

Increasing the share of renewable energy in energy mix

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Contents

- Why RE and why create a plan
- Making sense of the options
- Process overview

Why buy Renewable Energy?

Because

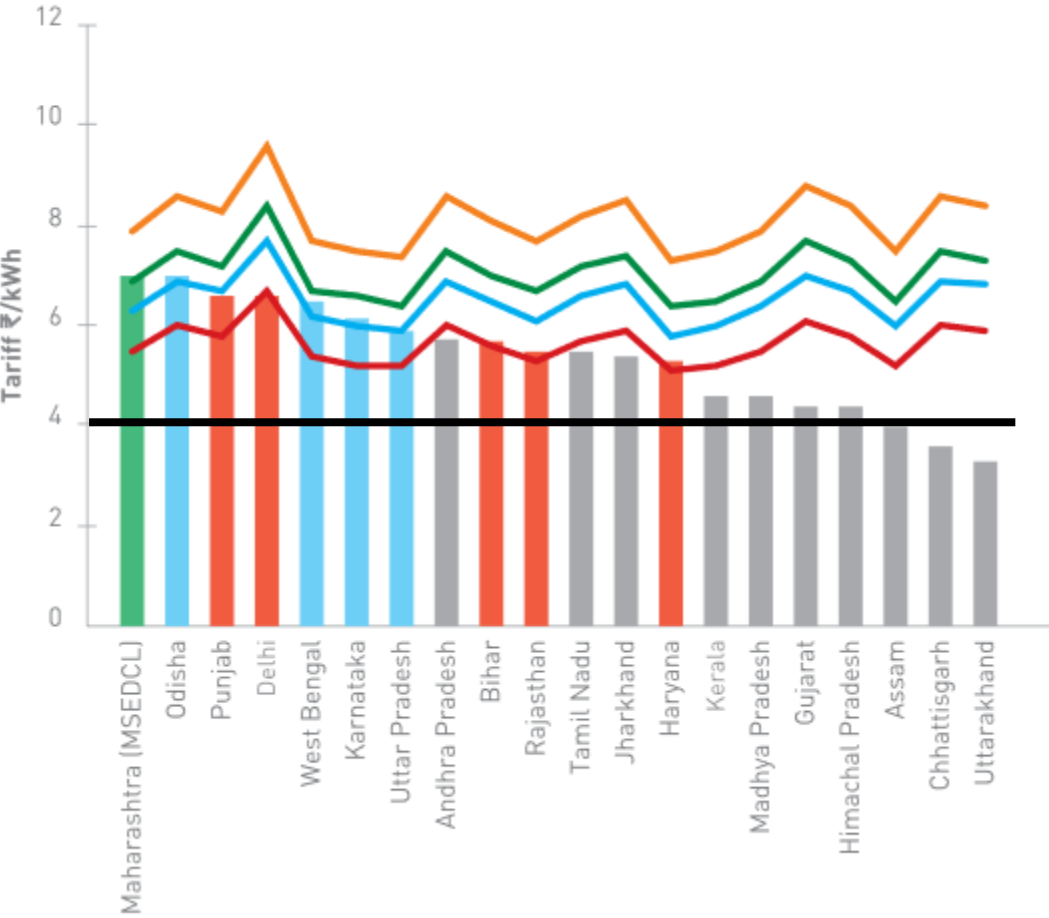
- It can make economic sense
 - Fossil fuel based electricity would continue to get costlier
- You may need to comply with government policies
 - Renewable Purchase Obligations compliance will become stricter
- Business is more than just profits
 - You may have your own sustainability goals
 - With increasing consumer awareness Indian consumers will get more demanding – this has already been happening in the west.

The cost of going solar

State-wise industrial tariff (HT) vs LCOE of solar power (100 kW system, ₹/kWh)²⁰



This was in 2014



This is now

And why do it NOW!

- No subsidy is not a problem – if it makes sense even without subsidy, don't keep waiting
- Expecting prices to continue falling through the floor? This is unlikely to happen, China has been trimming its overcapacity

But where to start?

- What does not work well
 - Ad-hoc piecemeal installations
 - Small capacity – pure visibility “show off” installations
- Start with energy audit
 - Helps collect/organize internal
 - Will optimize the RE investment by avoiding over capacity
- And then, prepare a RE plan for your company

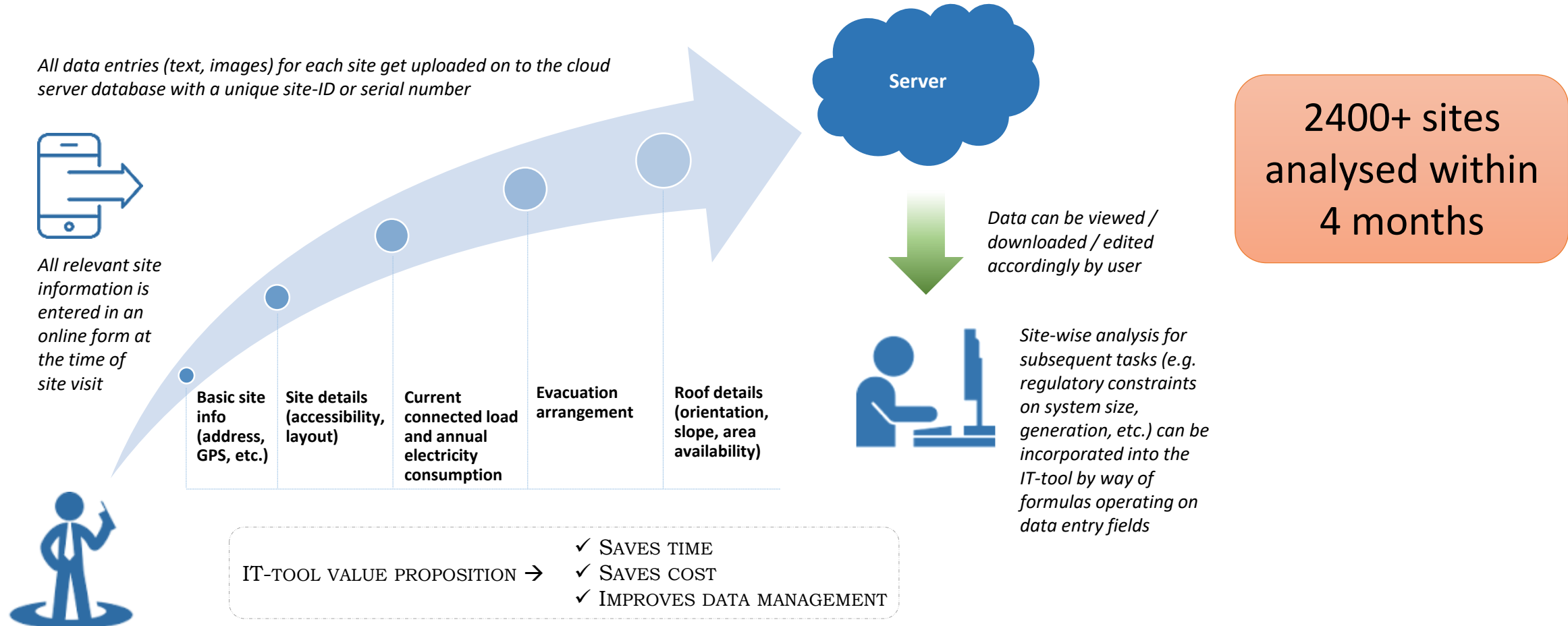
“If it is not big, it is not worth doing”

- Randal Newton, Ingersoll Rand

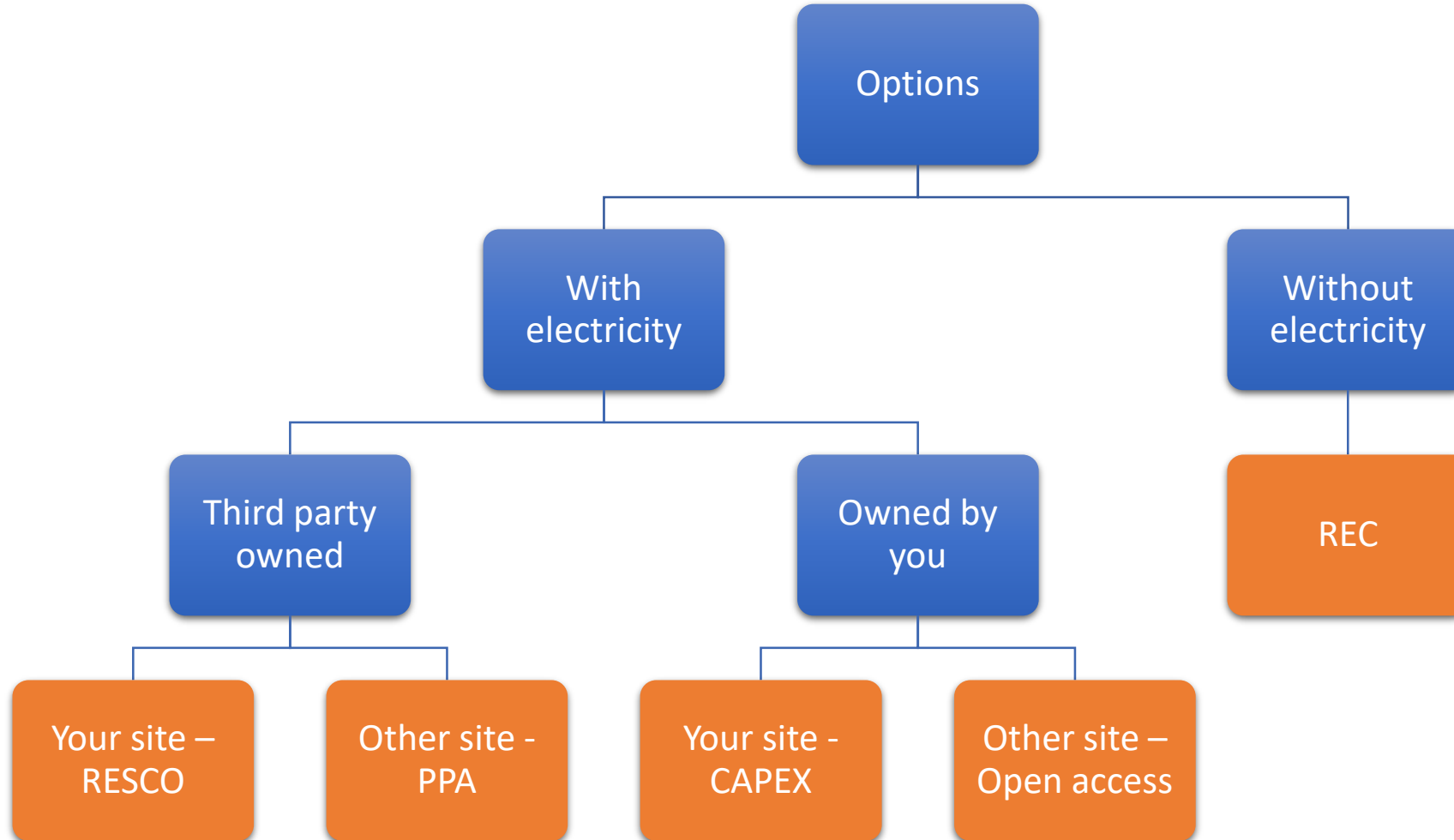
Advantage of RE plan

- You can follow a strategy (broken into short, mid, and long term goals)
- Integrate RE capacity with demand – necessary for bottom line benefits
- Especially useful when your assets are distributed at multiple locations
 - Different states, different policies.
 - Internal team inertia would otherwise slow things down
- Demand aggregation would allow better negotiation and better pricing

Demand aggregation for GoI – 500 MW



Options for increasing RE share



What does a good RE plan entail

- Location-wise assessment – potential, suitable technologies, feasibility, benefits, policies and regulation, financing options
- Benefits across large impact, high visibility, and integration with CSR
- Overall implementation schedule – short, mid, and long term
- Mode of implementation (EPC/BOO/PPA models)
- Identification of critical bottlenecks, risks & enablers, and blind-spots etc.
- Identification of implementation partners
- *Are you also helping your supply chain?*

Planning your RE plan

Ground Zero

- Post energy audit
- Set goals for RE plan – prioritize objectives, locations
- Assign location wise PoC

Baseline

- Location wise demand data collection
- Resource mapping, technology options, policy analysis

Techno-economic analysis

- Analyse the available feasible options and shortlist the ones above your threshold

Implementation model analysis

- Business model comparison (EPC/BOO/PPA)
- Consider critical bottlenecks, risks & enablers, and blind-spots

Final plan

- Take into account scale, impact and visibility
- Classify as short, mid, long term

What follows the plan?

- Connecting with implementation partners
- Tendering
- Due diligence and negotiations
- Contracting
- Communications and outreach
- Performance measurement

RE Roadmap for a steel company

Don't forget floating solar



Common pitfalls in planning

- Mostly due to lack of experience and short-term thinking
- For example - Mapping solar potential
 - Water availability at site
 - Rooftop accessibility – required for O&M
 - Any upcoming construction near the site
 - Inadequate cumulative direction analysis
- Important that your team (internal or external) is well aware of end to end project cycle

Creating impact – Magarpatta City



The 2018-19 Sustainability report of Magarpatta City, Pune was awarded as “Asia’s Best First Time Sustainability Report” by Asia Sustainability Reporting Awards

What TERI can do?

- Help you navigate through policy and regulatory processes
- Strategize and prepare a RE implementation plan
- Implementation advisory
 - Tendering & finding right partners
 - Handholding during contracting and negotiations
- Third party independent performance validations

Thank You!

For more information please contact

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