

»» Case Study: PPP Model for Solar PV projects

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Agenda

- ››› › **Motivation to achieve RPO targets in Maharashtra**
- › **Initial steps taken towards achievement**
 - › **Outcome: 125 MW Sakri solar PV plant**
- › **Scaling up via PPP model**
 - › **Revenue Sharing and,**
 - › **Performance linked contract**
- › **Capacity addition plans**

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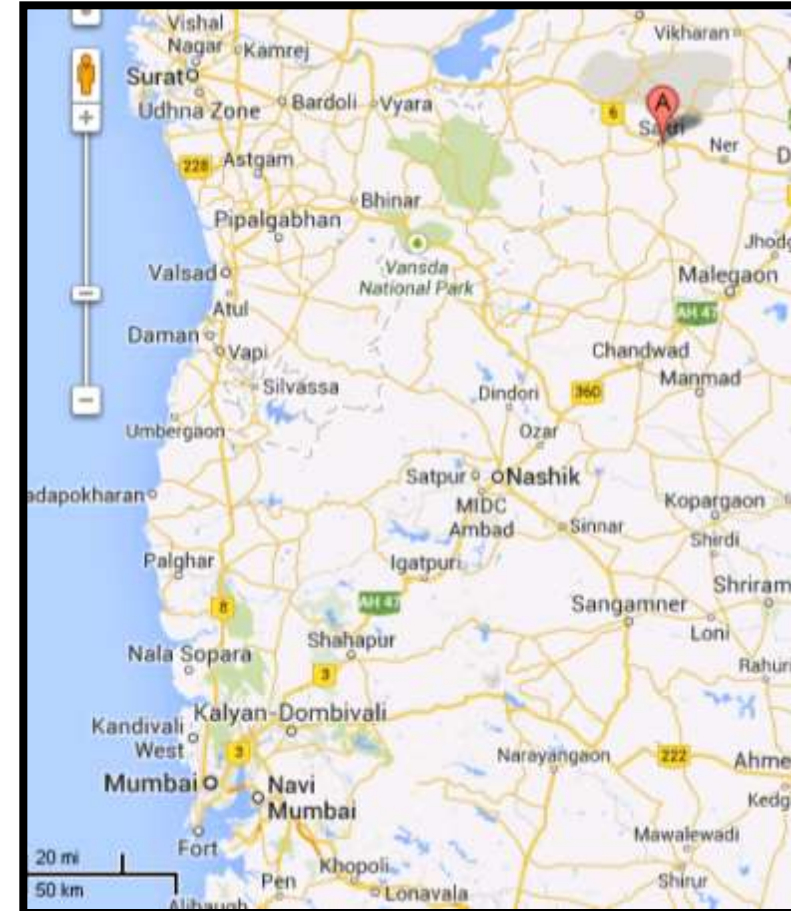
»» RPO targets of Maharashtra

› Partner needs

- › Establish 500 MW of solar power in Maharashtra to meet and exceed RPO target
- › Bankable, high quality, sustainable projects
- › Power Portfolio Diversification

› Initial business model

- › EPC cum 10 yr O&M for 125 MW at a single site - Sakri , Maharashtra
 - › 75 MW crystalline , 50 MW thin film
- › PPA at the regulator tariff



»» MAHAGENCO's 125 MW Sakri Project



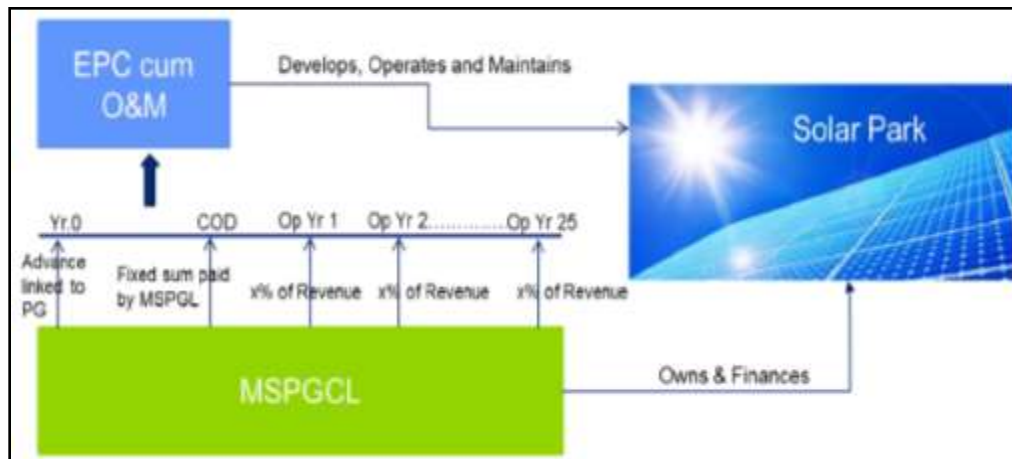
»» MAHAGENCO's 125 MW Sakri Project



- › **Loan EUR 150 Million (Reduced Interest Loan) - Technical Assistance EUR 0.7 Million**
 - › **Currently 125 MW are producing power (75 MW crystalline, 50 MW thin film)**
 - › **Estimated electricity generation: 216 GWh p.a. - Estimated CO₂ Reduction 186,000 tons p.a.**
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- › **Multiplier effect visible**

»» Smart Upscaling

- › MAHAGENCO's 50 MW Solar project in Baramati
 - › PPP Model
 - › Technology Agnostic
 - › Partial Payment by Commissioning
 - › Revenue Sharing for 25 years
 - › Payment Security through Letter of Credit
 - › Step in Rights for Lenders



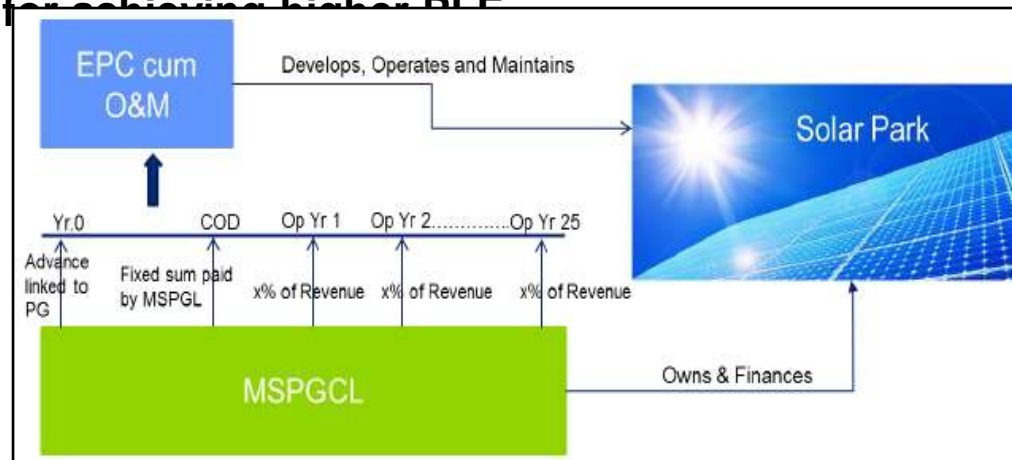
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Source: Deloitte



»» Performance linked revenue

- › Performance-linked Revenue Sharing Model based on the concept of sharing of risk and returns over the project lifecycle
- › Project developer receives a fixed portion of the EPC cost on achieving successful commercial operation and will earn a share of revenue over the life of the project
- › Revenue share will constitute O&M expenses and deferred EPC cost payment
- › Incentive/ Disincentive mechanism: Bidder to guarantee a minimum PLF.
 - › Bidder will have to pay penalties for falling below this PLF and receive incentives for achieving higher PLF



Source: Deloitte

»» Capacity Addition Plans

FINANCIAL YEAR	Target MW capacity as per SOLAR RPO	Fulfilment by MAHAGENCO (MW)	Details of Solar Project
▶ 2010-11	118 (0.25%)	1	1MW Dist. Chandrapur
▶ 2011-12	129 (0.25%)	5	4MW Dist. Chandrapur
▶ 2012-13	142 (0.25%)	130	125 MW Dist. Dhule
▶ 2013-14	313 (0.5%)	130	--
▶ 2014-15	344 (0.5%)	255	50 MW- Baramati 50 MW- Kaudgaon, (Phase I) 25 MW – Sakri (extension)
▶ 2015-16	379 (0.5%)	450	50 MW, Kaudgaon, (Phase II) 50 MW, Gangakhed 80 MW, Mangladevi, Yawatmal 15 MW, Aanterveli, Parbhani

› Maharashtra Energy Minister quoted on Feb 10, 2015 in the Times of India :

“..Mahagenco will build 2,500MW ..(solar) ..plants under public private partnership (PPP) model...(by 2019) ..”



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