

Estimating publicly-mobilised private finance for climate action

A South African case study

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TIPS Annual Forum
14 June 2017 - Midrand, South Africa

Project Overview

Scope of the analysis

1. Estimate private finance mobilised directly by domestic and international public climate finance (2010 – 2015)
2. Estimate private finance mobilised indirectly (catalysed) by capacity building and policy-related interventions

Aims and intended outcomes

- i. Improve the measurement of private climate finance to/in South Africa
- ii. Test methodologies to estimate direct and indirect private finance mobilisation
- iii. Identify gaps in data coverage and estimation methods
- iv. Further the understanding of drivers of private climate finance, including broader catalytic effects

Context: Why South Africa?

Economy

- Emerging economy with electricity demand projected to double over 20 years
- One of world leaders for attracting renewable energy investment (UNEP, 2014)
- Both a large GHG emitter (19th in the world) and a vulnerable economy (highly water-stressed country)

Natural resources

- High renewable energy potential (2,500 hours of sunshine per year)
- Ageing and coal-intensive (>90%) electricity generation infrastructure → diversification opportunity
- High and ever-rising urbanisation rate (2/3rd of population) creating opportunities for mass public transportation

Policy context

- Mature climate policy infrastructure (e.g. REIPPPP, EE, BRT, Gautrain)
- Project is aligned with the goals of National Development Plan and National Climate Change Response Policy

Three analytical levels

	Public interventions covered	Methodological choices
First-level analysis: direct mobilisation	<ul style="list-style-type: none"> Public co-finance 	<ul style="list-style-type: none"> Blanket causality between public co-finance and private finance Face value for co-finance Volume-based across all public interventions and actors
Second-level analysis: the “Investor perspective”	<ul style="list-style-type: none"> Public co-finance Policies that can be translated into financial support at project-level 	<ul style="list-style-type: none"> Face value for co-finance and policies with one time financial support NPV for policies with guaranteed future reoccurring financial support Partial causality between public co-finance and private finance Volume-based across all public interventions and actors
Third-level analysis	All the above + Capacity building activities	<ul style="list-style-type: none"> Insights from qualitative consultation and relationships between key data series

Data Sources

Public-private co-financing data

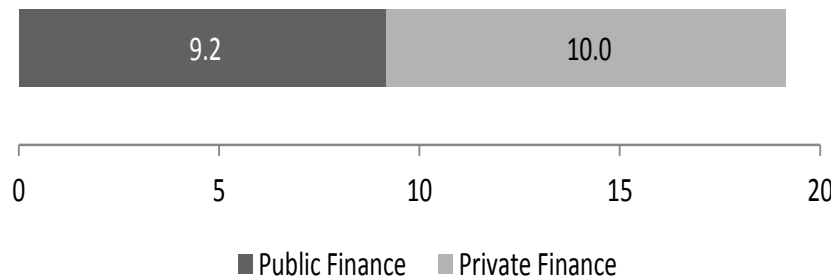
Data Type	Data Source
Primary	Authors' own data collection from public finance providers
	OECD DAC surveys on mobilised private finance
Secondary	Commercial databases (Bloomberg New Energy Finance, Dealogic, IJGlobal, Thomson Reuters)
	Desktop research (press releases, online project descriptions etc.)

Public capacity building and policy data

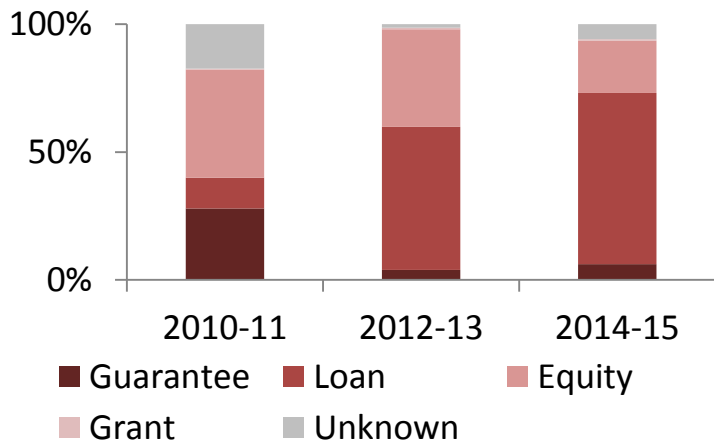
Data Type	Data Source
Policies	Literature review
	Quantitative data on volumes of public finance committed through each policy from departments (NT, DoE, the dti)
	Publicly-available databases (IEA's Policies and Measures, the OECD Environmental Policy and IPP Projects databases)
Capacity building	Analysed at sectoral- rather than at project-level
	Climate-related and sector-specific ODA to SA between 2005 and 2015 used as a proxy for international finance committed to capacity building activities
	Domestic publicly available sources (NCPC, Private Sector Energy Efficiency)

Direct private finance mobilisation

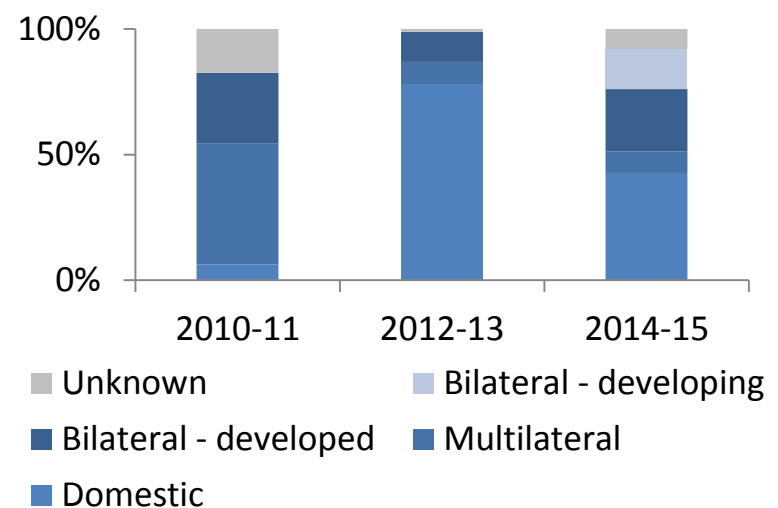
Volumes of public and private co-finance for climate action in South Africa (2010-2015, USD billion)



Attributed mobilised private finance by instrument type



Attributed mobilised private finance by actor type

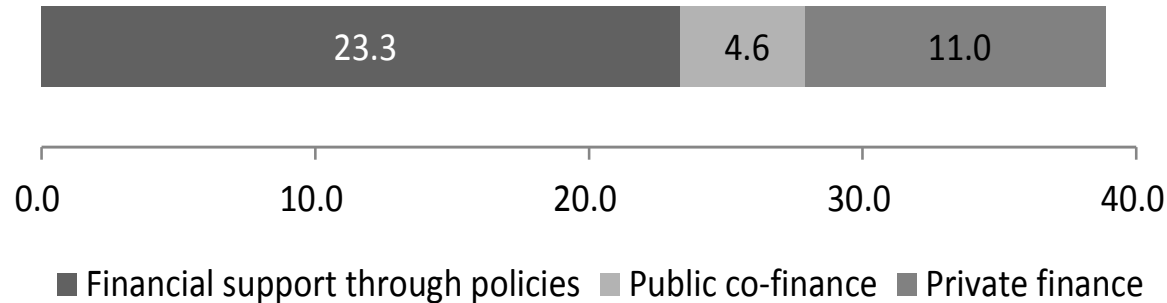


Renewables: Timeline of public interventions targeting private investment

Category	2007	2008	2009	2010	2011	2012	2013	2014	2015	
Capacity building for policy development and implementation	Renewable Energy Market Transformation (REMT)									
					GIZ-supported discussions on NERSA guidance for SSEG schemes by municipalities					
							South African-German Energy Programme (SAGEN)			
Capacity building for industry implementation and project demonstration			South African Wind Energy Partnership I (SAWEP I)							
	Darling wind demonstration									
				Wind Atlas for South Africa project						
					Lethabo & Kendal Solar PV demonstration					
							Southern African Solar Thermal Training & Demonstration Initiative (SOLTRAIN)			
								Solar Technology Roadmap		SAWEP II
IPP Programmes	Pilot National Cogeneration Programme (PNCP)									
			Multi-Site Baseload Independent Power Producers							
			Medium Term Power Purchase Agreement							
Fiscal policies				Renewable Energy Feed-in-tariff (REFIT)						
					Renewable Energy Independent Power Producer Procurement Programme (REIPPPP)					
							Electricity levy on non-renewable resources			
Incentives to support non-commercial installations							Accelerated Depreciation Allowance for Renewable Energy Technologies			
			National Solar Water Heating (SWH) Incentive							
					Municipal support schemes for small-scale embedded generation (SSEG)					
	No effect on private investment estimated									
	Mobilisation effect estimated using the "investor perspective" approach									
	For inclusion in future estimation using the "investor perspective" pending data availability									
	Analysed qualitatively at aggregate sector-level									

Renewables: overview

Volume of finance (2010-2015, USD billions)

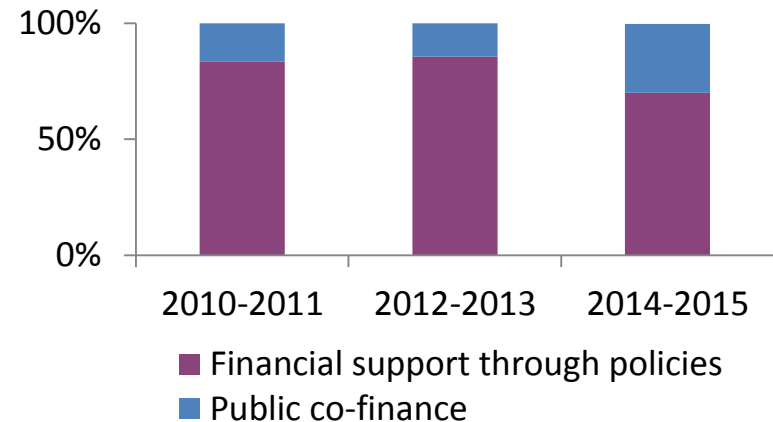


- Public finance through policies significantly outweighs public co-finance
- A combination of renewable energy-specific public interventions target large-scale installations

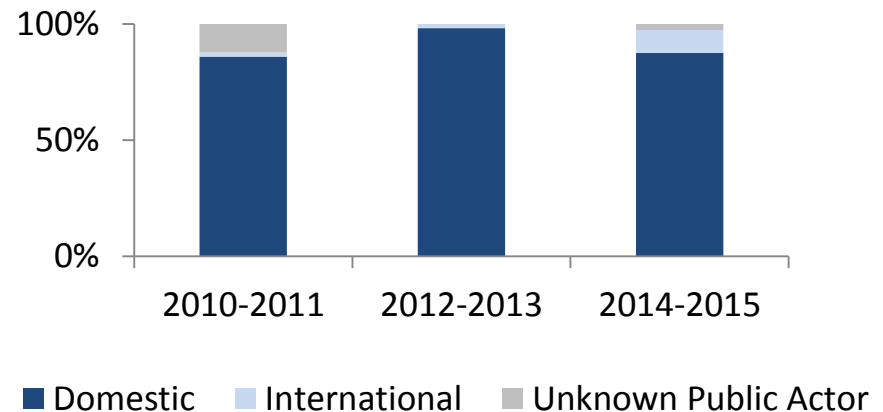
Renewables: “Investor perspective”

- Private finance catalysed by public financial support through policies outweighs that of public co-finance
- REIPPPP guarantee mobilises >70% of renewable energy-related private finance (USD 8.0 billion)
- Domestic public actors play key mobilisation role through co-finance provision and domestic policies
- Role of capacity building, often by bilateral and international actors, is not yet captured

Attributed mobilised finance by instrument







Attributed mobilised finance by actor type



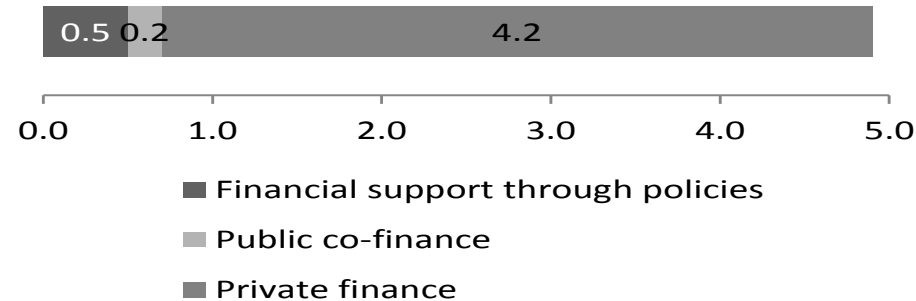
Energy efficiency: Timeline of public interventions targeting private investment

Category	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Capacity building for policy development and implementation	DANIDA's CaBREERE support programme (from 2001)											
									Danish Clay Brick Programme			
									GIZ's SAGEN (2011-2014; 2015-2017)			
Capacity building for industry implementation and project demonstration	NCPC's RECP programme								NCPC's RECP and IEE programme			
										PSEE (from December 2013)		
Labels and standards	Voluntary labelling and performance standards for electrical and electronic equipment										Mandatory labelling and performance standards	
					Voluntary building standards			Mandatory building standards (from November 2011)				
									Levy on Electric Filament Lamps			
Fiscal policies				Eskom's extensive DSM programmes							Eskom's reduced DSM programmes	
							Tax incentive (12i)				Tax incentives (12i + 12L since Dec 2013)	

-  No effect on private investment estimated
-  Mobilisation effect estimated using the "investor perspective" approach
-  For inclusion in future estimation using the "investor perspective" pending data availability
-  Analysed qualitatively at aggregate sector-level

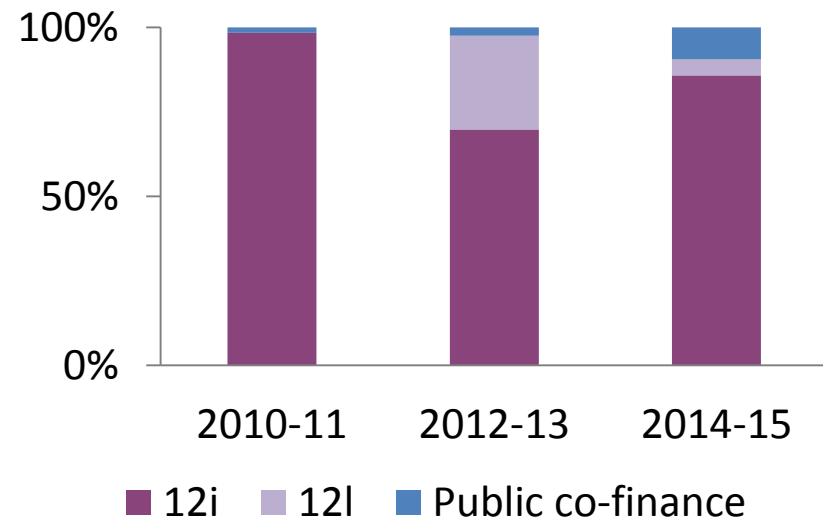
Energy Efficiency: “Investor perspective”

Volume of finance (2010-2015, USD billions)



- Primordial role of private sector investment in rolling out energy efficient practices and technologies
- Private finance catalysed by public financial support through policies overshadows (i.e. 12i/12L tax incentives) that of public co-finance (incl. grant schemes)
 - 12i tax incentives - USD 0.4 billion
 - 12L tax incentives - USD 0.1 billion
- Public channels are largely complementary to each other and do not overlap

Attributed private finance by public instruments



Water: Timeline of public interventions targeting private investment

Category	Year											
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	
Public Private Partnerships (PPPs)	Public Finance Management Act, 1999; Municipal Systems Act, 2000; Municipal Finance Management Act, 2003 (NT, 2004)											
Infrastructure Programmes								Business Adopt-a-Municipality (BAAM)				Strategic Integrated Project (SIP19)
Capacity building for policy development and implementation						GIZ's Climate Support Programme (CSP) phase 1						
									GIZ's Climate Support Programme (CSP) phase 2			
								Climate Change Status Quo Analysis and Strategy for Water Resources				
									Long-Term Adaptation Scenarios Flagship Research Programme			
Capacity building for industry implementation and project demonstration	GIZ's Development Partnerships with the Private Sector (DPPs)											
							Strategic Water Partners Network South Africa (SWPN-SA)					
									Danish-South African collaboration in the water sector			

Qualitative assessment of the catalytic effect on private finance

Water: Public policies and capacity building

- The government plays an important role in water sector infrastructural development in South Africa.
- The DWS is responsible for most of the water infrastructure through special purpose vehicles (SPVs), such as the TCTA
- Government programmes (e.g. SIP19, BAAM) have been instrumental in creating public-private collaboration in the water sector
- However, the policy framework does not provide sufficient incentives for the private sector to take a more active investment role.
- The private sector is involved in the sector by implementing smaller-scale means to conserve water, notably with catalytic support from capacity building activities

Upcoming changes: Water and Sanitation Sector Policy Position on Climate Change and NCPC's Industrial Water Efficiency

From 2005 to 2015, DAC members availed about

- USD 2 million (ZAR 19 million) for policy development and implementation
- USD 19 million (ZAR 178 million) for project demonstration and industry implementation

Conclusions on data and methods

Data

- Availability remains **limited and partial**
- Data from international actors is **inconsistent**
- Most domestic institutions **do not track co-finance** or climate-relevance
- Limited usefulness of commercial databases which **do not have public/private split**
- Manual and **time-consuming triangulation** process

Methodologies

- Data constraints mean **methodological choices must be simple**, e.g. volume-based attribution
- Considering **upstream financial instruments nuances** co-finance analysis (e.g. funds, credit lines)
- **“Investor perspective”** to be explored in other country/sector contexts
- **Challenging to quantify role of capacity building** support in mobilising private investment

Policy-related conclusions

- **Domestic public actors** play key mobilising role
- Private finance catalysed by financial support through **policies outweighs that of public co-finance**
- **Parallelism** of energy efficiency policies vs **combination** of renewable energy policies
- Encouraging **smaller-scale investment** could be further explored (grant schemes and municipal-level interventions)
- **Diversify to other sectors** (e.g. adaptation), including removing disincentives in the water sector