IFC International Finance Corporation World Bank Group

GSMA Green Power for Mobile

IHS Towers of strength

In partnership with Netherlands

Procurement model analysis: Green Power

By end of this presentation, you will learn:

- Why procurement model is an important topic?
- What are the different procurement models available in the market?
- How to justify?

Green investment, is that a priority?

Is it easy to raise fund? Or convince the CFO?

If CAPEX is a barrier, what's alternative?

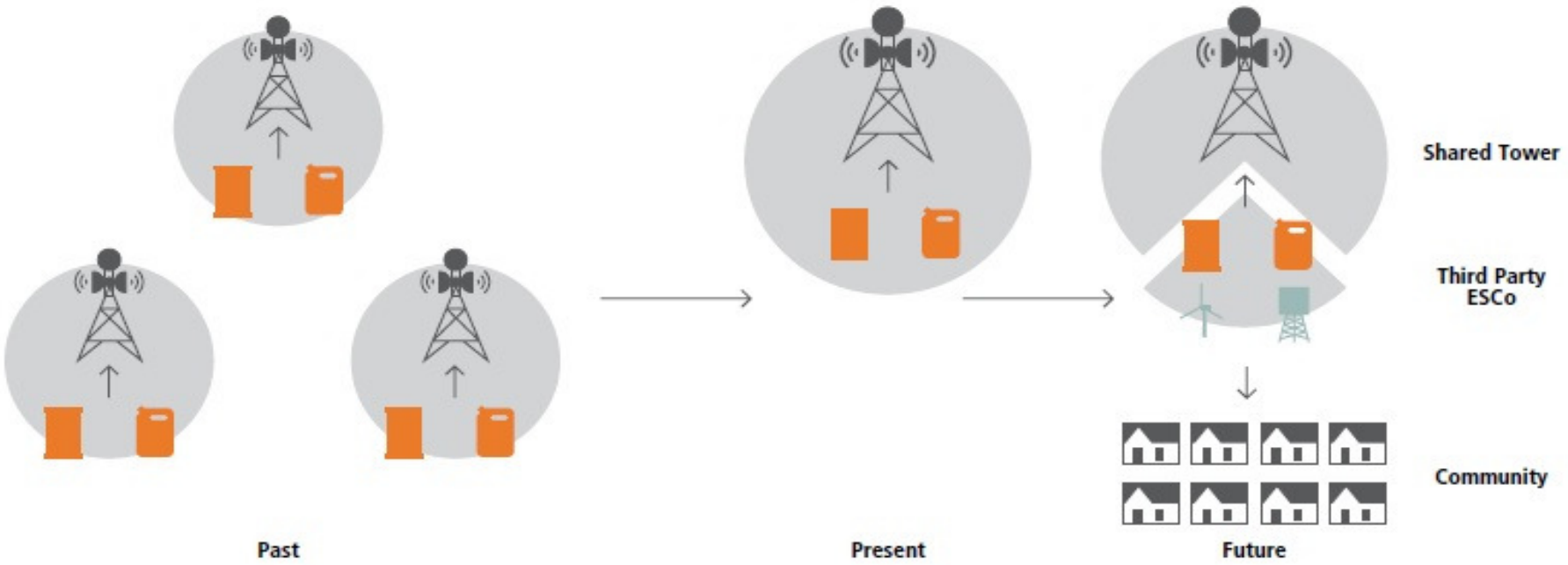
Procurement model:

CAPEX vs OPEX

In CAPEX model:

Activity	Responsibity
Equipment purchase	Operator
Additional land acquisition (If required)	Operator
Rollout of equipment & project management	Operator
Risk related to rollout	Operator
Site maintenance & operation	Operator
Re-fuelling of DG and risk related to fuel price hike	Operator
Assurance of site up-time	Operator
Site monitoring and Security	Operator
Remote alarm and performance data collection	Operator
Risk of theft and vandalism	Operator
Payout to 3rd Party	Operator

Current Market Trend: OPEX Model



OPEX Model:

Power Purchase Agreement (PPA)

Monthly Flat Fee

Energy Saving agreement (ESA)

In OPEX model:

Activity	CAPEX model	OPEX model
Equipment purchase	Operator	ESCO
Additional land acquisition (If required)	Operator	ESCO
Rollout of equipment & project management	Operator	ESCO
Risk related to rollout	Operator	ESCO
Site maintenance & operation	Operator	ESCO
Re-fuelling of DG and risk related to fuel price hike	Operator	ESCO
Assurance of site up-time	Operator	ESCO
Site monitoring and Security	Operator	ESCO
Remote alarm and performance data collection	Operator	ESCO
Risk of theft and vandalism	Operator	ESCO
Payout to 3rd Party	NA	Operator

Comparative Analysis

	CAPEX Model	OPEX Model
Financial analysis	- Operator has to invest all CAPEX either from its own source or from capital market; therefore financial risk belongs to Operator - IRR and NPV of Green Power deployment is significantly attractive. - For mass deployment, CAPEX investment comes as a barrier since it may require hundreds of millions of dollars.	- Operator does not have to invest for CAPEX, therefore no financial risk to deploy green power - IRR and NPV increases for telecom site since site OPEX reduces - Since mass deployment increases the business opportunity for ESCO, it comes more viable to invest.

Comparative analysis

	CAPEX Model	OPEX Model
Operational analysis	- Regular day-to-day site operation is a responsibility of operator - All cost related to site operation is incurred by operator - Site uptime and SLA maintenance is typically on operator. If fails, Operator bears all financial loss/penalty - OPEX for technical operation is low - OPEX for site operation is high.	- Site operation is a responsibility of ESCO; therefore Operator does not need to deploy resource for site operation - Operator pays only based on energy usage in a pre-agreed rate, therefore operational cost is forecast-able and comparatively lower than DG based energy cost - SLA and Uptime is a responsibility of ESCO. If fails, ESCO bears penalty.

Comparative analysis

	CAPEX Model	OPEX Model
Strategic analysis	- All asset of green power belongs to operator, therefore increases portfolio & branding value of organization - Maximize utilization of existing asset. - Easy to cope-up with variable changes - Multi 3rd parties' engagement makes the model complex for operator to handle at last mile - Increase debt for organization	- Easy to control last mile performance sine ESCO is the only last mile partner - Get full benefit of GHG emission reduction - Increases complexity of state management - Not so easy to cope-up with increasement of power requirement in regular basis - Reduces the risk of unforeseen energy OPEX due to market change and consumer inflation.

Lets now revisit

Is it CAPEX, or OPEX procurement model?

Thank you