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## Investment flows, economic development, and localization under the REIPPPP



**Chief Directorate: Green Industries**



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# Role of Green Industries

## Research and development of policy to:

Promote establishment of new renewable energy firms

Support existing firms

Promote industry development in new product/service sectors

Industrial financing instruments (MCEP, MIP, IDC Green Fund and Bank financing) to support green economy financing

Identify sectors that need funding

Promote localisation and grow domestic renewable industry

Funding of new skills sectors as well as support investment promotion



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# Economic Challenges

## Consumption-driven growth path

- SA's growth path has thus far been characterised by consumption-driven sectors growing at twice the rate of its productive sectors. Services surplus manufacturing

## Financialisation & import intensity

- The economy has experienced extensive financialisation, but the financial sector has not supported productive sector investment; growth has been import-intensive rather than based on growth in the domestic manufacturing sector.

## Structural unemployment

- High structural unemployment has remained a constant, and now stands at 27%.

# Industrial Development Levers (IPAP)

## Public Procurement

- Sector Designation and Competitive Supply Development Programme.
- Renewable Energy Independent Power Producer Programme (REIPPP).
- Procurement Accord
- National Industrial Participation Programme (NIPP)

## Innovation and Technology

- Supporting New Technologies, Incubators and Commercialisation of innovations

## Industrial Financing

- Ongoing support from DFIs( IDC) and Manufacturing Competitive Enhancement Programme (MCEP) and other incentives

## Developmental Policies

- Flexible/Strategic tariff setting, PPPFA/Local content Enabling standards and compulsory specification, illegal imports and dumping using SARS, SABS etc



# IPPPP portfolio status at a glance as at 31 March 2016

## Renewable IPP programmes

Carrier (Capacity determined <sup>1</sup> )	Master planning	Project preparation	RFP	Bid submission	Bid announcement	Financial close	COD
<b>Renewable energy (13 225MW)</b>							
<b>Bid window 1 (1 423.80 MW)</b>	IRP	Completed	3 Aug 2011	4 Nov 2011	6 Dec 2011	5 Nov 2012	100% COD 100%GC <sup>1</sup>
<b>Bid window 2 (1 043.86 MW)</b>	IRP	Completed	3 Aug 2011	5 Mar 2012	21 May 2012	9 May 2013	78% COD 89% GC <sup>1</sup>
<b>Bid window 3 (1 456.56 MW)</b>	IRP	Completed	3 May 2013	19 Aug 2013	29 Oct 2013	12 Dec 2015	0% COD 5.88% GC <sup>1</sup>
<b>Bid window 3.5 (CSP) (200 MW)</b>	IRP	Completed	-	31 March 2014	15 Dec 2014	Q1 2016/17	Q4 2018/19
<b>Bid window 4 and 4 additional (2 205 MW)</b>	IRP	Completed	26 May 2014	18 Aug 2014	16 Apr 2015	Q2 2016/17	Q2 2017/18 onwards
<b>Bid window Expedited (1 800 MW)</b>	IRP	Completed	25 Jun 2015	11 Nov 2015	Q2 2016/17	Q2 2017/18	Q1 2019/20 onwards
<b>Bid window 5</b>	IRP	Document preparation	Q2 2016/17	Q4 2016/17	Q2 2017/18	Q2 2018/19	Q4 2020/21 onwards
<b>Small renewables First Stage Two (49 MW)</b>	IRP	Completed	-	3 Nov 2014	4 Oct 2015	Q2 2016/17	Q4 2017/18
<b>Small renewables Second Stage Two (51 MW)</b>	IRP	Completed	18 Dec 2015	Q1 2016/17	Q3 2016/17	Q3 2017/18	Q4 2019/20
<b>Small Renewables Bid Window 3 (100 MW)</b>	IRP	Document preparation	Q2 2016/17	Q4 2016/17	Q2 2018/19	Q1 2017/18	Q4 2020/21 onwards



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The REIPPPP is most advanced and already making a significant contribution to power supply in the country

**6** bid rounds (bid windows 1, 2, 3, 3.5, 4 and 1S2<sup>1</sup>) **completed**

**334** bids received and **evaluated** (17.9 GW total capacity)

**102** **selected** as preferred bidders identified with...

**6 376** MW electricity capacity **procured**

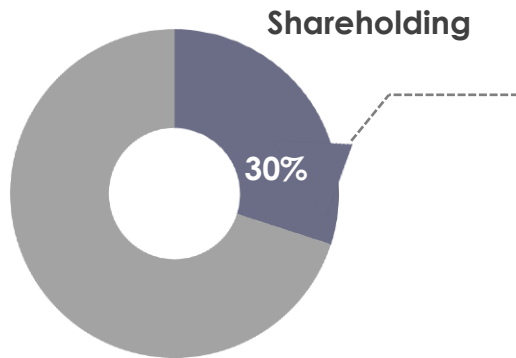
**2 021** MW already **operational** from 40 IPPs

**R194 billion** investment attracted for energy infrastructure in bid windows 1 – 1S2

**Note 1.** bid window 1S2 | Small scale projects, first completed procurement window comprised of a two stage bidding process



# The programme is effectively contributing to broader development objectives in SA



Shareholding by Black South Africans across the complete supply chain (for the 62 projects in BW 1, 2 and 3)



With 11% held by **local communities**

**49%** **local content** achieved in construction

**local content** reported as percentage of Total Project Value achieved during construction



**111%**  
**of planned employment** achieved during construction (BW 1, 2 and 3)

Even though BW 3 has only recently started construction, **11% more direct employment opportunities for South African citizens reported (21 673 actual vs 19 523 planned job years) during construction than originally projected by developers**



**+ twice as many** people from local communities employed by IPPs during construction than was contractually required



# the dtEconomic Development Criteria

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- **Job creation**, with the emphasis on jobs for South African citizens, South African citizens who are black people and South African citizens from local communities;
- **Local content**, with the view that a certain percentage of the project value would be spent in South Africa;
- **Ownership**, with the aims to advance ownership by black people and local communities;
- **Management Control**, with the aim to achieve the involvement of black people in management positions and responsibilities;
- **Preferential Procurement**, with focus on sub-contracting to empowered enterprises, black enterprises and enterprises owned by women;
- **Enterprise Development**, with the aim of development of emerging enterprises, and those merging enterprises located in local communities; and
- **Socio-economic Development**, which attempts to address the socio-economic needs of local communities





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# Local Content

Economic Development Element	Weighting	Points
Job Creation	25%	7.50
Local Content	25%	7.50
Ownership	15%	4.50
Management Control	5%	1.50
Preferential Procurement	10%	3.00
Enterprise Development	5%	1.50
Socio Economic Development	15%	4.50
<b>Total</b>	<b>100%</b>	<b>30.00</b>
ED Total Points	30 points	
Price	70 Points	

According to the document (SATS 1286:2011), local content is defined as “... *that portion of a tender price that is not included in the imported content, provided that local manufacturing takes place and is calculated with the local content formula.*”

Definition of local manufacturing is: “*any kind of working or processing, including assembly or specific operations*”. This definition is weak and defines manufacturing as any form of handling, even packaging; inspection; etc. can be regarded as manufacturing - require “arm’s length”

	Bid window 1		Bid window 2		Bid window 3, 4	
	Threshold	Target	Threshold	Target	Threshold	Target
Onshore Wind	25%	45%	25%	60%	40%	65%
PV	35%	50%	35%	60%	45%	65%
CSP no Storage	35%	50%	35%	60%	45%	65%
CSP with Storage	25%	45%	25%	60%	40%	65%
Biomass	25%	45%	25%	60%	40%	65%
Biogas	25%	45%	25%	60%	40%	65%
Landfill gas	25%	45%	25%	60%	40%	65%
Small Hydro	25%	45%	25%	60%	40%	65%

# Challenges

- Measured local spending and not local content this included items such
  - Contingencies
  - DOE development fee
  - Development cost
  - Success Payments
  - Net VAT (input VAT on construction costs less VAT refunds expected during construction period)
  - Interest during construction
  - Borrowing costs (arranging fees, facility fees, etc.) (excluding VAT)
  - Debt Service Reserve Account
  - Maintenance Reserve Account
  - Cash and working capital
- Implied cap
- Also natural localisation – groundwork, foundations etc.
- Poor monitoring and reporting
- Lack of punitive penalties for non-delivery of localisation requirements
- Roll out of REIPPPP not aligned with local supply capacity



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## New Focus

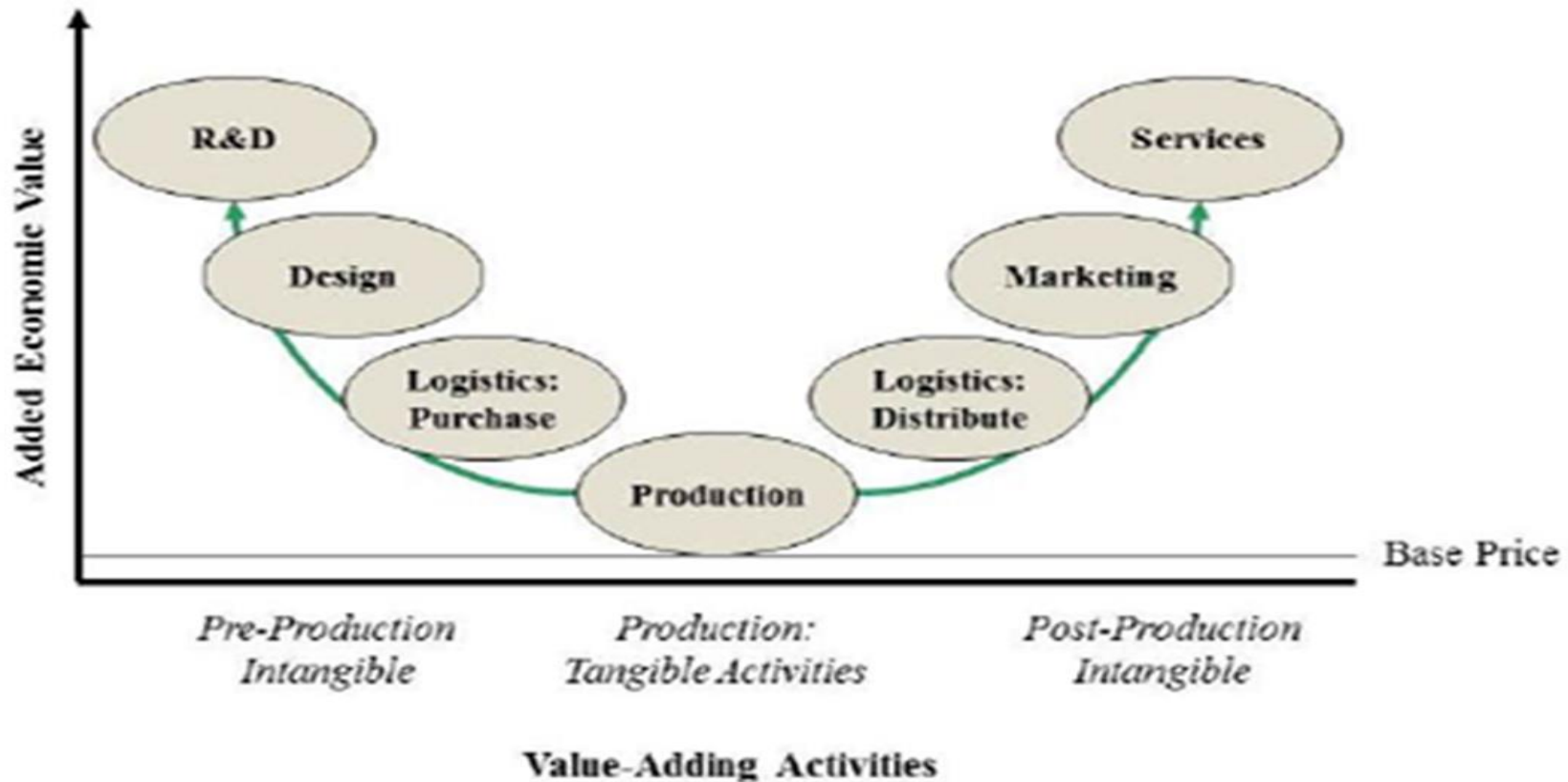
- A definitional focus change, from local project spend to **localised industrialisation**
- A more focused approach for scoring based on **“targeted” elements** with high potential for localised industrialisation
- incentivised scoring for “future” targeted items and **no dilution of scoring for “natural” localised activities** (e.g. foundations, groundworks etc)



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# Industrialised Localisation



Source: Gary Gereffi, presentation at OECD workshop, September 2010.



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# SA Industry

	Current Status	2016
	Wind Tower	2x 1 in trouble
RE tech	Solar PV	4x
	CSP	0
	Invertor	1x lost 2
Suppliers to RE tech	SMMEs	1x Cabling services
		1x basic steel structure (ladders and small platforms in trouble
		1x specialized painting services
		1x small electrical components and kits, incl, lights

# LARGE SCALE TURBINES IN SA: CURRENT CAPACITY



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Name of Investor	Location	Technology	Investment Amount	Jobs Created	Total Capacity
DCD Wind Towers	Coega (PE)	Steel towers	R300Mil	150	150 towers/annum
GRI	Atlantis (CT)	Steel towers	R237 Mil + R75	160	150 Towers/ annum
Concrete Units (mobile factory on site)	Acciona (CT)	Precast Concrete Towers			
Resolux Africa	Atlantis (CT)	Electrical and mechanical components for a wind tower			

**Resolux Africa Factory**



**DCD steel tower: Coega IDZ**



**GRI facility: Atlantis, Cape Town**

# SOLAR PV MANUFACTURING FACILITIES SET UP



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Name of Investor	Location	Technology	Investment Amount	Jobs Created	Claimed Total Capacity
SMA	Cape Town- WC	Inverters	R30 Mil	15	
ILB Helios	Eat London IDZ- EC	Solar Modules	R220 Mil	200	120MW/annum
Jinko Solar	Epping-WC	Solar Modules	R80 Mil	100	120MW/annum
AEG	Minerton-WC	Inverters			200 MW/annum
ART Solar	New Germany-KZN	Solar modules	R50-100 Mil	20	100MW/annum
Sun power	Cape Town	Solar modules		150	150MW/annum
JA Solar	Port Elizabeth	Solar modules			150MW/annum
PTiP	Stellenbosch- WC	Thin film demo and manufacturing plant	R189 Mil	The facility is designed to manufacture several megawatts of CIS-based PV modules under representative commercial conditions on substrate areas above 0.7m <sup>2</sup> . The facility will ultimately serve as a verification and qualification of (i) the process technology, (ii) core production equipment and (iii) market-ready PV modules.	
PFG	Springs- Gauteng	<ul style="list-style-type: none"> <li>Glass for PV &amp; SWH</li> <li>Mirrors</li> </ul>			<ul style="list-style-type: none"> <li>3Mil M<sup>2</sup>/year</li> <li>6Mil M<sup>2</sup>/year</li> </ul>





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# Designation of Solar PV

Solar PV components	Minimum Local Content Threshold	Conditionality
Laminated PV Modules	15 %	The local process will include tabbing & stringing of cells, encapsulation and lamination, final assembly and testing in compliance with IEC standards
Module Frame	65%	Aluminium Components: All aluminium PV Module Frames, PV mounting structures/racks, clamps, brackets, foundation components and fasteners are to be manufactured from locally produced extruded, rolled, cast or forged products
DC Combiner Boxes	65%	DC Combiner Boxes: Enclosures must be made from SMC and moulded in South Africa.
Mounting Structure	90%	All aluminium PV Module Frames, PV mounting structures/racks, clamps, brackets, foundation components and fasteners are to be manufactured from locally produced extruded, rolled, cast or forged products
Inverter	40%	Must be assembled locally





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# Outstanding

- **The planning of the roll-out needs to be reviewed so that it is aligned with a viable process of building relevant industrial capacity and capability**
- **Economic development criteria review**
  - certain sub-element criteria can be achieved with ease but have limited economic impact. Localisation has a much higher economic impact but appears to be less “popular”.
  - weighting system to make more points available for targeted localisation the development of certain value chains can achieve higher economic impact objective, support employment and socio-economic development
- **Import tariffs and rebates**
- **Local employment – local salary bill/MW, Dep Home Affairs – work permits**



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# THANK YOU