



RES4Africa Academy Technical and Vocational School
Micro-Grid Academy: Module 2 - DRE Site Selection and Engineering
23-27 October 2023

Day 1		23/10/2023	Site selection, demand assessment and load forecasting - Venue: SERC	Entities to be involved
Mins	Timeslot EAT	Lesson	Title	
30	9:00-9:30	INTRO 1	Introduction RE4Africa and Strathmore and course presentation	Strathmore SERC and Res4Africa
60	9:30-10:30	2.1.1	Micro Grid Site Selection	Strathmore SERC
10	10:30-10:40		Break	
60	10:40-11:40	2.1.2	Micro-grid pre-feasibility and feasibility studies, Site assessment and Demand forecasting	Res4Africa
60	11:40-12:40	2.2.1	Solar Irradiation	Strathmore SERC
60	12:40-01:40		Lunch	
40	01:40-02:20		Field visit	Strathmore SERC
30	02:20-02:50	WG	Introduction of Working Groups	Res4Africa and SERC
10	02:50-03:00		Closing session	Res4Africa
360	6.0			
Day 2		24/10/2023	Renewable mini-grid components (PV) - Venue: SERC	Entities to be involved
Mins	Timeslot EAT	Lesson	Title	
60	9:00-10:00	2.2.2	Types of PV systems	Strathmore SERC
10	10:00-10:10		Break	
90	10:10-11:40	2.2.3	PV cells modules and arrays	Strathmore SERC
60	11:40-12:40	2.2.4	PV array cables	Strathmore SERC
60	12:40-01:40		Lunch	
60	01:40-02:40	2.2.5	PV array combiner boxes, fuses and disconnect switches	Strathmore SERC
40	02:40-03:20	WG	Working Groups	Res4Africa and SERC
10	03:20-03:30		Closing session	Strathmore SERC
390	6.5			
Day 3		25/10/2023	Renewable mini-grid components (PV) - Venue: St. Kizito VTI	Entities to be involved
Mins	Timeslot EAT	Lesson	Title	
10	9:00-9:10	INTRO 2	Introduction St. Kizito	St. Kizito
60	9:10-10:10	2.2.10	Charge Controllers and MPPT's	St. Kizito
10	10:10-10:20		Break	
60	10:20-11:20	2.2.11	Inverters Overview	St. Kizito
60	11:20-12:20	2.2.12	Inverters and Inverter-Chargers for Off-Grid Systems (DC	St. Kizito
60	12:20-01:20		Lunch	
60	01:20-02:20	2.2.13	Inverters in AC Coupled Off-Grid System	St. Kizito
30	02:20-02:50	WG	Working Groups	Res4Africa
10	02:50-03:00		Closing session	Res4Africa
360	6.0			
Day 4		26/10/2023	Renewable mini-grid components (PV) - Venue: St. Kizito VTI	Entities to be involved
Mins	Timeslot EAT	Lesson	Title	
60	9:00-10:00	2.2.14	Fuel Generators	St. Kizito
10	10:00-10:10		Break	
60	10:10-11:10	2.2.15	Large PV Arrays Mounting Structures	St. Kizito
60	11:10-12:10	2.2.16	PV Module Mounting Structure and Exercise	St. Kizito
40	12:10-12:50	WG	Working Groups	Res4Africa
60	12:50-01:50		Lunch	
60	01:50-02:50		Field and lab activities	St. Kizito
10	02:50-03:00		Closing session	St. Kizito
360	6.0			
Day 5		27/10/2023	Renewable mini-grid components (PV) - Venue: SERC	Entities to be involved
Mins	Timeslot EAT	Lesson	Title	
90	9:00-10:30	2.2.6	Batteries – Technology	Strathmore SERC
10	10:30-10:40		Break	
60	10:40-11:40	2.2.7	Batteries - Configuration and Fuses	Strathmore SERC
60	11:40-12:40	2.2.8	Batteries - Installation Commissioning and Maintenance	Strathmore SERC
60	12:40-01:40		Lunch	
30	01:40-02:10	2.2.9	Batteries - In practice	Res4Africa
50	02:10-03:00	WG	Working Groups presentation	Res4Africa and SERC
30	03:00-03:30		Closing Ceremony	Strathmore SERC, Res4Africa, St. Kizito
390	6.5			