



Private Business and International Organizations – Sharing Experiences

DG DEVCO - EuropeAid – Empowering Rural Electrification – Brussels, 29.09.14

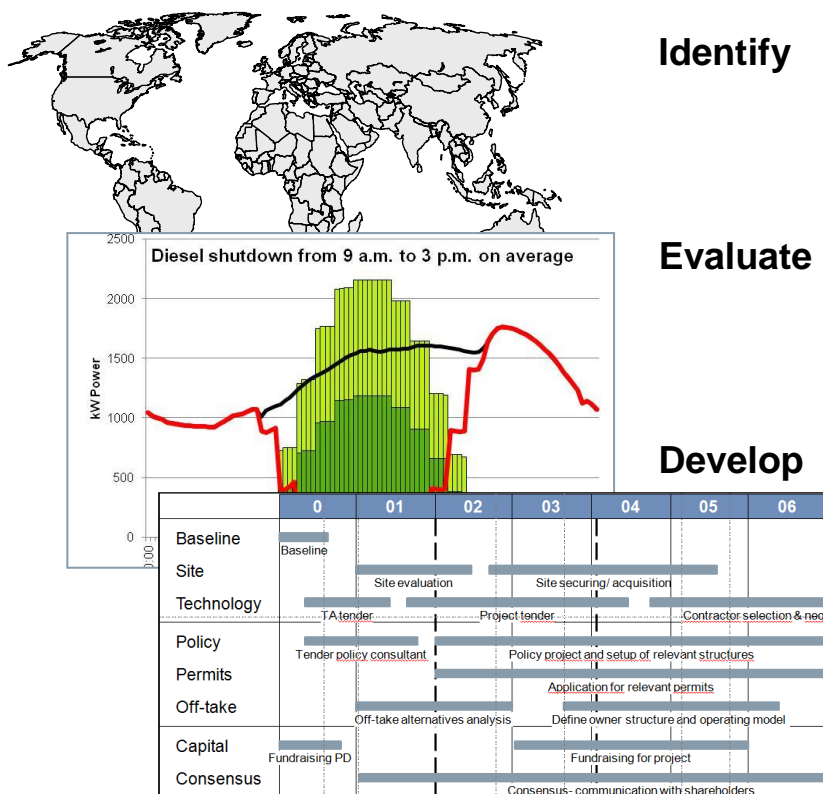
Member of



A critical phase while opening the doors on an immature market is project development

Projects and their way to the market

Long way to the projects



Market Gaps

Crucial problems:

- Missing appropriate **financing** scheme
- Inadequate **regulatory** framework
- Lack of **trained** staff and operational risks
- more ...

Lots of funding ?

International Organization have large financing resources



Private companies struggle in submitting over projects

Opportunities don't get to the market

Source: Siemens

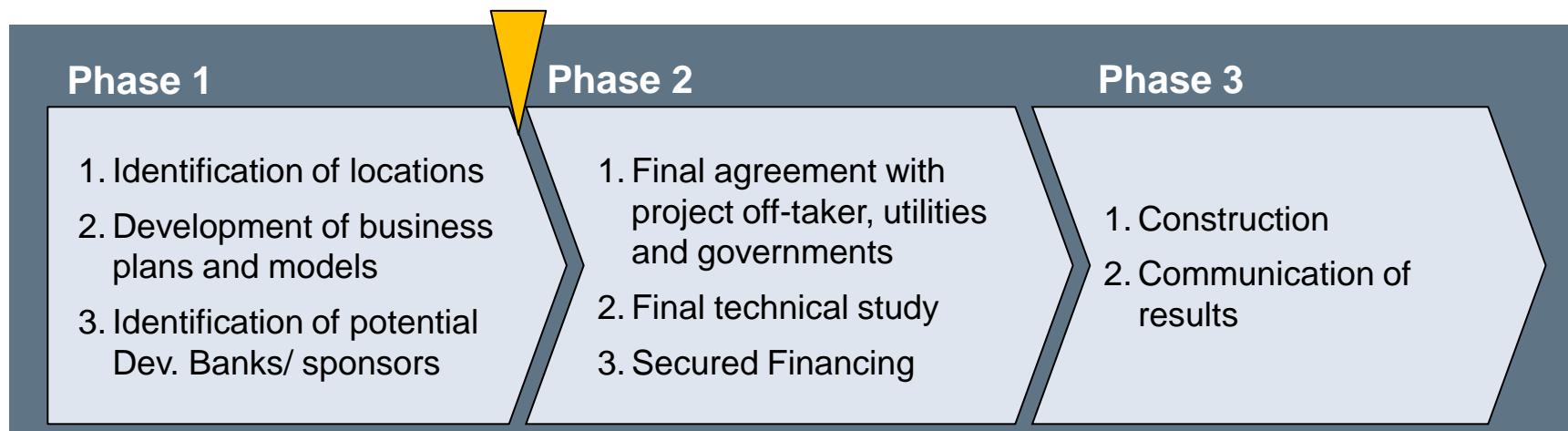
Unrestricted © Siemens AG 2014 All rights reserved.

Detecting and supporting project development: can International Organizations play a role?

Example: Siemens – UNEP – IRENA



Project goal	Technology	Siemens role
<ul style="list-style-type: none"> Provide off-grid communities with a sustainable power solution Develop Private-Public Partnership as successful business case 	<ul style="list-style-type: none"> Hybridization of diesel fired off-grid power plants with renewable energy sources Secure reliable energy supply 24/7 	<ul style="list-style-type: none"> Support in detecting best location Technical advisory and evaluation of chosen sites Modeling of possible hybridization benefits
Project development		



Source: Siemens

Unrestricted © Siemens AG 2014 All rights reserved.

Empowering Rural Electrification Workshop, 29th – 30th Sept. 2014

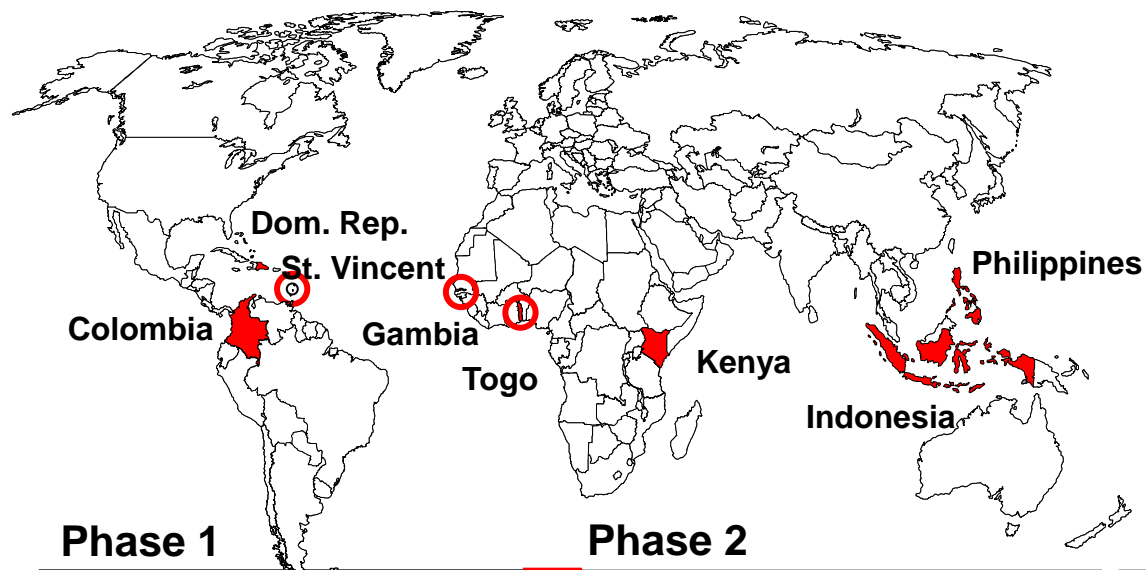
Financial support is vital in the first assessment and preparation phases

Chosen project locations, 8 sites



IRENA

International Renewable Energy Agency



Support required:

In order to attract investors and technology providers, **project development risks** have to be shared

Phase 1

Local authorities:
contacted

Final user:
involved

Technical needs:
assessed

Phase 2

1. Final agreement with project off-taker, utilities and governments
2. Final technical study
3. Secured Financing

Phase 3

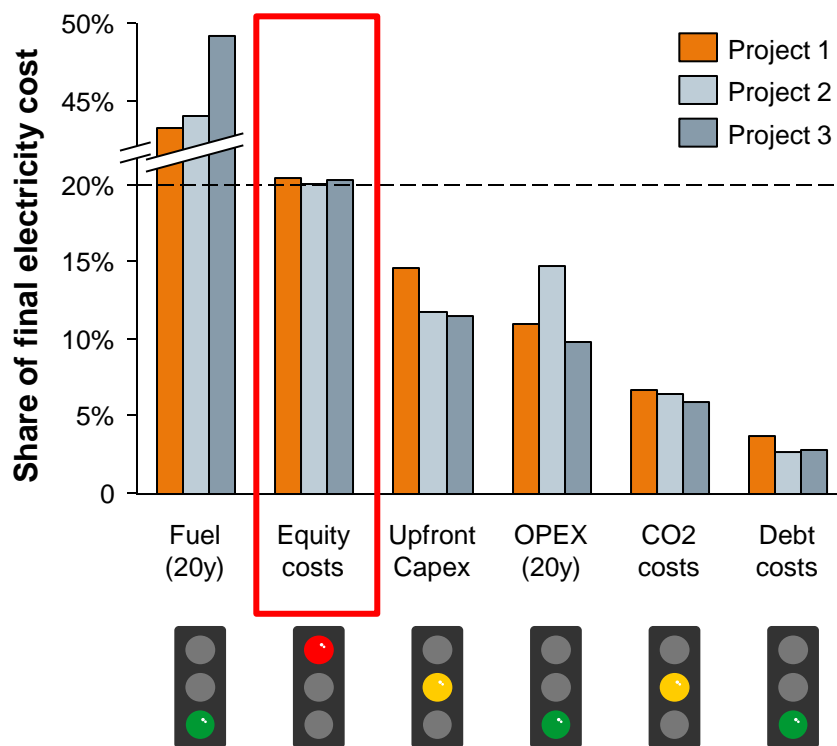
1. Construction
2. Communication of results

Source: Siemens

Unrestricted © Siemens AG 2014 All rights reserved.

Investors' equity requirements are a significant part of the final electricity costs

Lifetime power generation cost over 20 years
3 hybrid power plants PV + Diesel



Example: Equity impact

- Project analysis has been done considering
 - Initial capital costs
 - Debt (8%) and Equity (15%)** interest rates
 - Fuel costs and operation costs

Results

- Share of return on equity is second largest contributor to power costs
- It account to 20% of final electricity cost

In projects at **development stage** ...

In **risky** business environments ...

On **small** projects ...

... **high capital costs** ruin business cases

Source: Siemens

Unrestricted © Siemens AG 2014 All rights reserved.

Page 5

Empowering Rural Electrification Workshop, 29th – 30th Sept. 2014

E P I E S T B D

Torsten Wetzel

**Business Development
Siemens Power & Gas**

+49 174 24 75 966

torsten.wetzel@siemens.com

Lieven Kenis

**Energy Management Division
Siemens Belgium**

+32 473 96 06 23

lieven.kenis@siemens.com

DG DEVCO - EuropeAid – Empowering Rural Electrification – Brussels, 29.09.14

Member of

