

**INTERNATIONAL
CONFERENCE
ON CONCESSIONS
IN THE
POWER SECTOR —
LEARNING
FROM
PRACTITIONERS**

February 28th, March 1st–2nd (Online)

2pm-5pm GMT; 3pm-6pm CET; 9am-noon EST

INTERNATIONAL CONFERENCE ON CONCESSIONS IN THE POWER SECTOR

February 28 & March 1 & 2, 2022

Introduction to concessions

Ignacio Pérez-Arriaga

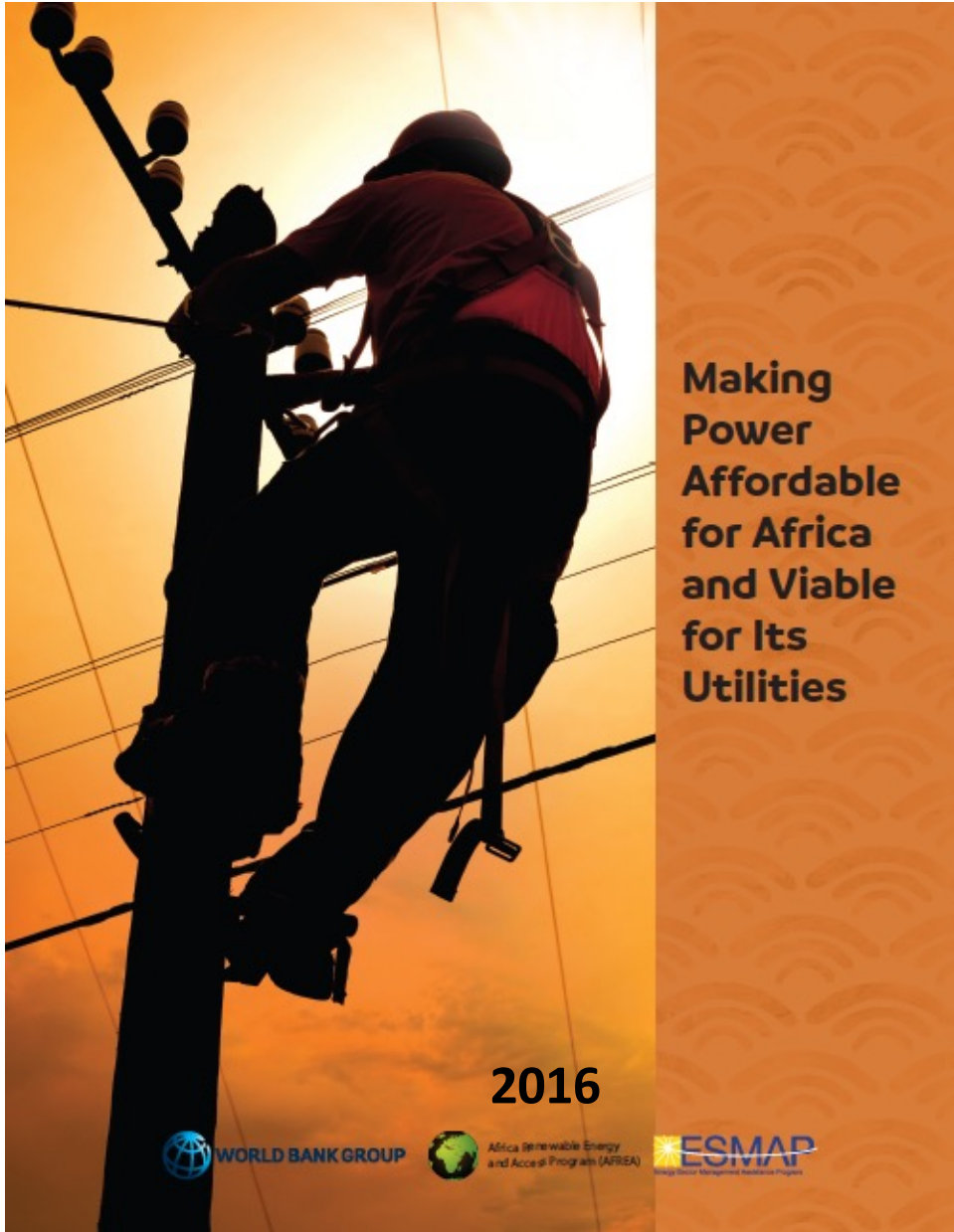
Sloan School of Management, MITEI & CEEPR, MIT
Institute for Research in Technology (IIT), Comillas University
Florence School of Regulation, European University Institute



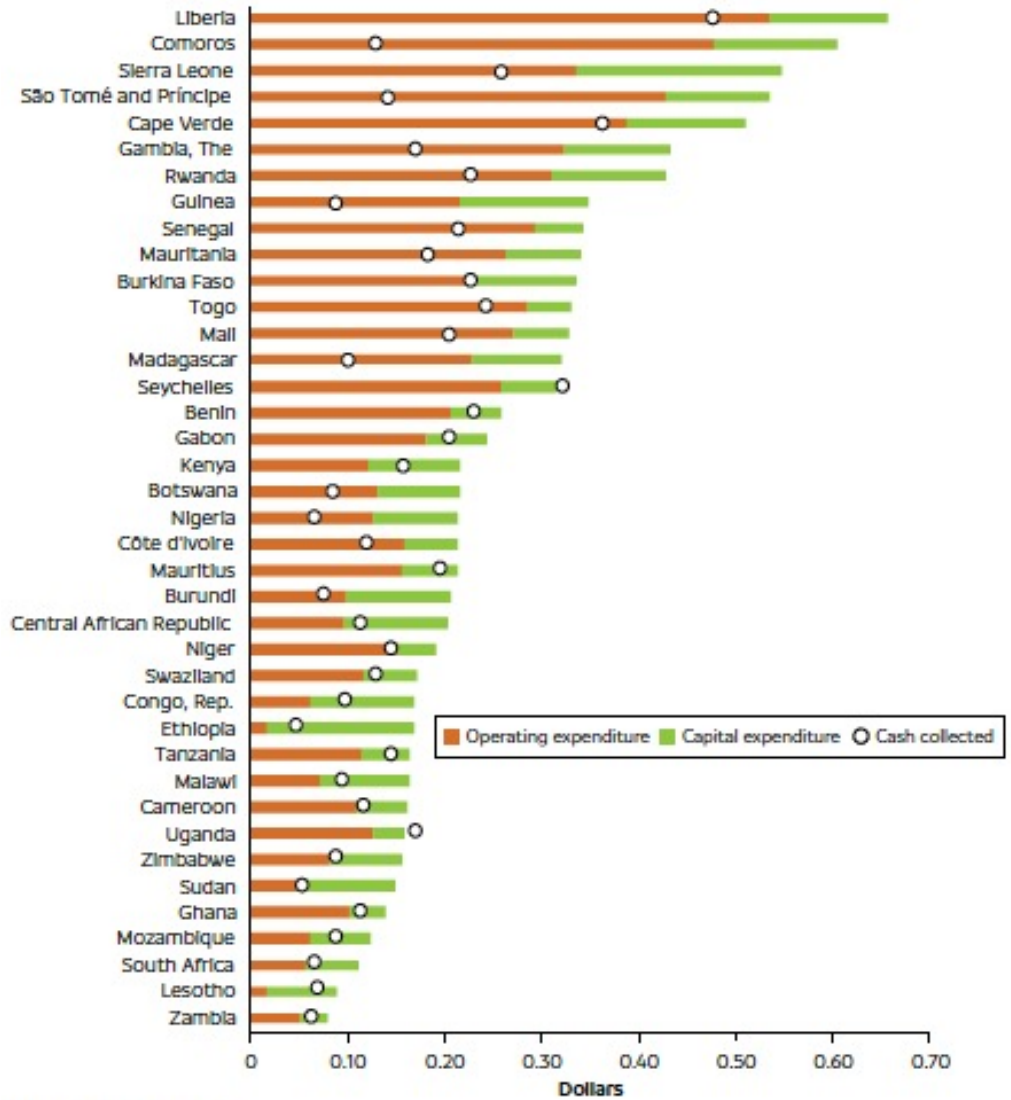
Why concessions?

Let's start from the current situation...

Power utilities in SSA countries are in a dire financial situation...



Cost recovery from tariffs of SSA power utilities

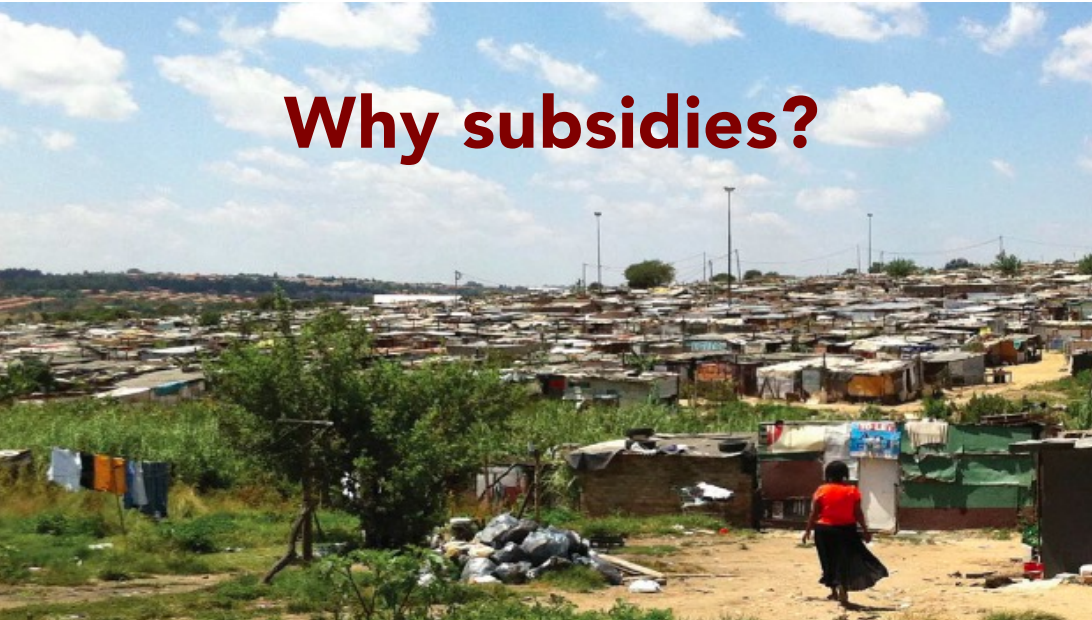


Source: Trimble et al. 2016.

Rural electrification needs subsidies...

(The fundamental challenge of rural electrification is that it is not profitable within the time frames normally considered attractive to the private sector.)

Why subsidies?



1. Disperse population

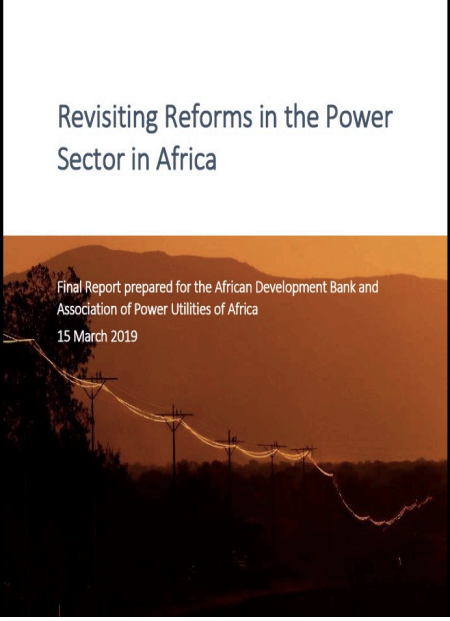
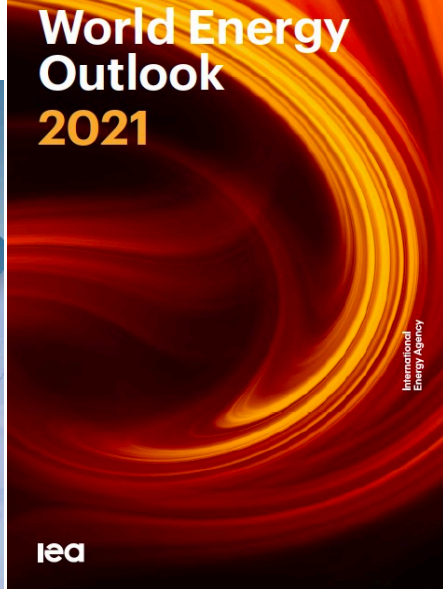
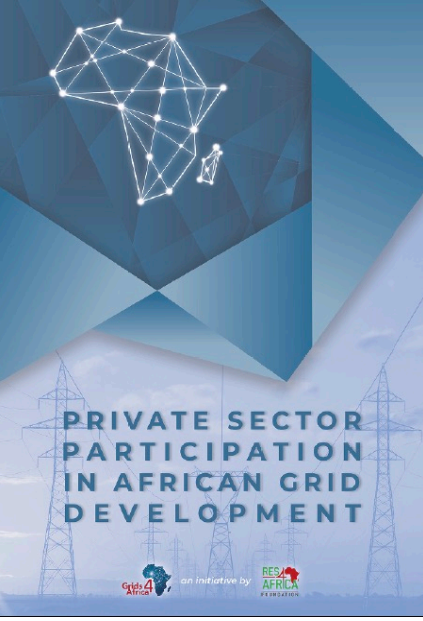


2. Low power demand



3. Low affordability

**Private investment in the distribution segment is
negligeable...**



How to fix the (distribution) utilities & attract private investors?

Why concessions?

- **Definition & taxonomy of concessions**
- The experiences to be presented
- The questions to be answered
- The conference program

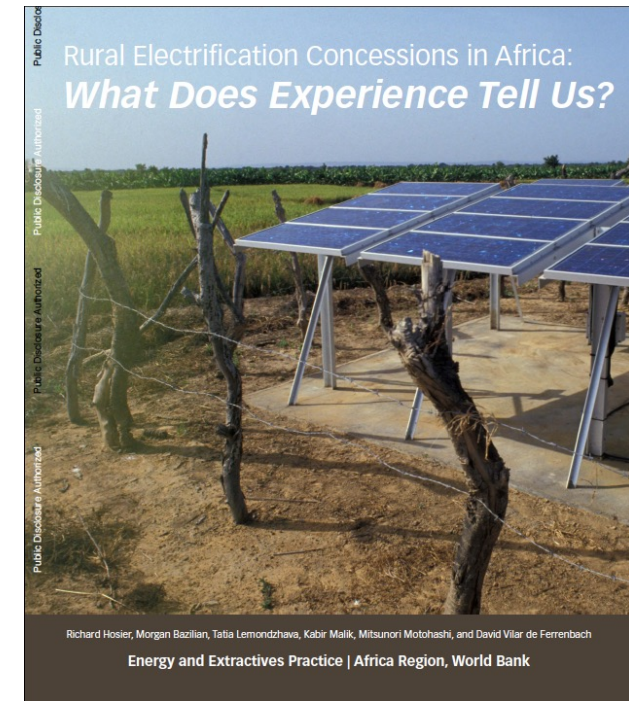
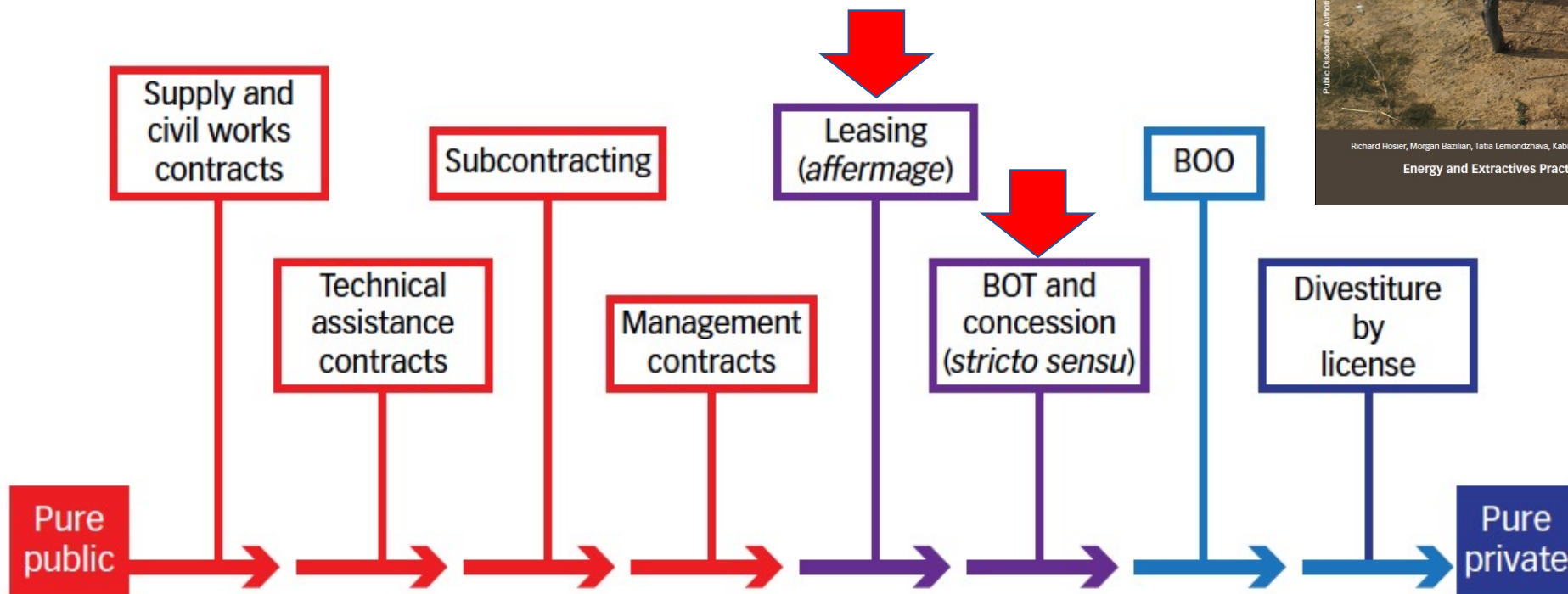
Concessions: definitions

- A **concession** or concession agreement is a **grant of rights**, land or property by a government, local authority, corporation, individual or other legal entity.
 - Regardless of the type of concession, the concessionaire usually must pay the party that grants it the **concession fees**.
 - These fees and the rules under which they may change are generally described in great detail in the **contract**.

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 - These fees and the rules under which they may change are generally described in great detail in the contract.
- A **concession** is any arrangement in which a firm obtains from the government the **right to provide a particular service** under conditions of significant market power.
 - A concession can be used to **create competition for a market**, when competition in the market is not operating.

Concessions as public-private partnerships can cover the entire spectrum of institutional engagement



Concessions: reflections

- When applied to a poorly performing power utility, the design of concessions can resemble the “**good bank / bad bank**” approach
- A key useful feature of a power sector concession is that it makes possible to carve out a **viable business** out of a nonviable one. Thus:
 - The concession business **can attract private capital**
 - The owner of the original business must continue dealing with the segments, functions, or financial liabilities **not included** in the concession
- A concession is **not a privatization**
 - Concessionaire must **return all assets** – including any new investments, subject to an economic compensation – to the original owner at the concession end
 - The original owner may have a **minority participation** in the concession business

Concessions: taxonomy

- A power sector concession must define
 - the **segment of the supply chain**, i.e., the entire utility; or just some generation plants; transmission assets; or distribution areas (*specifying the electrification mode: grid extension, minigrid or standalone*)
 - the **function(s) to be concessioned**, i.e., metering; billing & collecting; procurement & building; operation, maintenance & administration (*affermage*); & expansion planning plus investment (*full concession*)
 - & the **geographical scope**, i.e., for distribution: country, state, province, or smaller administrative entity; distribution company; demand cluster

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Most popular models: Leasing or affermage

- Leasing (widely referred to using the French term affermage) represents a type of concession in which the public sector (owner) retains ownership of the assets as well as responsibility for making new investments and expanding the asset base.
- The private partner (concessionaire) assumes responsibility for operating and maintaining the assets, providing the public service, and collecting payments for it. In exchange for the right to collect payments, the concessionaire makes regular lease payments to the asset owner.

Most popular models: Full *(or strict)* concession

- In a full concession the concessionaire takes full responsibility for the management of the assets, existing and future, being responsible for making new investments and expanding the asset base, in addition to operating and maintaining the assets, providing the public service, and collecting payments for it.
- In exchange for the right to collect payments, the concessionaire makes regular lease payments to the asset owner.
- When the duration of the concession ends, if it is not renewed, the owner of the assets must pay to the concessionaire the residual value of the assets that it has invested during the concession period.

Concessions: experiences

Existing experiences cover most of the space defined by taxonomy

- **Vertically integrated** utility at country or smaller level (*Cameroon, Ivory Coast, Gabon*)
- Large **generation** plants (O&M) (*e.g., Uganda*)
- **Transmission** (*Latin America*)
- **Distribution**
 - Metering, billing, revenue collection (*many successful examples*)
 - O&M plus minor investments / affermage (*several in Africa, India*)
 - Full, specific mini-grid projects, rural (*many in Africa, India*)
 - Full, solar home systems, territorial, rural (*South Africa, Latin America*)
 - Full, territorial with restrictions, grid extension, mostly urban (*Umeme in Uganda*)
 - Full, territorial, technology neutral, rural (*Argentina, Senegal, Colombia, Ugandan small concessionaires*)
 - Full, large state, territorial, grid extension, urban & rural (*Odisha in India*)

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Concessions: questions -1

For **each type** of concession

- Do concessions help **improve the distribution segment** of the supply chain?
- Can concessions contribute to **improving energy access**, and if yes, in which contexts?
- What are the **key factors** that allow concessions to achieve their potential? What are the major pitfalls? What are the **lessons** that can be learned from the experiences?

Concessions: questions -2

Financial viability of concessions

- Can concession be a solution to financial viability of utilities? What are the **conditions** required for the concessions **to succeed**?
- What are the **advantages** of concessions **in attracting private financing** compared to other business models? Are there **specific challenges** or hidden financial risks of concessions?
- What the **roles and responsibilities** of the **public vs. private** sector should be for a concession to succeed?
- How to make compatible **not leaving anyone behind** with the **financial viability** of concessions as the electrification business model?

Concessions: questions -3

Off-grid concessions & their interaction with the disco

- How to best **integrate the three electrification modes**?
 - Integrated planning, comprehensive regulation, integrated electrification approaches, all consistent with a long-term vision of the power sector
- What minimum **demand level** should be considered in off-grid residential electrification planning?
 - Should regulation specify and enforce a minimum level of electricity access (e.g., tier 2)? Should this minimum level of access depend on the context?
- How to ensure the off-grid solutions **do not leave anyone behind**?
- How to ensure that off-grid solutions are sustainable (i.e., **permanent**)?

Concessions: questions -4

Interesting **challenges** in the implementation of concessions

- Is OK to look for **second-best concession solutions** when first-best solutions are not currently possible?
 - E.g., sub-distribution franchises, or mini-grids under the grid
- Can concessions be established **just for the distribution segment** of a vertically integrated utility? Under which conditions?
- How to deal with **existing off-grid developers** when implementing off-grid concessions?
- Integration of **community and productive uses** in concession design
- Coordination of rural electrification concessions with **other economic sectors**

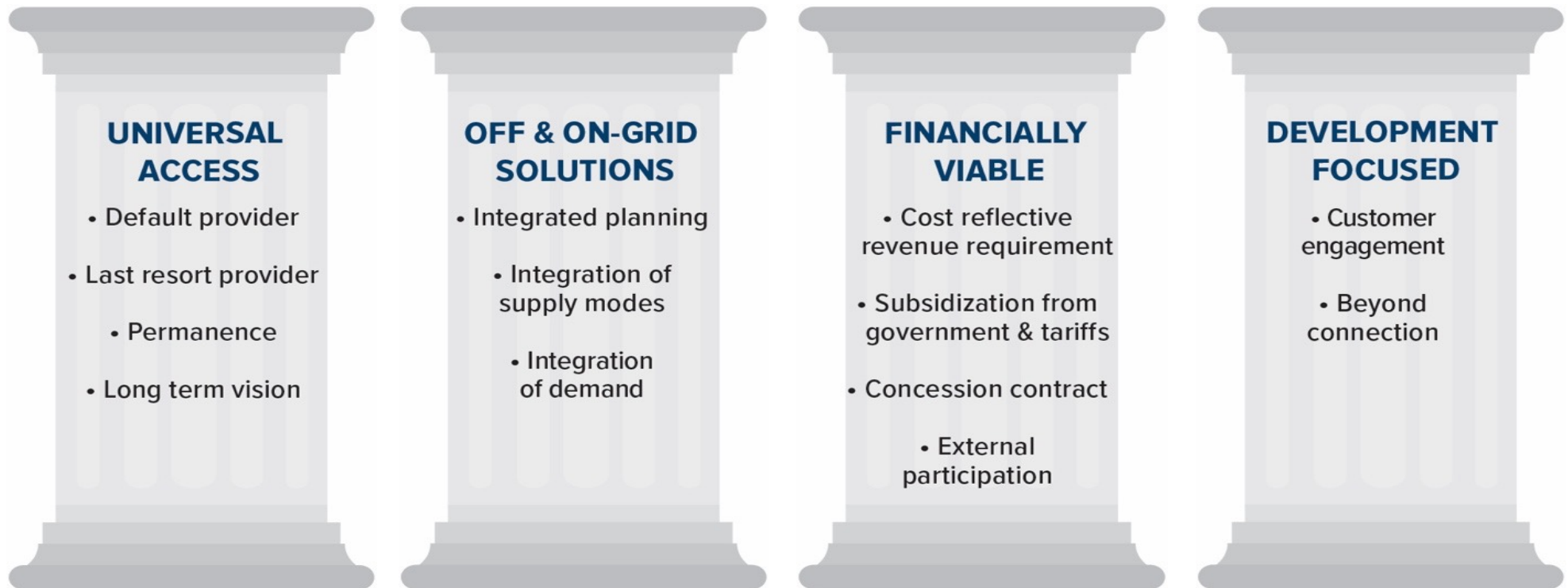
Searching for the “ideal” concession design...

(The technical / regulatory / business / financial features of a distribution concession model must respect the **basic principles** of

- **Inclusivity** (no one left behind) on a permanent basis
- **Integration** of all electrification modes
- Financial **viability** of the concession
- Focused on **development** of the communities

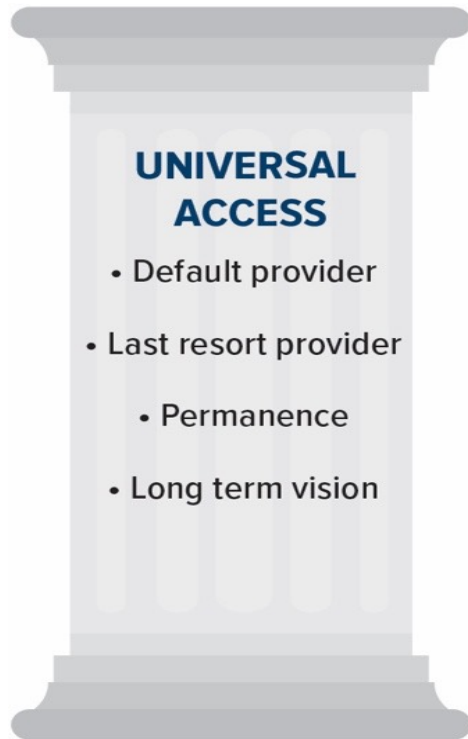
The Integrated Distribution Framework (IDF)

Electrification principles



See <https://www.endenergypoverty.org>

Principles for successful electrification



1. A commitment to **universal access** that leaves no one behind. This requires **permanence** of supply and the existence of a **utility-like entity** with ultimate responsibility for providing access in a defined territory.

Principles for successful electrification



OFF & ON-GRID SOLUTIONS

- Integrated planning
 - Integration of supply modes
 - Integration of demand

2. Efficient and coordinated **integration of on- and off-grid solutions** (i.e., grid extensions, mini-grids and stand-alone systems). This requires integrated planning and appropriate business models for all types of consumers in a defined service territory.

Principles for successful electrification



3. A **financially viable business model** for distribution. This will typically require some form of distribution concession to provide legal security and ensure the participation of external and mostly private investors, as well as subsidies for viability gap funding.

Principles for successful electrification



4. A **focus on development** to ensure that electrification produces broad socio-economic benefits. This principle links expanded access to the delivery of critical public services (e.g., health, education) and to multiple economically beneficial end-uses.

Concessions: questions -5

The **final questions** that we want to answer in this conference

- Can concession business models offer an **attractive alternative** to the present situation? Under which conditions?
- Is there a need for a **continued expert interaction** around concessions design and specifically about distribution concessions?
 - What should be the goal of a potential network of practitioners?
 - Operations: How to structure and operate this network – or networks? Who could lead the initiative?

Why concessions?

- Definition & taxonomy of concessions
- The experiences
- Open questions
- **The conference program**

Day 1 – February 28th

INTRODUCTION TO CONCESSIONS: LEARNING FROM PAST AND CURRENT EXPERIENCES

2:00–2:20pm: **Conference opening**

2:20–2:50pm: **Introduction to concessions**

2:20–2:30pm: ***Current issues in power sector reforms and universal energy access policy***

2:30–2:50pm: ***Introduction to concessions and problem statement***

2:50–3:00pm: **BREAK**

3:00–5:00pm: **Reviewing emblematic concession programs: a historical overview of success/failor factors**

3:00–3:55pm: **PANEL 1:
*Traditional utility concessions***

3:55–4:05pm: **BREAK**

4:05–5:00pm: **PANEL 2:
*Off-grid concessions & Territorial concessions***

Day 2 – March 1st

IMPLEMENTING CONCESSIONS: GENERAL GUIDELINES AND CHALLENGES

2:00–2:05pm: **Introduction and schedule of the day**

2:05–2:45pm: **Implementing concession: general success/failure factors from past experiences**

2:05–2:15pm: ***Questions and preliminary answers***

2:15–3:00pm: **PANEL 3:
General lessons learned from the diverse individual experiences**

3:00–3:15pm: **BREAK**

3:15–5:00pm: **MULTI-PANEL 4:
Lessons for specific implementation issues**

TOPIC #1: Planning and long-term perspective

*Least-cost electrification planning
Coordination between electrification modes
Coordination with other economic sectors
Clean transition objectives*

TOPIC #2: Business models and regulation

*Concession design, enforcement, and renewal
Concessions in integrated/unbundled power sectors
Attracting investment in generation, transmission, and distribution*

TOPIC #3: Financial viability

*Financing a concession
Public-private collaboration in the power sector
Long-term viability of concessions*

Day 3 - March 2nd

IMPLEMENTING CONCESSIONS: THE WAY FORWARD

2:00–2:05pm: **Introduction and schedule of the day**

2:05–2:25pm: **Wrap-up from Day 2**

2:05–2:15pm: *Key lessons learned*

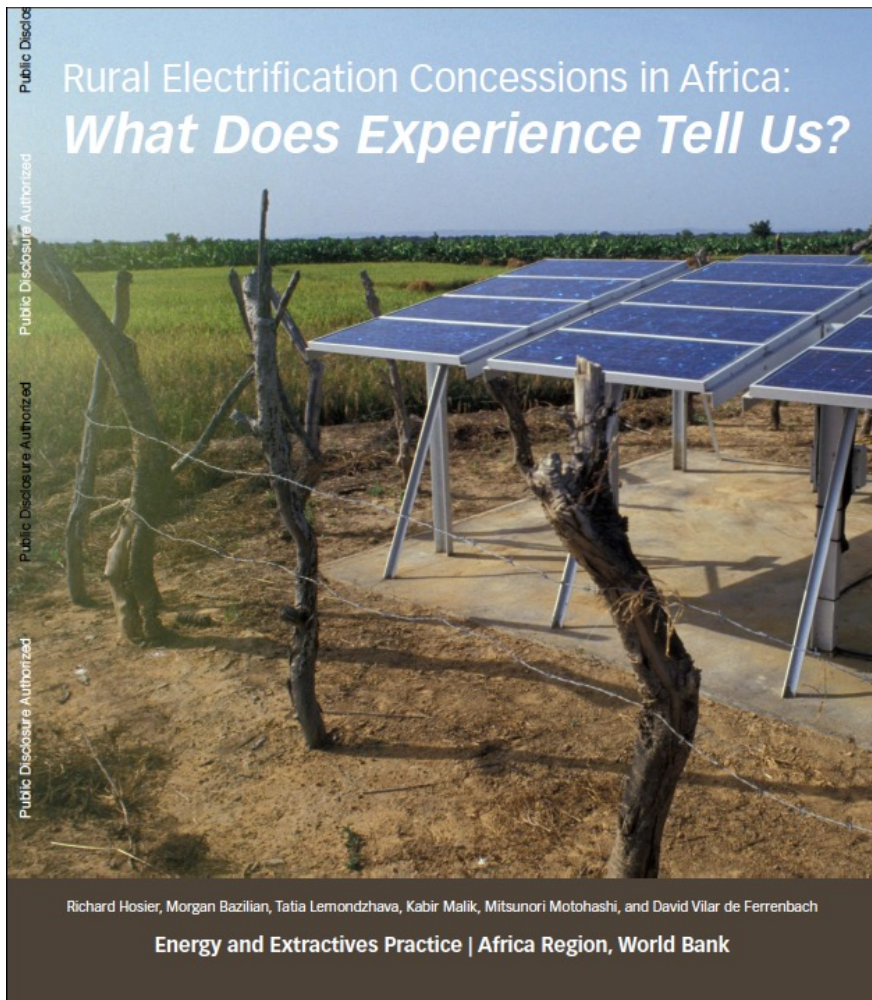
2:15–2:25pm: *Pending challenges*

2:25–3:45pm: **PANEL 5:**
*Countries exploring future concessions:
Power sector situation, lessons learned,
and open issues*

3:45–4:00pm: **BREAK**

4:00–4:45pm: **PANEL 6:**
*Planning for the future: Building a network of
practitioners*

4:45–5:00pm: **Conference closure**



Learnings

- “When supported by the government, properly incentivized, and placed within an appropriate legal framework, concessions can be a useful tool for attracting private resources, managerial expertise, and technical know-how to address the enormous challenge of rural electrification.”
- “Indeed, concessions can potentially accelerate rural electrification in ways that neither the public nor the private partner can accomplish on its own.”

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