

Exploring solutions to
challenges on financing
and certification on
locally produced
renewable products



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IN SUMMARY

- SAREC fully supports the localisation drive and Green Economy Accord
- A concerted effort with a long term focus is required for success, with inputs from industry, government, the banking sector and the development agencies
- If we take the right steps now, the good results will be visible in 2-3 years and will stay with us for many years
- Skills development is an important, related subject but not discussed here due to the narrower topic of the day

STATUS QUO – LOCALISATION THRESHOLDS

- Solar PV – Round 1 was 35%, round 2 was 40% (both reached), round 3 will be higher
- Solar Thermal with storage - Round 1 was 25%; round 2 was 25% round 3 will be higher 40%; Solar Thermal without storage was higher: 35%; 35% and then rising. So far thresholds were exceeded
- Wind – the local content thresholds for round 1 and 2 (25%) were achieved by civil works and balance of plant. Round 3 target will be higher and implies local towers/blades - not yet certain if this can be met (see below)

SOLAR PV: WHAT'S BEING DONE – STUDIES

- SAPVIA together with DTI have commissioned a study into solar PV localisation and the study is under way
- The study will provide a road map towards optimal localisation for Solar PV

SOLAR THERMAL: WHAT'S BEING DONE – STUDIES

- SASTELA have commissioned a study on localisation with DTI and GIZ that will commence within days
- The study will aim to create a road map towards optimal localisation in the Solar Thermal Industry – due mid- December
- Individual companies have started to investigate the local manufacturing of key components, including studies of international manufacturing plants

WIND: WHAT'S BEING DONE – STUDIES

- SAWEA co-hosted with IDC a Localisation Indaba in June 2012
- Discussion have taken place with IDC and DTI to identify blockages and find solutions
- A workshop followed by bilateral discussions between manufacturers and DTI was hosted in May 2012
- SAWEA has engaged the Department of Science and Technology on a Localisation Road Map and supplied DST with a Terms of Reference for such a study
- An RFP from DST is expected

STATUS QUO – SESSA COLLABORATION WITH GOVERNMENT

- SESSA in collaboration with the DST & CSIR is building a platform that would be able to monitor, measure and report on actual job creation, enterprise development and skills development growth in the RE sector.
- Simultaneously building relationships with municipalities to monitor, create and set standards for installations of varied RE technologies through selected accredited training institutions.

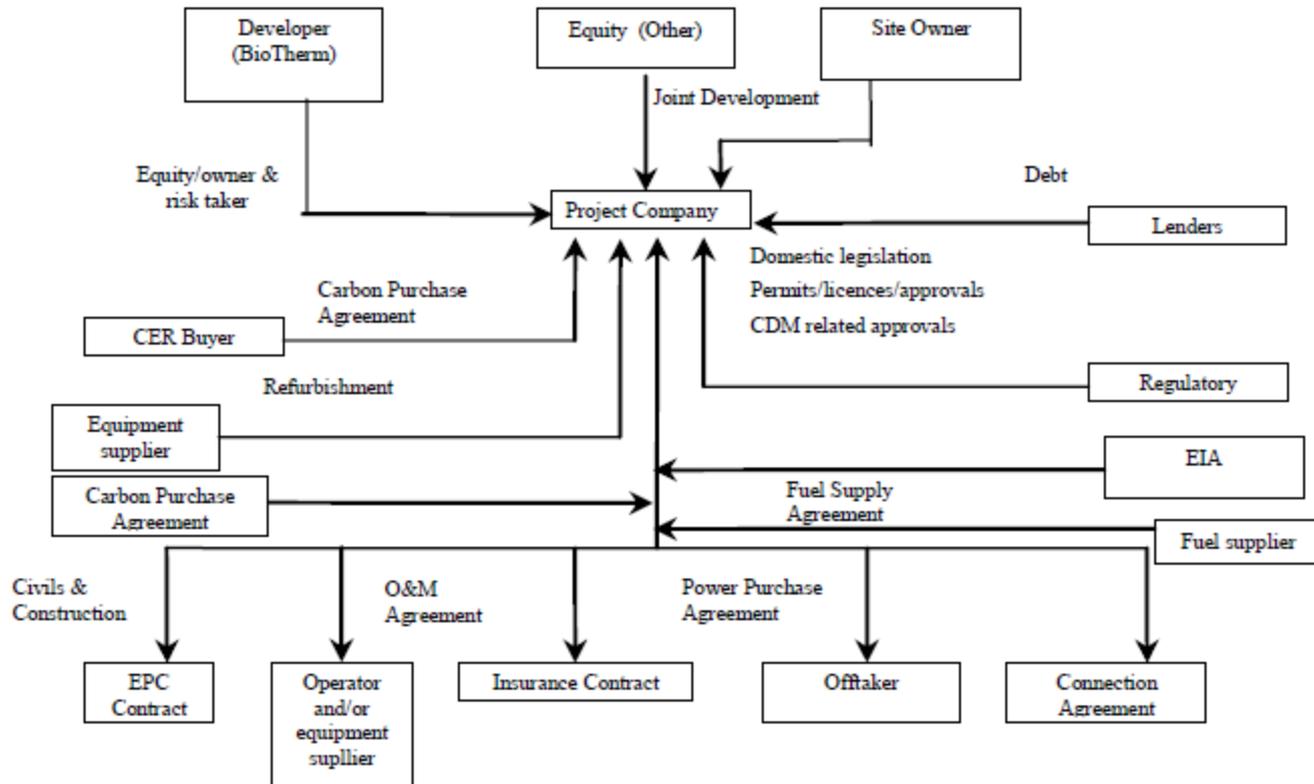
THE LONG TERM VISION REQUIRED ACROSS TECHNOLOGIES

- The Green Economy Accord and IRP envision a large roll out of renewables to 2030
- At the moment however, all that is certain is the Minister's first determination of 3,725 MW's - which will start to run out soon;
- IRP is revisited/adjusted every two years and a factory takes 6 or more years to pay off
- Minimum allocation to each technology is required to draw manufacturing plants to SA (say for 6 – 10 years into the future);
- This implies that the IRP should only be amended
- within certain bounds to unlock local manufacturing

Minimum thresholds for each technology to unlock manufacturing (definite annual procurement in MW's, medium term)

- Each renewable technology requires a minimum annual procurement for a number of years (medium term) to activate local manufacturing
- Suggesting exact figures may be premature and the answer is different for different technologies
- A collaborative investigation between government and industry will assist to refine these figures
- The various studies being undertaken now are likely to assist in finding these figures
- There has been a clear and rapid response by local manufacturing firms in investigating localisation potential based on the 3 725MW allocation
- This will stall if further medium term certainty is not provided'

Certification and guarantees (1) - Project finance



Certification and guarantees (2) - Project finance

- In project finance, the equity providers (developers) do not guarantee or sign surety to the bank for the very large loans (can be more than ZAR 1 billion);
- If the project does not perform, the bank must be able to sue someone who has the money to pay - or the public's deposits at the banks might ultimately be jeopardised
- For this reason each piece of equipment must be certified and guaranteed by a financially strong company
- Certification of new equipment involves testing and takes time (eg 12 months or more for wind)
- Guarantee is essential – big balance sheet needed

Certification and guarantees (3) - Project finance

- It is possible to provide other kinds of finance through development institutions (eg IDC)
- If no bank loans are used and developers are asked to provide everything themselves, there may not be enough money and the cost of renewable energy will go up, as this kind of money is more expensive than bank loans

Certification and guarantee issues - PV

- PV industry is confident that local manufacturing of certain components can take place affordably in South Africa
- Currently 3 module assembly plants exist in South Africa with a capacity of approx 120MW/yr
- Several more plants for module assembly and inverter manufacture are under development but require clear procurement roll-out plan

Certification and guarantee issues – Solar Thermal

- Steel, glass piping, tanks, construction materials, cement and cooling equipment can be sourced locally
- There is no local manufacturer of turbines and receiver tubes
- If a manufacturer came it would have to be international coming with certification and guarantees otherwise time and a balance sheet would be required
- Appropriate certification would allow local manufacturers to compete in the growing global market for CSP

Certification and guarantee issues – Wind

- No local turbine manufacturer at commercial scale to buy from
- No certified and guaranteed local blade manufacturer to buy from
- One un-guaranteed, local turbine assembler and blade manufacturer closing its doors due to guarantee requirements of banks and the bid rules
- Certification will take about 12 – 18 months after erection of pilot plant – thus perhaps 2 years away
- If a certified and guaranteed intern. firm comes to SA, this shortens to the time required to complete the local factory

SOLUTIONS (1): CHANGE THE SCORING SYSTEM

- At present the scoring is 70:30 for Price: Socio-economic
- Strong localisation success may save money even if prices rise a little – more employment, money stays in the country
- SAPVIA suggests for PV: scoring needs to be analysed per technology and per component. The actual number of jobs created for each component manufactured locally must be quantified and balanced against increased costs. Increased costs will lead to higher energy costs, less installed capacity (there is a limited budget available for government to procure) and fewer jobs through installation and operation – a balance is required

SOLUTIONS (2): Lure international manufacturing firms

- Lure international firms with existing certifications and guarantees to SA
- This shortens the delay before A made technology will be bankable
- This requires clarity on the IRP and medium term procurement

SOLUTIONS (3): DEVELOP NON-RECOURSE FINANCE PACKAGES

- IDC and DBSA can choose to apply project finance rules differently to serve a development objective
- So they can choose to “bank” unproven South African technology without certification or guarantees
- In time the certification issue will disappear and the companies may be able to provide some of the guarantees themselves

SOLUTIONS (4): Allow bids at varying levels of local content

- If firms are allowed to submit two bids with two prices corresponding with two different localisation levels, it will be clear to government what localisation really costs
- Government could allocate bids at both levels and achieve the optimum, blended levels of price and local content
- In this manner the target is achieved at industry level not project level and projects can indirectly “help” each other
- Government could make an informed decision

SOLUTIONS (5): LOOK AT THE REGIONAL POTENTIAL

- SA firms have a competitive advantage in Southern Africa, due to lower transportation costs
- The regional market will be bigger than the local market
- If we can access the regional market, the feasibility of local firms will be strengthened

SOLUTIONS (6): PROMOTE TRAINING AND R&D

- Facilitate funding for Training, Research and Development in universities and businesses, specifically as part of the project Socio Economic Development spend in REIPPP
- This would create the intellectual component to SA's emergence as a power in RE

SOLUTIONS (7): DISTRIBUTED SOLUTIONS

- Mostly in PV but also in wind, facilitate the roll out of the smaller-scale distributed generation (own use and Net Metering).
- Smaller projects allow local companies to provide technology more easily and bolsters their track record and ability to provide guarantees (project finance not required)

SOLUTIONS (8): WORKSHOP THE WAY FORWARD

- The present PPC initiative is exactly what is required
- Similar initiatives with all role players to unify “SA Inc”

A collaborative role division

Steps required	Gov	RE Industry	IDC/DBSA	Academia
IRP visibility	√			
Studies/localisation road maps	√	√	√	√
Reconsider scoring system REIPPP	√	√	√	?
Lure international manufacturing firms	√	?	√	
Develop non-recourse finance packages	√	?	√	?
Allow bids at varying levels of localisation	√	?	√	
Promote training and R&D	√	√	√	√
Promote self-generation and off-grid solutions	√	√	√	√
Look at the regional potential	√	√	√	√
Workshop the way forward	√	√	√	√



AN EMERGING GLOBAL PLAYER: SA'S POSSIBLE PLACE IN THE 2015 GLOBAL PECKING ORDER (PV AND WIND)

SOLAR PV

Produced, installed & total photovoltaic peak power capacity (MWp) as of the end of 2010

Country or Region	on grid	2015
Germany	17,320	
China	10,000?	
Spain	3,787	
Japan	3,519	
Italy	3,465	
United States	2,094	
Czech Republic	1,952.7	
India		2,000?
France	1,025	
Belgium	787.40	
SOUTH AFRICA		1000? ←
South Korea	649.60	
Australia	483.10	
Canada	231.00	
Greece	198.50	
Switzerland	69.60	
Netherlands	62.50	
Austria	48.99	
United Kingdom	26.40	
Israel	21.63	
Portugal	15.03	
Slovenia	8.90	
Luxembourg	5.70	
Bulgaria	5.70	
Denmark	4.03	
Sweden	3.60	
Mexico	1.30	
Malaysia	1.06	
Turkey	0.50	
Finland	0.20	
Norway	0.13	

Wind

Country or Region	2011	2015
China	62,733	
United States	46,919	
Germany	29,060	
Spain	21,674	
India	16,084	
France	6,800	
Italy	6,747	
United Kingdom	6,540	
Canada	5,265	
Portugal	4,083	
Denmark	3,871	
Sweden	2,970	
Japan	2,501	
Netherlands	2,328	
Australia	2,176	
Ireland	2,031	
Turkey	2,032	
SOUTH AFRICA	10	2,000? ←
Greece	1,629	
Austria	1,084	
Belgium	1,078	
Romania	1,010	
Mexico	873	
New Zealand	623	
Taiwan	564	
Norway	555	
Egypt	550	
South Korea	407	
Morocco	291	
Chile	205	
Finland	197	

THANK YOU



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