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GSMA Green Power for Mobile

In partnership with Netherlands

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Green Power for Mobile
Myanmar specific Working Group

29th May 2014



Narada

Heliocentris

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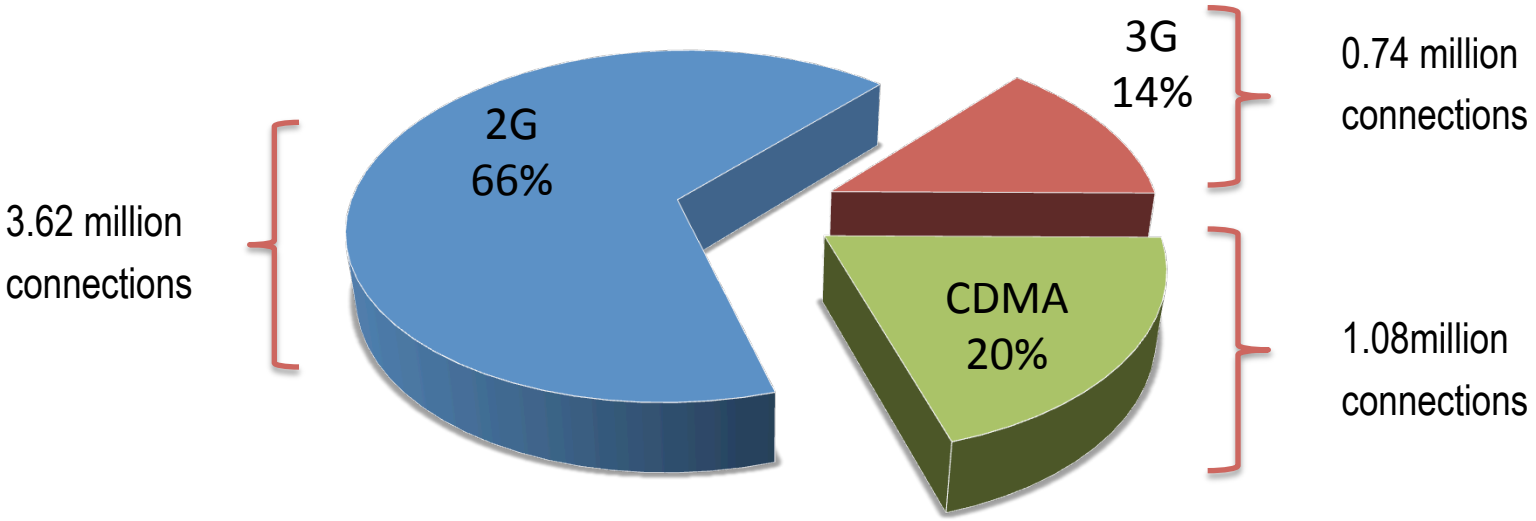


Telecom & Power: Current Status

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Telecom: Connection and Penetration

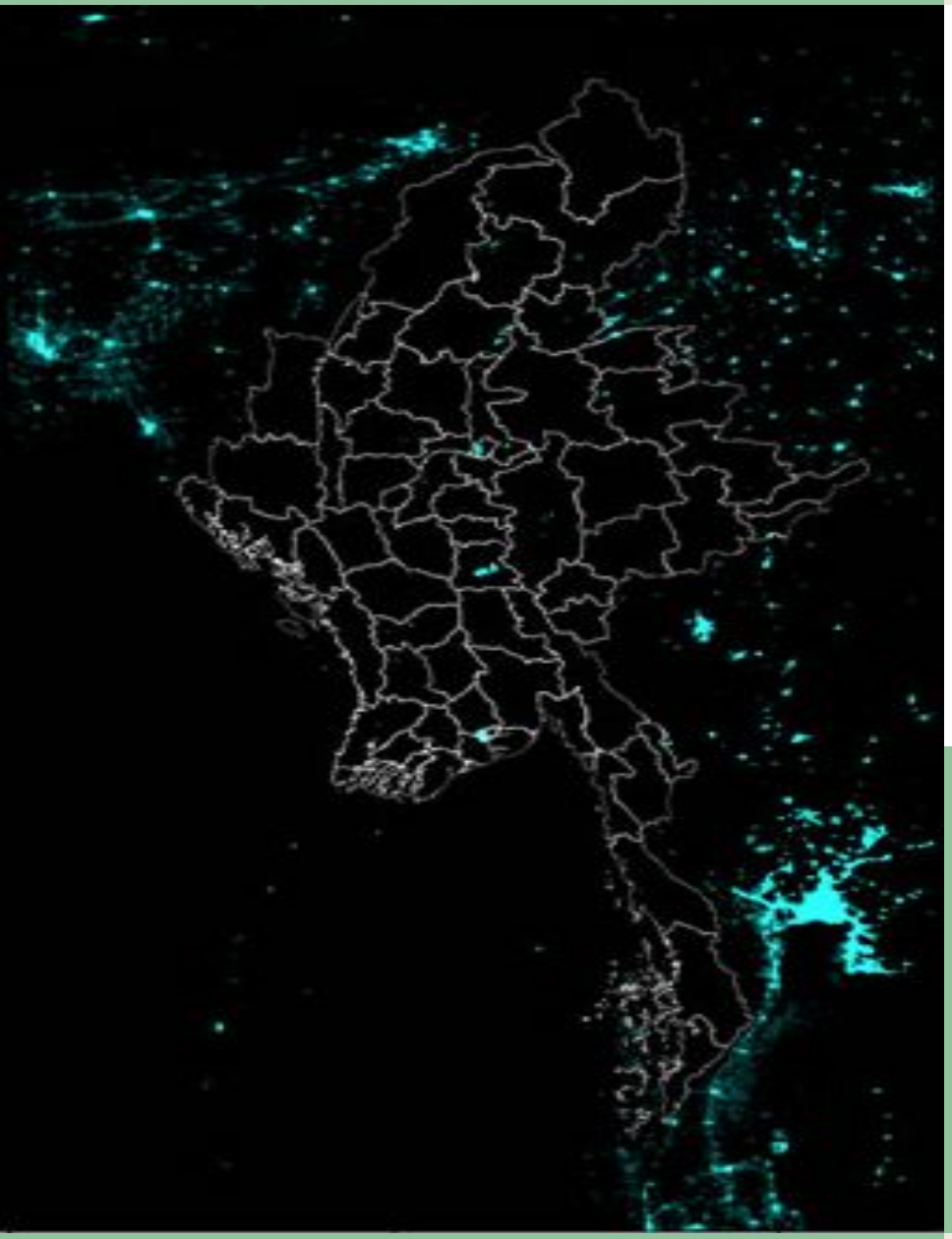
Mobile Connections - Myanmar 2013

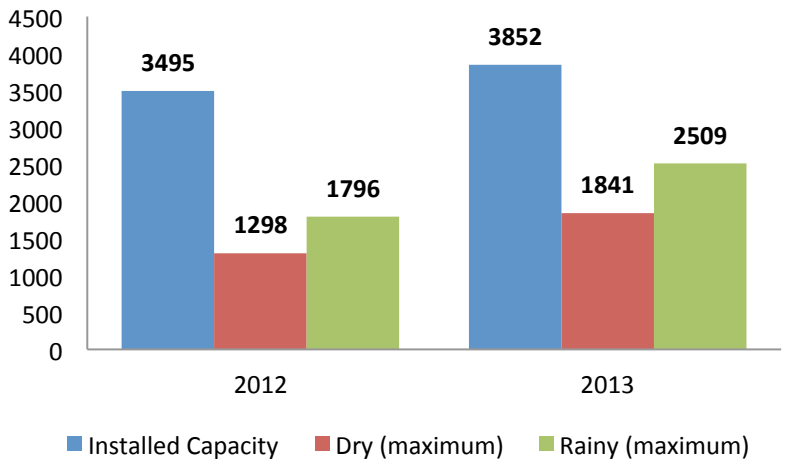


- **10.22% Mobile Penetration and 1% Fixed Line Penetration**
- **Around 1,800 towers have been deployed**

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Power: Current Status





Presently in Myanmar, less than 30% of population has access to electricity

67% of power comes from Hydropower plants and 29% is from Gas-fired power plants

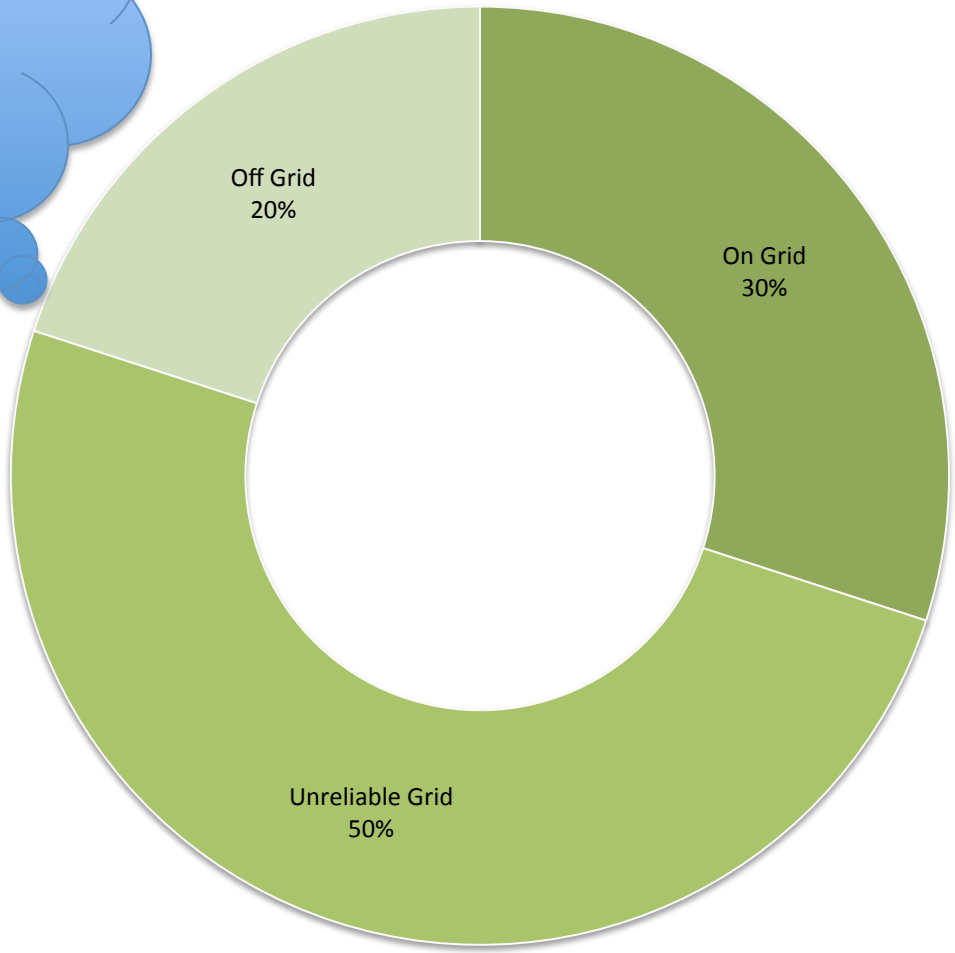
(source: Ministry of Electric Power)

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Impact on Current Deployment

MNO needs to burn 9.7 million liters

Telecom Current Deployment



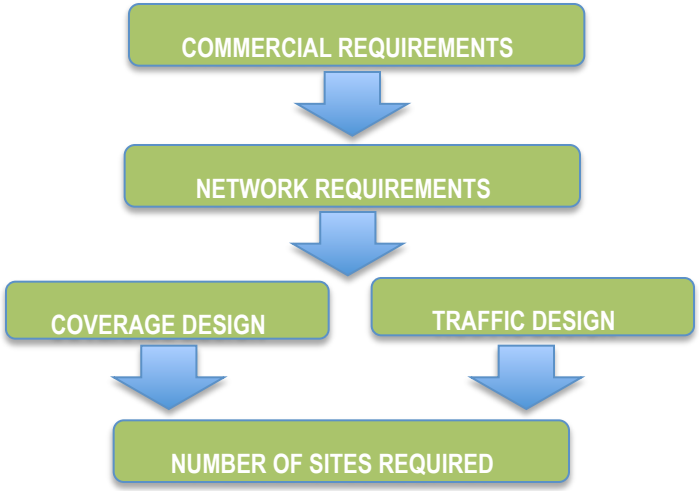
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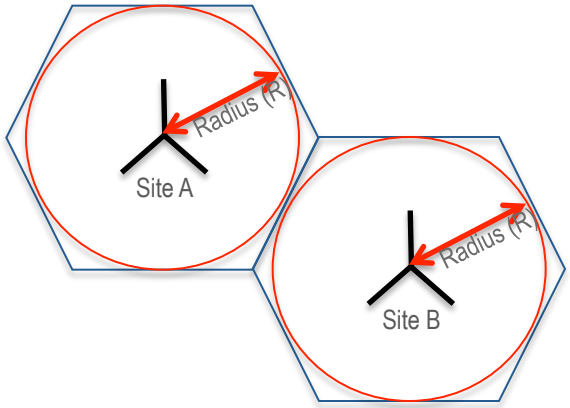


Telecom: Future Growth

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Telecom Growth: Approach

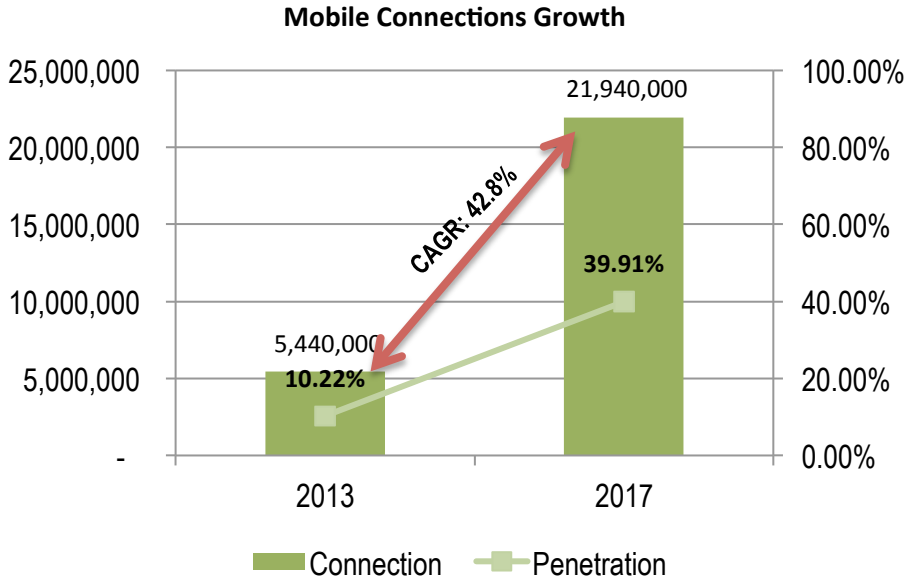


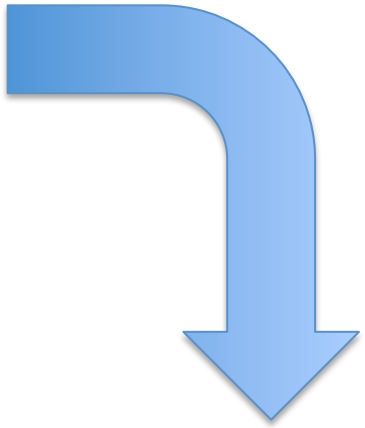




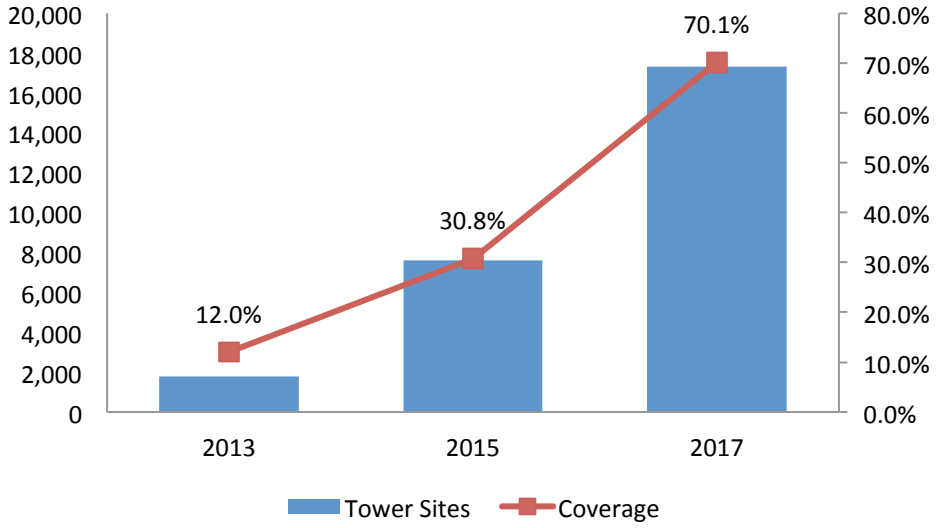
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Telecom Growth



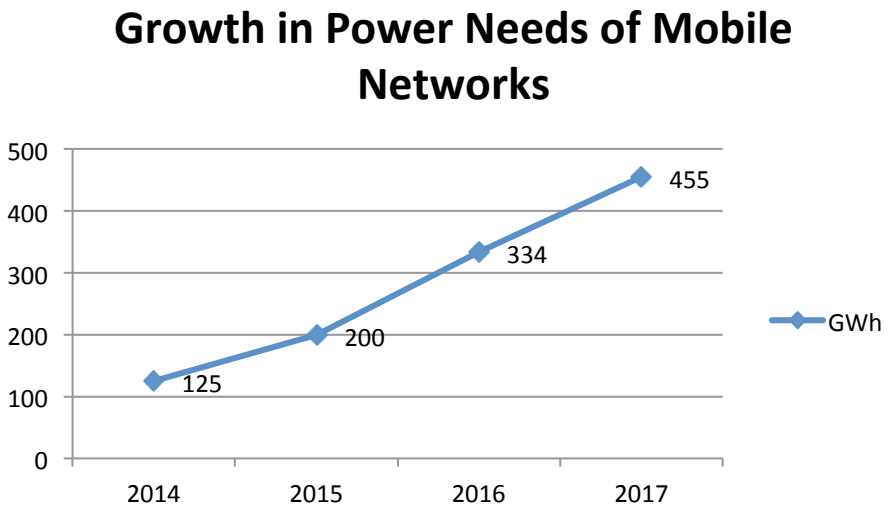


- Future mobile subscriber growth will be heavily **on addressable market** on first 1-3 years
- MNO will concentrate on **3 mayor cities** to optimize a market penetration
- MNO will try to cover 70-75% of area across the country



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Tower Growth: A Power Requirement

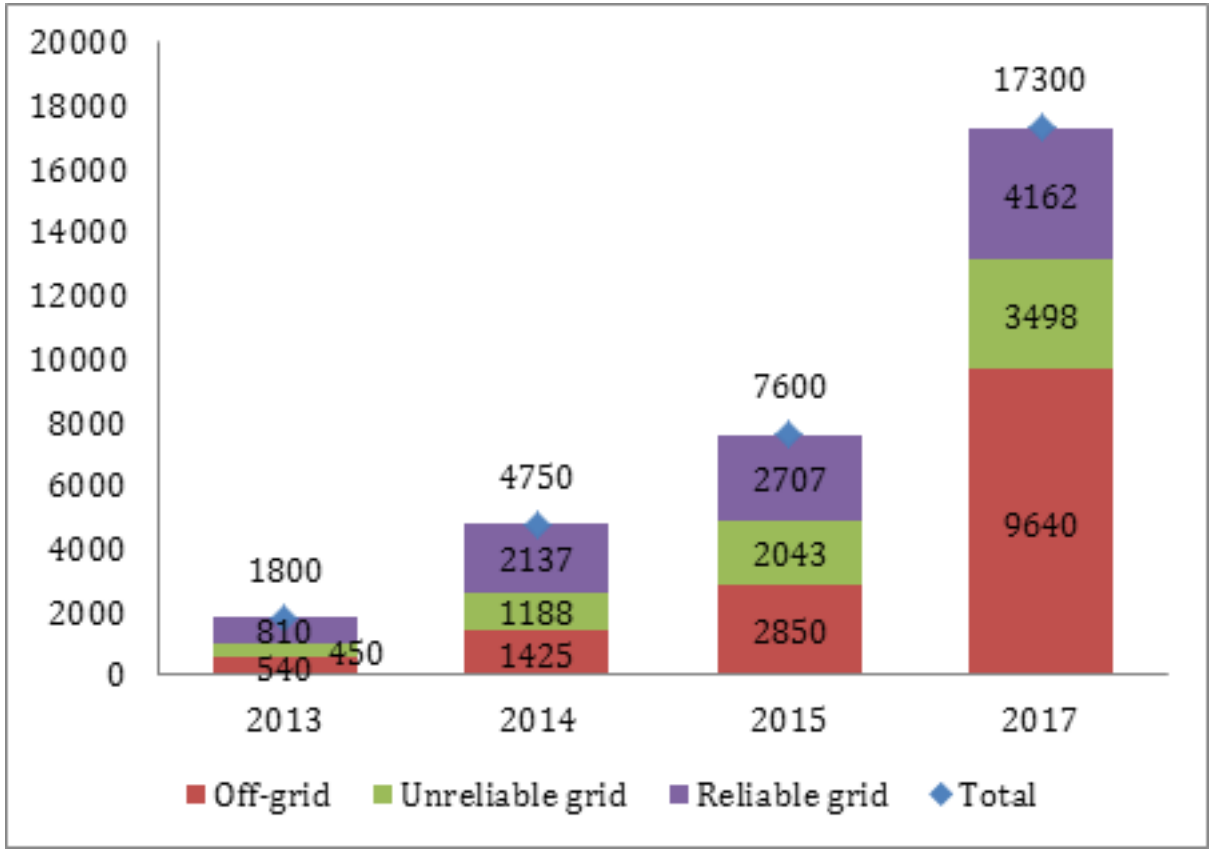


'Given the context of poor grid power infrastructure and power supply shortages, it is expected that the mobile industry will face huge challenges in powering up the existing and planned network rollouts'

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Telecom Growth: Problematic

"A number of problematic sites will reach for more than 13,000 sites by 2017 "
GPM Research



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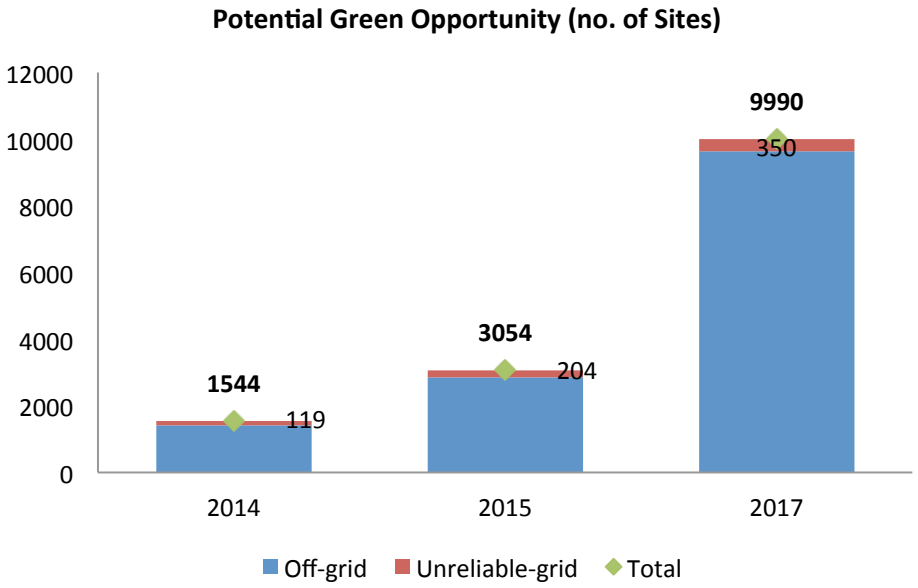
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Powering Telecom: Opportunities

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Powering Telecom: A Green Potential Sites



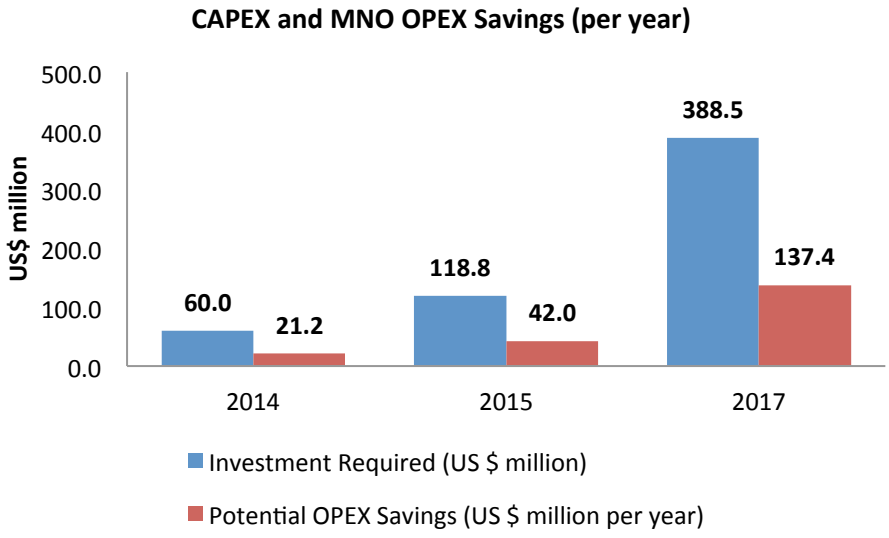
- Based on current approach MNOs/TowerCos will require **25 million litres** of diesel **in 2014** and climb up to **116 million by 2017**
- In 2014, GPM estimates a green potential site will reach **1,544 sites**
- And by 2017, the potential sites might grow to **9,990 sites** across the country

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CAPEX

	2014	2015	2017
Potential number of sites	1544	3054	9990
Investment Required (US $ million)	60.0	118.8	388.5
Potential OPEX Savings (US $ million per year)	21.2	42.0	137.4
Savings in Diesel Consumption (million liters per year)	11.8	23.3	76.1
CO2 emission reduction (Tonnes per year)	31,527	62,359	203,985

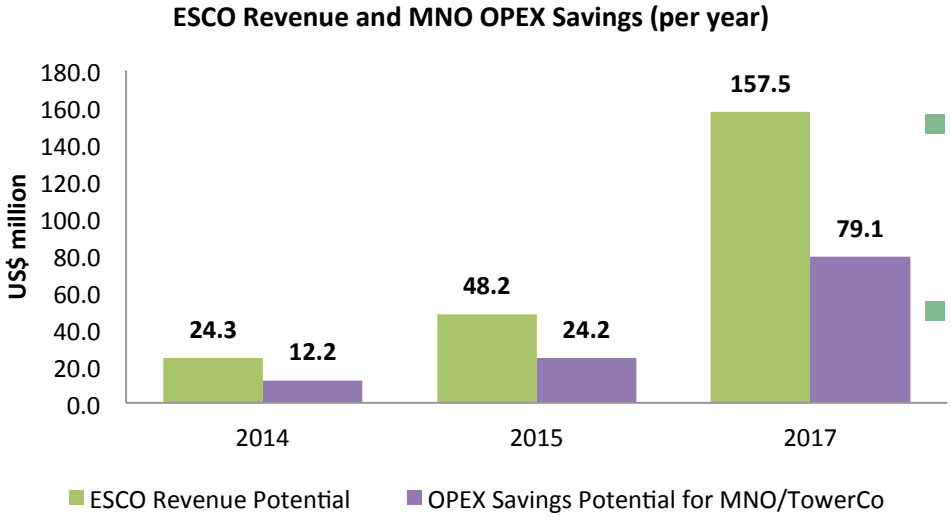
- GPM estimates that the MNOs and Tower Companies would require an investment of **US$388 million by 2017**
- The investments would have a payback period of 2.83 years at an annual OPEX savings of over **US$137 million by 2017**
- By investing in green power MNOs and Tower Cos would be reducing their diesel consumption by **76 million liters** and reduce CO2 emissions by **203,895 tons** every year by 2017

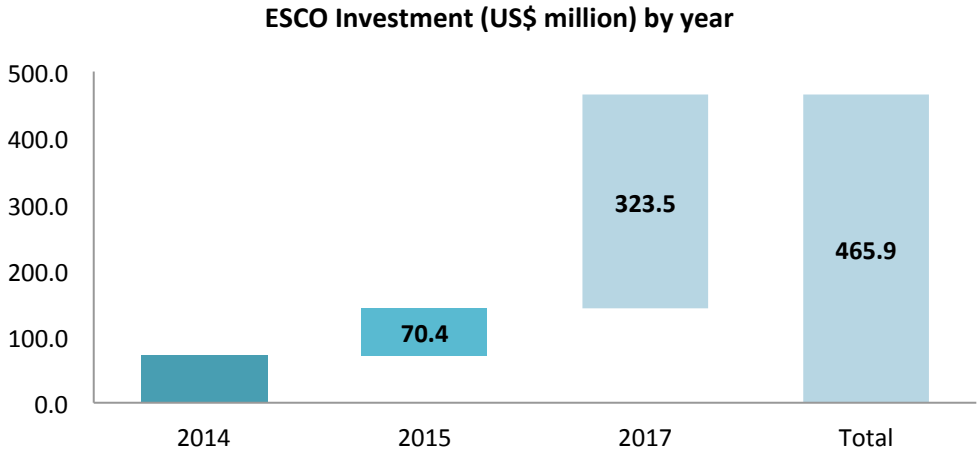


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Powering Telecom: Opportunities

OPEX





- A potential investment for ESCO in 2014 is around **US$72 million** that will give direct OPEX saving about **US$12 million**
- The number will increase to **US$465 million** in 2017 with saving opportunity for MNO will reach **US$79 million**
- This is based on PPA model calculation with payback period less than **3 years**

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Conclusion



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Barriers

Here is the barriers on green technology deployment in Myanmar:

- Time constrain on roll-out to implement a green solution
- MNO and Tower Co are still searching a best business model for energy outsourcing
- Lack of energy outsourcing business model offered in Myanmar
- Less number of competitive ESCO players

Opportunities

- Good opportunity for green vendor to offer their best solution
- Huge saving can be achieve by MNOs for implementing green power solution.
- Good opportunity for financial institution on green technology investment.
- Myanmar needs US$ 60 million investment for green technology and will reach US$ 388.5 millions by 2017.

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Please check our website:
http://www.gsma.com/mobilefordevelopment/green-power-for-mobile

Thank You!

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