

# Renewable Energy Auctions

## *Progress in Sub-Saharan Africa*

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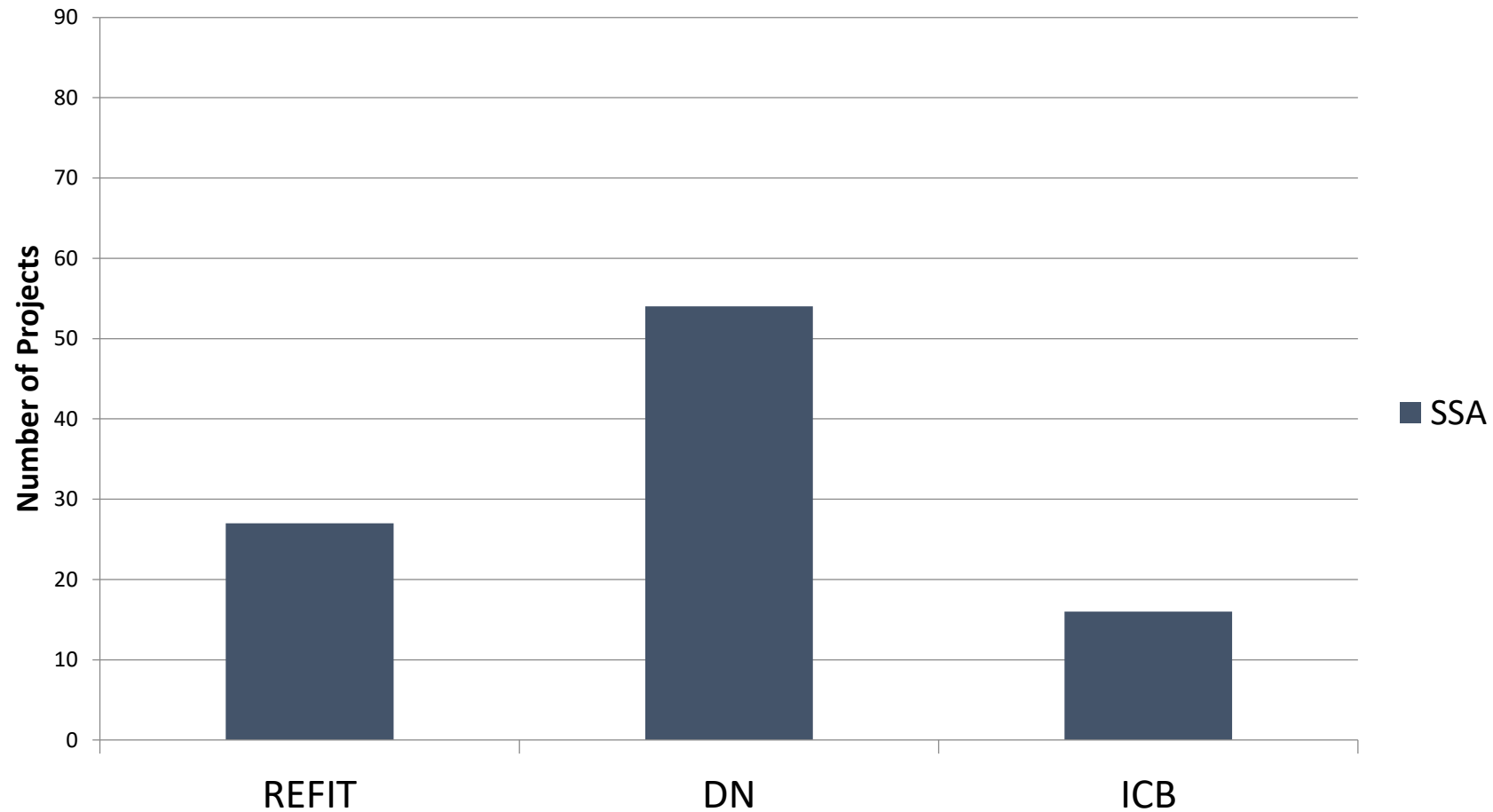
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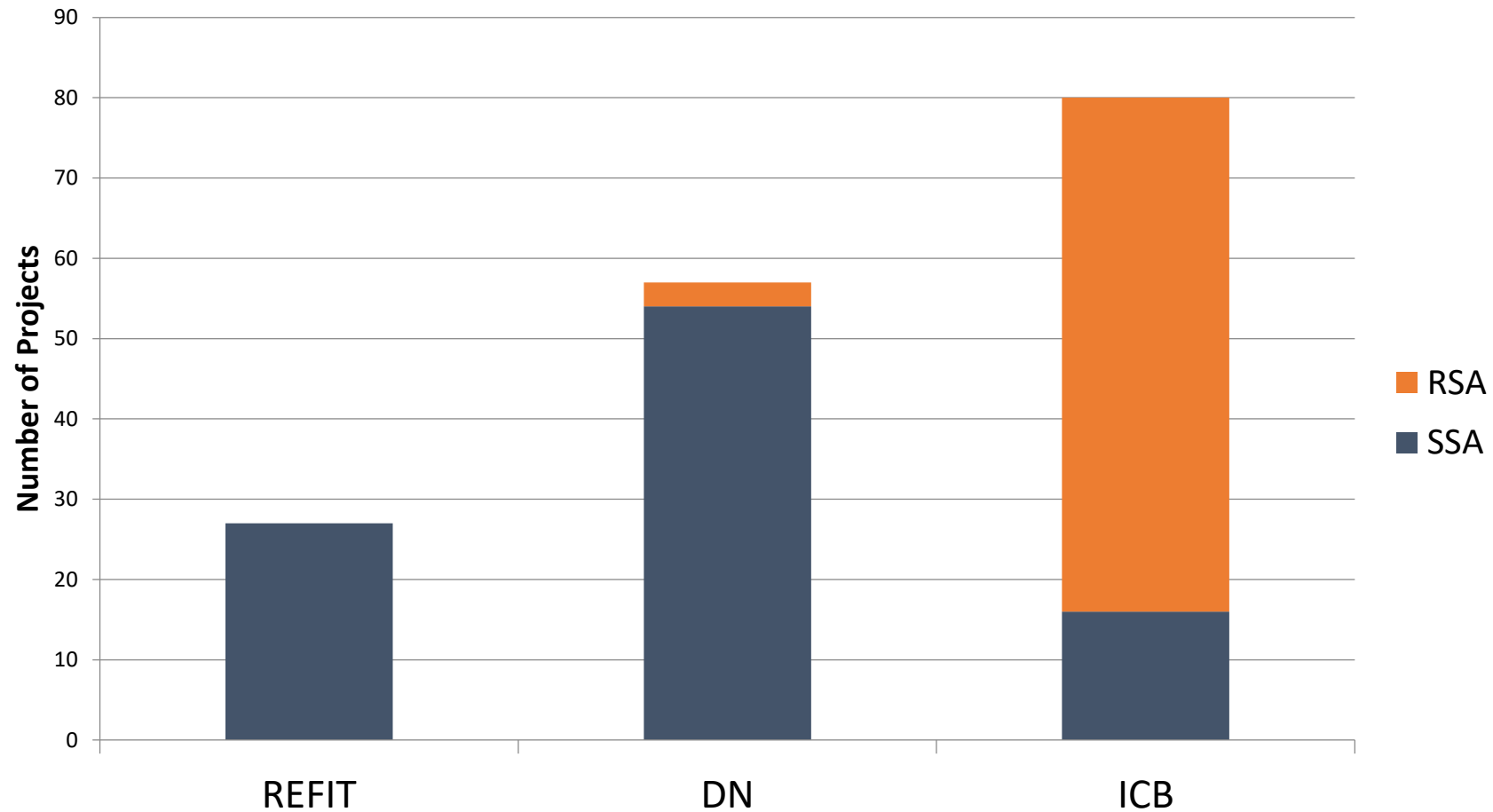
# The Context

- Sub-Saharan Africa desperately needs more power
  - 90 GW installed capacity: less than Spain!
    - 45 GW in South Africa alone
    - 27 Countries with systems smaller than 500 MW
      - 14 with systems smaller than 100 MW
- No electricity markets
  - State-owned, vertically integrated utilities dominate
  - Not investment grade
- Chinese investments & private sector investments (IPPs) are growing

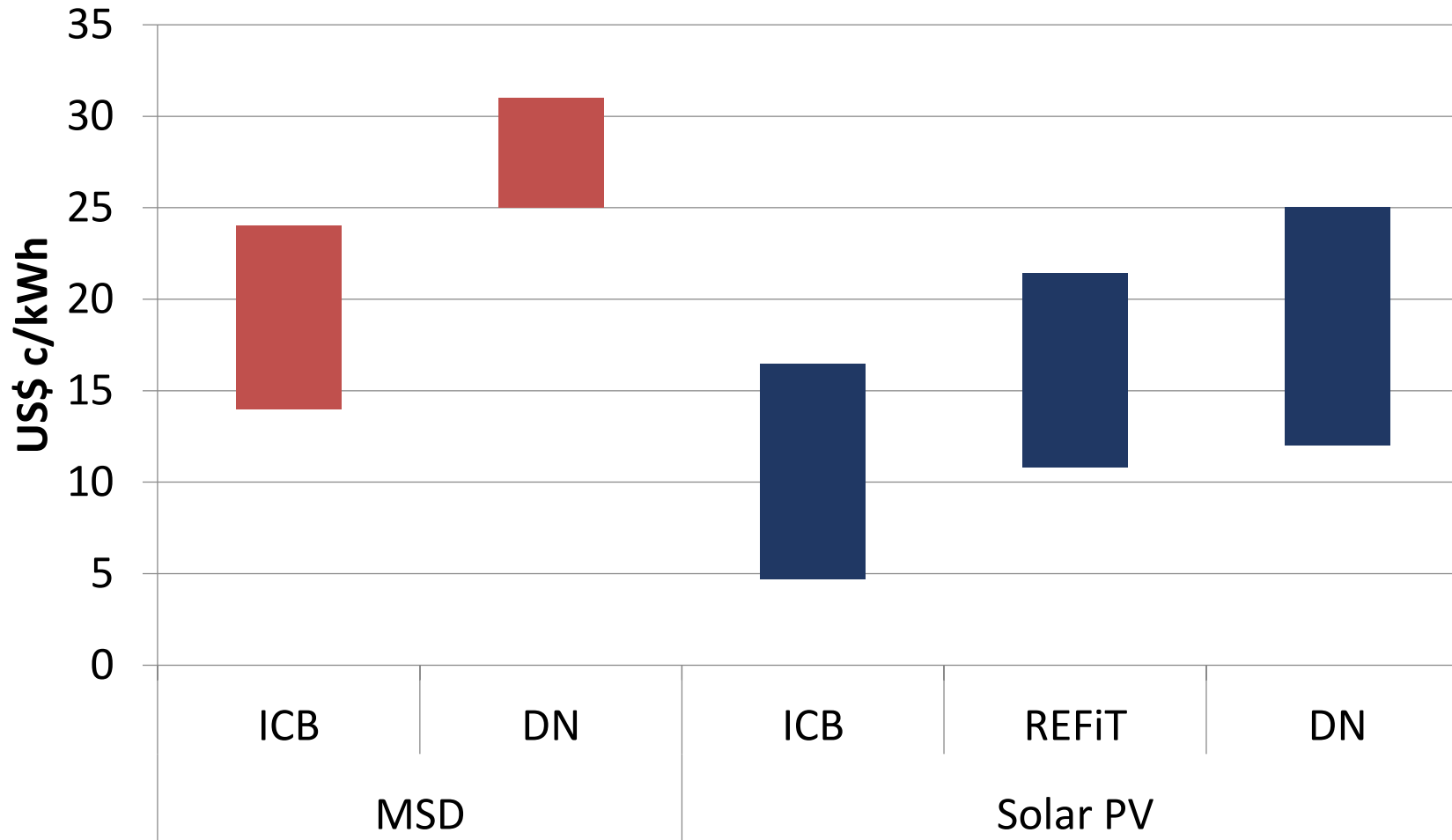
# How are most IPPs procured in sub-Saharan Africa?



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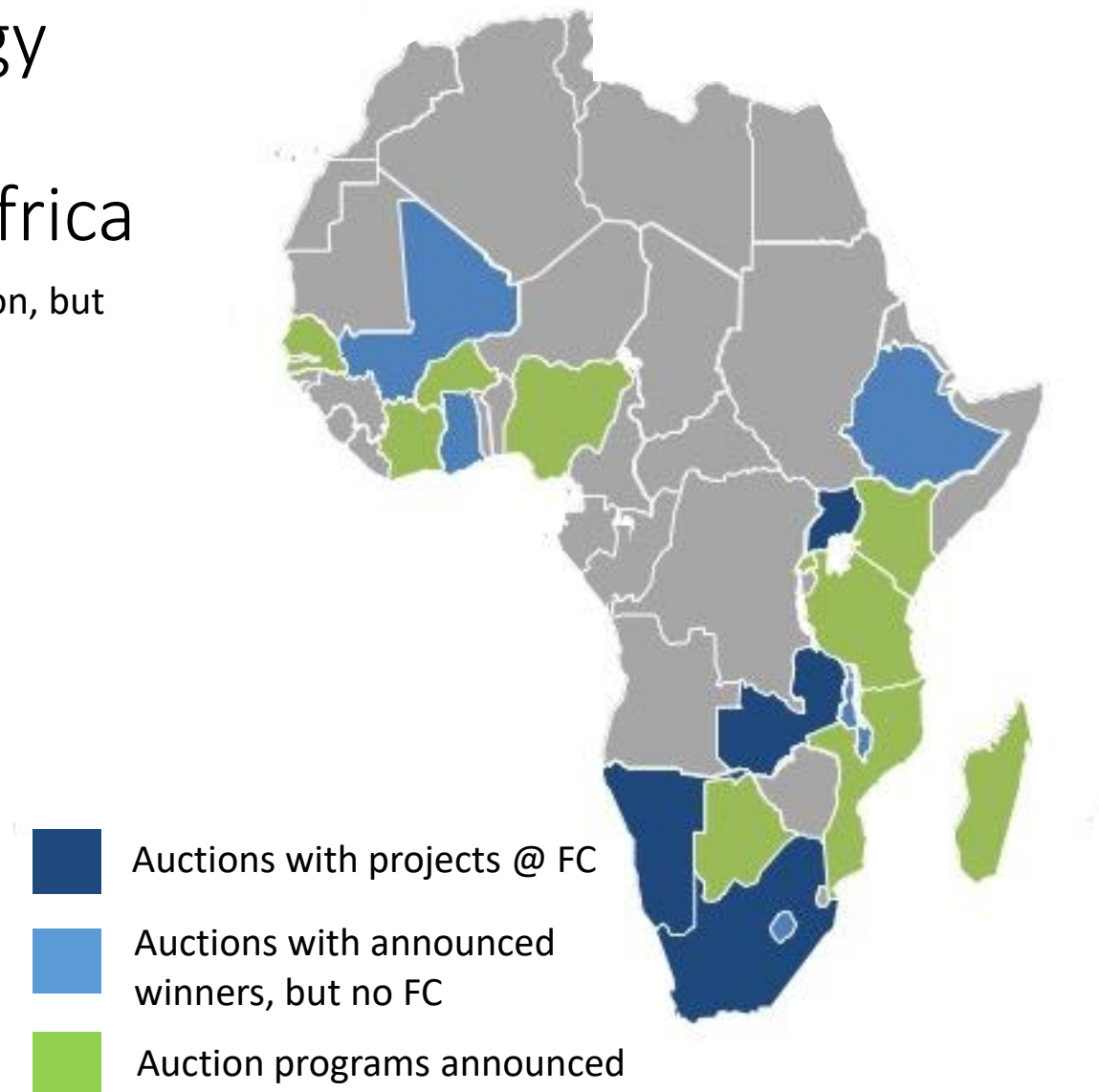


# Which procurement methods yield better prices in sub-Saharan Africa?



# Renewable energy auction progress in sub-Saharan Africa

Rapidly spreading across the region, but  
varying results



# Features of renewable energy auctions in sub-Saharan Africa

	South Africa*	Uganda*	Zambia*	Ghana	Namibia*	Malawi	Ethiopia	Senegal
Year	2011 - 2018	2014	2016	2016	2017	2017	2017	2018
Auction Demand	6,300 MW (4 rounds) Multiple RE	4 x 5 MW Solar PV	2 x 50MW Solar PV	1 x 20MW Solar PV	1 x 37 MW Solar PV	Max 80 MW Solar PV (4x sites)	1 x 100 MW Solar PV	2 x 30 MW Solar PV
Site Selection	Developer	Developer (3km - grid)	Selected by govt.	Developer (input from offtaker)	Selected by govt./ utility	Substations identified by govt.	Selected by govt.	Selected by govt.
Local Content	40% min	None	None	20%	None (but 30% local share- holding)	5% develop ment & construction 20% O&M	15%	None
Evaluation	70:30 Price:Economic Development	70:30 Price:Technical	Price	Not clear	70: 30 Price:Technical	Price	70:30 Price:Technical	Price
PPA	20 Years	20 Years	25 Years	20 Years	20 Years	25 Years	20 Years	20 Years
Guarantees	Sovereign	Sovereign & Liquidity	Sovereign & Liquidity	Sovereign & Liquidity	None	Sovereign & Liquidity	Sovereign	Sovereign & Liquidity
Winning Price (USDc/ kWh)	4,7*	16,37	6,02	11,47	6,02	7,35 – 10,35 (TBC)	Below US\$c6 (TBC)	4,7
Currency	ZAR	US\$/EUR	US\$	US\$	NA\$	US\$	US\$	US\$
Financial Close	Yes	Yes	Yes*	No	Yes	No	No	No

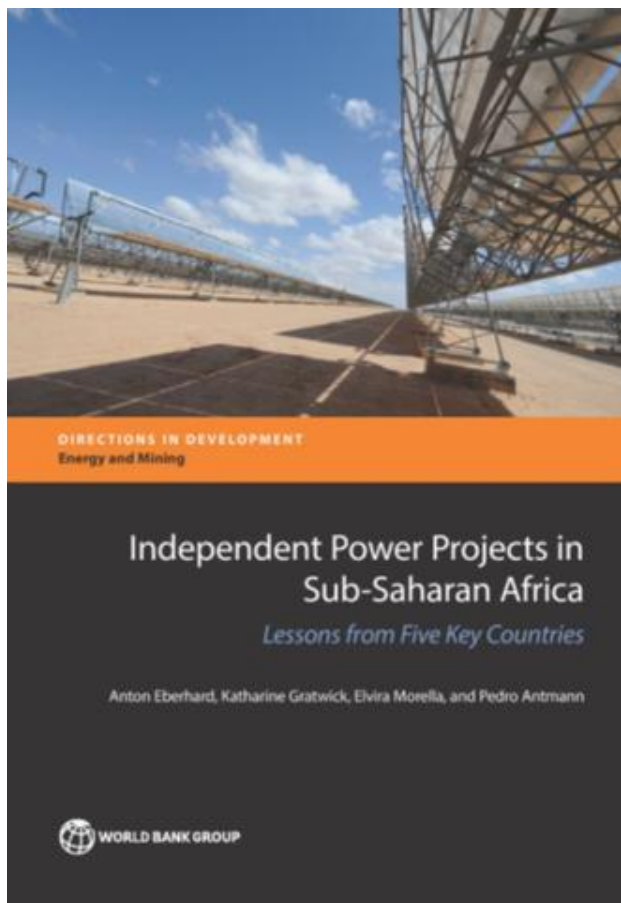
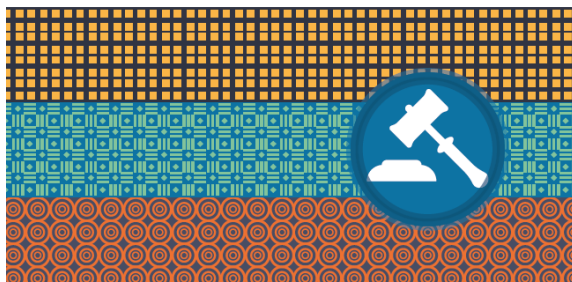
## THE SOUTH AFRICAN RENEWABLE ENERGY IPP PROCUREMENT PROGRAMME

Review, Lessons Learned & Proposals to Reduce Transaction Costs

Anton Eberhard and Raine Naude



## RENEWABLE ENERGY AUCTIONS — CASES FROM SUB-SAHARAN AFRICA



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The Management Programme in Infrastructure Reform & Regulation (MIR) is an emerging centre of excellence and expertise in Africa.

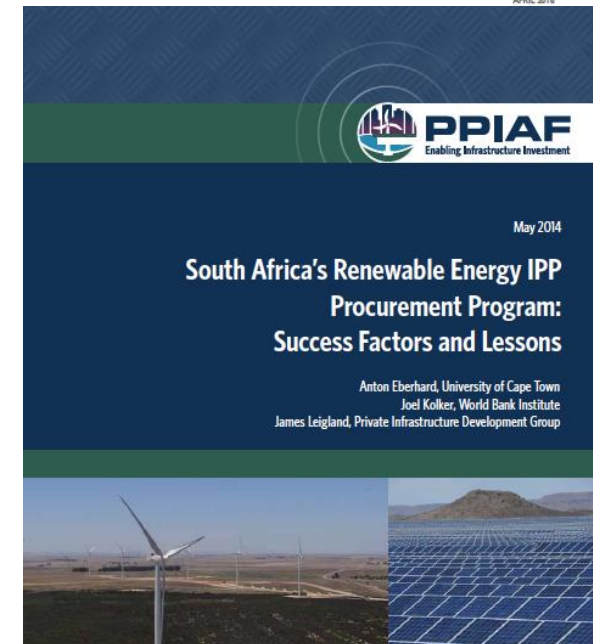
## RECOMMENDATIONS FOR THE DESIGN OF SUCCESSFUL RENEWABLE ENERGY AUCTIONS OR COMPETITIVE TENDERS IN AFRICA

LESSONS FROM SOUTH AFRICA

Anton Eberhard and Raine Naude



APRIL 2016



May 2014

## South Africa's Renewable Energy IPP Procurement Program: Success Factors and Lessons

Anton Eberhard, University of Cape Town  
Joel Kolker, World Bank Institute  
James Leigland, Private Infrastructure Development Group

