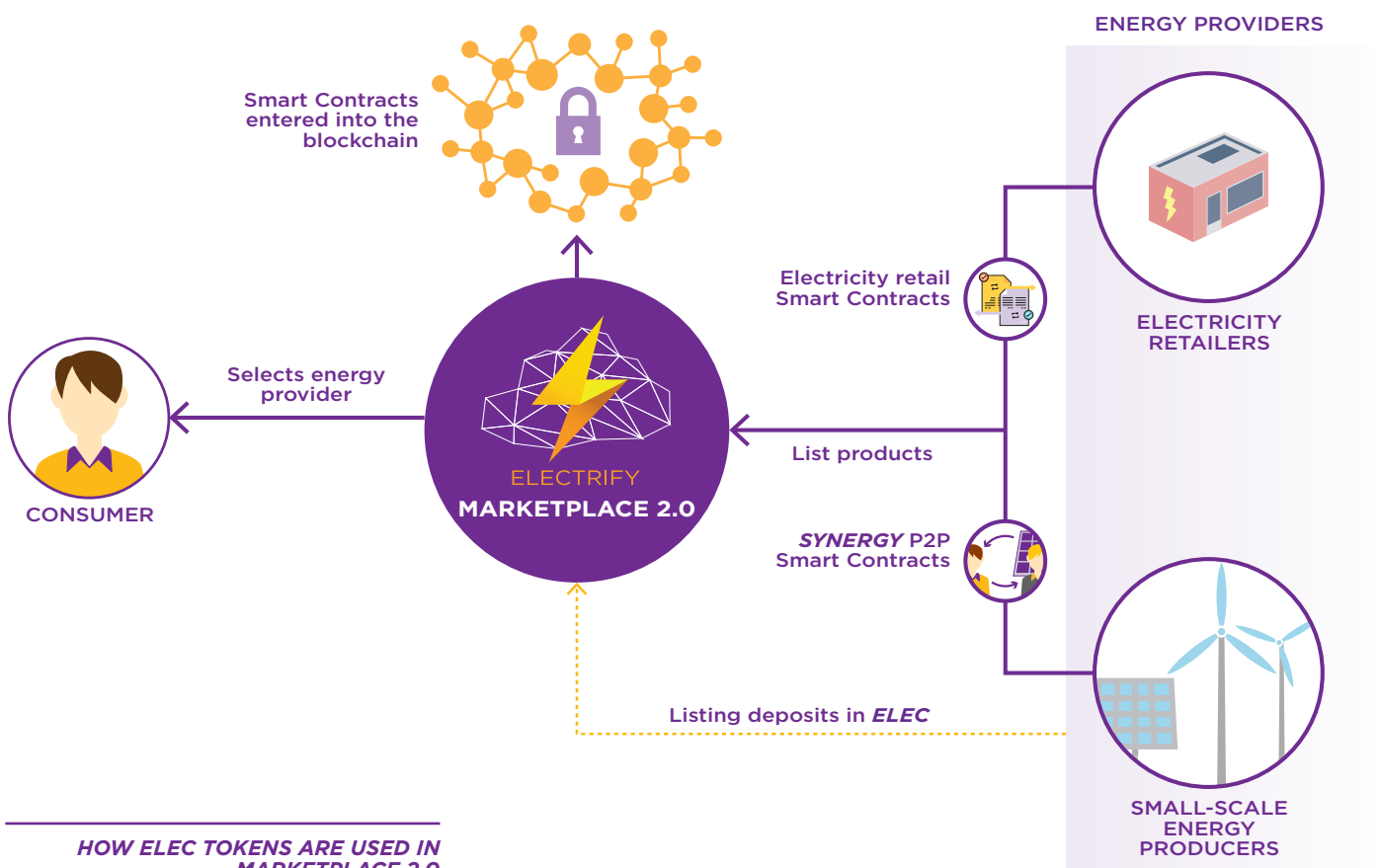


WEB & MOBILE APPLICATION

ELECTRIFY MARKETPLACE 2.0

SMART CONTRACTS FOR ENERGY

ELECTRIFY's new **Marketplace 2.0** will be the overarching web and mobile platform, allowing consumers to access all of ELECTRIFY's services. Consumers will be able to purchase energy from electricity retailers or directly from their peers (P2P), cutting out the middleman. Using smart contracts and blockchain, we bring the following benefits to the consumer:



SYNERGY

PEER-TO-PEER ENERGY TRADING PLATFORM

Synergy allows consumers to buy power directly from small-scale producers, such as residential rooftop solar and wind turbines.

Synergy removes the middleman, and reduces energy costs for all consumers.

P2P trades will ride on a [*Contract for Difference*](#) (CfD) settlement mechanism.

Beyond microgrids, our CfD-based platform will allow **Synergy** to plug-and-play into major cities and all developed power grids globally.

PARTICIPANTS

BUY-SIDE

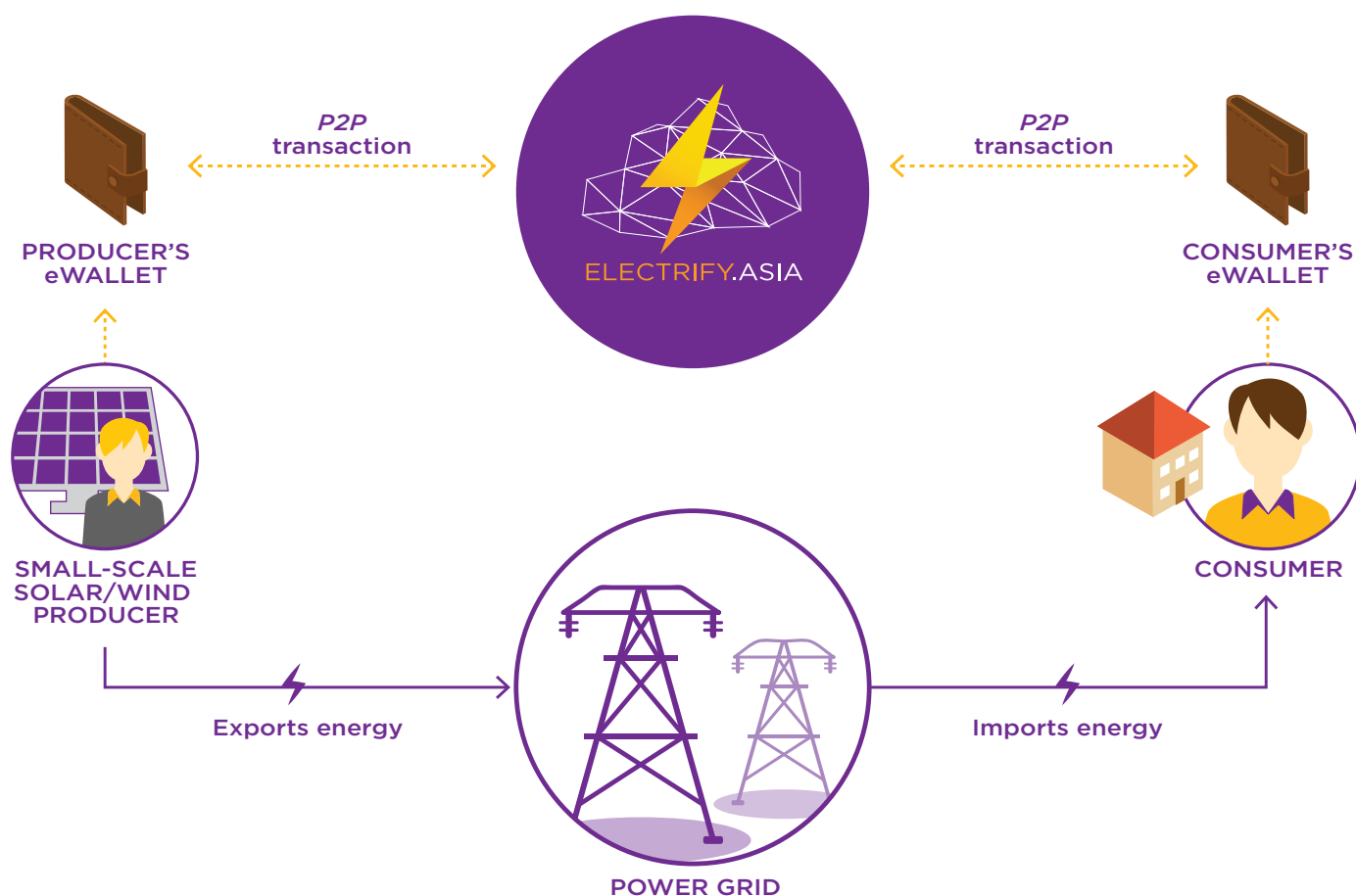
- Residential consumers
- Electricity retailers
- MNCs and Small-Businesses

SELL-SIDE

- Small-business and residential energy producers (factories, warehouses, homes)
- Electric vehicles and battery storage systems

OTHERS

- Electricity grid operators
- Third-party auditors
- Commodity traders
- Risk management teams



POWERPOD & eWALLET



POWERPOD

To accurately track and audit the production from a small-scale energy producer, we have developed an IoT smart device to measure and enable P2P trades via **Synergy** smart contracts. **PowerPod** will log the energy produced onto a blockchain.

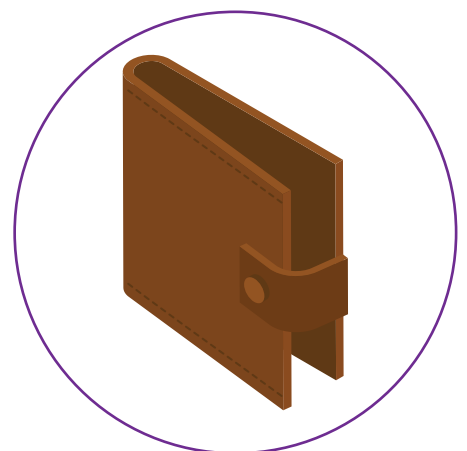
Producers will be required to deposit at least 200 ELEC/kWp of rated generation capability as permissioned access to write energy data onto the blockchain. This encourages long term ownership and disincentivises tampering and dishonest behaviour.

This data will also allow producers to be awarded with a [renewable energy certificate](#).

eWALLET

The **eWallet** will be used to facilitate payments via the smart contracts, allowing consumers to pay for their energy usage. This will enable automatic and secure payments and allow energy suppliers to manage their credit risk.

This will be the standard for payments in **Marketplace 2.0** and **Synergy**.

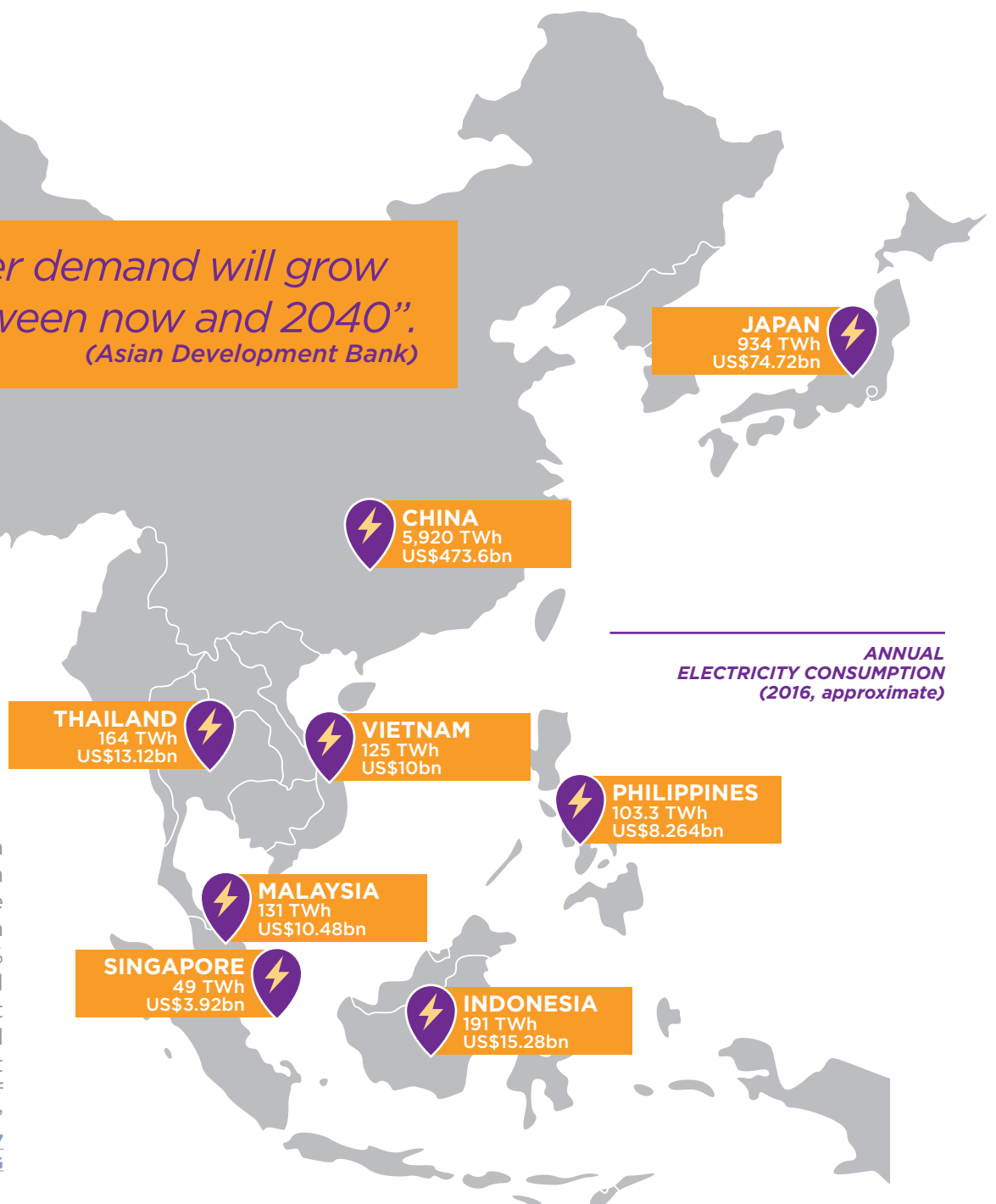


OPPORTUNITIES

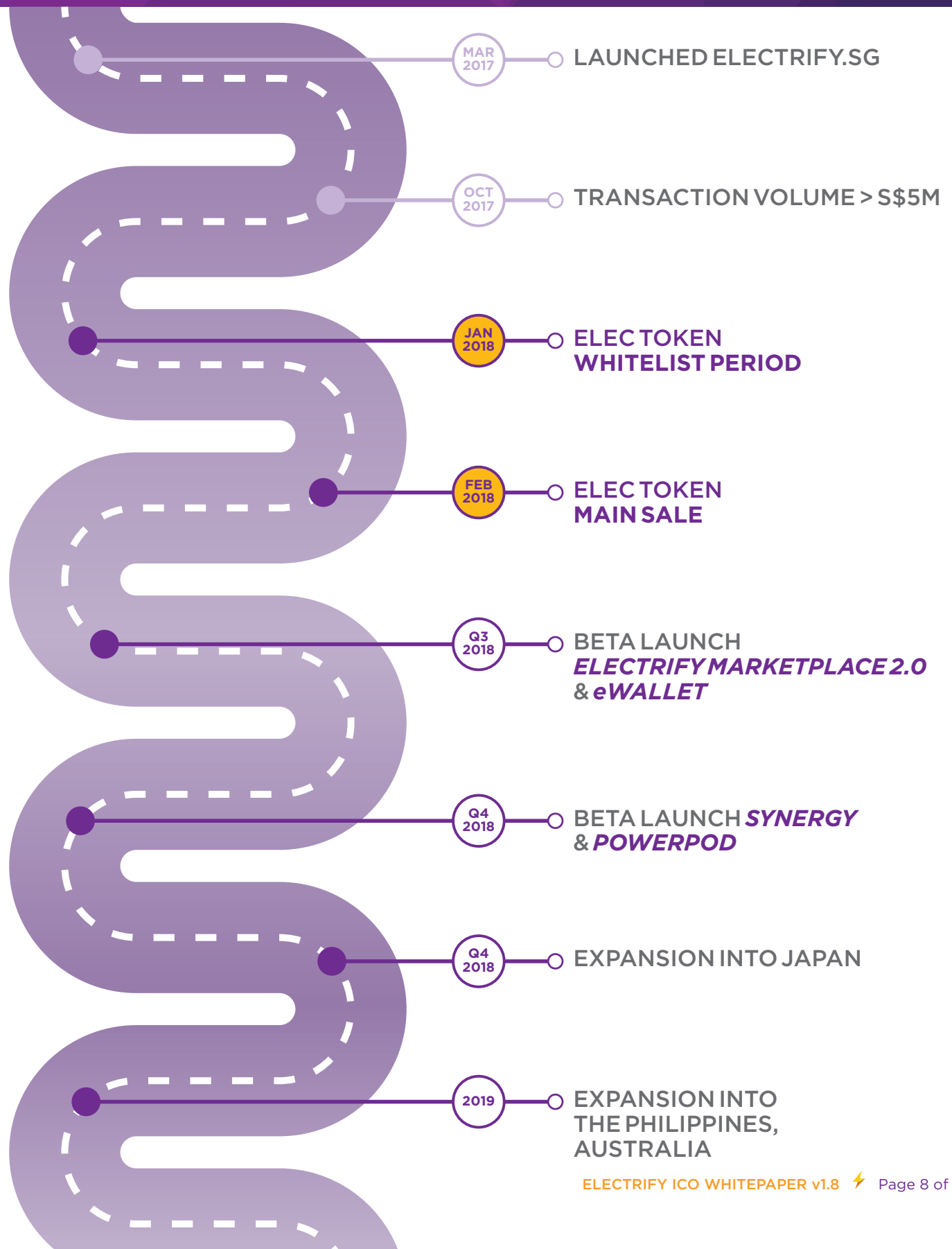
As countries around Asia gear up for the liberalisation of their electricity markets, **ELECTRIFY** will deliver value through our marketplace and peer-to-peer (P2P) platforms. Singapore's [Open Electricity Market](#) liberalisation in 2018 will be an excellent test bed for our solutions.

*“Global power demand will grow by 58% between now and 2040”.
(Asian Development Bank)*

“China and India alone are a \$4 trillion opportunity for the energy sector. China accounts for 28% and India 11% of total regional investment over 2017-40. Wind and solar both account for around a third of total investment.”
[New Energy Outlook 2017](#)
[BLOOMBERG](#)

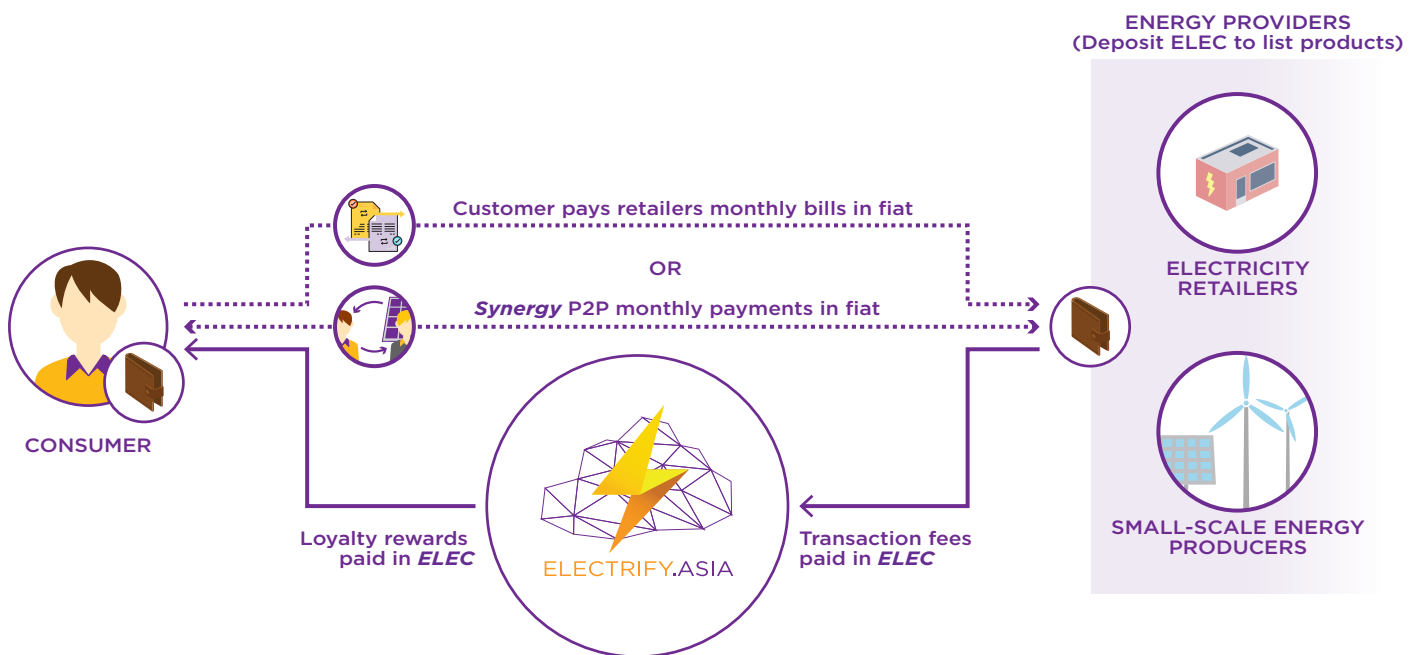


ROADMAP



TOKENS

HOW TOKENS ARE USED



ELEC ELECTRIFY TOKEN

The **ELEC** will be issued at the ICO and will be used in ELECTRIFY's ecosystem.

ELEC USAGE

- Listing deposits for energy producers and retailers to access Electrify's ecosystem
- Transaction fees paid by Energy Providers to Electrify
- Loyalty rewards for consumers



CONVERSION RATE WILL BE DETERMINED
CLOSER TO THE MAINSALE

TOKENS

TOKEN SALE

MAIN SALE DETAILS	
Hard cap	USD 30 million
Dates	23/02/18 to 01/03/18
Accepted currencies	ETH only
ELEC to USD rate	1 ELEC = US\$0.08
Token supply	Total token supply: 750,000,000 ELEC ICO token issuance: 375,000,000 ELEC
Maximum contribution	To be determined based on the number of whitelisted participants

The level of product development and country expansion will be determined by the amounts raised, according to the following table.

% OF HARD CAP	DELIVERY	COUNTRIES
Up to 60% - USD 18 mil	Marketplace 2.0 + Synergy + eWallet	Singapore
80% - USD 24 mil	Above items + PowerPod	Above + Japan
100% - USD 30mil	Above items	Above + the Philippines + Australia

TOKEN ISSUANCE

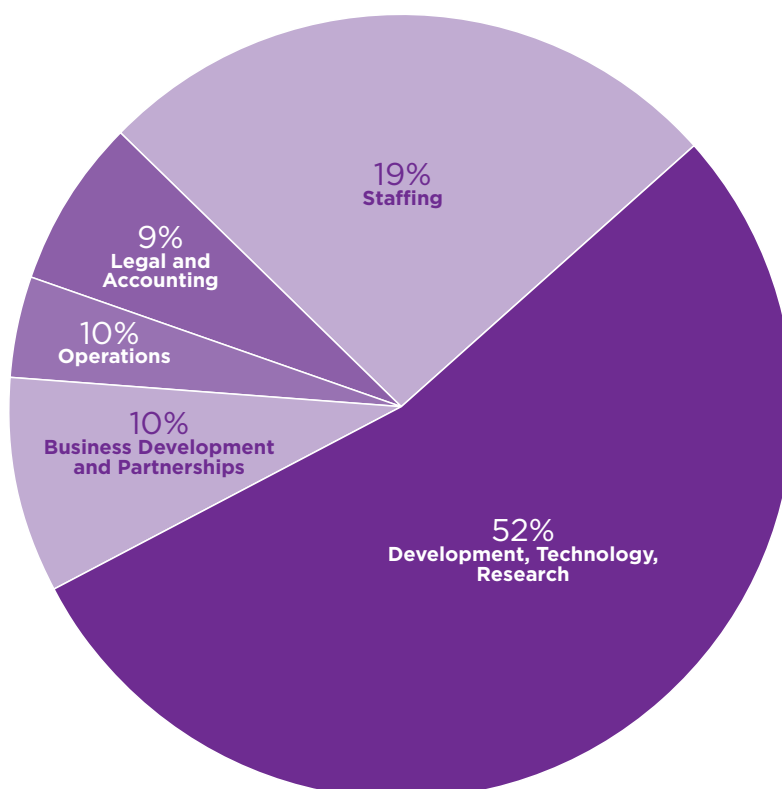
The tokens will be distributed approximately two weeks from the end date of the main sale. These two weeks will be used to consolidate and confirm all token sale details, create and distribute tokens.

TOKENS

TOKEN DISTRIBUTION

- A. **50% Token sale**
- B. **18.4% Team and future team members (Vesting: 50% at each 6-month interval)**
- C. **9.0% Advisors and Partners**
- D. **18.5% Treasury and Community Development**
 - 6.1 % community development for small-scale energy producers and consumers
 - 11.2% Reserve
 - 1.2% Contribution to research to blockchain public scaling development
- E. **4.1% Airdrop** to the community

USAGE OF FUNDS



FOUNDERS

JULIUS TAN CEO

Julius worked as a Solar Research Engineer at the National University of Singapore, thereafter moving on as an electricity trader and Head of the Energy department at a power company. Julius and team aim to build ELECTRIFY to offer a seamless experience for energy consumers in Asia through the use of blockchain and AI, unlocking value for both consumers and retailers.

Julius has a BA and MA in Engineering from the University of Cambridge. He previously worked at the Singapore Economic Development Board (Cleantech), Standard Chartered Bank (Global Transactional Banking), and Schlumberger (Oilfield Engineering).

MARTIN LIM COO

Martin has over 20 years of experience in the mass communications industry, having served as both a creative and strategic lead for a diverse range of clients ranging from SMEs to MNCs. The last decade provided a great deal of exposure with business startups and regional business development. His interests in energy and water led him to subsequently co-found a company to develop water treatment systems for disaster relief. He eventually landed a role in Business Development at a power company where he was the lead in new business generation in the key accounts.

Martin leads the operational functions at ELECTRIFY which include driving internal milestones and pursuing new opportunities with various stakeholders from retailers to customers, offering them a fluid integration into the ELECTRIFY ecosystem.

ADVISORS

JUN HASEGAWA

BLOCKCHAIN SCALABILITY AND PAYMENTS TECHNOLOGY

Current: Founder and CEO of Omise & OmiseGO

Prior to founding Omise, Jun was involved in founding a series of tech companies in Japan, primarily in the fields of e-commerce, life-logging, mobile payment, and payment infrastructure.

Jun currently leads an international team of engineers and business personnel in countries across Asia, and is gearing up for the company's expansions in Southeast Asia. He is passionate about making online payments available to the masses.

DR. LICHENG LIU

JAPAN ENERGY MARKET, UTILITY SCALE SOLAR PROJECT DEVELOPMENT

Current: O&M Manager at Saferay Pte Ltd (Global solar developer)

Previous: Deputy Head, National Solarisation Centre (SERIS), PhD (Advanced Photovoltaics, NUS), Engineering Science (Osaka University)

FOO MING QING

CYBERSECURITY AND POWER SYSTEMS MODELLING

Current: Software Engineer at ST Electronics (Info-Comm Systems)

Previous: MSc Computation for Design and Optimisation (MIT), BA Electrical and Information Sciences (University of Cambridge), National Taiwan University Imperial College London

Relevant publications:

[*Robust and resilient estimation for cyber-physical systems under adversarial attacks.*](#)

[*Distributed Feasibility Algorithms with Application to Power Flow Problems.*](#)

SHIRLEY WONG

GROWTH STRATEGY AND PARTNERSHIPS

Current: Managing Partner at TNF Ventures, Board member of IMDA, Co-chairman of the Cyber Security Awareness Alliance, Vice Chairman of South Asia Business Group, Member of Temasek Polytechnic's IT School Advisory Council and an Entrepreneur-in-Residence at Singapore Management University.

Previous: Chairman (SITF), Co-founder (Frontline Technologies, acquired by BT)

DR. YANG DAZHI

GREATER CHINA, ML, AI, DATA SCIENCE, SOLAR STATISTICAL FORECASTING

Current: Research Scientist (A*STAR)

Previous: PhD at National University of Singapore

Interests: Geometrical transformation, kriging and model output statistics, sensor network-based forecasting utilising spatial-temporal correlations, urban to continental scale solar irradiance monitoring networks. Research in both structured and unstructured data mining and machine learning.

NIZAM ISMAIL

LEGAL ADVISOR

Current: Co-Founder of RHT Compliance Solutions, Partner and Head of Regulatory Practice of RHTLaw Taylor Wessing, Head of Regulatory Sub-Committee of the Association of Cryptocurrency Enterprises and Startups Singapore (ACCESS)

Previous: Former Executive Director and Head of Compliance for Southeast Asia at Morgan Stanley, Former Deputy Director, Market Conduct Policy Division at Monetary Authority of Singapore (MAS)

DISCLAIMERS

IMPORTANT NOTICES

The ELEC tokens are not securities as defined under Singapore's Securities and Futures Act (Cap. 289) ("SFA"). Accordingly, the SFA does not apply to the issuance of the ELEC tokens. For the avoidance of doubt, the offering of ELEC tokens need not be accompanied by any prospectus or profile statement and no prospectus or profile statement needs to be lodged with the Monetary Authority of Singapore ("MAS").

This White Paper does not constitute an offer of, or an invitation to purchase, the ELEC tokens in any jurisdiction in which such offer or sale would be unlawful. No regulatory authority in Singapore, including the MAS, has reviewed or approved or disapproved of the ELEC tokens or this White Paper. This White Paper and any part hereof may not be distributed or otherwise disseminated in any jurisdiction where offering tokens in the manner set out in this White Paper is regulated or prohibited.

The information in this White Paper is current only as of the date on the cover hereof. For any time after the cover date of this White Paper, the information, including information concerning Electrify's business operations and financial condition may have changed. Neither the delivery of this White Paper nor any sale made in the related token offering shall, under any circumstances, constitute a representation that no such changes have occurred. Electrify does not make or purport to make, and hereby disclaims, any representation, warranty, undertaking, or other assurance in any form whatsoever to any person, including any representations, warranties, undertakings, or other assurances in relation to the truth, accuracy, or completeness of any part of the information in this White Paper.

Whether taken as a whole or read in part, this White Paper is not, and should not be regarded as, any form of legal, financial, tax, or other professional advice. You should seek independent professional advice before making your own decision as to whether or not to receive any ELEC tokens. You are responsible for any and all evaluations, assessments, and decisions you make in relation to investing in the ELEC tokens. You may request for additional information from Electrify in relation to this offer of the ELEC tokens. Electrify may, but is not obliged to, disclose such information depending on whether (i) it is legal to do so and (ii) the requested information is reasonably necessary to verify the information contained in this White Paper.

Electrify is not responsible for compelling any person to accept ELEC tokens and disclaims, to the fullest extent permitted by law, all liability for any adverse consequences arising out of or in relation to such rejections of the ELEC tokens.

Upon receiving any ELEC tokens, you will be deemed to have reviewed this White Paper (and any information requested and obtained from Electrify) in full and to have agreed to the terms of this offering of the ELEC tokens, including to the fact that this offering does not fall within the scope of any securities laws in Singapore and is not regulated by the MAS. You further acknowledge and agree that the ELEC tokens are not securities and are not meant to generate any form of investment return.

The ELEC tokens and related services provided by Electrify (if any) are provided on an "as is" and "as available" basis. Electrify does not grant any warranties or make any representation, express or implied or otherwise, as to the accessibility, quality, suitability, accuracy, adequacy, or completeness of the ELEC tokens or any related services provided by Electrify, and expressly disclaims any liability for errors, delays, or omissions in, or for any action taken in reliance on, the ELEC tokens and related services provided by Electrify. No warranty, including the warranties of non-infringement of third party rights, title, merchantability, satisfactory quality, or fitness for a particular purpose, is given in conjunction with the ELEC tokens and any related services provided by Electrify.

RISK FACTORS

REGULATORY RISKS

The regulation of tokens such as the ELEC tokens is still in a very nascent stage of development in Singapore. A high degree of uncertainty as to how tokens and token-related activities are to be treated exists. The applicable legal and regulatory framework may change subsequent to the date of issuance of this White Paper. Such change may be very rapid and it is not possible to anticipate with any degree of certainty the nature of such regulatory evolution. Electrify does not, in any way, represent that the regulatory status of the ELEC tokens will remain unaffected by any regulatory changes that arise at any point in time before, during, and after this offering.

NO REGULATORY SUPERVISION

None of Electrify or its affiliates is currently regulated or subject to the supervision of any regulatory body in Singapore. In particular, Electrify and its affiliates are not registered with MAS in Singapore as any type of regulated financial institution or financial advisor and are not subject to the standards imposed upon such persons under the Securities and Futures Act, Financial Advisors Act, and other related regulatory instruments. Such persons are required to comply with a variety of requirements and standards concerning disclosures, reporting, compliance, and conduct of their operations for purposes of maximising investor protections. Since Electrify is not subject to such requirements or standards, it will make decisions on those issues at its own discretion. While Electrify will have regard to best practices on these issues, holders of ELEC tokens may not necessarily enjoy the same extent and degree of investor protections as would be the case should they invest with regulated entities instead.

NO FIDUCIARY DUTIES OWED

As Electrify is not a regulated financial institution, it does not owe investors in ELEC tokens any fiduciary duties. This means that Electrify has no legal obligation to always act in good faith in the best interests of holders of ELEC tokens. While Electrify will have regard to the interests of holders of ELEC tokens, it is also permitted to consider the interests of other key stakeholders and to prefer these interests over the interests of ELEC token holders. This may mean that Electrify is permitted to make decisions that conflict with the interests of ELEC token holders. Not owing any fiduciary duties to holders of ELEC tokens also means that holders of ELEC tokens may have limited rights of recourse against Electrify and its affiliates in the event of disputes.

TAX RISKS

The tax characterization of ELEC tokens is unclear. Accordingly, the tax treatment to which they will be subject is uncertain. All persons who wish to receive ELEC tokens should seek independent tax advice prior to deciding whether to receive any ELEC tokens. Electrify does not make any representation as to whether any tax consequences may arise from purchasing or holding ELEC tokens.

RISKS FROM THIRD PARTIES

The tokenised nature of ELEC tokens means that they are a blockchain-based asset. The security, transferability, storage, and accessibility of blockchain assets depends on factors outside of Electrify's control, such as the security, stability, and suitability of the underlying blockchain (in this case, the Ethereum blockchain), mining attacks, and who has access to the smart contract where the ELEC tokens are stored. Electrify is unable to assure that it can prevent such external factors from having any direct or indirect adverse impact on any of the ELEC tokens. Persons intending to receive the ELEC tokens should note that adverse events caused by such external factors may result in the loss of some or all of the ELEC tokens. Such loss may be irreversible. Electrify is not responsible for taking steps to retrieve ELEC tokens lost in this manner.

RISKS IN RECEIVING THE ELEC TOKENS

Electrify cannot and does not guarantee or otherwise assure that there are no risks in relation to the issuance of the ELEC tokens. The ELEC tokens may, depending on the manner in which the relevant issuance is effected, involve third parties or external platforms (e.g., wallets). The involvement of such parties or platforms may introduce risks that would not otherwise be present, such as misconduct or fraud by the third party, or your failure to receive the ELEC tokens upon duly making payment because of a third-party wallet's incompatibility with the ELEC tokens. Electrify is not responsible for any risks arising due to the involvement of third parties, including the risk of not receiving (or subsequently losing) any or all ELEC tokens issued to you.

THANK YOU



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FOR MORE INFORMATION, PLEASE CONTACT:

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