

Indian Energy Exchange Limited

Issue Snapshot:

Issue Open: Oct 09 – Oct 11, 2017

Price Band: Rs. 1645 – 1650

 Issue Size: 6,065,009 Equity Shares
(Entirely Offer for sale)

Offer Size: Rs.997.69 crs – 1000.72 crs

QIB	Upto 3,032,503 eq sh
Retail	atleast 2,122,754 eq sh
Non Institutional	atleast 909,752 eq sh

Face Value: Rs 10

Book value: Rs 104.55 (June 30, 2017)

Bid size: - 9 equity shares and in multiples thereof

100% Book built Issue

Capital Structure:

Pre Issue Equity:	Rs. 30.33 cr
Post issue Equity:	Rs. 30.33 cr

Listing: BSE & NSE

Book Running Lead Manager: Kotak Mahindra Capital Company Limited, Axis Capital Limited, IIFL Holdings Limited

Registrar to issue: Karvy Computershare Pvt Ltd

Shareholding Pattern

Shareholding Pattern	Pre issue %	*Post issue %
Promoter and Promoter Group	-	-
Public & Others	100.0	100.0
Total	100.0	100.0

Source for this Note: RHP

Background & Operations:

Indian Energy Exchange Ltd (IEEL) is the largest exchange for the trading of a range of electricity products in India in terms of traded contract volumes in the financial year 2017 according to the Central Electricity Regulatory Commission (the "CERC"). Electricity products traded over its electronic trading platform comprise (i) electricity contracts in blocks of 15 minutes in the day-ahead-market (the "DAM"), (ii) electricity contracts for fixed terms in the future, such as intra-day contracts, day ahead contingency contracts and contracts up to 11 days ahead, known as the term-ahead-market (the "TAM") and (iii) renewable energy certificates ("RECs"). It has commenced the trading of energy saving certificates ("ESCerts") on September 26, 2017.

IEEL is one of two exchanges in India that offer an electronic platform for the trading of electricity products and has a substantial majority market share among the power exchanges in India. The DAM constitutes the substantial majority of the energy contracts that are traded on the Exchange. Its Exchange is an online platform which is accessible to registered participants throughout India. It promotes efficient price discovery and offers participants on its Exchange the opportunity to trade in a variety of electricity products. Its Exchange increases the accessibility and transparency of the power market in India and enhances the speed and efficiency of trade execution. In addition to trade execution, its Exchange offers settlement services, including electronic trade confirmation, access to clearing services and risk management functionality.

As of August 31, 2017, IEEL had over 5,900 participants registered on its Exchange of which over 3,200 participants were active. Over 4,300 registered participants were eligible to trade electricity contracts and over 4,000 registered participants were eligible to trade RECs, as of August 31, 2017. Its participants registered to trade electricity contracts are located across 29 states and five union territories in India, and include 50 distribution companies, over 400 electricity generators and over 3,900 open access consumers. In the financial year 2017, participants traded and cleared 40,528 million kWh of power on its Exchange. The volumes for the financial year 2017 represent a growth of 77.5% from 22,827 million kWh of power traded on its Exchange in the financial year 2013. For the five months ended August 31, 2017, participants traded and cleared 19,715 million kWh of power on Exchange power on its Exchange. As of August 31, 2017 in addition to the participants registered to trade electricity contracts, participants registered to trade RECs on its Exchange included over 1,000 renewable energy generators and over 2,900 industry and corporate customers. In the financial year 2017, participants traded and cleared 4.62 million RECs on its Exchange. The volumes for the financial year 2017 represent growth of 132.0% from 1.99 million RECs traded and cleared on its Exchange in the financial year 2013. For the five months ended August 31, 2017, participants traded and cleared 0.91 million RECs on its Exchange.

Objects of Issue:

The objects of the Offer is to achieve the benefits of listing the Equity Shares on the Stock Exchanges and to carry out the sale of up to 6,065,009 Equity Shares by the Selling Shareholders. The listing of the Equity Shares will enhance IEEL's brand and provide liquidity to the existing Shareholders. IEEL expects that the proposed listing will also provide a public market for the Equity Shares in India. The company will not receive any proceeds of the Offer.

Competitive Strengths

Efficient price discovery and flexibility on Exchange: IEEL's Exchange is an online platform which is accessible by participants throughout India. It promotes efficient price discovery and offers the participants on its Exchange the flexibility to trade in a variety of electricity products. It primarily brings together sellers of power, such as independent power producers, captive power plants, distribution companies and Government owned power generation companies, and buyers of power, such as distribution companies and industrial, commercial and institutional power consumers, and provides them with a transparent, neutral and automated platform for trading of electricity. IEEL's

Exchange increases the accessibility and transparency of the power market in India and enhances the speed and efficiency of trade execution. Its Exchange also provides flexibility to the participants for buying and selling on the same day in different time blocks and thereby the ability to manage their requirements more efficiently. It has also provided a variety of order types within the DAM to meet the needs of the participants and provide them more flexibility, such as ‘single bids’ which allows the participants to specify multiple sequences of price and quantity pairs in a portfolio manner, ‘block bid’ for all or none orders wherein the participants can specify one price and one quantity for a combination of continuous 15 minute time blocks. In addition to trade execution for electricity contracts, its Exchange offers trading in RECs, settlement services, including electronic trade confirmation, access to clearing services and risk management functionality.

First and largest energy exchange in India with strong brand recognition: IEEL is the largest exchange for the trading of a range of electricity products in India, in terms of traded contract volumes in the financial year 2017, according to the CERC. It is the first energy exchange in India, having commenced operations in June 2008. Stemming from its significant operational track record and by achieving international quality certifications, it enjoys the early mover advantage and strong brand recognition among participants in the energy trading industry in India. It has successfully grown its operations since the inception of its business and enjoys a significant share of the short term power trading market in India. IEEL’s operational experience and scale of operations as the largest energy exchange in India, coupled with the growth expected in the short term electricity market, would continue to deepen the liquidity of electricity contracts and other electricity products available to trade on its Exchange and, in turn, will enable IEEL to grow both the number of participants and the volume of trades cleared on its Exchange.

Fast growing domestic market with conducive Government policies and regulations: IEEL’s business benefits from conducive domestic market dynamics. According to CRIS, the power generated in India is expected to grow by 29.6% between the financial year 2017 and by the financial year 2022. Energy exchanges have been gaining popularity as a platform for trading power due to the transparency of the trading process and efficient price discovery mechanism offered by such exchanges. The proportion of energy traded over power exchanges grew from 23.8% to 34.5% of the short term market between the financial year 2013 and the financial year 2017. At the same time, IEEL’s business is well placed to benefit from conducive Government policies and regulations that encourage the trading of energy and increase the volume of electricity products available to be traded over exchanges. In addition, most state electricity regulatory commissions have allowed open access to their state grids, which has facilitated wider participation in energy trading and has increased the liquidity of electricity products in the market. Further, in recent years, the CERC has also increased the penalties imposed on power generation and distribution companies for unscheduled drawl and injection of electricity, which has encouraged such companies to manage their short-term power requirements through the power exchanges.

Diverse participant base ensuring liquidity on Exchange: IEEL has achieved deep penetration of the market for trading of electricity over exchanges, and as of August 31, 2017, it had over 5,900 participants registered on its Exchange of which over 3,200 participants were active. Over 4,300 registered participants were eligible to trade electricity contracts and over 4,000 registered participants were eligible to trade RECs, as of August 31, 2017. Its participants registered to trade electricity contracts include 50 distribution companies, over 400 electricity generators and over 3,900 open access consumers. As of August 31, 2017, in addition to participants registered to trade electricity contracts, participants registered to trade RECs on its Exchange included over 1,000 renewable energy generators and over 2,900 industry and corporate customers. IEEL’s participants are located in 29 states and five union territories in India and include companies across, among others, the textile, metals, chemicals, automobiles, food processing, cement, ceramics, plastics, housing and commercial real estate, consumer goods and information technology industries in India. The diversity of its participant base leads to increased liquidity of electricity contracts and other electricity products on its Exchange, both in terms of demand and supply.

Highly scalable and proven technology infrastructure: IEEL’s energy trading platform, which it has used since 2012 for its business operations, provides a rapid, accurate and efficient trade execution mechanism and caters to the requirements of pre and post-trade functionalities. Its platform is a flexible, reliable and secure system for trading of energy contracts. It uses a trading software, developed by 63 Moons Technologies Limited (“63 Moons”), which is critical to maintain the anonymity of bids, the integrity of the price discovery mechanism, implementation of risk management procedures and catering to the requirements of all pre and post trade functionalities on Exchange. IEEL’s platform is accessible online and is designed to be highly scalable, such that it can expand capacity and add new products and functionality efficiently and at relatively low cost without disruption to its markets. It has regularly allocated substantial resources towards upgrading information technology systems and infrastructure, in order to improve market efficiency and transparency, enhancing user experience and providing flexibility for future business growth and market needs. IEEL’s commitment to using and investing in technology to enhance platform will continue to contribute to the growth and development of its business.

Professionally managed company with a highly qualified and experienced management team: IEEL is a professionally managed company. Its governance structure promotes shareholder value and the operation of fair and efficient markets. In addition, in accordance with applicable regulations, it does not participate as a principal in any power trading activities and its members are not allowed to own over 5% of

its share capital individually and 49% of its share capital in aggregate, which allows IEEL to avoid potential conflicts of interest. It has a qualified and experienced management team led by its Managing Director and Chief Executive Officer, Satyanarayan Goel, who has over 38 years of experience in the power industry. He is ably supported by an 11 member senior management team, having experience ranging from 14 to 31 years, in their respective areas of operation. Its management team has been able to take advantage of market opportunities, formulate sound business strategies and execute them in an effective manner.

Business Strategy:

Market development to encourage trading of power over exchanges: IEEL plans to continue its initiatives to increase trading of electricity contracts on its Exchange, such as engaging with major distribution companies to work on strategies for reducing and optimizing their power procurement costs by trading electricity contracts on its Exchange, conducting capacity building workshops for power distribution companies and encouraging initiatives to reduce power procurement costs. Further, it intends to continue its efforts to work in different states in India and assist in developing a more conducive policy and regulatory framework to enable industry participants to trade on its Exchange. In addition, IEEL as member of the Advisory Committee of State Electricity Regulatory Commissions of ten states, contribute towards development of the power market at the state level in India. It also intends to continue working with central and state Governments and regulators to encourage the development of relevant infrastructure, regulatory and policy framework to support trading on its Exchange.

Attract new participants and increase trading activity on Exchange: IEEL plans to continue to expand its member and client base by targeting new industry participants and by offering electronic trade execution and processing capabilities that appeal to a broad range of industry participants, together with providing new participants a way to plan their power procurement and optimize their costs. IEEL expects increasing the number of new participants on its Exchange to not only result in an increase in revenue but also increase the liquidity of electricity products available on its Exchange. Such increase in liquidity is also expected to encourage increased trading activity from its existing participants.

Expand into new geographic markets: IEEL plans to offer its products in neighboring countries such as Bhutan, Bangladesh and Nepal, all of which are connected at one or more points with the Indian power grid. It intends to leverage the guidelines issued by the Government in December 2016, which enable cross-border trade of electricity contracts with neighboring countries through Indian power exchanges, initially in the TAM product categories. It also intends to engage the relevant regulators in India and in neighboring countries to develop collaboration opportunities with the local power grid companies so as to allow participants from these countries to trade on the Exchange. Expanding into such new geographic markets would allow it to increase its customer base and also enhance the liquidity of electricity products available on its Exchange. In the longer term, it also intends to explore and pursue strategic investments in and alliances with international power exchanges that will enable it to supplement its internal growth, expand trading products and related services, advance technology and take advantage of experience and new developments in international energy markets.

Develop new products and services: IEEL intends to continually develop and launch new products designed to meet market demand and the needs of its participants. It has commenced the trading of ESCerts on its Exchange on September 26, 2017. In addition, it is attempting to develop products for trading in renewable energy contracts. Further, it intends to work on developing capacity markets and longer duration contracts, including futures and options, in electricity contracts and other electricity products. As the Indian power industry is heavily regulated and all electricity products that may be traded over its Exchange require approval from the CERC, it intends to continue to engage with the CERC, other relevant Government authorities and industry participants to develop electricity products that respond to its participants needs and also meet the regulatory requirements.

Focus on technology including increasing connectivity to trading platform: IEEL plans to improve its information technology systems and infrastructure and its front- and back-end functions in response to technological developments, customer demand and competitive pressures. It continue to improve its core IT capabilities, platform infrastructure and the user-friendly interface of its trading systems, in order to maintain its systems' reliability, performance and security, add new order types and services and enhance its participant's experience. IEEL also plans to continue to invest in its technology to increase connectivity to its trading platform by extending access to its platform to clients of its members. It is in the process of offering a computer-to-computer link to its trading platform so as to allow its members to individually develop their own software which would, in turn, allow their own clients to directly access its trading platform.

Industry:

Overview of the Indian Power Sector

Even as India is the third-largest electricity producer in the world, the country's need for energy is increasing as a result of economic growth and modernization over the past several years. India's per capita electricity consumption has grown from 631.4 kilowatt-hour ("kWh") in the financial year 2006 to 1075 kWh in the financial year 2016, an increase of 70.2% in 10 years. Between 2006 and 2017, India's peak demand increased at a CAGR of 5.0% to reach 159.5 gigawatts ("GW"); the installed power generation increased from 124 GW to 327 GW at a CAGR

of 9.2% during the period. Further, the latest draft National Electricity Plan 2016 projects peak demand of 235 GW at the end of the financial year 2022.

Electricity Act, 2003 and regulations relating to power market

The Central Government enacted the Electricity Act 2003 (the “**Electricity Act**”) to promote competition and efficiency in the power sector against a backdrop of ongoing economic reforms in other key sector of the economy. The enactment of the Electricity Act in June 2003 led to significant structural changes in the power sector, such as, a) shift from the single-buyer model to the multi-buyer model; b) de-licensing of thermal generation; c) grant of open access in transmission and distribution; d) identification of trading as a distinct activity; and e) reorganization of the erstwhile State Electricity Boards (“**SEBs**”). Following the Electricity Act, several policies evolved in relation to the determination of tariffs, National Electricity Policy, National Electricity Plan, National Tariff Policy and development of hydro power. The Ministry of Power at national level is responsible for perspective planning, policy formulation, processing of projects for investment decision, monitoring of the implementation of power projects, training and manpower development and the administration and enactment of legislation in regard to thermal, hydro power generation, transmission and distribution. All states and union territories have set up State Electricity Regulatory Commissions (“**SERCs**”) to regulate and determine tariffs for distribution and transmission companies as well as for generating companies which sell power to distribution companies. The Central Electricity Regulatory Commission (“**CERC**”) fulfills this responsibility for inter-state generation and transmission and also for central power utilities.

Generation, transmission and distribution

Generation

Electricity is among India’s core sectors, with an installed capacity of 327 GW as of March 31, 2017. Thermal power plants constitute around 67% of the installed capacity, followed by renewable, hydro and nuclear at around 18%, 14% and 2%, respectively. During the Twelfth Five-Year Plan ending March 2017, about 92 GW of thermal generation capacity has been added against a target of 72 GW. While capacity addition has peaked, the peak demand has grown at a moderate CAGR of 4.1% during the past five years ending March 2017, on account of sluggish demand from the industrial and commercial segments. In this context, the country has witnessed a gradual decline in peak deficit from 9.0% in the financial year 2013 to 1.6% in the financial year 2017.

Transmission

Adequate and reliable transmission capacity is a key enabler for power transactions in India. While generation capacity has been added at a faster pace over the last five years, the growth in transmission has not been commensurate enough to ensure congestion free transmission within the country, resulting in situations where a certain demand in a market could not be met even as supply is available elsewhere. This has led to some unsold capacity in some regions impacting plant load factors for thermal generation plants. The concerns over transmission corridor availability would remain an important consideration for inter-state power sale as going forward the country envisages aggressive ramp up of capacity from renewable energy projects.

The transmission system in India can be categorized as inter-state transmission system and intra-state transmission system. The development of intra-state transmission system is the responsibility of state transmission utilities, while Power Grid Corporation of India Limited (“**PGCIL**”) is responsible for development of inter-state transmission system. Nearly 59% of the transmission system is under state transmission utilities; about 38.0% is owned by the PGCIL and 3% by private operators as of March 31, 2017.

Distribution

The power distribution system, that is the last leg of the electricity sector value chain, provides power to individual consumer premises. Until recently, SEBs would own all distributions networks across the country. This has changed in the last two decades with entry of private players in the distribution segment across a few large cities in the country. Private distribution companies are operating in Delhi, Kolkata (West Bengal), Mumbai (Maharashtra), Ahmedabad (Gujarat) and Surat (Gujarat).

Evolution of the power market structure

Initially, the structure for the bulk power market was characterized by long term contracts between generation plants owned by central and state governments, independent power producers, captive generators with surplus capacity and distribution utilities or SEBs. With the enactment of Electricity Act, to encourage competition in all segments of the electricity industry, open access in inter-state transmission was introduced in May 2004 that facilitated the development of a bilateral market in the country. This facilitated competition in wholesale market.

Open access in distribution system facilitated large users of power — typically having connected load of 1 megawatt (“**MW**”) and above — to buy power from the open market at competitive prices. The aim was to allow the customers to choose among a large number of competing power companies instead of being forced to buy electricity from their existing electric utility monopoly.

In December 2006, CERC issued guidelines for setting up of Power Exchanges. To further streamline bilateral transactions and to facilitate implementation of power trading in India, CERC took several significant initiatives. The open access regulation pertaining to procedure for application, transmission charges, computation of losses, among others were revised to facilitate market development. CERC revised the regulations for open access in inter-state transmission to include collective transactions discovered on a power exchange.

With the above provisions in place, the Indian Energy Exchange (“**IEX**”), the country’s first power exchange, made an application for grant of permission to set up a power exchange in March 2007. IEX commenced operations on June 27, 2008 and, Power Exchange of India (“**PXIL**”) commenced operations on October 22, 2008. During the financial year 2017, total short-term sale of electricity through exchanges is 3.6% of the country’s generation, and IEX constitutes approximately 98.5% of the total volumes, day ahead market (“**DAM**”) and term ahead market (“**TAM**”), traded on both the exchanges.

Overview of Trading Operations

The entire electrical grid is operated and regulated by the system operators, who are independent government owned statutory bodies created under the Electricity Act, responsible for scheduling, despatch and energy accounting of trade in electricity. The system operator at the national level is the National Load Despatch Centre (NLDC) and at the regional level it is Regional Load Despatch Centres (5 RLDCs, one each for each region in the country). Both these entities are part of Power System Operation Corporation (POSOCO) which is an entity owned by Government of India. Similarly at the State level there are State Load Despatch Centres (SLDCs, total 33 such entities) which are owned by the State Government entities. Flow of electricity on the grid is ensured through transmission lines in the transmission network owned by the PGCIL for inter-state power transmission and the state transmission utilities of respective states for intra-state transmission.

Trading on the electricity exchanges is conducted and delivery is ensured through a process of scheduling, which is akin to a process of generators injecting their respective obligation to supply into the grid and all buyers drawing power to the extent of their entitlement from the grid, based on their respective contracts. As such a pool of electricity produced by generators gets created in the process and buyers draw their entitlement from this pool.

All trades cleared on exchanges, are converted into obligations to supply by sellers and entitlement to draw by the buyers, and these obligations and entitlement get recorded as a schedule in a tabular for the system operators. Any entity deviating from its obligation or entitlement is settled as per the CERC (Deviation Settlement Mechanism and Related Matters) Regulation 2014, by the system operators and exchanges have no role in the matter after trades are converted into obligations and entitlements. For converting trades into obligation and entitlement of participants, exchanges have to follow ‘Procedure for Scheduling of Collective Transactions’ issued by the grid operator POSOCO which is in accordance to the various provisions mentioned in CERC Open Access Regulations. As per this process, clients should obtain standing clearance for the quantum and duration for which power can be traded, from their respective SLDC. The Exchanges update this information on the trading system thereby restricting volume of trade to the extent allowed by the respective SLDC. After the order matching auction is run, requisition for transmission capacity required is sent to NLDC, who in turn informs the exchanges how much power can actually be transmitted, based on various technical considerations. Based on this input from the NLDC the auction is re-run on the same set of bids imposing the constraint as informed by the NLDC, which gives final results and the selected set of sellers and buyers which is converted into above referred obligation and entitlement of these entities. As mentioned above, all subsequent activities are then performed by the system operators.

In case of any break down in the grid, the same is handled by the exchanges as a force majeure condition. Based on the real time information provided by the system operators, trades are modified to the extent curtailed by the system operator with a view to ensure grid security. Exchanges may be subject to failure of systems due to power or telecommunications failure, acts of God, war or terrorism, human error, natural disasters, fire, sabotage, hardware, or software or electronic malfunctions or defects, computer viruses, acts of vandalism or similar events. Any failure to meet or respond to technological changes or changes in participant preferences may cause the volume of trades on its Exchange to decline, which may have an adverse effect on the business, financial condition, results of operations and prospects.

Market mechanism for renewable energy

The Electricity Act, policies framed under the Electricity Act, and the National Action Plan on Climate Change provide a roadmap for increasing the share of renewable energy in total generation capacity, by stipulating purchase of a percentage of power by distribution utilities from renewable energy sources.

Renewable Purchase Obligations (“**RPOs**”), put simply, is the minimum percentages of total power that electricity distribution companies and other obligated entities like captive and open access consumers need to purchase from renewable energy sources. RPOs create a market for renewables. RPOs have been the major driving force in India to promote the renewable energy sector. In this context, renewable energy certificates (“**RECs**”) were introduced to address this mismatch between availability of sources and requirement of the obligated

entities to meet their renewable purchase obligations, by purchasing green attributes of renewable energy located elsewhere, in the form of certificates.

Short term electricity markets in India

Short-term power market covers contracts of less than a year for electricity transacted through (i) inter-state trading licensees; (ii) power exchanges; (iii) directly between distribution licensees (cashless) and (iv) the Deviation Settlement Mechanism. The volume of short-term transactions of electricity, as a percentage of total electricity generation, has been between 9% and 10% in recent years. In the financial year 2017 total short-term sale of electricity (119 BU) was approximately 10.3% of the country’s generation during the period. Of the total short term volume transacted in financial year 2017, share of exchanges is 34.5%, followed by traders at 28.1%. On the other hand, short term volume transacted directly between distribution companies is 17.9% and DSM is around 19.5% in financial year 2017.

The share of traders has declined to 28.1% of total short term power traded in the financial year 2017 from 36.5% in the financial year 2013. During the same period, share of direct bilateral (traded between distribution companies) increased from 14.7% to 17.9%, and that of DSM declined from 25.0% to 19.5% during the same period. Volume of power traded through the exchanges increased to 41.1 billion units in the financial year 2017, having grown at 28.3% CAGR between the financial year 2010 and the financial year 2017. The total volume on power exchanges for the financial year 2017 is 41.1 BUs, and amounts to around 34.5% of total short-term electricity trade in the country.

Short term market share of traders and exchanges

Power exchanges aim to facilitate transparent and efficient use of energy resources and bridge the demand-supply mismatch by bringing larger players onto a common platform for buying and selling in an auction-based system, thereby providing liquidity, transparency and competitive price discovery. Owing to efficient price discovery at the exchanges, the short-term market witnessed a shift from traders to exchanges over the years. Further, implementation of automated and reliable processes helped the exchanges to establish themselves as preferred destination for day-ahead volume in the short-term power market.

Market share of exchanges: IEX and PXIL

IEX and PXIL are the two power exchanges facilitating short-term trade of power in India. IEX dominates the space, with its share in total volume traded through exchanges at an average of over 93.5% in last five years. The following chart sets forth market share of IEX (product category wise):



Key Drivers for short term market

Power procurement cost optimization by Distribution companies

The short term market has provided the distribution companies with the option to hold a mix of long-term and short-term contracts and optimize the overall power-purchase cost. Subdued demand for power in the past three years, combined with a lag in long-term capacity contracting has pushed generators to sell their surplus power in the short-term market.

Adequate Supply for Short Term Market

At present it has 327 GW of installed capacity, whereas the peak demand was only 159.5 GW in 2017. Large coal based generation capacity is operating at a PLF of under 60% whereas it has a potential of operating at PLF of over 80%. A major portion of this coal based capacity is remaining underutilized. With this capacity addition, present surplus supply scenario is expected to continue for the next seven to eight years.

Power for All, Rural Electrification and Make in India

The Government of India’s 24x7 “Power for All” scheme aims at providing all households and industries access to electricity. Initiatives such as Power for All, along with rural electrification and the Make in India initiative aim to increase per capita consumption in India, which at

1,075 kWh, is among the lowest in the world. There is significant potential for growth of volume considering this low per capita consumption. A part of this demand is expected to come to the short term market.

Phasing out of old plants

Due to environmental, technological and commercial concerns, the Government of India is working to phase out thermal generating capacity which is more than 25 years. At present this capacity is over 40,000 MW. Most of this capacity is with State and Central Government utilities and tied up with Distribution companies on long term basis. Phasing out of these plants could result in shifting of such long term demand from the Distribution companies to short term market.

Seasonality factors

There is variation in demand of state electricity distribution companies in India due to geographical spread and varied climatic conditions. States with hydroelectric potential such as Himachal Pradesh, Jammu and Kashmir, Uttarakhand and Sikkim are power surplus in the summer and monsoon seasons and are deficit in the winter season. Similarly, some other states like Punjab and Haryana have power requirements in the summer and monsoon seasons and have surplus in winters. This diversity provides lot of power trading opportunities.

Improvement in Transmission Infrastructure

Adequate and reliable transmission capacity is a key enabler for power transactions in India. While generation capacity has been added at a faster pace over the last five years, the growth in transmission has not been commensurate enough to ensure congestion free transmission within the country, resulting in situations where a certain demand in a market could not be met even as supply is available elsewhere. Inter-regional transmission capacity has more than doubled in the five years leading up to the financial year 2017 to approximately 75,050 MW for the financial year 2017 from 27,750 MW for the financial year 2012. Augmentation of transmission capacity is expected to reduce transmission congestion, which is currently restricting short term transaction through exchanges. Further, implementation of open access and removal of procedural barriers will make open access transactions more lucrative for consumers, which in turn will benefit the exchanges..

Improving Health of Distribution companies: UDAY Scheme

The Ujwal Distribution Companies Assurance Yojana (“UDAY”) is a scheme initiated by the Government of India with intention of improving the financial health of distribution companies. UDAY allows states opting for it to take over 75% of total debt outstanding in the books of their respective distribution companies as of September 30, 2015, and pay back lenders by selling bonds. Distribution companies are expected to issue bonds for the remaining 25% of their debt. With states issuing UDAY bonds worth approximately Rs. 2.32 trillion as of August 2017, it is expected that distribution companies’ financial health has improved owing to a reduced interest burden after transfer of debt to their respective state governments. This is expected to ease the financial stress on distribution companies and improve their power offtake ability. Improvement in the financial health of distribution companies would enable them to procure cheaper power available at exchanges and reduce their overall power procurement cost.

Forecast for short-term power market

In the immediate term, the realization of estimated short-term market potential will be contingent upon:

- distribution companies moving towards more prudent decision-making with respect to balanced mix of long-term and short-term power procurement and optimizing their power portfolio;
- availability of inter-regional transmission capacities for short-term volume;
- mitigation of barriers/restrictions on open access by many states; and
- increase in procurement of power from exchange by industrial consumers through open access route.

The share of traders, currently at 28.1% of power traded in the short term, is expected to gradually shift to exchanges. This is due to transparency and efficient price discovery mechanism at exchanges, resulting into lower prices at exchanges. Among the two exchanges currently operating in the country, IEX dominates the space, with an average share of over 93.5% of total volume traded through exchanges in last five years. In DAM and TAM combined, IEX constitutes approximately 98.5% of the total exchange trade during the financial year 2017. Owing to its robust technology platform and continuous initiatives towards development of power market, IEX is expected to maintain its dominant position going ahead. In view of the above, the electricity volumes to be traded on exchanges is estimated to increase to 8.9% of the total generation from conventional sources by the financial year 2022 from current levels of approximately 3.5% during the financial year 2017.

Energy saving certificates

The Perform Achieve and Trade (“PAT”) scheme was introduced in 2008, under the National Mission for Enhanced Energy Efficiency, to step up and incentivise energy efficiency in large energy-intensive industries. The rules for the PAT scheme specify that ESCerts have to be transacted through power exchanges, thus presenting an opportunity for power exchanges in the immediate term.

Green day ahead market

Green day-ahead market is proposed to be based on collective transactions, and will function on similar lines as existing DAM at exchanges. It would comprise solar and non-solar day-ahead contracts, applicable for merchant capacity. G-DAM contracts will enable obligated entities procure renewable power at competitive prices, when they actually need power, and also green attributes to meet RPOs. In this context, it would offer an alternative market-based mechanism and stimulate renewable energy generation in the country.

Forward and futures market

The current product portfolio on power exchanges focuses on short-term demand of electricity in the country. Generating companies and distribution companies currently lack price visibility over one year and beyond, and are thus exposed to price risks in the absence of a forward price curve. Forward markets provide such visibility and an important hedging option for generators as well as distribution companies.

Ancillary services market

The Indian Electricity Grid Code defines ancillary services in relation to power system (or grid) operation, as services necessary to support the power system (or grid) operation in maintaining power quality, reliability and grid security, for example, active power support for load following, reactive power support and black start. According to the CERC, the market framework would be introduced at a later point when more providers would be enabled to participate in these services. Power exchanges would play an important role in development of these markets, as the participants would be able to bid for such services on the exchanges.

Capacity market

Capacity markets allow for payment of capacity charges to peaking generators, thereby encouraging investments. The need for implementation of capacity markets in India derives importance from lack of peaking capacity and current day-ahead market is energy-only market, where generators are not fully compensated for their capacity charges. This warrants establishment of capacity markets to encourage investment and enable markets to function better.

Financial transmission rights

Exchange-based markets currently thrive on residual transmission capability that is left over after being allocated to long, medium, and bilateral short-term electricity markets. Therefore, in the present context, the ability of power exchanges to deliver efficiency for the sector and economy are constrained. With transmission rights in place, all grid-connected entities and traders are allowed to purchase transmission rights in an auction for a specific point of injection and point of delivery. The auction is held on the exchange, and the highest bidders are allocated capacity between the desired points of injection and withdrawal.

Key Concerns

Business and results of operations may be adversely affected if IEEL is unable to maintain or grow the volume of the electricity contracts traded on Exchange: IEEL derives a significant majority of its revenue from (i) transaction fees, which it earns from participants who execute transactions on Exchange and (ii) annual subscription fees, which are subscription fees it charge participants for trading on Exchange, which combined accounted for 81.56%, 87.05%, 85.48% and 89.95% of its total revenues for the financial years 2015, 2016, 2017 and for the three months ended June 30, 2017, respectively. As such, a significant percentage of IEEL's revenues are dependent on the volume of power traded on Exchange. The success of the business depends substantially on its ability to maintain and increase the number of participants and the volume of electricity contracts traded on Exchange and the resultant revenue from transaction fees and subscription fees. Trading volumes on exchange are impacted by inadequate availability of inter-region transmission capacity; specifically import of power in northern and southern regions, which are the two key load centers in India, restricting clearing volume on Exchange. Any decline in the volume of electricity contracts traded or the number of participants trading on Exchange may lead to a decline in revenue generated from transaction fees and subscription fees collected from participants, and so may have an adverse effect on the business, financial condition, results of operations and prospects.

Information technology ("IT") system limitations or failures, including IT maintenance may harm business, financial condition, results of operations and prospects: IEEL Exchange depends on the integrity, performance and continuing availability of the technology and software that underpin its electronic trading platform. It is also reliant on both third-party and in-house technology specialists, including computer engineers, systems and quality analysts, database administrators and website designers to operate and maintain electronic trading platform, as well as rectify issues as they arise. If the technology, systems or software it license were to malfunction or its third-party or in-house technology specialists were to fail to perform, it may have an immediate and negative impact on its Exchange and may have an adverse effect on trading volumes, business, financial condition, results of operations and prospects.

Any adverse finding by the NCLT in relation to the Perpetual License Agreement could result in an adverse effect on the reputation, business, financial condition and results of operations: IEEL had entered into the Perpetual License Agreement for acquiring exclusive

rights to the source code (together with modification rights) for its trading software. On May 16, 2017, it acquired exclusive rights to the source code (together with modification rights) for the trading software from 63 Moons along with the transfer of 22 employees of 63 Moons to the Company for an aggregate consideration of Rs.1,306.80 million (including applicable taxes), pursuant to the Perpetual License Agreement. Should the NCLT confirm the interim order of the CLB, in any final order or should there be any challenge to its acquisition of the exclusive rights to the source code (together with modification rights) for the trading software from 63 Moons, the Perpetual License Agreement may stand annulled or be repudiated. Further, in the event such annulment or repudiation occurs, while IEEL will be entitled to continue the trading of software under an erstwhile software and implementation agreement, the recovery of the consideration paid by it to 63 Moons under the Perpetual License Agreement may be subject to disputes which may be time consuming or required to be set off against the consideration paid by it to 63 Moons and it would lose the exclusive rights to the source code (together with modification rights) acquired by the Company pursuant to the Perpetual License Agreement. Any such development may have an adverse effect on its reputation, business, financial condition and results of operations.

IEEL may incur damages in the event of any breach of the terms and conditions of the Perpetual License Agreement: IEEL entered into the Perpetual License Agreement for acquiring exclusive rights to the source code (together with modification rights) for its trading software. On May 16, 2017, it acquired exclusive rights to the source code (together with modification rights) for the trading software from 63 Moons along with the transfer of 22 employees of 63 Moons to IEEL for an aggregate consideration of Rs.1,306.80 million (including applicable taxes), pursuant to the Perpetual License Agreement. Further, pursuant to the terms of the Perpetual License Agreement, it is not permitted to sell, sub-license or otherwise encumber or use the software, including the source code other than as per the terms of the Perpetual License Agreement or use the software to enter into technology business in competition with 63 Moons, globally. Any use of the software, including the source code by it in a manner which is restricted or not authorized under the Perpetual License Agreement may result in a breach of the terms and conditions of the Perpetual License Agreement and may require it to pay damages to 63 Moons which may have an adverse effect on its reputation, business and financial conditions.

Operate in a highly regulated industry: The power trading industry is subject to significant regulatory oversight and may be subject to increased regulatory scrutiny in the future. IEEL is regulated by the CERC in terms of the CERC Power Market Regulations and several rules and regulations made under the Electricity Act, among others. It is subject to regulatory investigations by the CERC. IEEL is subject to periodic regulatory review by the CERC and any adverse findings or non-compliance discovered as part of such review, may require it to incur additional expenditure to address such findings or non-compliance and may have an adverse effect on its reputation, business, and results of operations, financial condition and prospects. IEEL is also required to obtain and maintain certain approvals, licenses, registrations and permits from CERC and other statutory and regulatory authorities including for each of the products traded on its Exchange. While it has obtained most of the approvals required for its operations, for certain approvals in relation to revision of its bye laws, rules and business rules, it has submitted applications which are currently pending before relevant authorities. In the event IEEL fail to comply with current regulatory obligations, or any future obligations introduced by the CERC or other regulators, it may be subject to fines, penalties or censure and its licenses or registrations may be revoked or suspended, which in turn may have an adverse effect on the business, results of operations and financial condition.

Regulatory restrictions, and changes in regulations, applicable to IEEL , may restrict IEEL's ability to conduct business and may have an adverse effect on business: Regulations notified by the CERC, the State Electricity Regulatory Commissions (the "SERCs") or other regulators of IEEL's industry, and governance changes that its Exchange may adopt in fulfillment of regulatory obligations, may adversely affect the business operations. Such regulations may restrict the scope of certain operations IEEL may undertake, reduce its fees or margins on transactions or subject it to certain additional statutory and regulatory costs. Further, the Ministry of Power, Government of India, has issued a consultation paper on August 24, 2017, identifying certain issues relating to open access, including a proposal requiring open access customers to schedule power in advance to address difficulties and costs arising from frequent shifting of open access consumers between state distribution companies and other power sources. The consultation paper also includes proposals for revised methodologies for determination of cross-subsidy surcharge, additional surcharge and stand-by charges and tariff design and rationalisation, primarily based on the principles of transparency and offering direct subsidies solely to needy consumers, instead of cross-subsidizing tariffs for all customers. The introduction of these or other proposed regulatory changes and future reforms could impose significant costs and obligations on the operation of its Exchange and trading thereon

IEEL is subject to certain risks relating to the operation of an electronic trading platform: Electronic trading platforms may be subject to rapid technological change, change in usage patterns, change in user preferences, new product and service introductions and the emergence of new industry standards and practices. These changes may render IEEL's Exchange and existing technology and platform uncompetitive or obsolete. As all trading on its Exchange is conducted exclusively on an electronic basis, it is heavily dependent on its trading software and other information technology systems it uses for its trading platform. In addition, its ability to respond to failure of systems due to power or telecommunications failure, acts of God, war or terrorism, human error, natural disasters, fire, sabotage, hardware, or software or electronic malfunctions or defects, computer viruses, acts of vandalism or similar events may affect the business and results of operations. It cannot be

assured that it will be able to successfully implement new technologies or develop proprietary technology adequately addressing participants' requirements or emerging industry standards, in a timely and cost effective manner, or at all. Any failure to keep up with new or advanced technology and respond to participant preferences may cause the volume of trades on its Exchange to decline, which may have an adverse effect on its business, financial condition, results of operations and prospects.

Compliance and risk management methods may be ineffective and may result in outcomes: IEEL's ability to comply with applicable laws and regulations is largely dependent on its establishment and maintenance of compliance and risk management procedures, audit and reporting systems, as well as its ability to attract and retain qualified compliance and other risk management personnel. Its policies and procedures to identify, monitor and manage its risks may not be fully effective and it may fail to implement or update its internal procedures and manuals, as frequently as required. The CERC Power Market Regulations require it to establish various committees and submit periodic reports, related to risk assessment and mitigation. It cannot be assured that its policies and procedures will always be effective or that it will always be successful in monitoring or evaluating the risk to which it is or may be exposed, which may adversely affect IEEL's ability to conduct its business. IEEL's actual or alleged non-compliance may subject it to investigations and judicial or administrative proceedings that may result in substantial penalties or civil lawsuits, including by participants, for significant damages. Any of these outcomes may adversely affect its reputation, financial condition and results of operations. In extreme cases, these outcomes may adversely affect the ability to conduct its business.

Dependent on certain material contracts with third-party vendors relating to the technology and software: The technology IEEL used is imperative to successfully conducting its business. It utilize trading software, which is critical to maintaining the anonymity of bids, the integrity of its price discovery mechanism, and the implementation of its risk management procedures and caters to the requirements of all pre and post trade functionalities on Exchange. IEEL also periodically utilize services from third party vendors for important elements of its trading systems, communications and networking equipment, computer hardware and software and related support and maintenance, as well as other functions necessary for the operation of its business. It cannot be assured that any of these providers will be able to continue to provide their services in an efficient, cost-effective manner, or at all, or that they will be willing or able to adequately expand their services to meet its needs. Any interruption in or the cessation of service by any of its service providers or vendors or inability to make alternative arrangements in a timely manner, or at all, may have an adverse effect on its business, financial condition, results of operations and prospects.

Business operations could be affected if the recommendations under the report of the Standing Committee on Energy, Ministry of Power, Government of India result in amendments to the CERC Power Market Regulations: The Standing Committee on Energy, Ministry of Power (the "Standing Committee") issued a report dated April 18, 2016 on "Evaluation of role, performance and functioning of the power exchanges". In its report, the Standing Committee, provided suggestions/recommendations regarding development and operations of the power market and power exchanges in particular:

- the Ministry of Power, Government of India and the CERC should formulate clear and effective guidelines so as to ensure healthy competition and development of multi exchange power market;
- the day ahead market and day ahead contingency contract should be streamlined for better functioning of the power exchanges;
- involvement of distribution companies in wheeling of power;
- simplification and increasing transparency of settlement mechanism;
- the price discovery mechanism to be made open-ended should be verified to ensure that resultant prices discovered are fair and not manipulated; and
- various policy changes should be considered in order to ensure transparency in the power market.

While the recommendations made in this report has not yet been considered, there can be no assurance that there will not be amendments to the CERC Power Market Regulations in the future which may have an adverse impact on its business, financial condition and results of operations.

Depend on a limited number of participants for a significant portion of revenue: A small number of participants account for a substantial portion of power traded on Exchange, and consequently IEEL's revenue, and expects that a limited number of participants will continue to represent a substantial portion of its revenue from operations in the foreseeable future. Its top ten participants accounted for 30.6%, 29.7%, 23.5% and 35.0% of its revenues from DAM operations for the financial years 2015, 2016, 2017 and for the five months ended August 31, 2017, respectively. The loss of any of its major participants may have an adverse effect on transaction volumes and consequently on its business, financial condition, results of operations and prospects.

Declines in interest rates and performance of mutual funds IEEL has invested in may adversely affect results of operations and financial condition: IEEL's revenues and reserves are invested in a portfolio of assets comprising bonds and mutual funds. Its investments are exposed to the effects of fluctuations in the prevailing levels of market interest rates and thus declines in interest rates may adversely affect their

values. Changes in the general level of interest rates can affect its profitability by affecting the spread between, among other things, income it receives on its investments, the value of interest-earning investments, ability to realize gains from the sale of investments and interest expense on any interest-bearing liabilities that it may incur in the future. Fluctuations in interest rates may also affect the valuation of its investments. For the foregoing reasons, a variation in interest rates may adversely affect its revenues, results of operations and financial condition.

Expansion into new markets may present increased risks due to unfamiliarity with those areas thus affecting those operations and thus affect profitability, results of operations and cash flows: Some of IEEL's expansion targets are planned for markets where it has little or no operating experience. Its growth strategies include expanding the trading on its Exchange into countries neighbouring India which are connected to the Indian power grid. New markets, particularly outside India, may have different competitive conditions and participant preferences than its existing markets. As a result, its growth in those markets may be less successful than anticipated. Participants in new markets may not be familiar with its brand, and it may need to build brand awareness in that market through greater investments in advertising and promotional activity than it originally planned. Further, its expansion plan into markets outside India will require extensive regulatory support in its target markets and domestically, which may not receive. Some or all of these factors may be more pronounced in markets outside of India due to cultural, regulatory or economic differences with which it is not familiar, and may have a particularly adverse impact on its results in those markets and may have an adverse effect on its business, financial condition, results of operations & prospects.

Networks and those of third-party service providers may be vulnerable to security risks: IEEL expects the secure transmission of confidential information over public networks to continue to be a critical element of its operations. Its network, systems and any alternate or backup systems it put in place, may be vulnerable to unauthorized access, computer viruses, cyber-attacks and other security related problems such as misuse, loss or destruction of its participant's confidential or other information or disruptions of and errors within its systems. IEEL may also be required to expend significant resources to protect against the threat of security breaches or to alleviate security related problems, including reputational harm and litigation, caused by any breaches or alleged breaches. Although it intends to continue to implement stringent security measures, voluntary compliance audits and software updates, these measures may prove to be inadequate and it may encounter wrongful use of its information or interruptions in its operations that may result in negative publicity, cause it to lose participants, face unforeseen liabilities and experience a decline in trading volume, all or any of which may have an adverse effect on its business, financial condition, results of operations and prospects.

A significant portion of costs comprise fixed and semi-fixed costs which are not directly dependent on the trading volume on Exchange: IEEL's costs are not entirely directly dependent on trading volumes on Exchange and include fixed and semi-fixed costs such as software support charges, employee benefits costs, depreciation, rent and service charges, repairs and maintenance and business promotion and advertisement expenses. It may not be able to rapidly adjust its operating costs in the event that its trading volumes decrease or demand for its products and services fall short of expectations, which may result in larger decreases in its revenues than corresponding decreases in expenditures. If the volume of power traded on its Exchange declines and, as a result, its revenues decline, it may not be able to reduce its fixed and semi-fixed costs correspondingly in a timely manner, or at all. In such event, its profitability may be adversely affected and may result in an adverse effect on its business, financial condition, results of operations and prospects.

May face competition from existing players and new entrants in the industry: IEEL expects that competition in the power exchange industry may intensify in the future. Its ability to maintain and enhance competitiveness will have a direct effect on its business, financial condition, results of operations and prospects. Competition within the Indian power market may intensify as new power exchanges or other marketplaces for trading electricity products are established. It may be required to adjust pricing in response to actions by its competitors, which may adversely impact operating results. It cannot be assured that it will be able to compete effectively in the future. If its electricity contracts, power products, services and more generally its Exchange are not competitive, it may have an adverse effect on its business, financial condition, results of operations and prospects.

Changes in tax laws or regulations or their interpretations may significantly affect financial statements and may adversely affect business, financial condition, results of operations and prospects: The regulatory and policy environment in which IEEL operates is evolving and subject to change. Such changes, including the instances mentioned below, may adversely affect its business, financial condition, results of operations and prospects, to the extent that it is unable to suitably respond to and comply with any such changes in applicable law and policy. IEEL has not determined the impact of such proposed legislation on its business. In addition, unfavourable changes in or interpretations of existing, or the promulgation of new, laws, rules and regulations including foreign investment laws governing its business, operations and group structure may result in it being deemed to be in contravention of such laws and/or may require to apply for additional approvals. IEEL may incur increased costs and other burdens relating to compliance with such new requirements, which may also require significant management time and other resources, and any failure to comply may adversely affect its business, financial condition, results of operations and prospects.

Profit & Loss

Rs in million

Particulars	Q1FY18	FY17	FY16	FY15
Revenue from Operations	554.7	2039.1	1750.3	1447.8
Other Income	61.9	335.1	251.1	316.0
Total Income	616.6	2374.2	2001.4	1763.8
Total Expenditure	133.1	606.2	498.5	406.9
Technology expenses	35.1	234.2	202.0	194.1
Employee benefits expense	47.6	155.7	141.1	117.1
Other expenses	50.5	216.3	155.4	95.7
PBIDT	483.4	1768.0	1502.9	1356.9
Interest	0.1	1.3	2.7	2.4
PBDT	483.4	1766.7	1500.2	1354.5
Depreciation	14.8	34.6	33.9	29.5
PBT	468.6	1732.1	1466.3	1325.1
Tax (incl. DT & FBT)	162.2	596.4	462.9	424.9
Tax	127.6	610.4	473.5	430.0
Deferred Tax	34.6	-14.0	-10.6	-5.1
PAT	306.3	1135.7	1003.4	900.2
EPS (Rs.)	10.1	37.4	33.1	29.7
Equity	303.3	303.3	303.3	303.3
Face Value	10.0	10.0	10.0	10.0
OPM (%)	76.0	70.3	71.5	71.9
PATM (%)	55.2	55.7	57.3	62.2

Balance Sheet:

Rs in million

Particulars	Q1FY18	FY17	FY16	FY15
Equity & Liabilities				
Shareholders Funds	3056.2	2749.9	2709.4	2399.5
Share Capital	303.3	303.3	303.3	303.3
Reserves and surplus	2753.0	2446.7	2406.1	2096.2
Non-Current Liabilities	401.8	381.8	368.8	374.6
Deferred tax liabilities	21.8	0.0	1.2	11.8
Other long-term liabilities	359.8	359.1	351.1	350.0
Long-term provisions	20.2	22.7	16.5	12.7
Current Liabilities	1147.3	2385.4	1159.4	1283.3
Due to other than micro enterprises and small enterprises	339.3	1719.4	589.7	344.8
Other current liabilities	700.5	589.9	502.0	886.9
Short term provisions	107.5	76.2	67.8	51.6
Total Equity & Liabilities	4605.3	5517.1	4237.6	4057.4
Assets				
Non-Current Assets	1363.6	496.5	511.7	579.1
Property, Plant and Equipment	64.14	63.4	73.1	86.3
Intangible assets under development	2.9	6.3	4.0	0.0
Capital work in progress	2.8	3.3	0.0	0.0
Intangible assets	1176.1	23.0	40.7	54.0
Non-current investments	42.0	92.0	92.0	0.0
Deferred tax assets (net)	0.0	12.8	0.0	0.0
Long-term loans and advances	24.1	28.8	31.5	34.5
Other non-current assets	51.7	266.9	270.5	404.3
Current Assets	3241.7	5020.7	3725.8	3478.2
Current Investments	2478.4	3701.1	2715.2	2543.9
Trade receivables	3.2	2.1	7.7	3.6
Cash and bank balances	530.9	1274.9	914.8	835.0
Short-term loans and advances	137.8	15.7	19.0	15.6
Other current assets	91.3	26.9	69.2	80.2
Total Assets	4605.3	5517.1	4237.6	4057.4

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