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.
ELECTRICITY MARKET PRIMER

REGULATED vs LIBERALISED ELECTRICITY MARKETS

REGULATED ELECTRICITY MARKET
- POWER GENERATION MONOPOLY
- POWER DISTRIBUTION MONOPOLY
- CONSUMERS

LIBERALISED ELECTRICITY MARKET
- ASIAN COUNTRIES ARE HEADED TOWARDS LIBERALISATION
- WIND/SOLAR FARM
- HOME-BASED ENERGY PRODUCER
- CONSUMER TO BUSINESS
- PEER-TO-PEER
- CONSUMERS

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.
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.
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.
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:

- **NO MIDDLEMAN FEES**
- **REDUCED TRANSACTION COST**
- **AUTOMATIC EXECUTION**

**HOW ELEC TOKENS ARE USED IN MARKETPLACE 2.0**

**CONSUMER**

- Selects energy provider

**ELECTRICITY RETAILERS**

- List products
  - Synergy P2P Smart Contracts

**SMALL-SCALE ENERGY PRODUCERS**

- Smart Contracts entered into the blockchain

**ELECTRICITY RETAILERS**

- Electricity retail
  - Smart Contracts

**MARKETPLACE 2.0**

- Listing deposits in ELEC
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.
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.

“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

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

- **Mar 2017**: Launched Electrify.SG
- **Oct 2017**: Transaction volume > $5M
- **Jan 2018**: Electrify Token Whitelist Period
- **Feb 2018**: Electrify Token Main Sale
- **Q3 2018**: Beta Launch Electrify Marketplace 2.0 & eWallet
- **Q4 2018**: Beta Launch Synergy & Powerpod
- **Q4 2018**: Expansion into Japan
- **2019**: Expansion into the Philippines, Australia
**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

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*CONVERSION RATE WILL BE DETERMINED CLOSER TO THE MAINSALE*
TOKENS

TOKEN SALE

<table>
<thead>
<tr>
<th>MAIN SALE DETAILS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Hard cap</td>
<td>USD 30 million</td>
</tr>
<tr>
<td>Dates</td>
<td>23 FEB 1:00PM UTC to 02 MAR 12:59PM UTC</td>
</tr>
<tr>
<td>Accepted currencies</td>
<td>ETH only</td>
</tr>
<tr>
<td>ELEC to USD rate</td>
<td>1 ELEC = US$0.08</td>
</tr>
</tbody>
</table>
| 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.

<table>
<thead>
<tr>
<th>% OF HARD CAP</th>
<th>DELIVERY</th>
<th>COUNTRIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 60% - USD 18 mil</td>
<td>Marketplace 2.0 + Synergy + eWallet</td>
<td>Singapore</td>
</tr>
<tr>
<td>80% - USD 24 mil</td>
<td>Above items + PowerPod</td>
<td>Above + Japan</td>
</tr>
<tr>
<td>100% - USD 30mil</td>
<td>Above items</td>
<td>Above + the Philippines + Australia</td>
</tr>
</tbody>
</table>

TOKEN ISSUANCE

The tokens will be transferable seven days from the end date of the main sale.
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

- 19% Staffing
- 9% Legal and Accounting
- 10% Operations
- 10% Business Development and Partnerships
- 52% Development, Technology, Research
**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.
**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  

**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)
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.

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THANK YOU

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