

MAINTENANCE AND TRAINING

**SCHEDULE 1:
CONDITIONS OF MAINTENANCE/SERVICE OF INSTALLED SOLAR
HYBRID PV PLANT INFRASTRUCTURE**

1. CONDITIONS OF MAINTENANCE/SERVICE OF INSTALLED SOLAR HYBRID PHOTOVOLTAIC PLANT INFRASTRUCTURE

- 1.1. In return for payment of the maintenance charge (See Schedule of Cost), the tenderer shall maintain the installed solar hybrid PV Plant in accordance with installation standards and supplementary manufacturer's installation standards and shall respond to emergency calls for assistance at any of the facilities where solar hybrid PV Plant where undertaken
- 1.2. The Tenderer undertakes that, if any of the installed security equipment/infrastructure or their workmanship for newly installed solar hybrid PV Plant systems is faulty in the periods of warranty and/or guarantee, such installed solar hybrid PV Plant shall be repaired or replaced at no additional expense and/or cost to the Department of Education, including any applicable call-outs.
- 1.3. Notwithstanding Clause 1.2 (above), should the Tenderer be required to attend to any repair or replacement work of the solar hybrid PV Plant installed, at any time other than the dates of scheduled maintenance during the maintenance/service period, the Tenderer is not eligible to claim and subsequently invoice the Department of Education the repair or replacement work as additional work.
- 1.4. The scope of maintenance and service shall be limited to that which is practically capable of being performed by the Contractor and shall only apply to solar hybrid PV Plant installed by the Tenderer.
- 1.5. The maintenance/service period shall be for a fixed term period of three (3) years from the date of Approval.
- 1.6. Parts or components of any solar hybrid PV Plant system installed by the Tenderer, which fail after any routine maintenance/service visit will remain at the liability of the Tenderer and must be replaced in whole or in part, during the maintenance/service period. In an instance where parts or components of any solar hybrid PV Plant system installed by the Tenderer are not replaced, the Department of Education may deduct, to replace or repair such part of component, from the contracted maintenance/service amount of a particular maintenance/service year, a sum or portion of the maintenance cost due to the Tenderer that is fair and reasonable quantum of the market-related cost of the part(s) or component(s) plus additional costs of labour, delivery and other taxable items.
- 1.7. The Tenderer shall undertake annual maintenance visits and two(2)- four(4) solar panel cleaning depending on site & approval, with the accompaniment of an official of the Free State Department of Education, to the facilities where solar hybrid PV Plant is installed. The inspection will be limited to that of equipment scheduled in the Bill of Quantities or any other items procured and installed in terms of the Bill of Quantities. It is required that a written report on the condition of the solar hybrid PV Plant systems should be forwarded to the Department of Education within 14 working days after the scheduled maintenance/service date. It shall be the Tenderers responsibility to act on and remedies and defects found with the solar hybrid PV Plant systems as identified and scheduled in the written report.



**SCHEDULE 1:
CONDITIONS OF MAINTENANCE/SERVICE OF INSTALLED SOLAR
HYBRID PV PLANT INFRASTRUCTURE**

Chief Directorate: Physical Resources Management

N8 Gateway Office Park | c/o Rudolf Greyling Drive & AW Louw Avenue | Estoire | Bloemfontein | 9300

**SCHEDULE 1:
CONDITIONS OF MAINTENANCE/SERVICE OF INSTALLED SOLAR
HYBRID PV PLANT INFRASTRUCTURE**

- 1.8. The annual replacement charge shall include charges for any replacement parts, including but not limited to; batteries, Inverters, solar panels, fuse, filters etc. and any other parts that shall be deemed reasonably required for the integrated functioning of the solar hybrid PV Plant and shall be charged only where replacement has taken place (See 1.10). The annual **Maintenance Tasks** shall include, but may not be limited to:

Inverters

- 1.8.1. Verify solar connection at Point of connections (POC) (check terminal for tightness and heat discoloration)
- 1.8.2. Report any unauthorized access, debris/obstruction, unclear access to inverter station.
- 1.8.3. Confirm warning labels are in place and intact.
- 1.8.4. Check mechanical connection of the inverters to the wall or ground.
- 1.8.5. Check and validate all voltages & production values from the human-machine interface display.
- 1.8.6. Clean inverter filters & ensure that heat sinks are clear and free from obstruction.
- 1.8.7. Test inverter fans for proper operation
- 1.8.8. Verify integrity of electrical enclosures (AC and DC boards).
- 1.8.9. Check cables and terminals for discoloration from excessive heat build-up.
- 1.8.10. Check continuity of system ground and equipment grounding.
- 1.8.11. Verify operation of CBs RCDs DC isolation devices.
- 1.8.12. Check torque on terminations.
- 1.8.13. Check fuses.
- 1.8.14. Check Anti-islanding Mechanism/ internal disconnect operation.

Lithium Battery

- 1.8.15. It is important to follow the manufacturer's recommendations for maintaining and caring for the battery to ensure that it performs at its best and last as long as possible.
- 1.8.15. Check the temperature that they are not too low or too high that they affect the lifespan of the batteries.
- 1.8.16. Check the limit of the depth of discharge (DOD) is limited between 50- 80%, so as not to affect the lifespan of the lithium battery.
- 1.8.17. Check that the charge and discharge rate of the battery is not high, to prevent internal resistance and electrode breakdown quickly. Thus, to extend lifespan
- 1.8.18. Keep the battery clean.
- 1.8.19. Avoid overcharging or discharging and using a compatible battery charger. Regularly check the battery's voltage and current to ensure that it is functioning properly.

Solar Panel Modules

- 1.8.20. Clean the panels as solar panel can be affected by dust, dirt, leaves and bird droppings and thus reduce performance.
- 1.8.21. Check your connections points and wiring systems regularly and clean them if necessary. If there is any damage or cracks in the connection's points, they need to be repaired.
- 1.8.22. Solar panes are resistant to environmental factors, but they are still needing maintenance. Especially in areas with high winds, rains, snow and storms, it is important to check panels.

**SCHEDULE 1:
CONDITIONS OF MAINTENANCE/SERVICE OF INSTALLED SOLAR
HYBRID PV PLANT INFRASTRUCTURE**

regularly and make repairs if necessary.

- 1.8.23. Check the performance of the system regularly and resolve any issues.

Security Infrastructure

- 1.8.24 Check warning labels are still in place.
- 1.8.25 Check all cables and conduit are properly supported, undamaged and showing no signs of wear.
- 1.8.26 Check for sound physical fixings of all equipment including loosening or corrosion of supports and fixings including towers and brackets.
- 1.8.27 Check all glands, seals and connections on all external equipment.
- 1.8.28 Ensure the equipment is free from environmental problems such as dust, vibration, electrical interference etc.
- 1.8.29 Ensure the biometric or keypad systems remain protected against unauthorized interference, e.g., password level (s).
- 1.8.30 Check operation of all door fixings, contact magnets and furniture is satisfactory.
- 1.8.31 Check function of all interfaces with alarms is satisfactory including correct triggering of alarms.
- 1.8.32 Check that the performance of the system(s) continues to meet the agreed specification / operational requirement according to the periodic test scheme agreed with the customer.
- 1.8.33 All connections checked and labelled.
- 1.8.34 Check the number and type of cameras, including lenses, are in accordance with the specification.
- 1.8.35 Check that camera and magnetic door lock indicator lamps are working correctly.
- 1.8.36 Check the picture quality of each camera, channel and that the correct monitor is selected.
- 1.8.37 All camera housings and lenses are cleaned where necessary.
- 1.8.38 Check all automatic and remote-control camera functions are satisfactory and that camera movement and fields of view are free from obstruction.
- 1.8.39 Operation of all monitoring, switching, multiplexing, and recording equipment is satisfactory.
- 1.8.40 Operation of supplementary lighting is satisfactory.
- 1.8.41 Ensure that all camera presets are checked.
- 1.8.42 Ensure that all alarm presets are checked.
- 1.8.43 Check mains and stand-by power supplies including charging rates.
- 1.8.44 Check all audible warning and alarm devices for correct operation.
- 1.8.45 Ensure that there is still sufficient memory to save and store recorded footage from installed CCTV camera.

- 1.9. The annual site visit charges shall include the cost of travelling to the site or facility and technician's labour, and valid claims shall be made in respect thereof. In pricing for the site visit, Bidders should calculate the cost per kilometre (R/km) to the various hostels and special schools facilities relative to where their head/main offices are stationed accounting for cost of fuel and relative wear and tear of the vehicle(s). In addition, Bidders are to cost for the ordinary call out fee per technical staff. Technical staff is not to exceed two persons per facility. This information must be summarized below for the years of scheduled maintenance

CONTINUES

Chief Directorate: Physical Resources Management

N8 Gateway Office Park | c/o Rudolf Greyling Drive & AW Louw Avenue | Estoire | Bloemfontein | 9300

Chief Directorate: Physical Resources Management

N8 Gateway Office Park | c/o Rudolf Greyling Drive & AW Louw Avenue | Estoire | Bloemfontein | 9300

**SCHEDULE 1:
CONDITIONS OF MAINTENANCE/SERVICE OF INSTALLED SOLAR
HYBRID PV PLANT INFRASTRUCTURE**

TABLE 1 COST BREAK DOWN OF SITE VISITS (OPERATIONAL)			
	YEAR 1	YEAR 2	YEAR 3
Travel Cost (R/km)	R	R	R
Call Out Fee (Technician 1)	R	R	R

The pricing provided will be used for the generation of job cards at the end of each scheduled maintenance visit at each facility contemplated in Schedule 4. Said job cards shall be used for invoicing based on the pricing of the table above (As priced by the Tenderer). Prices in Schedule 3 are for the purposes of consolidation and provide a summation of costs and must reflect costs contemplated in the table above.

- 1.10. Where no material defects or faults are found with the installed solar hybrid PV Plant system that would not reasonable warrant a repair or replacement (1.8), the sum of repair and replacement shall not be invoiced vis-à-vis any billable scheduled site visit. Tenderers are advised that where amounts for repair and replacement are not invoiced at any particular scheduled maintenance/service visit, such amounts shall have right of retention by the Employer for discretionary use for repair and replacement of the solar hybrid PV Plant system at another scheduled maintenance/service visit provided approval is granted by the Chief Director.



**SCHEDULE 1:
CONDITIONS OF MAINTENANCE/SERVICE OF INSTALLED SOLAR
HYBRID PV PLANT INFRASTRUCTURE**

Chief Directorate: Physical Resources Management

N8 Gateway Office Park | c/o Rudolf Greyling Drive & AW Louw Avenue | Estoire | Bloemfontein | 9300

**SCHEDULE 2:
SCHEDULED MAINTENANCE/SERVICE VISITS TO FACILITIES WITH SOLAR
HYBRID PV PLANT INFRASTRUCTURE**

2. SCHEDULED SITE/INSPECTION VISITS

In terms of Clause 6, Schedule 1

The annual maintenance/service inspection visits shall include all seventy nine (79) facilities contemplated in Schedule 4

To be filled out by Tenderer:

YEAR 1	
Date of Scheduled Visit #1:	Date of Scheduled Visit #2:
Date of Scheduled Visit #3:	Date of Scheduled Visit #4:

YEAR 2	
Date of Scheduled Visit #1:	Date of Scheduled Visit #2:
Date of Scheduled Visit #3:	Date of Scheduled Visit #4:

YEAR 3	
Date of Scheduled Visit #1:	Date of Scheduled Visit #2:
Date of Scheduled Visit #3:	Date of Scheduled Visit #4:

**SOLAR HYBRID PV PLANT INFRASTRUCTURE
AT FARM HOSTEL AND SPECIAL SCHOOLS
POINTS IN THE FREE STATE**



education

Department of
Education
FREE STATE PROVINCE

**SCHEDULE 3:
SCHEDULE OF ANNUAL MAINTENANCE/SERVICE COSTS**

3. SCHEDULE OF FARM HOSTELS AND SPECIAL SCHOOLS POINTS

Levied against the Employer/Department

Bidders are reminded that the costs in the Tables below are for sole purpose of consolidation of costs vis-à-vis Table 1 of Schedule 1

The cost of the annual maintenance/service costs shall include all seventy nine (79) facilities contemplated in Schedule 4

To be filled out by Tenderer:

YEAR 1				
NAME OF FACILITY	CITY/TOWN	Site Visit (Operational)	Replacement (Budgetary)	TOTAL
Albert Moroka				
Bainsvlei				
Dr Blok				
Johan Calvyn & Hou Oop				
Leliehof				
Moroka High				
Unicom				
Kgotsofalo				
Sediti				
Sentraal Primary School				
Mariasdaal				
Heatherdale				



**SCHEDULE 3:
SCHEDULE OF ANNUAL MAINTENANCE/SERVICE COSTS**

Louw Wepener	MOTHEO	R	R	R
Hophouse				
Unicom primary				
Bartemea spec				
Bloefontein Autism school				
Bohmer S/S				
Boitumelong spec				
Jimmi Roos skool spec				
Ladybrand spec				
Lettie fouche spec				
Martie Du Plessis spec				
Pholoho school spec				
Qelo S/S				
Rosenhof S/S				
Tatello spec				
Willem Pretorius & Middleveldt				
Edenhof				
Olien				
Oranjekrag				

**SCHEDULE 3:
SCHEDULE OF ANNUAL MAINTENANCE/SERVICE COSTS**

Huis Diamant	XHARIEP	R	R	R
Oppermansgronde				
Pellissier				
Relebohile-Sibulele				
Rouxille				
Philippolis				
Koffiefontein				
Philippolis S/S				
Harmony	LEJWELEPUTSWA			
Wessel Maree				
Rietfontein				
Ventersburg				
Boshoff		R	R	R
Unitas				
HTS				
Amari skool pec				
Leboneng spec				
Nobilis skool spec				
Orion				
Dirkie Uys				
Marquard				
Mampoi				



**SCHEDULE 3:
SCHEDULE OF ANNUAL MAINTENANCE/SERVICE COSTS**

Majweng	THABO MOFUTSANYANE	R	R	R
Manthatsi				
Memel				
Paul Roux				
Seotlong				
Sekgutlong				
Tseki				
Lindley				
Tshiya				
Maluti Hooglandskool				
Qwaqwa Safe school spec				
Thiboloha spec	FEZILE DABI	R	R	R
Brentpark				
Huis Graniet/ Chris v Niekerk				
Sarel Cilliers				
Steyn & Stoffberg				
Steynsrus				
Edenville				
Tweeling				
Parys s/s				
Sentraal				
Sasolburg H/s				
Fakkelskool spec				



**SCHEDULE 3:
SCHEDULE OF ANNUAL MAINTENANCE/SERVICE COSTS**

Johan Slabbert spec				
Mphatlalatsane spec				
TOTAL OF YEAR 1 CARRIED TO SUMMARY OF ANNUAL FEES (YEAR 1 TO YEAR 3)				R

Chief Directorate: Physical Resources Management

N8 Gateway Office Park | c/o Rudolf Greyling Drive & AW Louw Avenue | Estoire | Bloemfontein | 9300



**SCHEDULE 3:
SCHEDULE OF ANNUAL MAINTENANCE/SERVICE COSTS**

	FEZILE DABI	R	R	R
TOTAL OF YEAR 1 CARRIED TO SUMMARY OF ANNUAL FEES (YEAR 1 TO YEAR 3)				R

Chief Directorate: Physical Resources Management

N8 Gateway Office Park | c/o Rudolf Greyling Drive & AW Louw Avenue | Estoire | Bloemfontein | 9300
Private Bag X20565 | Bloemfontein | 9300
Tel: (051) 404 9293 | Fax: 086-557-4789



**SCHEDULE 3:
SCHEDULE OF ANNUAL MAINTENANCE/SERVICE COSTS**

YEAR 2				
NAME OF FACILITY	CITY/TOWN	Site Visit (Operational)	Replacement (Budgetary)	TOTAL
Albert Moroka	MOTHEO	R	R	R
Bainsvlei				
Dr Blok				
Johan Calvyn & Hou Oop				
Leliehof				
Moroka High				
Unicom				
Kgotsofalo				
Sediti				
Sentraal Primary School				
Mariasdaal				
Heatherdale				
Louw Wepener				
Hophouse				
Unicom primary				
Bartemea spec				
Bloefontein Autism school				



**SCHEDULE 3:
SCHEDULE OF ANNUAL MAINTENANCE/SERVICE COSTS**

Bohmer S/S				
Boitumelong spec				
Jimmi Roos skool spec				
Ladybrand spec				
Lettie fouche spec				
Martie Du Plessis spec				
Pholoho school spec				
Qelo S/S				
Rosenhof S/S				
Tatello spec				
Willem Pretorius & Middleveldt	XHARIEP	R	R	R
Edenhof				
Olien				
Oranjekrag				
Huis Diamant				
Oppermansgronde				
Pellissier				
Relebohile-Sibulele				
Rouxille				
Philippolis				



**SCHEDULE 3:
SCHEDULE OF ANNUAL MAINTENANCE/SERVICE COSTS**

Koffiefontein				
Philippolis S/S				
Harmony				
Wessel Maree				
Rietfontein				
Ventersburg				
Boshoff	LEJWELEPUTSWA	R	R	R
Unitas				
HTS				
Amari skool pec				
Leboneng spec				
Nobilis skool spec				
Orion				
Dirkie Uys				
Marquard				
Mampoi				
Majweng	THABO MOFUTSANYANE	R	R	R
Manthatsi				
Memel				
Paul Roux				
Seotlong				
Sekgutlong				

**SCHEDULE 3:
SCHEDULE OF ANNUAL MAINTENANCE/SERVICE COSTS**

Tseki				
Lindley				
Tshiya				
Maluti Hooglandskool				
Qwaqwa Safe school spec				
Thiboloha spec				
Brentpark				
Huis Graniet/ Chris v Niekerk				
Sarel Cilliers				
Steyn & Stoffberg				
Steynsrus	FEZILE DABI	R	R	R
Edenville				
Tweeling				
Parys s/s				
Sentraal				
Sasolburg H/s				
Fakkelskool spec				
Johan Slabbert spec				
Mphatlalatsane spec				
TOTAL OF YEAR 2 CARRIED TO SUMMARY OF ANNUAL FEES (YEAR 1 TO YEAR 3)				R



**SCHEDULE 3:
SCHEDULE OF ANNUAL MAINTENANCE/SERVICE COSTS**

N8 Gateway Office Park | c/o Rudolf Greyling Drive & AW Louw Avenue | Estoire | Bloemfontein | 9300



**SCHEDULE 3:
SCHEDULE OF ANNUAL MAINTENANCE/SERVICE COSTS**

YEAR 3				
NAME OF FACILITY	CITY/TOWN	Site Visit (Operational)	Replacement (Budgetary)	TOTAL
Albert Moroka	MOTHEO	R	R	R
Bainsvlei				
Dr Blok				
Johan Calvyn & Hou Oop				
Leliehof				
Moroka High				
Unicom				
Kgotsofalo				
Sediti				
Sentraal Primary School				
Mariasdaal				
Heatherdale				
Louw Wepener				
Hophouse				
Unicom primary				
Bartemea spec				



**SCHEDULE 3:
SCHEDULE OF ANNUAL MAINTENANCE/SERVICE COSTS**

Bloefontein Autism school				
Bohmer S/S				
Boitumelong spec				
Jimmi Roos skool spec				
Ladybrand spec				
Lettie fouche spec				
Martie Du Plessis spec				
Pholoho school spec				
Qelo S/S				
Rosenhof S/S				
Tatello spec				
Willem Pretorius & Middleveldt	XHARIEP	R	R	R
Edenhof				
Olien				
Oranjekrag				
Huis Diamant				
Oppermansgronde				
Pellissier				
Relebohile-Sibulele				
Rouxille				



**SCHEDULE 3:
SCHEDULE OF ANNUAL MAINTENANCE/SERVICE COSTS**

Philippolis				
Koffiefontein				
Philippolis S/S				
Harmony				
Wessel Maree				
Rietfontein				
Ventersburg				
Boshoff	LEJWELEPUTSWA	R	R	R
Unitas				
HTS				
Amari skool pec				
Leboneng spec				
Nobilis skool spec				
Orion				
Dirkie Uys				
Marquard				
Mampoi				
Majweng				
Manthatsi				
Memel				
Paul Roux				
Seotlong				

**SCHEDULE 3:
SCHEDULE OF ANNUAL MAINTENANCE/SERVICE COSTS**

Sekgutlong	THABO MOFUTSANYANE	R	R	R
Tseki				
Lindley				
Tshiya				
Maluti Hooglandskool				
Qwaqwa Safe school spec				
Thiboloha spec				
Brentpark	FEZILE DABI	R	R	R
Huis Graniet/ Chris v Niekerk				
Sarel Cilliers				
Steyn & Stoffberg				
Steynsrus				
Edenville				
Tweeling				
Parys s/s				
Sentraal				
Sasolburg H/s				
Fakkelskool spec				
Johan Slabbert spec				
Mphatlalatsane spec				
TOTAL OF YEAR 3 CARRIED TO SUMMARY OF ANNUAL FEES (YEAR 1 TO YEAR 3)				R

Chief Directorate: Physical Resources Management

Private Bag X20565 | Bloemfontein | 9300
Tel: (051) 404 9293 | Fax: 086-557-4789

www.fsdoe.fs.gov.za



**SCHEDULE 3:
SCHEDULE OF ANNUAL MAINTENANCE/SERVICE COSTS**

N8 Gateway Office Park | c/o Rudolf Greyling Drive & AW Louw Avenue | Estoire | Bloemfontein | 9300

**SOLAR HYBRID PV PLANT INFRASTRUCTURE
AT FARM HOSTEL AND SPECIAL SCHOOLS
POINTS IN THE FREE STATE**



education

Department of
Education
FREE STATE PROVINCE



YEAR 1	R
YEAR 2	R
YEAR 3	R
TOTAL COST OF MAINTENANCE AND SERVICE	R

Chief Directorate: Physical Resources Management

N8 Gateway Office Park | c/o Rudolf Greyling Drive & AW Louw Avenue | Estoire | Bloemfontein | 9300

Private Bag X20565 | Bloemfontein | 9300

Tel: (051) 404 9293 | Fax: 086-557-4789



**SCHEDULE 4:
SCHEDULE OF FACILITIES: SOLAR HYBRID PV PLANT**

NAME OF FACILITY	CITY/TOWN	DISTRICT
Albert Moroka	Thaba Nchu	MOTHEO
Bainsvlei	Bloemfontein	
Dr Blok	Bloemfontein	
Johan Calvyn & Hou Oop	Excelsior	
Leliehof	Ladybrand	
Moroka High	Thaba Nchu	
Unicom	Tweespruit	
Kgotsofalo	Tierpoort	
Sediti	Thaba Nchu	
Sentraal Primary School	Bloemfontein	
Mariasdaal	Bloemfontein	
Heatherdale	Bloemfontein	
Louw Wepener	Wepener	
Hophouse		
Unicom primary	Tweespruit	
Bartemea spec	Thaba Nchu	
Bloefontein Autism school	Bloemfontein	



**SCHEDULE 4:
SCHEDULE OF FACILITIES: SOLAR HYBRID PV PLANT**

Bohmer S/S	Bloemfontein
Boitumelong spec	Thaba Nchu
Jimmi Roos skool spec	Dewesdorp
Ladybrand spec	Ladybrand
Lettie fouche spec	Bloemfontein
Martie Du Plessis spec	Bloemfontein
Pholoho school spec	Bloemfontein
Qelo S/S	Botshabelo
Rosenhof S/S	Bloemfontein
Tatello spec	Bloemfontein
Albert Moroka	Bloemfontein
Bainsvlei	Thaba Nchu
Willem Pretorius & Middleveldt	Petrusburg
Edenhof	Edenburg
Olien	Fauresmith
Oranjekrag	Gariiep Dam
Huis Diamant	Jagersfontein



**SCHEDULE 4:
SCHEDULE OF FACILITIES: SOLAR HYBRID PV PLANT**

Oppermansgronde	Oppermansgrond	XHARIEP
Pellissier	Bethulie	
Relebohile-Sibulele	Smithfield	
Rouxille	Rouxville	
Philippolis	Philipolis	
Koffiefontein	Koffiefontein	
Philippolis S/S	Philipolis	
Harmony	Virginia	LEJWELEPUTSWA
Wessel Maree	Odendaalsrus	
Rietfontein	Winburg	
Ventersburg	Ventersburg	
Boshoff	Boshof	
Unitas	Welkom	
HTS	Welkom	
Amari skool pec	Welkom	
Leboneng spec	Welkom	



**SCHEDULE 4:
SCHEDULE OF FACILITIES: SOLAR HYBRID PV PLANT**

Nobilis skool spec	Virginia	THABO MOFUTSANYANE
Orion	Welkom	
Dirkie Uys	Warden (New)	
Marquard	Marquard	
Mampoi	Phuthaditjhaba	
Majweng	Diyatalawa	
Manthatsi	Phuthaditjhaba	
Memel	Memel	
Paul Roux	Paul Roux	
Seotlong	Phuthaditjhaba	
Sekgutlong	Phuthaditjhaba	
Tseki	Phuthaditjhaba	
Lindley		
Tshiya	Phuthaditjhaba	
Maluti Hooglandskool spec	Bethlehem	
	Phuthaditjhaba	
Qwaqwa Safe school spec		
Thiboloha spec	Witsieshoek	
Brentpark	Kroonstad	



**SCHEDULE 4:
SCHEDULE OF FACILITIES: SOLAR HYBRID PV PLANT**

Huis Graniet/ Chris v Niekerk (school)	Vredefort	FEZILEDABI
Sarel Cilliers	Koppies	
Steyn & Stoffberg	Villiers	
Steynsrus	Steynsrus	
Edenville	Edenville	
Tweeling	Tweeling	
Parys s/s	Parys	
Sentraal	Kroonstad	
Sasolburg H/s	Sasolburg	
Fakkelskool spec	Sasolburg	
Johan Slabbert spec	Kroonstad	
Mphatlalatsane spec	Viljoenskroon	

Chief Directorate: Physical Resources Management

N8 Gateway Office Park | c/o Rudolf Greyling Drive & AW Louw Avenue | Estoire | Bloemfontein | 9300



**SCHEDULE 5:
PROVISION OF TRAINING FSDOE DESIGNATED PERSONNEL AS FIRST-LINE
SUPPORT: MAINTENANCE OF THE SOLAR HYBRID PLANT INFRASTRUCTURE**

1. GENERAL

- 1.1. Contractors are advised that this contract is for the provision of once-off upgrading and installation of solar hybrid PV Plant at the facilities contemplated in Schedule 4.
- 1.2. The contract is intended for the contractor to install, repair and maintain solar hybrid PV Plant systems and web based monitoring of the operation of the plant and security, but not operation of in-house monitoring and/or reaction/armed response service.
- 1.3. As such, selected personnel of the Free State Department of Education's Chief Directorate Physical Resource Management in each of the five (5) districts shall be responsible for the day-to-day maintenance of the property.
- 1.4. We invite bidders to further provide once-off handover training to the selected personnel contemplated in 1.3.

2. SCOPE OF TRAINING

2.1. The Service provider shall:

- 2.1.1. Train personnel on the correct usage and operation of solar hybrid PV Plant, security and associated software and hardware
- 2.1.2. Educate and provide practical training of personnel on troubleshooting and diagnostics protocols of the integrated solar hybrid PV Plant
- 2.1.3. Provide updated training books, reference material and other applicable training materials to designated personnel as frequently as possible to be up-to-date with system that may be applicable to associated software and hardware
- 2.1.4. Train personnel (theory and practice) on methods and on maintaining solar panel, hybrid inverter and the lithium battery.
- 2.1.5. Training on security zone safety (precautions and awareness)
- 2.1.6. Practical training on cleaning of the solar hybrid PV Plant
- 2.1.7. Training/Practice on programming, storing, recording and usage of systems
- 2.1.8. Provide a consolidated report on training to the Free State Department of Education's Chief Directorate of Physical Resource Management

Chief Directorate: Physical Resources Management

N8 Gateway Office Park | c/o Rudolf Greyling Drive & AW Louw Avenue | Estoire | Bloemfontein | 9300



**SCHEDULE 5:
PROVISION OF TRAINING FSDOE DESIGNATED PERSONNEL AS FIRST-LINE
SUPPORT: MAINTENANCE OF THE SOLAR HYBRID PLANT INFRASTRUCTURE**

3. DURATION OF TRAINING

- 3.1. The successful Bidder is required to provide training during maintenance period once a year at each district.
- 3.2. Training may be implemented any time during the year, except during June examinations, September exams and during final matric examinations.
- 3.3. Depending on the content matter to be covered, in line with the scope of training, training should not exceed one (1) working day at each District.



**SCHEDULE 5:
PROVISION OF TRAINING FSDOE DESIGNATED PERSONNEL AS FIRST-LINE
SUPPORT: MAINTENANCE OF THE SOLAR HYBRID PLANT INFRASTRUCTURE**

Chief Directorate: Physical Resources Management

N8 Gateway Office Park | c/o Rudolf Greyling Drive & AW Louw Avenue | Estoire | Bloemfontein | 9300



1. SCHEDULED TRAINING SESSIONS

In terms of Clause 3, Schedule 5

Bidders must provide proposed dates for scheduled training.

The proposed Dates shall be submitted to the relevant Physical Resource Management managers at each district to be included in their respective annual plans

In providing proposed dates, Bidders must be cognisant of Clauses 3.2 and 3.3 of Schedule 5

To be filled out by Tenderer:

YEAR 1	
DISTRICT	PROPOSED DATE OF SCHEDULED TRAINING SESSION
XHARIEP DISTRICT
MOTHEO DISTRICT
LEJWELEPUTSWA DISTRICT
THABO MOFUTSANYANE DISTRICT
FEZILE DABI DISTRICT



SCHEDULE 7: SCHEDULE: HANDOVER TRAINING

2. HANDOVER TRAINING

- 2.1. After commissioning bidders must conduct training sessions at one of the Centre's in each of the 5 districts. The selection of the Centre should be confirmed at least 4 weeks in advance from the dates contemplated in Schedule 6
- 2.2. Handover training shall be for no more than a one (1) working day (8 hours) at each district.
- 2.3. As this is a handover training bidders may not price for the cost of training 25 delegates (max. 5 persons per district). The training may also include the applicable Training Material, Equipment and Toolkits to be used in the training session.
- 2.4. The Department will be responsible for the venue/ accommodation and catering per the handover training.
- 2.5. When submitting report of Handover Training, the Service provider must include the following:
- 2.6. Attendance Register for the days that training took place per district.
- 2.7. The attendance Register must also indicate the Department's Officials that attended, Persal numbers being of key importance. A Template of the Attendance Register shall be made available to Bidders upon request at the required time.

Chief Directorate: Physical Resources Management

N8 Gateway Office Park | c/o Rudolf Greyling Drive & AW Louw Avenue | Estoire | Bloemfontein | 9300



**SCHEDULE 7:
SCHEDULE: HANDOVER TRAINING**

Chief Directorate: Physical Resources Management

N8 Gateway Office Park | c/o Rudolf Greyling Drive & AW Louw Avenue | Estoire | Bloemfontein | 9300