

# Positioning Nelson Mandela Bay for Renewable Energy Manufacturing Opportunities

Presented to Nelson Mandela Bay Business Chamber  
Ibhayi Town Lodge , Port Elizabeth  
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Presented by Davin Chown



**MAINSTREAM**  
RENEWABLE POWER  
SOUTH AFRICA

A joint venture with Genesis Eco-Energy

## Who we are

- Mainstream Renewable Power is a **leading global renewable energy developer** with a portfolio of over 15,000MW of wind and solar projects across **eight countries**.
- Mainstream South Africa, a Joint Venture with **Genesis Eco Energy** has been active since 2009 developing over 4,000MW of wind and solar projects in the Eastern, Northern and Western Capes.
- In December 2011, a consortium led by Mainstream was awarded **preferred bidder status** by the Department of Energy in South Africa to deliver **138MW of wind energy and 100MW of solar PV** into commercial operation by 2014.
- This partnership is unique and teams the local knowledge, development skills and relationships of Genesis Eco-Energy with the core global strengths of Mainstream Renewable Power. These global strengths are in the areas of **finance, engineering and procurement** where Mainstream has a strong track record in delivering **large-scale renewable energy plants** around the world.

# Background - A Project with a long history in SA

- Kouga Wind Farm proposed on part of Sunnyside dairy farm, outside Jeffrey's Bay in 2002
- Municipality very supportive - represented along with DBSA and Eskom on the project Steering Com established in 2003
- EIA Authorisation received in March 2009 for 16 MW
- Proponent local company - Genesis Eco Energy
- Project has since expanded into the 138MW Jeffrey's Bay Wind farm when JV formed between Genesis Eco Energy and international development company Mainstream Renewable Power in March 2009

## J-Bay set to be new powerhouse with wind farm project

Development bank commitment makes plan workable

By GUY ROGERS  
Environment & Tourism Editor

A R50-MILLION wind farm project at Jeffreys Bay ratcheted forward yesterday with commitments to the project announced by the Development Bank of South Africa and the local municipality.

The bank's commitment should see the project's vital on-site study phase begin immediately and will also send out positive signals to other possible investors.

Speaking at a site inspection, the bank's agency services manager Christina Golino said the bank was ready to finance technical assistance including a feasibility study, and was also keen to invest in the finished product.

"We're very excited, especially in terms of the benefits for the local economy," she said, "and on a wider scale in terms of carbon trading."



BREEZY . . . Key players in the wind farm project, pictured here on site, include (from left) farmer Mark Holliday, Kouga mayor Robbie Dennis, Christina Golino, of the Development Bank of Southern Africa, and Genesis CE Dr Andries van der Linde. Picture: GUY ROGERS

This extra power will help cater for the growing electricity demand load in the area, eliminate the current problem of dips and blackouts, and boost development.

A cornerstone of the project

Golino said the bank had not yet set aside a particular sum for the technical assistance grant, "but other projects of this kind have received a substantial sum".

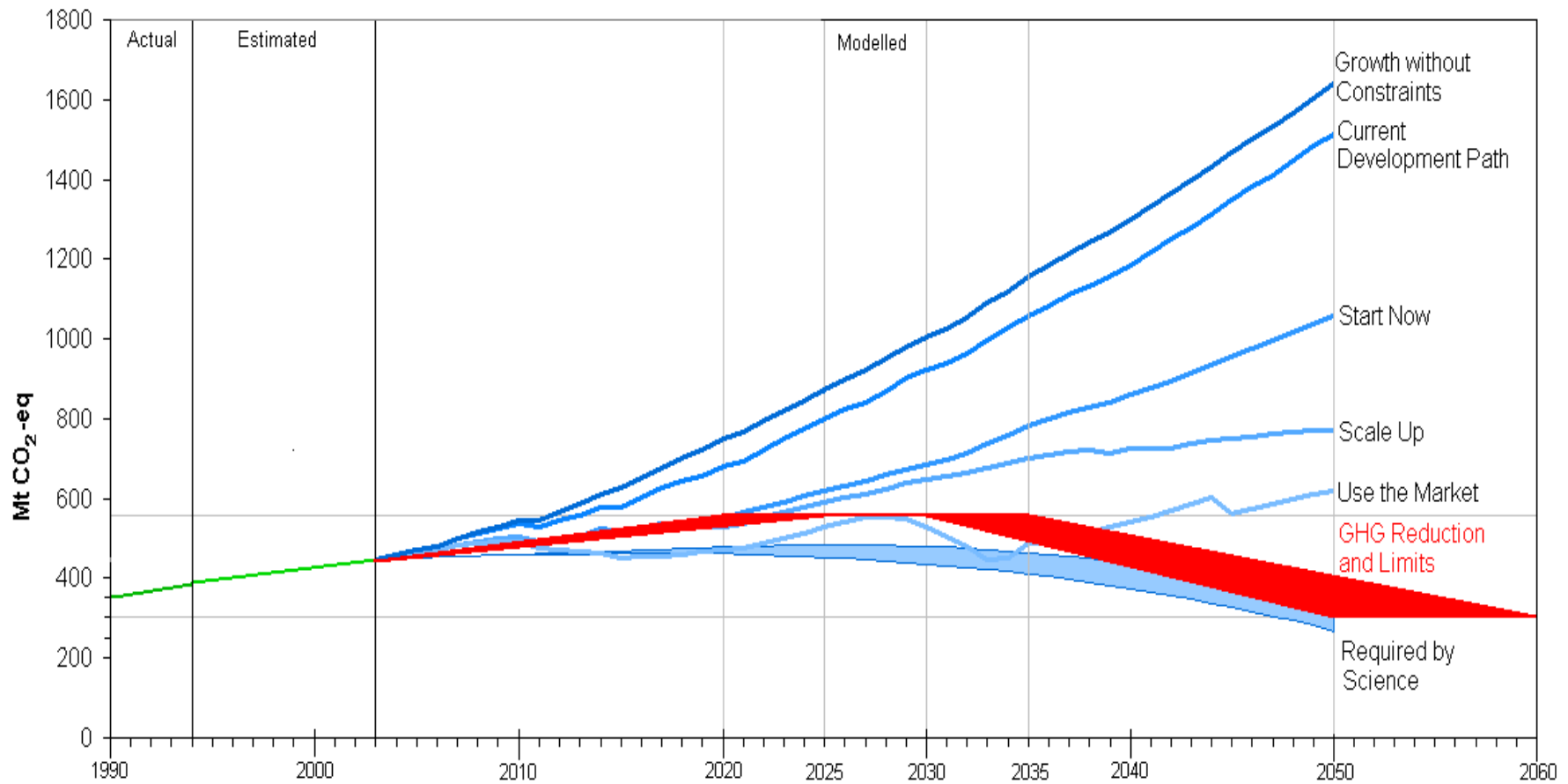
Kouga mayor Robbie Den-

# Stop-start Energy Programmes

Programme	Status
<b>DME Peaker</b> Commenced 2005 ~1000 MW OCGT	Preferred bidder selected in 2007, but failed to reach financial close in early 2008. Status and legality is unclear.
<b>Pilot National Cogeneration Programme (PNCP)</b> Eskom RFP in 2006 Target 900 MW, self dispatch	Expressions of interest for ~5,000 MW Very few proposals due to investor concerns with bankability of PPA and sense that better-priced programmes might be offered in future.
<b>Medium Term Power Procurement Programme (MTPPP)</b> Eskom RFP in 2007 Procurement for capacity for 2010-2018, self-despatch. Tariff declining from 105 c/kWh to 65 ZAc/kWh.	Delayed for two years pending resolution of Eskom's funding model. 400 MW signed up, of which 215 MW operational.
<b>Multi-Site Base Load Independent Power Producer Programme (BLT)</b> Eskom EOI in 2008 Target 2,100 to 4,500 MW in minimum size of 200 MW	Eskom pre-qualified 23 developers in October 2008 Programme on hold, pending resolution of Eskom's funding model.
<b>Renewable Energy Feed-in Tariff (REFIT)</b> DOE mandate to NERSA to devise tariffs and rules Integrated Resource Plan suggests ~700 MW	Rules still under development. Unclear who the off-taker will be. Eskom or ISO?

Courtesy: Meridian Economics

# Key Challenges – The LTMS

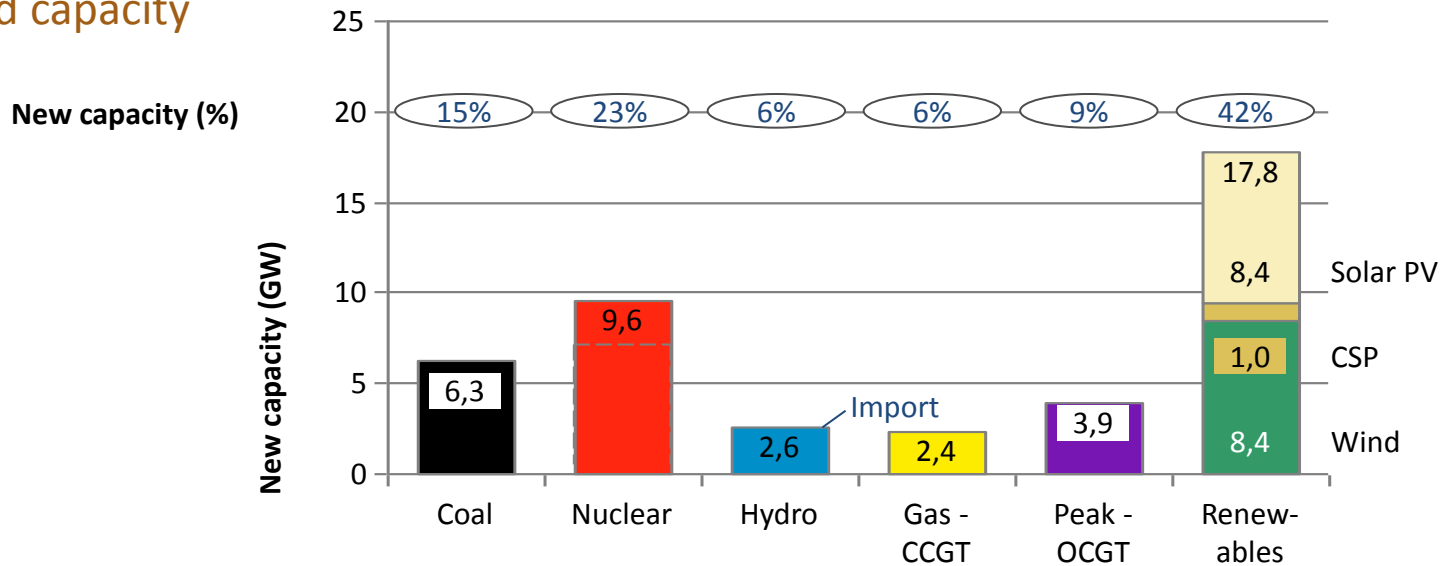


# Our New Energy Path – IRP 2010

## Existing and committed capacity

	Coal	Nuclear	Hydro	Gas - CCGT	Peak - OCGT	Renewables
<b>2010 fleet (41.8 GW)</b>	35,5	1,8	2,1	0,0	2,4	0,0
<b>Committed build (12.1 GW)</b>	10,1	0,0	0,05	0,0	1,0	1,0

## Planned capacity



## Resulting energy mix

	Coal	Nuclear	Hydro	Gas - CCGT	Peak - OCGT	Renewables
<b>2010 Energy (260 TWh)</b>	90%	5%	5%	0%	< 0,1%	0%
<b>2030 Energy (454 TWh)</b>	65%	20%	5%	1%	< 0,1%	9%

# The Slow Awakening

- Economic RE-direction - The Green Economy
  - Driven by the Deputy President's Office – RE is central theme
  - National Planning Commission: Low Carbon Economy
  - DPE, DTI: SARI & significant impacts on SA trade situation
  - DEA : LTMS
  - DoE :IRP 2010
- Reshaping the energy landscape
  - EDI failure
  - ISMO (DoE confirmation)
  - RE IPP Procurement Process – a win for all?



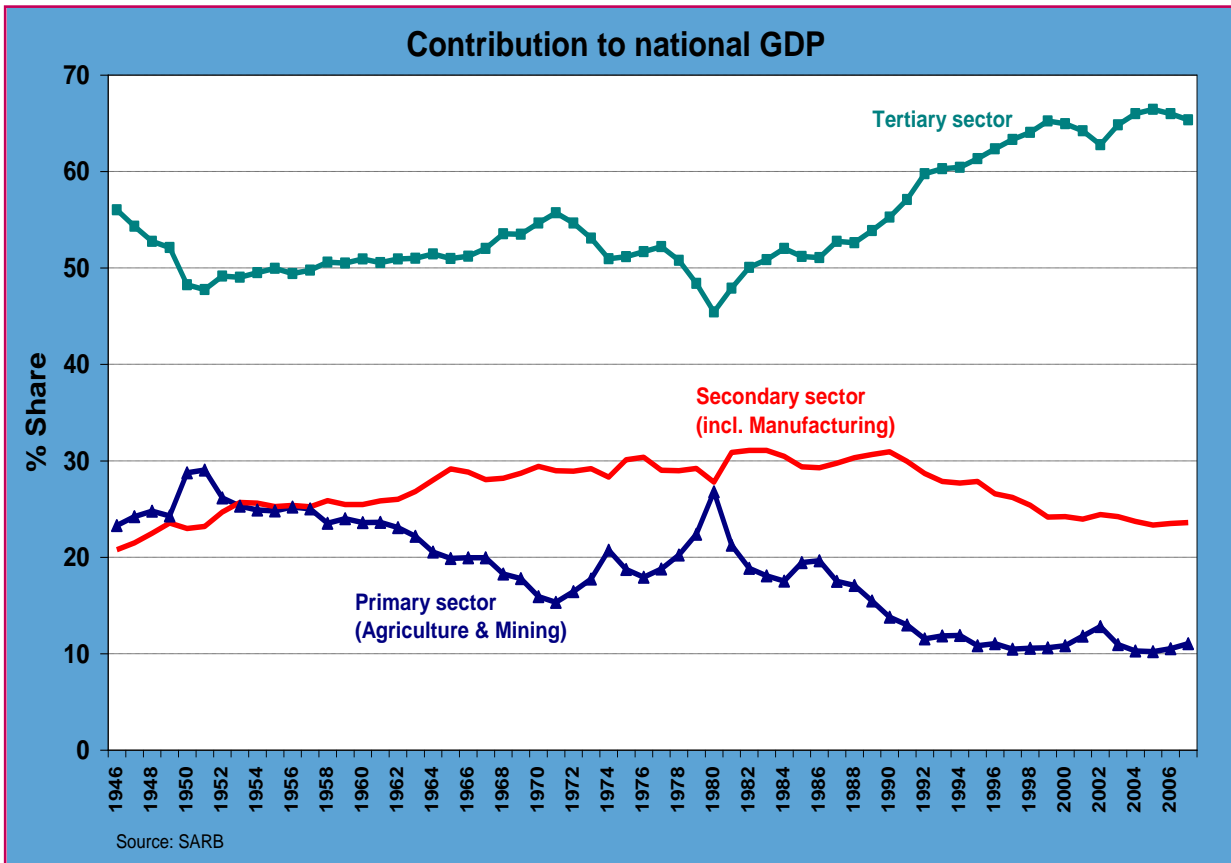
# Conquering the 'Low Carbon Divide'

- National Planning Commission – Diagnostic and NDP
  - Defines the key Challenges we face across society
  - Recognises that we are doing this in the context of a carbon constrained future
  - Clear in what we need to do to get SA on track and create a long term viable, stable future
  - Recognises the key 'ailments' in society and the need for redirecting the economy
- BUT.....
  - Low Carbon Economy transition, economic growth, and poverty reduction





# The Manufacturing Challenge and our Growth Path



- SA economy increasingly dominated by services-related sectors - in line with international trends.
- Share of the manufacturing sector - the 2nd largest sector of the economy - decreased sharply since the early 1990s in light of globalisation, trade liberalisation and an increasingly challenging global trading environment.

Courtesy: The DTI, 2012

# The Promise and the Potential

Local Content						
Technology	First Bid Submission Date		Second Bid Submission Date		Third Bid Submission Date	
	Current Threshold	Current Target	Threshold	Target	Threshold	Target
Onshore Wind	25%	45%	25%	60%	40%	65%
Solar Photovoltaic	35%	50%	35%	60%	45%	65%
Solar CSP Without 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 scale hydro	25%	45%	25%	60%	40%	65%
	25%	45%	25%	60%	40%	65%

# A R120bn Programme – Local Economic Benefits

## Operation

20 – 30 yrs

- Development Trust
- ED support
- SED support
- Permanent Jobs
- Support to emerging farmer
- Income to landowners
- Local services
- Stability of grid
- Electricity supply
- Tourism

## Construction

18 months

- Temporary Jobs
- Temporary Services
- Upgrade of certain infrastructure
- Local Procurement of goods & services

## Development

- Local spend
- Support to local projects
- Exposure



# Major Industry Initiatives – Rapid Scale-Up

- Signing of the Green Accord
  - 70% local content as aspirational target
  - 300 000 jobs by 2025??
- SA PV Industry Association and DTI
  - co-funding a localisation strategy plan
  - Solar roof-top programme to look at 300 000 roof tops
- SA Wind Energy Association and DTI
  - Task team to look at local towers and components – higher cost vs local content
  - Rapid step-wise increase – go beyond BOP back along value chain = towers, turbines, components, blades,
  - Can we do concrete towers – impact on finance, performance, etc
- Can we do this off 1850 MW wind and 1450 PV and 200MW CSP, in the absence of long term targets – what will IRP2012 do to help create the new path

# Where to from here?

- NMB Business Chamber in a good position
  - Three of the large wind farms allocated to Eastern Cape – J Bay, Oyster Bay, Cookhouse – and more to come
  - But manufacturers locating in the Western Cape?
  - At Munic level – SWH and EE roll-out to kick-start PV Rooftop programme?
- Policy and industrial investment direction
  - Participation in the new SA Renewable Energy Council
  - Direct engagement with DTI and building of incentive schemes and investment promotion
  - Shape the direction of new policy
  - Participate in the DTI/SAPVIA studies?
- How to promote Mandela Bay and regional infrastructure at centre of the RE development and investment hub – help create the climate. Can you campaign??

# Thank You for Your Time

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SA PV Industry Association: [www.sapvia.co.za](http://www.sapvia.co.za)

SA Wind Energy Association: [www.sawea.org.za](http://www.sawea.org.za)