



## IMPACT

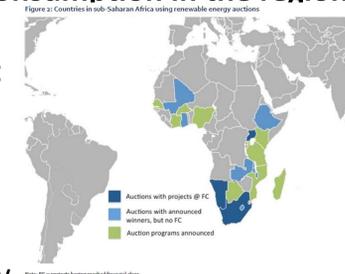
- This project is building on **research** into the factors supporting **the success of private power investment** in sub-Saharan Africa, going into detail on **auction design and implementation choices as determinants of auction outcomes** → to **improve the success of renewable energy auction programmes** in SSA region.
- work has resulted in **wider adoption of renewable energy auction good practice** across the region. Through high-level seminars, country trainings, [executive education courses](#) and publications ( e.g. [handbook on power project procurement](#) -> **more and better auction outcomes across the region.**
- part of advisory board of EU funded H2020 project that **advises on renewable energy auctions in Europe**
- embarking on work with DTU in Denmark in 2019/20 to **study South Africa's wind auction program**
- **leading analysis of auctions in Latin America and India** in 2020 as part of a global best practice analysis

## Role Alumnus in project

- ✓ a research fellow (and PhD student) at the Power Futures Lab at the University of Cape Town's Graduate School of Business
- ✓ **leads research on power sector investment in sub-Saharan Africa**, and also course director for executive education **short courses** on "power sector reform and regulation" and "finance, contracts and risk mitigation for private power projects in Africa"
- ✓ Our unit is small focused on **improving electricity access and the performance of the African electricity sector** through **cutting-edge research, training and advocacy.**
- ✓ **actively advising governments, development partners and a broader set of stakeholders** during the time of the greatest and most rapid transition in the global - and especially African - power sector ever

## PROJECT DESCRIPTION

- Sub-Saharan Africa has less installed power generation capacity than Spain and half of this capacity concentrated in South Africa → **more than two thirds of Africans do not have access to electricity**
  - those that do often are **not** able to rely on the grid connection for **stable supply & electricity costs are among the highest in the developing world** → **Per capita electricity consumption in the region is much lower** than elsewhere
  - Since 2000s, **steady increase in investment** in new power generation capacity from
    - China (large hydro power)
    - **private sector:** (recent) shift
 → smaller, **renewable energy-based** = **least-cost option** for new generation capacity
- price decline** is (partially) due to use of **competitive procurement mechanisms (=AUCTION)**



**! significant change for SSA**, historically mostly **private power project** → procured through directly negotiated bids: often **controversy, opaque** and **more high power generation costs**. **AUCTION: use of competitive bidding** + rapidly decreasing costs of technology (PV solar & onshore wind) → **improving installed generation capacity and improving electricity access.**

- South Africa first in region to run a renewable energy auction;
- contract more than 6300 MW of renewable electricity & **prices falling 70% for solar PV and 40% for onshore wind.**
- As a result, **electricity from solar PV and onshore wind is now cheaper than new coal or nuclear**
- **project realisation rates of more than 95%**, which is one of the main criticisms of RE auction programmes globally.
- As a result, **more than 20 other African countries** have launched their own renewable energy auction programmes in the least three to four years, with varying results.

## What I learned at IOB? Tips for students

- helped **me to connect with the EU aid architecture** in Brussels (e.g. Internship at EU Energy Initiative Partnership Dialogue Facility)
- great opportunity to **understand the "other side"** of the development picture, where before I was mostly working on the side of recipient governments or consultants
- **professional networks** were developed
- has helped me greatly to **ensure that the work I do is not only academically rigorous, but also practically relevant**
- **TIP: Use your proximity to Brussels** as much as possible; high concentration of development stakeholders offers opportunity to **understand** this world better, develop useful **professional networks** and ensure that **your country features prominently in the minds of decision-makers**

## CONTACT PERSON

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