IFC International Finance Corporation
World Bank Group

# IFC - Power Outsourcing

## Cairo GSMA workshop

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# Potential Impact of providing power (RE + DG) to the Community

| Advantages | Potential Development Impact in Emerging Markets: Triple Bottom-line |
|---|---|
| For companies | • Reduction in the diesel bill in off-grid / grid-off base tower stations (currently 40% of operating expenses are spent on energy in the telecom networks and base stations).<br>• Increase in efficiency of diesel generator sets from 40 to 80 per cent<br>• Create a natural hedge against diesel price volatility |
| For people | • Access to power: over 40% of India's rural population does not have sustainable access to power. Many such communities can benefit from distributed generation from telecom towers.<br>• Increased economic growth: Estimates reveal that every 10 per cent increase in mobile penetration is associated with 1.2 per cent GDP growth in a developing country. Distributed generation can accelerate mobile penetration in remote areas. |
| For the planet | • Potential reduction in GHG emissions: Up to 60 tons of $CO_2e$ emission reductions per tower in rural areas per annum. |

# Barriers

**Some of the large constraints in the growth of dist. gen. in the telecom sector:**

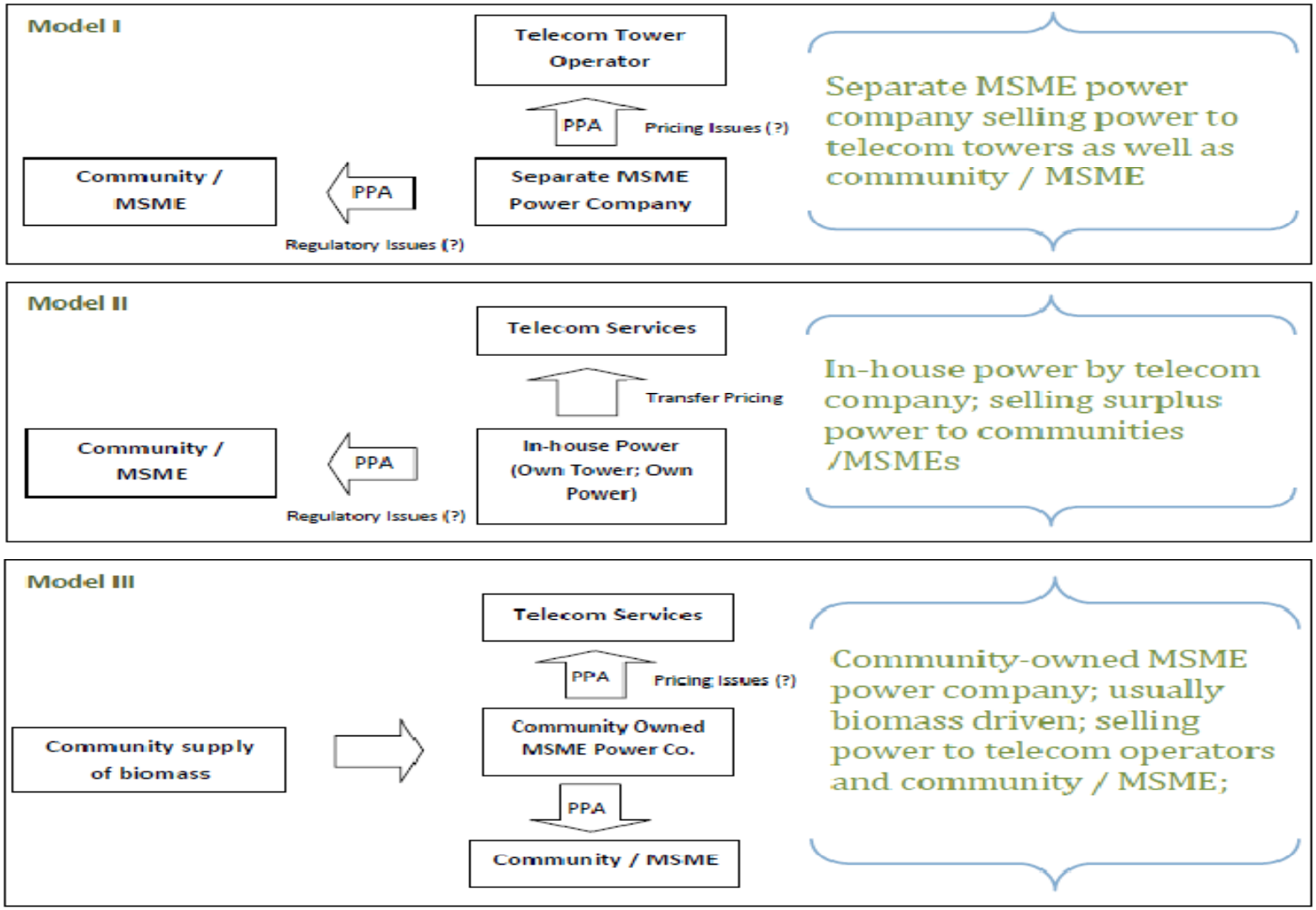
- High Capital Expenditures (CAPEX) for RE versus Operating Expenses (OPEX) dilemma: If the net returns from RE are positive, then the market barrier is the higher initial CAPEX as this reduces the ability of mobile operators to quickly install more towers and expand coverage and capture market share.
- Concerns over reliable power supply through distributed generation using RE
- Regulatory concerns – ambiguity around structuring proper Power Purchase Agreements to community
- In absence of technology and finance, distributed generation is unable to reach critical mass
- Programmatic carbon-credits / CDM through distributed generation is not clear
- Lack of Load for excess power (the load has to be developed over time)

# Objectives for New Initiative by IFC in India

The project will seek to partner with mobile operators and service providers (such as ESCO's – Energy Service Companies) in India, offer a variety of technical assistance to enable the implementation of viable business models that leverage renewable power for long-term efficiency gains.

Through this collaboration, mobile operators, ESCOs and telecom tower companies in India can benefit from a technical assistance program, addressing the key market barrier (CAPEX versus OPEX dilemma).

# Potential Business Models



# Objectives/ Timelines

Project objectives (India deep dive component):

- Extend and deepen the "green power for mobile" work in India.
- Undertake activities to assist mobile operators in India explore and achieve the use of renewable power
- Focus on creating a business model that can be adopted by mobile operators

Timeline:

| S. No | Project Objective | Year 1 | Year 2 |
|---|---|---|---|
| 1 | Support mobile operators / telecom tower companies / ESCOs switch to distributed generation using RE for base stations in off-grid / grid-off areas | 2 | |
| 2 | Conduct feasibility studies for developing viable business models for using RE (including the ESCO model) for providing green power to telecom towers in India | 2 | - |
| 3 | Support mobile operators / telecom tower companies / ESCOs with technical assistance for pilot projects of viable and demonstrable business models for distributed generation using RE in grid-off / off-grid areas | - | 2 |
| 4 | Conduct awareness and training workshops with mobile operators / telecom tower companies on distributed generation using RE | 1 | 1 |

# In conclusion

This project is an attempt to address the critical market barrier for mobile operators / telecom tower companies (CAPEX versus OPEX dilemma) by creating viable business models through:

- Providing technical assistance
- Carrying out feasibility studies
- Facilitating pilot projects
- Creating a knowledge base for mobile operators and ESCO's
- And, finally disseminating the information