



Country Training Course 1

Capacity Building on Long-Term Energy Planning in the Republic of Sierra Leone

May 28 – June 8, 2018
Freetown, Sierra Leone

Objectives of the course: (1) completing the update of SPLAT-Sierra Leone model (2) finalize a reference scenario and (3) develop alternative scenarios for inclusion in the energy master plan.

AGENDA

The below agenda will be implemented flexibly according to the progress the team makes, and any additional needs that may arise during the course will be addressed as the course progresses.

DAY 1: MAY 28 MONDAY MORNING: MEETING WITH STEERING COMMITTEE (& WORKING TEAM)

09:30 – 09:45	Welcome remarks	Sierra Leone official
09:45 – 9:50	Participants self-introduction	All participants
09:50 – 10:20	Outline of the Programme and preview of the agenda (1)	Asami Miketa (IRENA)
10:20 – 10:40	Progress made since formal country request (March 2017)	Ministry of Energy
10:40 – 11:10	Energy planning – experience from Croatia (methodologies, process, purpose and use of national energy master plans) (2)	Mario Tot (IRENA/EIHP)
11:10 – 11:40	Presentation on scope/methodology/outcomes/applications of the System Planning Test model for Sierra Leone (SPLAT-SL) (3) <ul style="list-style-type: none"> • What does SPLAT do? • How is the model used? • How was the model built? 	Asami Miketa (IRENA)
11:40 – 12:30	Feedback from the Steering Committee	
12:30 – 13:30	Lunch break	

DAY 1: MAY 28 MONDAY AFTERNOON

13:30 - 14:00	Data sharing structure (4)	Asami Miketa (IRENA)
14:00 – 15:00	Theory behind solving a model (5) <ul style="list-style-type: none"> • Key concepts • Mathematics • Economics aspects • Technical aspects • Various constraints 	Mario Tot (IRENA/EIHP)
15:00 – 16:00	Hands on introduction to SPLAT model interface (13) <ul style="list-style-type: none"> - Running the SPLAT-SL and extracting the results - Execution of model run and the use of the data extraction template (excel) - Exercise: extracting the results 	Asami Miketa (IRENA); all participants

DAY 2: MAY 29 TUESDAY

9:30 – 10:00	Reference energy system – power sector (6)	Asami Miketa (IRENA)
10:00 - 11:00	Working session: SPLAT-SL model mapping exercise (7) <ul style="list-style-type: none"> • Instruction of the exercise • Exercise: map technology names in the SPLAT-SL on the RES drawing in the excel file 	Bassam Ben Ticha (IRENA/STEG); working team
11:00 - 11:30	Presentation of the Sierra Leone power system <ul style="list-style-type: none"> - 2010-2015 data - Projects under pipeline - Projects under consideration - Future policy directions 	Working team
11:30 - 12:30	Working session: Updating reference energy system – power sector <ul style="list-style-type: none"> • Update the excel datasheet reference energy system using the latest Sierra Leone data 	Bassam Ben Ticha (IRENA/STEG); working team
12:30 - 13:30	Lunch break	
13:30 - 14:15	Reference energy system – extending to non-power sector (8) <ul style="list-style-type: none"> • Residential and industrial thermal demand and transportation demand • Biomass supply and transformation 	Asami Miketa (IRENA)
14:15 - 14:45	Presentation of Sierra Leone energy balance table <ul style="list-style-type: none"> - Latest data - Fuel supply - Transformation 	Working team

	<ul style="list-style-type: none"> - Final energy demand by sector and by fuel - Future policy direction 	
14:45 - 16:00	Working session: Drawing SW RES <ul style="list-style-type: none"> • Updating the power sector RES with non-power sector information 	Mario Tot (IRENA/EIHP)

DAY 3: MAY 30 WEDNESDAY

9:30 – 10:00	Energy demand assessment (9) <ul style="list-style-type: none"> - Drivers for demand growth - Scenario approach - Top down/bottom up methodologies 	Bassam Ben Ticha (IRENA/STEG)
10:00 – 11:30	Review of demand projections <ul style="list-style-type: none"> - IRP from 2015 	All participants
11:30 – 12:30	Updating technologies in SPLAT-SL (10) <ul style="list-style-type: none"> - Instruction: Power generation data collection format; finding correspondence between data input template (excel) and SPLAT-SL technology tab (MESSAGE) - Discussion: review the data template (data collected by Sierra Leone team) 	Mario Tot (IRENA/EIHP)
12:30 – 13:30	Lunch break	
13:30 – 14:30	Work session: Updating technologies in SPLAT-SL (power sector) <ul style="list-style-type: none"> • Completing the RES in SPLAT-SL (adding new technologies and updating technology parameters) 	All participants (group work)
14:30 – 16:00	Work session: Finalizing technology updates in SPLAT-SL (power sector) <ul style="list-style-type: none"> • Consolidating the inputs • Identifying the data gaps 	Bassam Ben Ticha (IRENA/STEG); All participants

DAY 4: MAY 31 THURSDAY

9:30 – 10:30	Representing variability of an energy system (11) <ul style="list-style-type: none"> • Demand • Hydro • Solar • Wind 	Asami Miketa (IRENA)
10:30 – 11:30	Work session: Defining variability of an energy system in the SPLAT-SL <ul style="list-style-type: none"> • Discussion on hydro variability • Representing variability in SPLAT-SL 	Mario Tot (IRENA/EIHP)

11:30 - 12:30	Work session: Putting the variability in the SPLAT-SL <ul style="list-style-type: none"> Finalize the model 	IRENA, all participants
12:30 – 13:30	Lunch break	
13:30 – 15:00	Controlling technology deployment (12) <ul style="list-style-type: none"> Site specific projects vs. generic technologies Bounds on new capacity addition, on installed capacity, and on activity Exercises 	Mario Tot (IRENA/EIHP), all participants
15:00 – 16:00	Setting policy constraints (14) <ul style="list-style-type: none"> Basic mathematics RM CO₂ emissions RE targets Trade constraints 	Bassam Ben Ticha (IRENA/STEG), all participants

DAY 5: JUNE 1 FRIDAY

09:30 – 10:30	Setting policy constraints (recap)	All participants
10:30 – 13:00	Work session: Reviewing the reference case results <ul style="list-style-type: none"> Extract the results Analyze the results Improve the model 	All participants
13:00 – 14:00	Lunch break	
14:00 – 15:30	Reviewing the reference case results (<i>continued</i>)	All participants
15:30 – 16:00	Recap summary and wrap up of week 1	

DAY 6: JUNE 4 MONDAY

09:30 – 12:00	Calibration of the results to the historical data (15)	Bassam Ben Ticha (IRENA/STEG), all participants
12:00 – 12:30	Checking your input data (16) <ul style="list-style-type: none"> Use of excel template for checking the adb contents 	Mario Tot (IRENA/EIHP)
12:30 – 13:30	Lunch break	
13:30 – 14:30	Analysing seasonal and diurnal dispatch patterns using the interface (17)	Mario Tot (IRENA/EIHP), all participants
14:30 – 16:00	Reviewing the reference case scenario results	

DAY 7: JUNE 5 TUESDAY

09:30 – 11:00	Presentation/discussion on the improving the reference case	
11:00 – 12:30	Creating scenarios (18) <ul style="list-style-type: none">• What is a scenario approach? Different types of scenarios• Demonstration: How to create scenarios using the MESSAGE interface and the input data• Discussion: Possible ideas for scenarios to be featured in the Sierra Leone national energy master plan	Mario Tot (IRENA/EIHP), all participants
12:30 – 13:30	Lunch	
13:30 – 15:00	Creating scenarios – group work (4 groups) <ul style="list-style-type: none">• Develop scenarios and compare with reference case• Prepare presentations	All participants
15:00 – 16:00	Group discussion – results of scenario development	All participants

DAY 8: JUNE 6 WEDNESDAY

09:30 - 11:00	Updating the SPLAT model with non-power sector <ul style="list-style-type: none">- Key linkage between the power sector and non-power sector- Data gaps	All participants
11:00 - 12:30	Group discussion – scenarios to be featured in the national energy master plan	All participants
12:30 – 13:30	Lunch break	
13:30 – 14:00	Presentation format for the scenario results	All participants
14:00 – 16:00	Developing scenarios (in groups)	All participants

DAY 9: JUNE 7 THURSDAY

09:30 – 11:00	Preparation of the presentations (in groups)	All participants
11:00 – 13:00	Presentations of the results <ul style="list-style-type: none">- 10 minutes each for presentation (4 groups)- 30 minutes group discussion- 50 minutes finalization of the presentations	
13:00 – 14:00	Lunch break	
14:00 – 16:00	Way forward and respective timelines and responsibilities <ul style="list-style-type: none">- Analysis- Master plan drafting- Country training course 2	All participants

DAY 10: JUNE 8 FRIDAY MORNING: MEETING WITH STEERING COMMITTEE (& WORKING TEAM)

10:00 – 10:30	Summary of the training: reporting to the Steering Committee	Working team
10:30 – 11:40	Presentation of the key scenario results <ul style="list-style-type: none">- 10 minutes each for presentation (4 groups)- 30 minutes group discussion	Working team, Steering Committee, IRENA
11:40 – 12:10	Presentation of way forward and responsibilities <ul style="list-style-type: none">• Next Steps (deliverables and work plan) and responsibilities• Outline of the master plan	Sierra Leone
12:10 – 13:00	Comments and Discussion	Working team All participants