

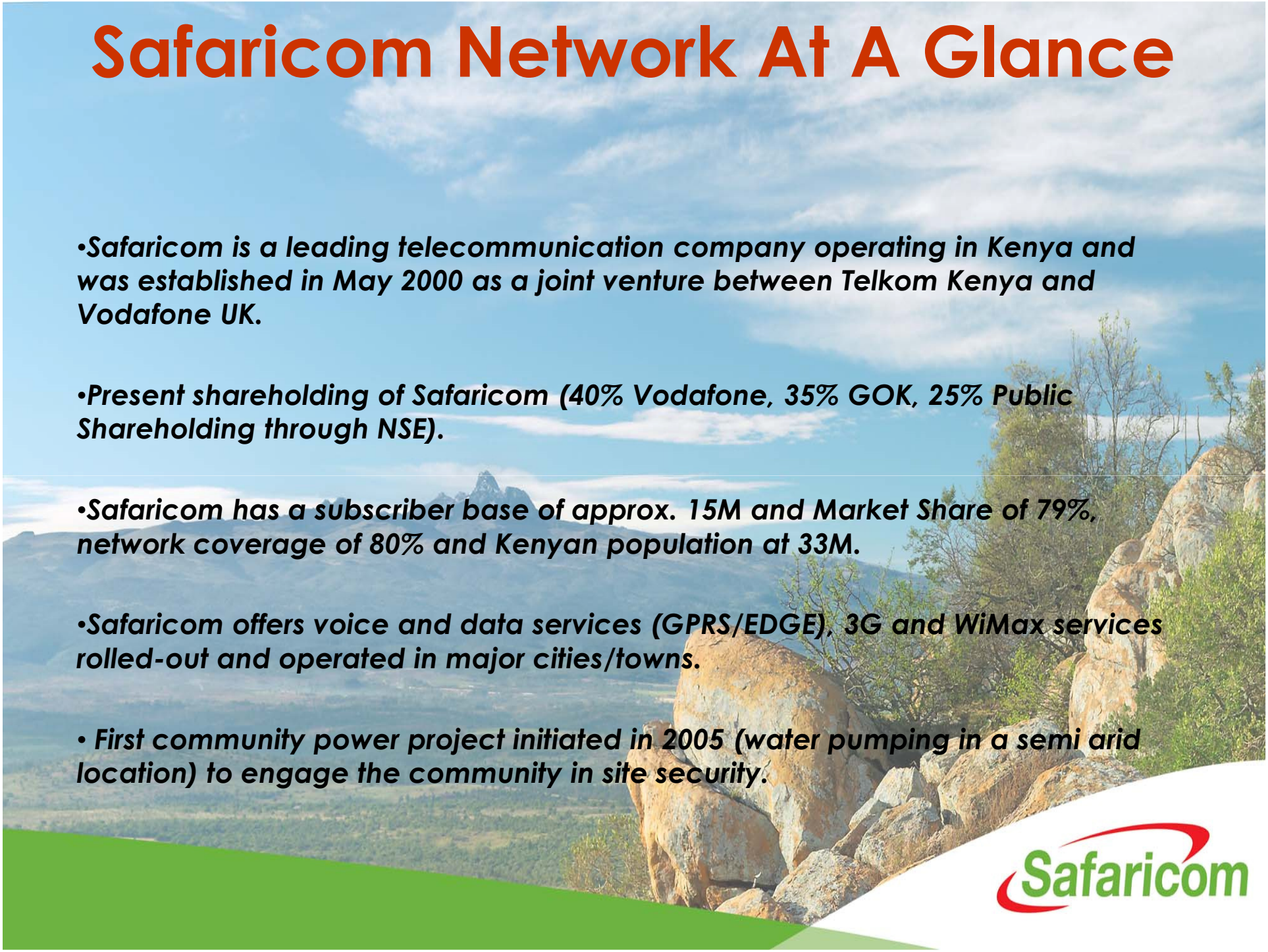
Safaricom's 15 Community Power Sites

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Schedule
• Safaricom Network At A Glance
• Objectives of Community Power Projects.
• Current Status and Applications.
• Impact of Community Power Projects
• Challenges
• Recommendations and Way Forward
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Safaricom Network At A Glance



- *Safaricom is a leading telecommunication company operating in Kenya and was established in May 2000 as a joint venture between Telkom Kenya and Vodafone UK.*

- *Present shareholding of Safaricom (40% Vodafone, 35% GOK, 25% Public Shareholding through NSE).*

- *Safaricom has a subscriber base of approx. 15M and Market Share of 79%, network coverage of 80% and Kenyan population at 33M.*

- *Safaricom offers voice and data services (GPRS/EDGE), 3G and WiMax services rolled-out and operated in major cities/towns.*

- *First community power project initiated in 2005 (water pumping in a semi arid location) to engage the community in site security.*

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Safaricom Network At A Glance

- *Safaricom has 1800 sites on grid power supply, 317 sites on 24/7 diesel generator power and 68 sites on Remote Power Solutions (RPS) a mix of Solar-Wind-Diesel-battery hybrid.*
- *Safaricom contributes to community power indirectly by extending the grid infrastructure with own resources up to sites within 5km radius from existing grid infrastructure.*
- *Safaricom also contributes directly by providing community power applications with excess power from the base stations (at time deliberate power system over-specification) meeting 100% of cost.*
- *Rural population is poor and can ill-afford cost of power.*

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Community Power Projects - Reasons

- *Slow pace of electricity infrastructure expansion in rural areas.*
- *Excess power from the base station.*
- *Network access expansion in off-grid rural areas.*
- *CSR – empowering the community /subscriber*





- *Site security especially in hostile areas..*
- *Increased (ARPU) due to availability of power for mobile phone charging and also from resultant economic stimulation from small businesses due to the project.*
- *Brand Image and subscriber loyalty*

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Community Power Projects - Reasons

- *Poor local community, cannot afford cost of power.*
- *Request from the community.*
- *Request from donors engaged with the community in other development projects.*





- *Rapid expansion of Mobile Money MPESA services to the rural areas.*
- *Optimum network utilization and improved Rate of Return (no sleeping cells) for lack of subscriber activity.*

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Current Status and Applications

Community Power Applications;

- ***Mobile Phone Charging Booths,***
- ***Local Community Computer Laboratory.***
- ***Water Pumping Set.***
- ***Street-lighting facility.***





- ***Hospital facilities lighting and sockets (laboratory, maternity wing, e.t.c***
- ***School lighting and sockets (photocopying, lighting in dormitory,library, classes).***
- ***Local community security surveillance radio***

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Current Status

#	Community Power Application	Power Source	No. of Sites
1	Water Pumping	Diesel Generator	1
2	Community Computer Project	Diesel Generator	1
		Pure Green (Solar_Wind Hybrid)	2
3	Mobile Charging Booths	Diesel Generator	6
		Solar_Wind_Diesel_Hybrid	13
		Wind_Diesel_Hybrid	1
		Solar_Diesel_Hybrid	1
		Pure Green (Solar_Wind Hybrid)	2
4	Street Lighting	Diesel Generator	2
5	Hospital Facility	Diesel Generator	1
6	Sockets and Lighting to Community	Diesel Generator	4
7	Security Surveillance Radio	Solar_Wind_Diesel_Hybrid	1
	Total Number of sites Supported		25
	Number of Sites on Air		2175
	% of Community Power Sites		1.15%

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Current Status





- *Street-lights and mobile charging booth in one of the community power site.*





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Current Status





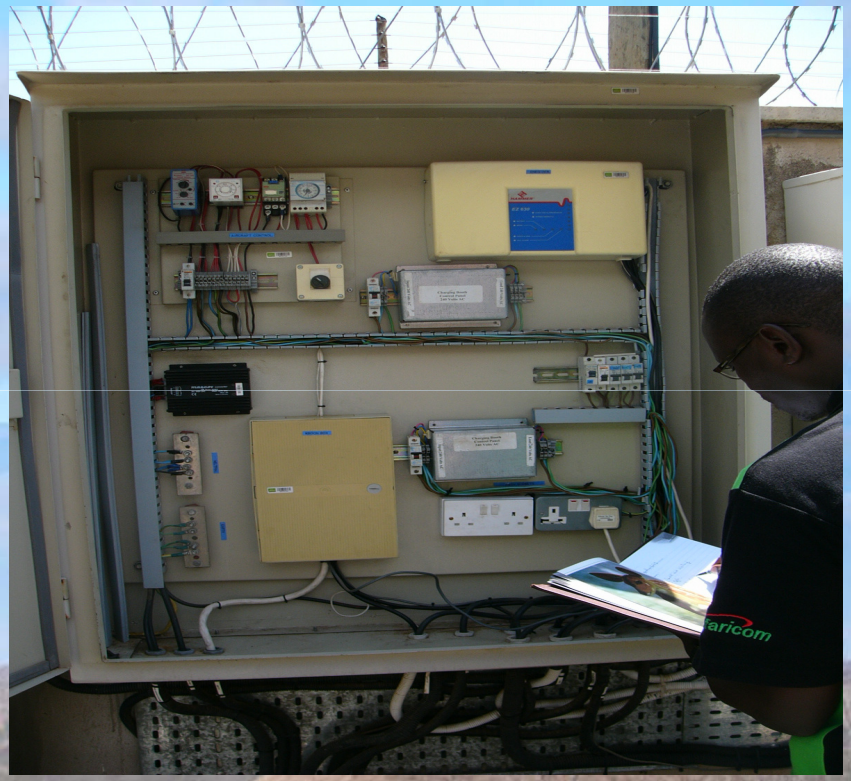
- *School lighting and socket power (computer lab).*



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Current Status





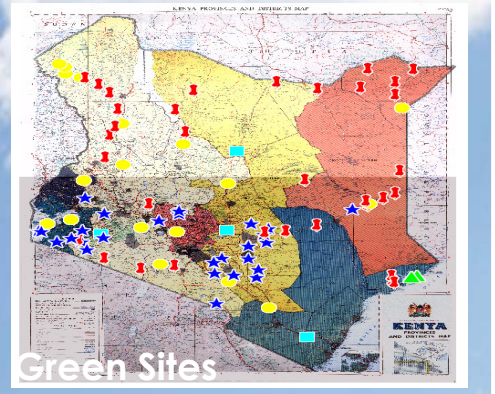
- *Mobile phone charging facility – power output regulated via a 16Apms CB.*



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Current Status – Power Sources





- Solar_Wind_Diesel Hybrid.
- Pure Green Power (Solar_Wind Hybrid).
- Wind_Diesel_Hybrid
- Diesel_Generator











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Community Power SitesCosts

#	Additional Equipment & Infrastructure Requirement for Community Project	Total CAPEX Cost (USD)	Total OPEX Cost (USD) pa	OPEX Items
1	11kVA Extra Genset Power	65,160.00	44,948.07	Extra Cost of Diesel
2	Street Lighting Infrastructure	50,820.44	694.10	250watts bulbs replacement.
3	Mobile Charging Booth	85,512.82	10,738.46	Booth repair costs since installation
4	Solar Panel and Inverter Charger for Community Computer Laboratory	14,673.08	2,307.69	Battery replacement cost after 2years
	Total	216,166.33	58,688.32	

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Impact of Community Power

- *Improvement in local security both for the base station and the community.*
- *Positive brand image and reports to shareholders and to the wider society through association with community power.*
- *Increased sales amongst conscious customers and a competition edge.*
- *Expanded access and service offerings to rural communities/schools.*
- *Bridging the digital/information divide through access to information.*
- *Contribution to local community development; opportunities for entrepreneurs/vendors and extended business hours.*
- *Improved social cohesion and peaceful coexistence amongst communities and clans with warring cultures (cattle raids, inter-clan wars e.t.c).*

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Social Impact



- Improved healthcare, inter-community cohesion, access to communication, improved standard of living.





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Challenges

- *High CAPEX and OPEX costs to implement and sustain power sources to allow for community power applications.*

- *Non-Core business activity; administrative challenges in implementation and maintenance of community power applications.*

- *Lack of local maintenance/technical expertise to offer first level support.*

- *Managing Community Expectations;*

    - *Expectation of reliable, uninterrupted, and quality power to local community power applications.*
    - *Demand for more services once basic needs are provided.*

- *Local community increased reliance to the provided community power even when grid power is finally connected to the area (poor communities).*

- *Technical, Cultural and Regulatory barriers to implementation.*

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Challenges







- Requirement by local community for power supply to a community school for the handicapped, water pumping, Government Security camp e.t.c.

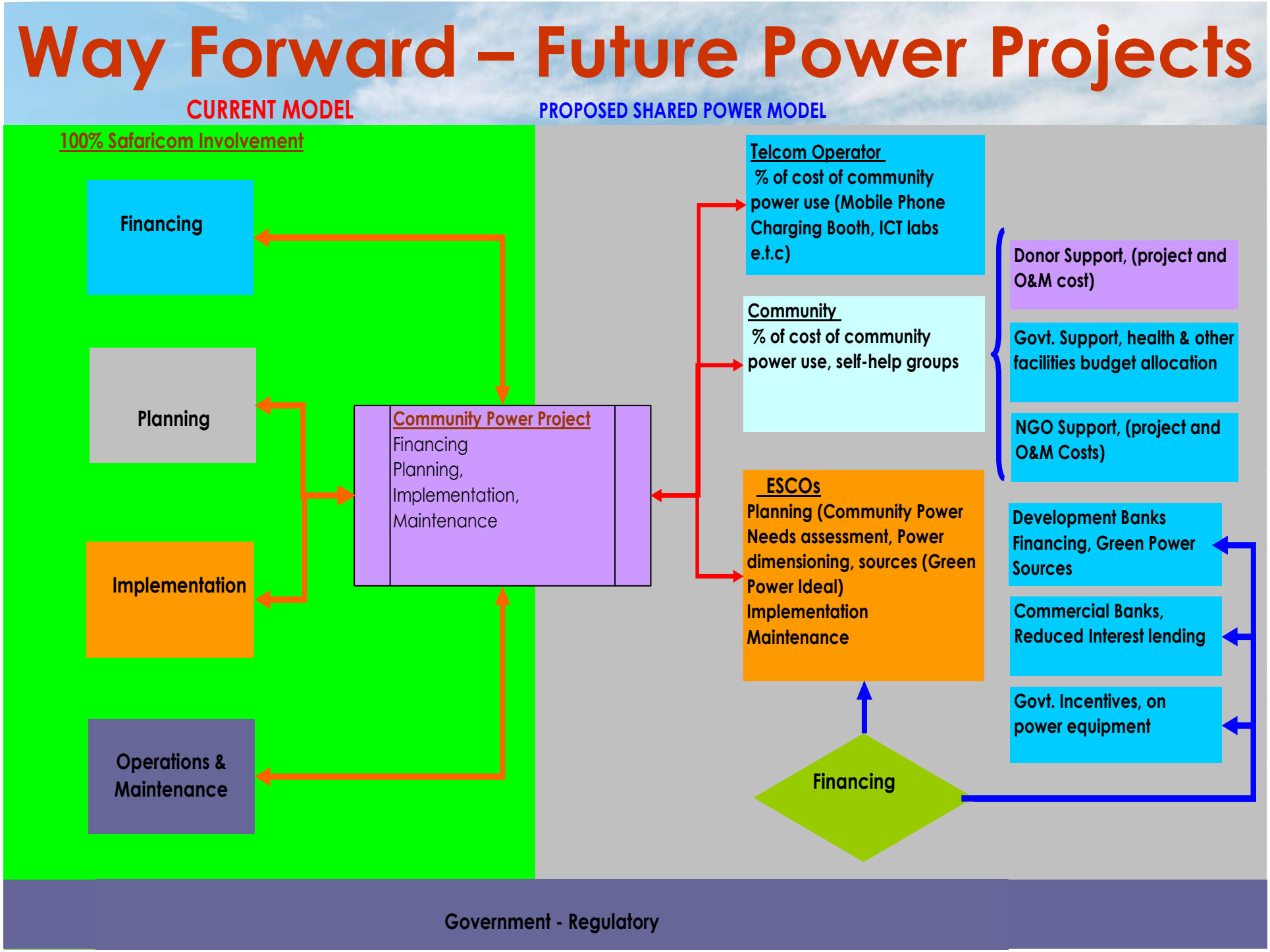
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Recommendations

- *Government subsidies and incentives to the Telcom operator in support of community power.*
- *Telcom operator and local community engagement in meeting cost of power.*
- *Consultations and engagement of the community is key in successful implementation and maintenance of the project.*
- *Outsourcing of community power projects to Energy Service Companies (ESCOs) and meeting the cost of base station site and community power applications.*
- *Community partnership may be unsustainable due to poverty amongst the community, inter-clan rivalry, pastoralists e.t.c*
- *Model proposed (Next slide) should be tested.*

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Way Forward – Future Power Projects




Thank You
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