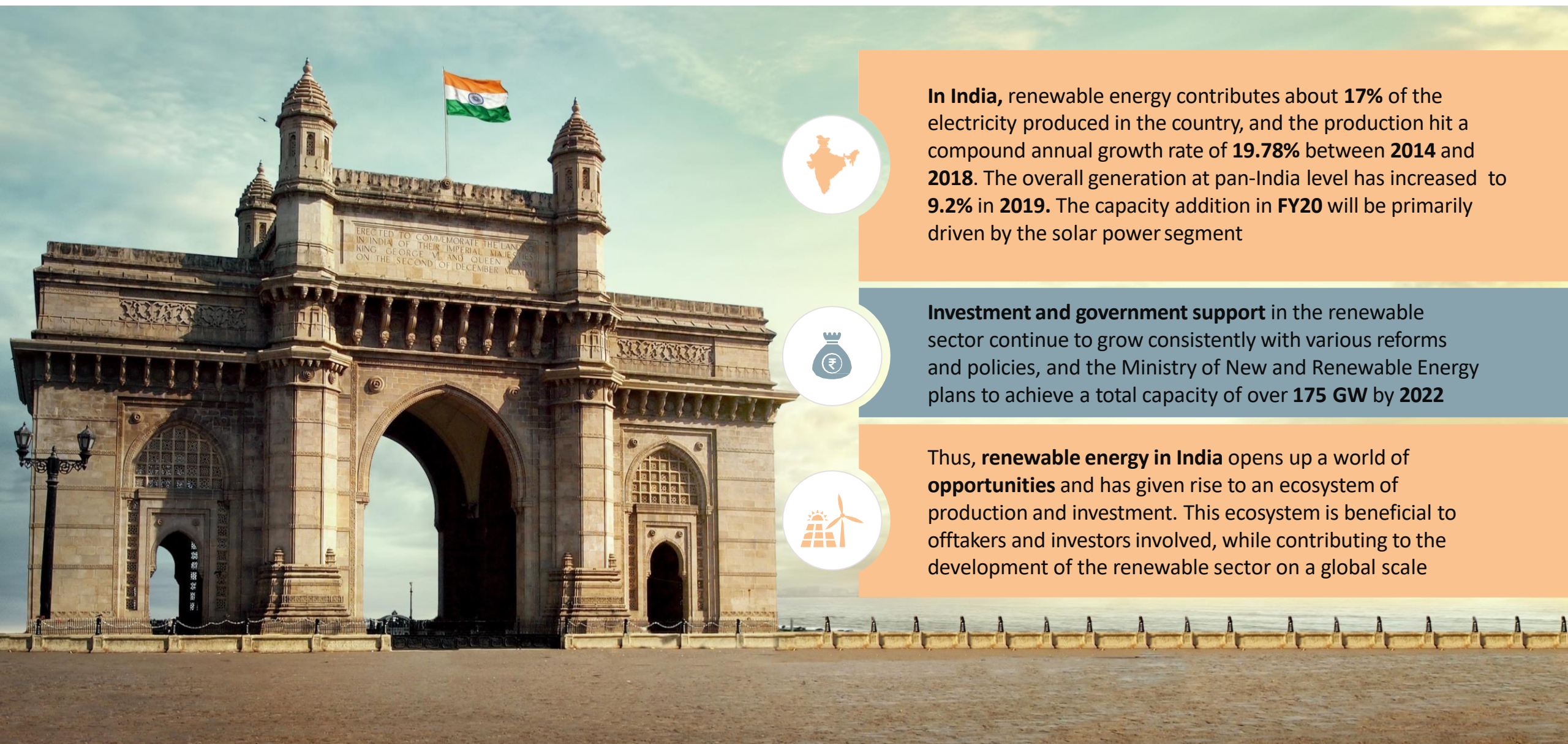




**Your Trusted Partner for Renewable
Energy Investments**

Renewables in India — The Context



In **India**, renewable energy contributes about **17%** of the electricity produced in the country, and the production hit a compound annual growth rate of **19.78%** between **2014** and **2018**. The overall generation at pan-India level has increased to **9.2%** in **2019**. The capacity addition in **FY20** will be primarily driven by the solar power segment



Investment and government support in the renewable sector continue to grow consistently with various reforms and policies, and the Ministry of New and Renewable Energy plans to achieve a total capacity of over **175 GW** by **2022**



Thus, **renewable energy in India** opens up a world of **opportunities** and has given rise to an ecosystem of production and investment. This ecosystem is beneficial to offtakers and investors involved, while contributing to the development of the renewable sector on a global scale

The Renewables Ecosystem

Facilitating **production** and **investment** in the renewable sector is a requisite for India to meet its clean energy targets. To this end, a dynamic **offtaker-investor ecosystem**, built to deliver results for investors and offtakers alike, is crucial.



The Enabler — GSER

GSE Renewables (GSER) is a subsidiary of the **100-year-old GSE Group of Companies**. We work towards strengthening the **off taker-investor ecosystem** through a **turnkey end-to-end approach**. With a combined experience of over **250 years** and the successful management of **30+ MW** of solar energy projects, **GSER** offers the most efficient solutions in **India** and **abroad**.

GSER's solutions are executed through the following services:



Investment Banking and Management

GSER creates customized, financially engineered, innovative tax-efficient, regulated alternative, investment vehicles that help investors create true wealth by investing in risk-mitigated renewable assets. **GSER provides investment and debt advisory services**



Project Development

GSER's approach covers the complete development and execution of Solar **PV** projects. The models offer **CAPEX/OPEX** and **Deferred CAPEX** with innovative financing in **Rooftop and Open Access Solar**



Asset Management and Advisory

GSER ensures holistic plant performance management through engineering and analysis via **cloud based monitoring**, use of high-end technology such as drone and robotic cleaning and regular inspections of projects along with **overall legal, commercial and compliance management**



Venture Capital and Cleantech Investing

GSER invests in upcoming and new **disruptive technologies** and startups that are cleantech focused. These startups give the business a tech advantage and in turn benefit from **GSER's technology and finance platform**

How Do We Do This?

We achieve results by leveraging our strengths

01



Our team

We have a strong Development and **Advisory team** with domain expertise and thorough know-how in **managerial, technical, legal, financial, banking, tax planning and investment advisory**. Our team comes from some of the top institutions such as **IIT, NY State University, ICAI and Carnegie Mellon**

02



Our network

Established a deep connect with investors and international banking institutions. These include **International Funds, HNIs, PE Funds, Energy-focused Alternative funds, Corporate treasuries and large Pedigree Offtakers**

03



Our experience

We have advised over **\$25 million** worth of projects, commissioned more than **40 sites**, and executed more than **30+MW** of solar energy projects. Our teams have been a part of some top **MNCs like JSW, L&T, McKinsey & Co., Deutsche Bank, JP Morgan , JSW, Ravin**

04



Our signature execution

We have strong turnkey execution capabilities in **CAPEX, OPEX**, and Deferred **CAPEX**, with full stack investment models for the renewable energy sector with **end-to-end solutions**, right from **Due Diligence, Project Development, Financing, Overall Project Management to Asset Management**

GSER Across the Lifecycle

OUR CAPEX MODEL



Pre-engineering and analysis

Pre-engineering analysis and policy analysis to determine **possible project development opportunities**



Executions

Design, procurement, construction, and all approvals



Post-construction services

Operations and maintenance



Asset management

Manage financial, legal, compliance, **warranty** and debt aspects for the **off taker** as needed throughout the **plant lifecycle**



WEEK 01

Preliminary sizing, designing, order closing



WEEK 02

Finalization and project scheduling



WEEK 08

Material procurement completion



WEEK 12

Project installation and commissioning

Our Deferred CAPEX Model

Deferred CAPEX as a model allows the off taker to own the asset and avail depreciation benefits while being able to payback over a short period of time through a simple **EMI Model**.



01

Asset on off taker books from **day 1 - (40+20%)** depreciation in the first year, and **40%** for life of the asset (**GST Tax Offset**)



02

Minimum **up front cost**, balance simple **EMI concept**



03

Shorter tenure to complete ownership (**3-5 years**) vs **BOOT / RESCO / OPEX Model**



04

Higher savings for **off taker**, coupled with deferment of capital investment, drives **high investment IRR**



05

EMI still lower than the grid cost — resulting in **savings from day one**

WEEK 01

Preliminary sizing, designing, orderclosing

WEEK 2-4

Preliminary Financial EMI Setup

WEEK 05

Finalization and Project scheduling

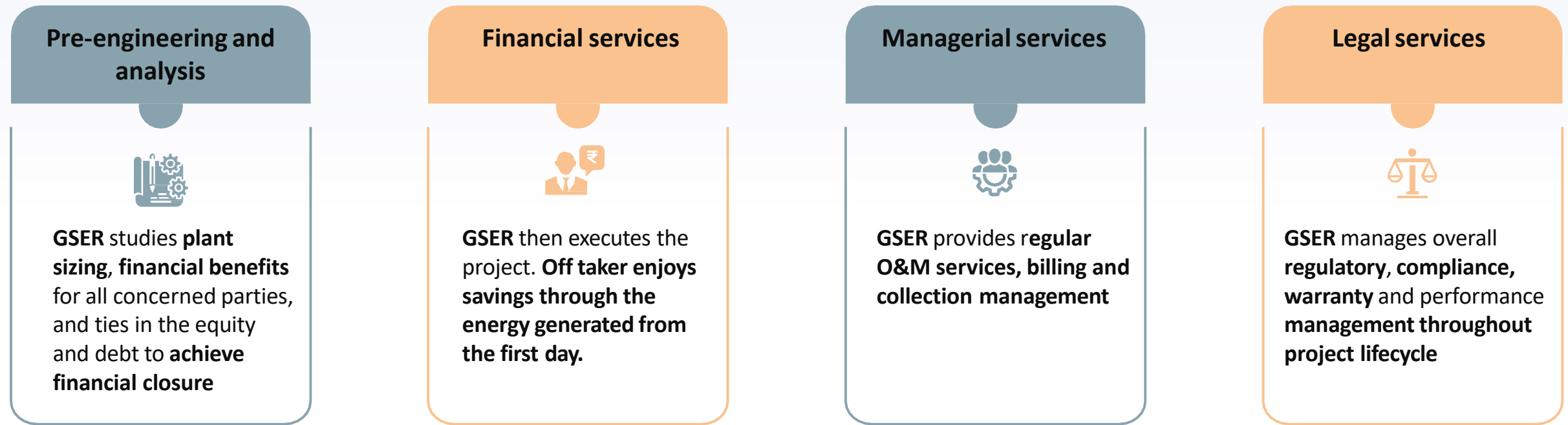
WEEK 10

Material procurement completion

WEEK 14

Project installation and commissioning

Our OPEX model



Structures:

BOOT (Build-Own-Operate-Transfer)

PPA —> Investment —> Generation

SOLAR FARM

Plant farm installation —> Investment —> Connection to a transmitting station —> Generation

WEEK 01

Preliminary sizing, designing, order closing

WEEK 2-4

Financial Structuring

WEEK 05

Finalization and Project scheduling

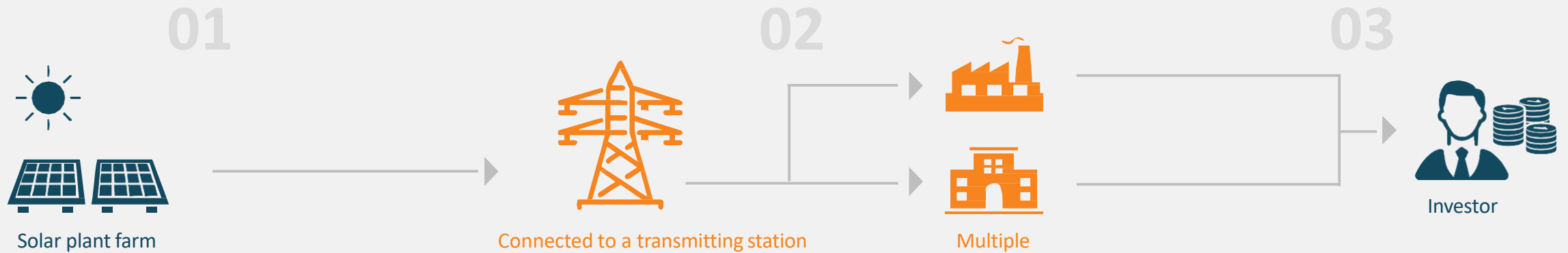
WEEK 10

Material procurement completion

WEEK 14

Project installation and commissioning

Typical Structures of Open Access Group Captive Solar Power Project



01

GSER proposed to develop, construct, and build **Solar Farm** with investment arrangement under **Captive** and **Group Captive** modes by forming the dedicated **SPV** with the **offtaker** for long term.

In Group Captive, the offtaker to invest only **26** of total equity (i.e. around **INR 34 lakhs/MWp** to **INR 36 Lakhs/ MWp**) and to consume **100%** of total solar power generated, for complying with Group Captive norms.

02

Power Generated from Solar Farm will be **transmitted to Grid** with metering arrangement and **offtaker** will get same **injected solar power adjustment** in his monthly **Discom bill** against **monthly power consumption**.

offtaker has no liabilities of

- Solar project performance
- Project related coordination with Grid
- O&M activities and management of project

03

Offtakers pay for the **solar power** at the **pre-decided solar power rate** for longer tenure that provides the visibility of substantial cost optimization support to boost up the **bottom line of business**.

Average annual savings: 15-30% on Discom-sourced electricity consumption costs.

*Considering current Discom tariff to **INR 7.07/ unit** with 3% annual escalation (For industrial consumer)

For commercial consumer, the savings will be more.

ASSET Management — The GSER Way

We provide you with a hassle-free experience in managing your assets by being a one-stop solution for asset management



Asset Management Services by GSER

01



Engineering Services

- Quality/Audit Inspection
- Plant (re)commissioning
- Repowering and upgrades
- Technological interventions
- Plant design review

02



Technical Asset Management

- Plant/Asset Management Supervision
- Oversight & Management of O&M provider
- Deployment of modern technological interventions for plant improvement.
- Resolution ombudsman

03



Commercial Management

- Accounting, Billing support & Reporting
- Payment Follow up
- Equity/Debt Finance Management.
- Interface with banks, Investors, local authorities, insurance and warranty management

Why Asset Management

**We manage an investment-
not just a plant**

- Regular reporting and performance monitoring from a commercial, compliance and technical perspective
- Data management for any future sell out opportunities
- Overall Stakeholder coordination
- CFO level services

**Real value is created through
proactive management**

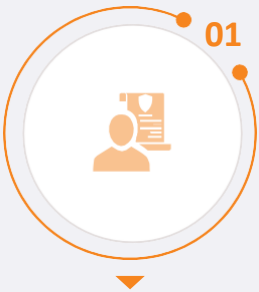
- Asset performance supervision, management and reporting
- Oversight of O&M
- Warranty & Insurance claim management
- Seamless coordination and management for Billing, Collection, Technical obligations
- PPA obligation enforcement
- Offtaker management support

**Well managed solar assets
bring increase in both
generation and income**

- Performance Improvement Plans (PIP)
- Operational cost reduction
- Contract management
- Preventive maintenance
- People management
- Risk mitigation & management
- Performance Guarantee optimization

Advantages from Asset Management

We provide you with a hassle-free experience in managing your assets by being a one-stop solution for asset management



We think like a **long-term asset owner**



We develop **ideas** by running a business not **operating a plant**



We bring **operational expertise** from other sectors



We have **designed ourselves** to easily provide services to all **geographies**

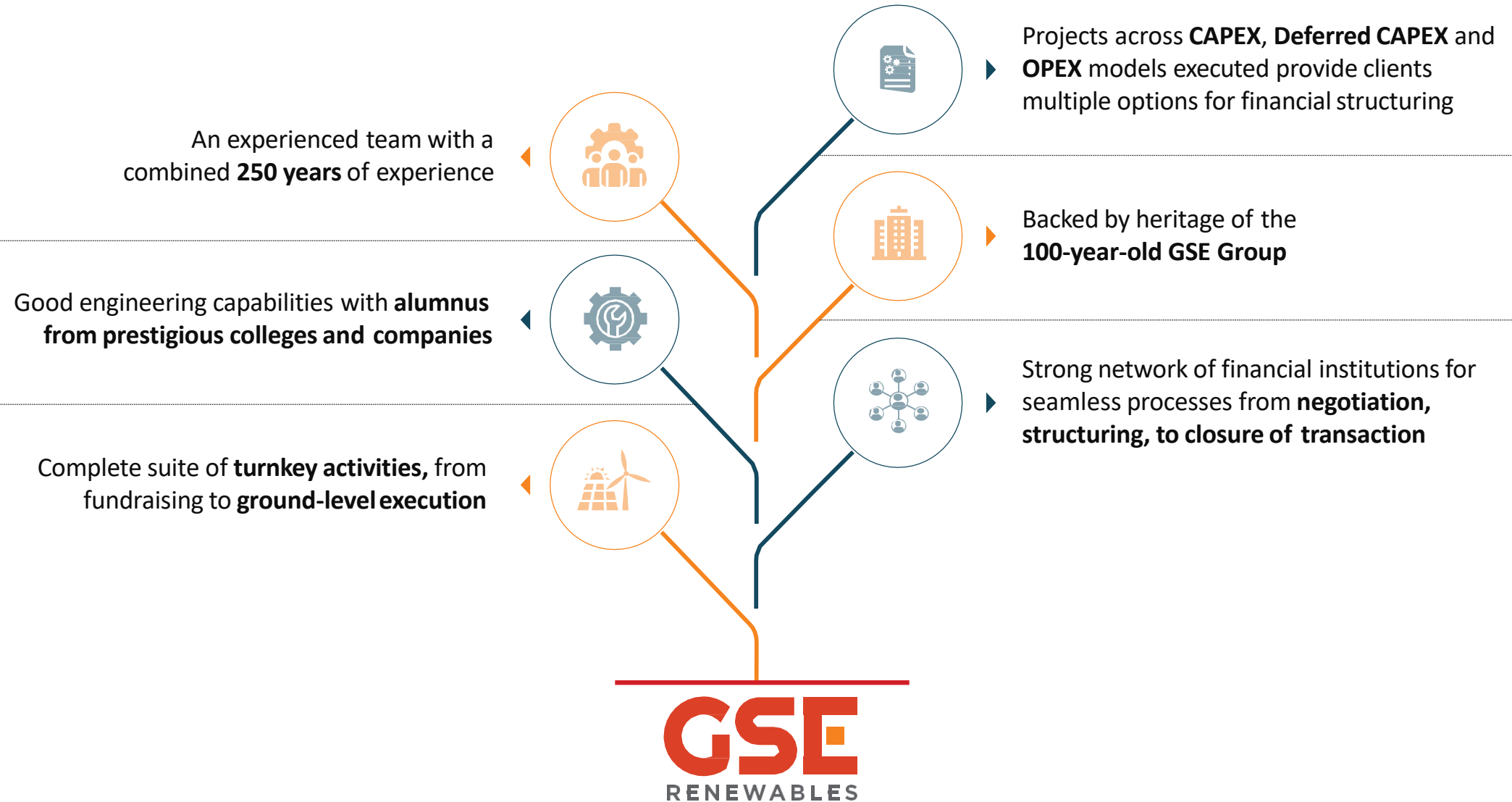


We consider every asset, as **every asset is important to us**

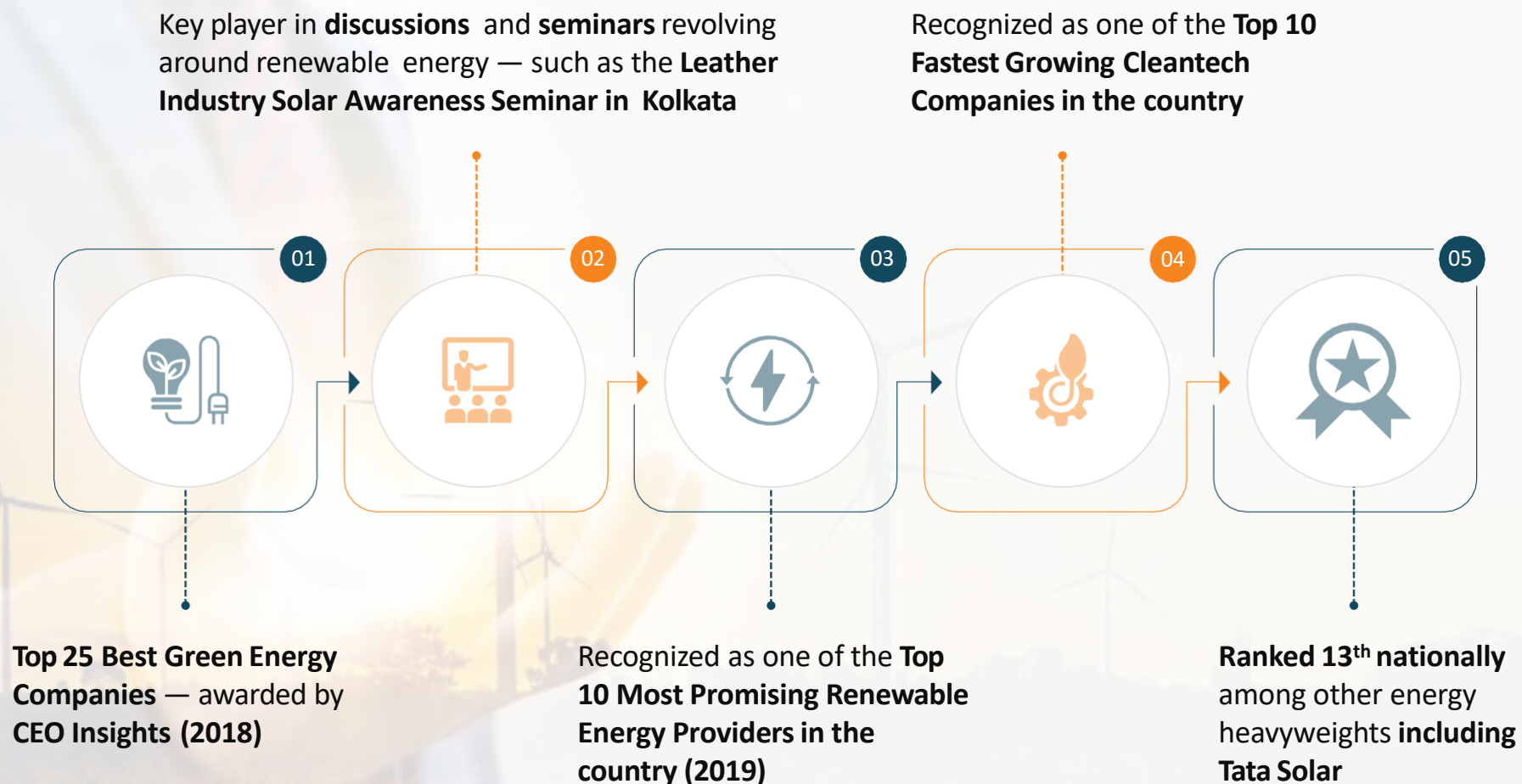


We have a plan for **every asset** to **maximize profitability**

Why GSER is the Right Fit



Building a Legacy



Our Key Clients



Our Team

GSER's success is founded on the expertise of a capable team, with a combined experience of more than **150 years**. The team at **GSER guarantees a straightforward approach** to the generation of **renewable energy** and investment in the sector.



Sahil Kejriwal

Managing Director

B.Sc in Mechanical Engineering and Business Administration, Carnegie Mellon Univ, USA. Executive education from Wharton, IIM & ISB

Experience as a Consultant with McKinsey & Co. USA. Provisional patent in solar technology, experience in manufacturing and export, brand promoter and founder of Estd 1977, Angel & Director on the board of a few companies.



Bharat Kotak

Vice President,
Operations and BD

Management Studies, Welingkar Institute of Management, Mumbai

20+ years of experience in Strategic P & L Management, Operations, Business Development and Growth in Textile, EPC & the Power Industry. Held a position of Director and Head of Marketing & Sales – Solar, Power Equipment and Retail Energy Products at Ravin Infraproject Pvt Ltd



R.S. Jain

CFO

B.Com, Mumbai University, Chartered Accountancy

35 years experience in senior positions in Finance, Accounting, and Management in multiple business houses.



Pratik Yadav

Vice President,
Sales and Finance

Vice President, Sales and Finance- MBA Finance – NYIT (USA), BMS Finance – R A PODAR

10+ years experience in Investment Banking with UBS, JP Morgan and Deutsche. Executed mandates for corporates and manufacturers, started FUNDRE to create an alternative lending platform for small and mid-sized developers in India.

Case Study 1



OVERVIEW: Nippon Paint is a wholly Singaporean and Japanese subsidiary of Nippon, based in Japan. Their range of water-based paints with no lead and mercury, and near-zero VOC coatings are proofs of their commitment to the environment. With their belief in enhancing life through innovations, to deliver perfection in products while also protecting the world we live in, the client was keen on using green energy to be sustainable in the long run.

Type:	Size	Annual savings	Location	Carbon emissions avoided	Trees saved	COD
Metal sheet	549.12 kWp	23 lakhs	Navi Mumbai, Maharashtra	1771 metric tons	17568	Jan, 2019

CHALLENGE



Since the plant was close to **Mumbai**, its construction and installation became a **massive challenge** due to **heavy rainfall**. Also, the client's need for the highest international standards of safety required extra structures for mounting installations, and one of the most unique **HSE** plans to be adhered to, during execution. Executing the project in time was impossible, **given the weather conditions and local needs**.

SOLUTION



With **strict deadlines**, our operations team executed the project in time by working around the clock — taking care of everything from material delivery at the site to connection of different arrays with **LT** panel of each building. The team worked out **innovative engineering solutions** to keep progress on track and complete the project as scheduled. **GSER** exhibited ingenuity, commitment, and hard work to overcome all the challenges that threatened the timely completion of the project.

BENEFITS



With the project executed under the **OPEX model**, the client is saving approximately **30%** of the variable grid cost of electricity. The client is one step closer to sustainable future with reduction in carbon emissions by over a **1000** metric tons. As the Director, **Mr. Hardev** says "It was a dream come true!"

Case Study 2



OVERVIEW: Helvoet Rubber & Plastic Technologies (India) Pvt. Ltd. is a global manufacturer and development partner of high-precision products, having been in business for 75 years. Their global sales are up to \$1 billion per year. The client was keen on reducing their plants’ carbon emissions.

Type:	Size	Client savings	Location	Carbon emissions avoided	Trees saved	Date of commissioning
BOOT RCC	571.34 kWp	26 lakhs	Pune, Maharashtra	1842 metric tons	18272	Sept, 2017

CHALLENGE

The building infrastructure included a historic **SLD** and layout with outdated **LT panels** and **evacuation systems**. This posed safety hazards due to instability during execution. **GSER was expected to come up with a unique way to develop a plant that would be both safe and commercially viable.**

SOLUTION

GSER worked on the project with **MSEB** to come up with a **solution** that was **technologically superior, safe**, as well as **commercially viable**. We used a certain process of systematic engineering to outdo the historic electrical infrastructure in the old building that the client housed and install a viable solar plant. **The plant** was **designed** and executed in **3 months flat**, even though there were regulatory hurdles surrounding the execution. The client, as a **result**, is saving **26 lakhs annually**.

BENEFITS

This solution helped both the client and the owner, giving client the freedom of choice to become the owner of the solar plant after the tenure. This helped reduce the client’s dependence on grid and diesel power by **30%** and **30-40%**, and major savings on electricity bills were observed. The client also enjoys Green Status due to the same.

