



PIDG Project Results Monitoring Sheet		Date Form Completed:	19 <sup>th</sup> January 2017	PIDG Facility: Green Africa Power LLP
<b>Project Title:</b>		<b>Senergy 2 solar park - Bokhol</b>		
Facility Funding Amount (US\$ million): <b>\$21.1m (as of Nov 2016- project funded EUR 20m)</b>	Month/Year of Approval: <b>September 2016</b>	Month/Year of Financial Close: <b>September 2016</b>	Country: <b>Senegal</b>	Sector and sub-sector: <b>Renewable Power - Solar</b>
<b>Summary Project Description:</b>		<p>The project is a 20 MW solar park located at Bokhol, Senegal. The project was about to fail because senior debt provider had withdrawn. GAP provided short term construction finance to allow the project to proceed and to allow time for long term debt to be put in place.</p> <p>GAP expect to be refinanced by 30<sup>th</sup> June 2017. In the event the deadline is not met an increased margin and full cash sweep will be put in place to incentivise early refinancing. The drop-dead date of the loan is 31<sup>st</sup> December 2017, at which point failure to refinance would be treated as an event of default. GAP has no contractual obligation to be involved in the refinancing however should a mezzanine tranche be offered it will be considered.</p> <p>In 2016 45% of the country's population has no access to power. Senergy 2 will help to bridge this gap by supplying clean energy at approximately 50% below the cost per kilowatt hour of the existing energy mix and make an important contribution to the national grid.</p>		
<b>Status</b>	Only one phase			
Recipient of PIDG Funding:	Senergy 2 SAS	<b>Jurisdiction of Recipient:</b>	Senegal	
Information on Main Supplier(s):	Vinci (France) – M & E equipment supplier (panels/electrical controls/sub-station equipment)and installation under EPC and O & M supplier under contract for operations and maintenance.			
Date of construction completion and 100% operationalization:	<b>Expected</b>	<b>Actual</b>	<b>Comments</b>	
	September 2016	December 2016	Programme delays due to arrangement of construction finance package as a replacement for Senior Debt from AfDB.	
Date of Loan Redemption:	December 2017 (latest)		GAP Construction finance to be repaid by refinance by senior debt.	
<b>Project Results Monitoring Indicators and Notes</b>				
<b>Project Costs <sup>1</sup></b>	<b>Committed (US\$ million)</b>	<b>Actual (US\$ million)</b>	<b>Additional Information</b>	
1. <b>Total Project Cost</b> <i>[Total of 1a+1b+1c]</i>	30.5	30.5		
<b>Total Private Sector Investment</b>				
1a Domestic Private Sector	3.9	3.9		
<i>Of which:</i>				
<i>Commercial Equity</i>	3.9	3.9	<b>The equity has been funded by: -</b> <ul style="list-style-type: none"> <li>Caisse des Depot et Consignation Senegal ("CDC")- \$2.3m</li> <li>F Sanchez, \$1.4m</li> <li>C Mbaye, -\$0.2m</li> </ul>	



<i>Commercial Debt</i>			
1b	Foreign Private Sector Investment	5.6	5.6
<i>Of which:</i>			
	<i>Commercial Equity</i>	5.6	5.6
<p><b>The equity has been funded by:</b></p> <ul style="list-style-type: none"> <li>• JD Camus- \$2.3m</li> <li>• R.Rossi- \$1.25m</li> <li>• D.Rossi-\$1.25m</li> <li>• Gisueppe Tanzarella* (Original Developer)- \$0.2m</li> <li>• Alfredo Barone* (Original Developer)- \$0.2m</li> <li>• Assane Fall* (Original Developer)- \$0.2m</li> <li>• C.Kalaidjian (Founder)- \$0.2m</li> </ul> <p><i>*To be bought out by GreenWish at a later date</i></p>			
<i>Commercial Debt</i>			
1c	Development Finance Investment	21.0	21
<i>Of which:</i>			
	- DFI Equity		
	- DFI Debt (GAP)	21.0	21
GAP construction finance facility			
1d	Project value generated through grant		
<b>2a. Number of People Served</b>		<b>Predicted No of People</b>	<b>Actual No of People</b>
<b>Additional Information</b>			
i.	Number of Additional People Served	N/A	N/A
<i>Of which</i>			
	<i>Female:</i>		
	<i>Male:</i>		
ii.	Number of People Below Poverty Line	N/A	N/A
<b>2b. Improved Service Level</b>		<b>Predicted No of People</b>	<b>Actual No of People</b>
<b>Additional Information</b>			
i.	Number with Improved Quality of Service	160,000	160,000
<p>Based on 219kWh per person average for Senegal (World Bank data 2016).  <a href="http://data.worldbank.org/indicator/EG.USE.ELEC.KH.PC?locations=SN">http://data.worldbank.org/indicator/EG.USE.ELEC.KH.PC?locations=SN</a></p> <p>The peak MW for the project is 20MW.</p> <p>The calculation has been derived from the expected system yield of 34,902 MWh/Yr provided from the LTA Technical Due Diligence Report compiled by 3E (April 2016):-  <math>34,902,000 \div 219 = 158,369</math></p> <p>46.7% of Senegalese population (2015: 15.12m) are classed as below the poverty line (World Bank data 2015)  <a href="http://data.worldbank.org/indicator/EG.USE.ELEC.KH.PC?locations=SN">http://data.worldbank.org/indicator/EG.USE.ELEC.KH.PC?locations=SN</a></p>			



<i>Of which:</i>			
<i>Female:</i>	61,867	61,867	
<i>Male:</i>	89,133	89,133	
ii. Number Below Poverty Line with Improved Service			GAP is not responsible for electrical connections so cannot give more precise analysis.
<b>3. Fiscal Impact</b>	<b>Predicted (US\$m)</b>	<b>Actual (US\$m)</b>	<b>Additional Information</b>
a Up-Front Fees to Government	N/A		
b Taxes paid to Government (e.g. Corporation Tax, VAT etc.) during first 5 years of operation	1.1	1.1	Supplied by the project.
<b>4. Long and Short Term Employment Effects</b>	<b>Predicted No of people</b>	<b>Actual No of People</b>	<b>Additional Information</b>
a. Short Term Effects - during construction	80	80	Supplied by the project.
<i>Of which:</i>			
<i>Female:</i>	22	22	All local
<i>Male:</i>	58	58	80 employees during construction- balance expats- (as per PIDG guidelines this number therefore cannot be used)
b. Long Term Effects - during operation	24	24	
<i>Of which:</i>			
<i>Female:</i>	9	9	All local
<i>Male:</i>	15	15	15 local (not including 1 expat)
<b>5a. Comment on other Developmental Impacts of Intervention</b>	<p>Project will invest \$13.5k per annum in community projects defined by the local communities. Part of the investment has been used on a local youth training programme where 15 youths were trained in the assembly of solar panel structures and also maintenance and installation which will help maintain the relationship and interaction with the local community throughout the lifetime of the project. An internship with the Ministry of Education has also been set up which 1 student has undertaken.</p> <p>Further funding could target provision of solar kits, medicine, and support to social infrastructure. This will be decided on an annual basis by the City Council and approved by Senergy 2 who will pay the suppliers directly. The above initiative will help to develop and maintain community relations in the long run.</p> <p>24k tonnes of CO2 emissions pa saved. This is based on the Grid Emission Calculation for Senegal* (0.6826) multiplied by the Expected System Yield of the project (34,902MWh/pa)</p>		
<b>5b. Comment on Overall Size of Impact on Sector / National Economy</b>	20MW increase in overall installed capacity of 860MW in Senegal (circa 600MW operational) The 20MW increase will help displace more expensive forms of electricity such as thermal (including Heavy Fuel Oil, Light Crude Oil) and imported electricity.		
<b>5c. Comment on Additionality Impacts of Intervention</b>	GAP in this project delivers financial additionality. The project was about to fail because senior debt provider had withdrawn. GAP provided short term construction finance to allow the project to proceed and to allow time for long term debt to be put in place.		

<b>5d. Comment on Demonstration Effect of Intervention</b>	First solar IPP in West Africa. The expectation is that this landmark project will set the benchmark for further solar IPP projects in West Africa going forward.	
<b>6. Any specific support / developmental interventions supported by TAF</b>	N/A	
<b>7. Any Subsidies due to the Project</b>	N/A	
<b>8 List any other PIDG Facilities involved and summary of Involvement</b>	N/A at this stage but EAIF may form part of the re-financing syndicate	
<b>9. Alignment with National Development Plans</b>	Senegal National Energy Plan calls for an increase of 500-670 MW by 2018.	
<b>10. Improve the enabling environment <sup>2</sup></b>	a. National IFC 'Doing Business' Index for the protection of investors	<i>CMO to complete</i>
	b. National IFC 'Doing Business' ranking for ease of enforcing contracts	<i>CMO to complete</i>
<b>11. Improve Government Capacity <sup>3</sup></b>	National Country Performance Rating	<i>CMO to complete</i>
<b>12. Poverty Focus <sup>4</sup></b>	Country category from DAC list of ODA-eligible countries at time the RMS is first completed	DAC 1.
<b>13. Fragile State Focus <sup>5</sup></b>	Fragile state status from PIDG List of Fragile States at the time the RMS is first completed	No
<b>14. Climate Change Benefits</b>		
a. Mitigation:	<b>significant</b>	24k tonnes of CO2 emissions pa saved. This is based on the Grid Emission Calculation for Senegal* (0.6826) multiplied by the Expected System Yield of the project (34,902MWh/pa)  *Source- IGES CDM Project Database at: <a href="http://www.iges.or.jp/en/cdm/report.html">http://www.iges.or.jp/en/cdm/report.html</a>
b. Adaptation:	<b>N/A</b>	

**Notes:**

\*1

Facility	Date of Approval
EAIF, Guarantco, ICF-DP, Infraco Asia Investment, InvestCo, GAP, FAIR	Date a project reaches financial close
InfraCo Africa and InfraCo Asia Development	Date a JDA / JDSA is signed

**Note:**

**Climate Change Mitigation:**

- Tier 1 - Significant climate mitigation co-benefits
- Tier 2 - Incremental climate change mitigation co-benefits
- Tier 3 - No climate change related co-benefits

**Climate Change Adaptation:**

- Tier 1 - Significant climate adaptation co-benefits
- Tier 2 - Incremental climate change adaptation co-benefits
- Tier 3 - No climate change adaptation co-benefits