

**Energy Modelling Platform for Africa (EMP-A) 2019**  
**14 – 29 January 2019, University of Cape Town, Upper Campus**  
**(30 Jan. – 31 Jan. 2019, High Level meeting)**  
**Cape Town, South Africa**

**Training Sessions - Track B (OSeMOSYS)**

Monday January 14 - OSeMOSYS track intro day		
Time	Session Title	Speakers and Trainers
<b>Venue</b>	<b><i>Chemical Engineering Building, seminar room</i></b>	<b>Upper Campus</b>
<b>8:30 - 9:15</b>	<b><i>Registration</i></b>	
9:15 - 09:45	Welcoming and Opening of the Energy Modelling Platform for Africa 2019	University of Cape Town
09:45 – 10:15	Energy modelling activities at KTH	Mark Howells
<b>10:15 - 10:45</b>	<b><i>Coffee break (30 min)</i></b>	
<b>Venue</b>	<b><i>Menzies Building, room Menzies 13</i></b>	<b>Upper Campus</b>
10:45 – 11:00	Introduction and objectives of the Training	Agnese Beltramo
10:30 - 12:00	Introduction by the participants: short presentation about their background of experiences, the situation of their countries and expectations of their learning outcomes.	-
<b>12:00 - 13:30</b>	<b><i>Lunch Break (1h30)</i></b>	
<b>Venue</b>	<b><i>Menzies Building, room Menzies 13</i></b>	<b>Upper Campus</b>
13:30 - 14:15	Intro to Energy Systems Analysis	Mark Howells
14:45 - 15:15	Introduction to linear optimization, OSeMOSYS and MoManI	Agnese Beltramo, Hauke Henke

<b>15:15 - 15:45</b>	<b>Coffee break (30 min)</b>	
15:45 - 17:00	Work session: Installation of MoManI and other questions	Agnese Beltramo, Hauke Henke
<b>18:00</b>	<b>Welcome event</b>	

Tuesday January 15 Venue: Menzies Building, room Menzies 13 (Upper Campus)		
Time	Session Title	KTH Trainers
<b>8:30 - 9:00</b>	<b>Welcoming</b>	
09:00 - 9:45	Designing a representative Reference Energy System	Agnese Beltramo
9:45 - 10:15	Time representation in OSeMOSYS	Hauke Henke
<b>10:15 - 10:45</b>	<b>Coffee break (30 min)</b>	
10:45 - 12:00	Hands on session: time representation in OSeMOSYS	Agnese Beltramo, Hauke Henke
<b>12:00 - 13:30</b>	<b>Lunch Break (1h30)</b>	
13:30 - 15:15	Work session: Drawing a Reference Energy System of your Country	Agnese Beltramo, Hauke Henke
<b>15:15 - 15:45</b>	<b>Coffee break (30 min)</b>	
15:45 - 17:00	Work session: Time representation for your country model	Agnese Beltramo, Hauke Henke
<b>17:00</b>	<b>End of activities</b>	

Wednesday January 16		
Venue: <i>Menzies Building, room Menzies 13 (Upper Campus)</i>		
Time	Session Title	KTH Trainers
8:30 - 9:00	<b>Welcoming</b>	
9:00 - 9:30	Defining energy demands in OSeMOSYS	Agnese Beltramo
9:30 - 10:15	Hands on session: Defining energy demands in OSeMOSYS	Agnese Beltramo, Hauke Henke
10:15 - 10:45	<b>Coffee break (30 min)</b>	
10:45 - 11:20	Representing primary energy supply in OSeMOSYS	Hauke Henke
11:20 - 12:00	Hands on session: Defining primary energy supply in OSeMOSYS	Agnese Beltramo, Hauke Henke
12:00 - 13:30	<b>Lunch Break (1h30)</b>	
13:30 -15:15	<i>Work session: Defining energy demands for your country model</i>	Agnese Beltramo, Hauke Henke
15:15 - 15:45	<b>Coffee break (30 min)</b>	
15:45 - 17:00	<i>Work session: Representing primary energy supply in your country model</i>	Agnese Beltramo, Hauke Henke
17:00	<b>End of activities</b>	

Thursday January 17		
Venue: <i>Menzies Building, room Menzies 13 (Upper Campus)</i>		
Time	Session Title	KTH Trainers
8:30 - 9:00	<b>Welcoming</b>	
9:00 - 9:45	Electricity supply system in OSeMOSYS part 1 (Thermal power plants & T&D)	Agnese Beltramo
9:45 - 10:15	Hands on session: Defining the electricity supply in OSeMOSYS (part 1)	Agnese Beltramo, Hauke Henke
10:15 - 10:45	<b>Coffee break (30 min)</b>	
10:45 - 12:00	Global <a href="#">Solar</a> and <a href="#">Wind</a> Atlas, developed by The World Bank	Andreas Sahlberg, Babak Khavari
12:00 - 13:30	<b>Lunch Break (1h30)</b>	
13:30 - 15:15	<i>Work session: Developing your country model</i>	Agnese Beltramo, Hauke Henke
15:15 - 15:45	<b>Coffee break (30 min)</b>	
15:45 - 17:00	<i>Work session: Developing your country model</i>	Agnese Beltramo, Hauke Henke
17:00	<b>End of activities</b>	

Friday January 18

Venue: *Menzies Building, room Menzies 13 (Upper Campus)*

Time	Session Title	KTH Trainers
<b>§8:30 - 9:00</b>	<b><i>Welcoming</i></b>	
9:00 - 9:30	Electricity supply system in OSeMOSYS part 2 (Hydropower and Storage options)	Hauke Henke
9:30 - 10:15	Hands on session: Defining the electricity supply in OSeMOSYS (part 2)	Agnese Beltramo, Hauke Henke
<b>10.15 - 10:45</b>	<b><i>Coffee break (30 min)</i></b>	
10:45 – 11:15	Electricity supply system in OSeMOSYS part 3 (Wind and solar)	Hauke Henke
11:15 - 12:00	Hands on session: Defining the electricity supply in OSeMOSYS (part 3)	Agnese Beltramo, Hauke Henke
<b>12:00 - 13:30</b>	<b><i>Lunch Break (1h30)</i></b>	
13:30 - 15:15	<i>Work session: Developing your country model</i>	Agnese Beltramo, Hauke Henke
<b>15:15 - 15:45</b>	<b><i>Coffee break (30 min)</i></b>	
15:45 - 17:00	<i>Work session: Developing your country model</i>	Agnese Beltramo, Hauke Henke
<b>17:00</b>	<b><i>End of activities</i></b>	

Monday January 21

Venue: *Snape Building, room TS 4C (Upper Campus)*

Time	Session Title	KTH Trainers
<b>8:30 - 9:00</b>	<b><i>Welcoming</i></b>	
9:00 - 9:30	Emissions representation in OSeMOSYS	Agnese Beltramo
9:30 - 10:15	Hands on session: Emissions representation in OSeMOSYS	Agnese Beltramo, Hauke Henke
<b>10.15 - 10:45</b>	<b><i>Coffee break (30 min)</i></b>	
10:45 - 11:15	Implementing capacity reserve in OSeMOSYS	Hauke Henke
11:15 - 12:00	Hands on session: implementing capacity reserve in OSeMOSYS	Agnese Beltramo, Hauke Henke
<b>12:00 - 13:30</b>	<b><i>Lunch Break (1h30)</i></b>	
13:30 - 15:15	<i>Work session: Developing your country model</i>	Agnese Beltramo, Hauke Henke
<b>15:15 - 15:45</b>	<b><i>Coffee break (30 min)</i></b>	
15:45 - 17:00	<i>Work session: Developing your country model</i>	Age Beltramo, Hauke Henke
<b>17:00</b>	<b><i>End of activities</i></b>	

Tuesday January 22		
Venue: <i>Snape Building, room TS 4C (Upper Campus)</i>		
Time	Session Title	KTH Trainers
8:30 - 9:00	<i>Welcoming</i>	
9:00 - 9:30	Defining scenarios and implementation in OSeMOSYS	Agnese Beltramo
9:30 - 10:15	Hands on session: Defining scenarios and implementation in OSeMOSYS	Agnese Beltramo, Hauke Henke
10:15 - 10:45	<i>Coffee break (30 min)</i>	
10:45 – 12:00	<i>Work session: Developing your country model</i>	Agnese Beltramo, Hauke Henke
12:00 - 13:30	<i>Lunch Break (1h30)</i>	
13:30 -15:15	<i>Work session: Developing your country model</i>	Agnese Beltramo, Hauke Henke
15:15 - 15:45	<i>Coffee break (30 min)</i>	
15:45 - 17:00	<i>Work session: Developing your country model</i>	Agnese Beltramo, Hauke Henke
17:00	<i>End of activities</i>	



**Wednesday January 23 - Introduction to Climate, Land-use, Energy, Water synergies (CLEWs)**  
**Venue: Snape Building, room TS 4C (Upper Campus)**

<b>Time</b>	<b>Session Title</b>	<b>KTH Trainers</b>
<b>8:30 - 9:00</b>	<b><i>Welcoming</i></b>	
9:00 - 10:15	Building Elements of Climate, Land-use, Energy and Water strategies (CLEWs) in OSeMOSYS: Introduction to water and land systems	Agnese Beltramo
<b>10.15 - 10:45</b>	<b><i>Coffee break (30 min)</i></b>	
10:45 - 12:00	Building Elements of Climate, Land-use, Energy and Water strategies (CLEWs) in OSeMOSYS: Introduction to water and land systems	Agnese Beltramo, Hauke Henke
<b>12:00 - 13:30</b>	<b><i>Lunch Break (1h30)</i></b>	
13:30 - 15:15	<i>Work session: Developing your country model</i>	Agnese Beltramo, Hauke Henke
<b>15:15 - 15:45</b>	<b><i>Coffee break (30 min)</i></b>	
15:45 - 16:45	<i>Work session: Developing your country model</i>	Agnese Beltramo, Hauke Henke
16:45 - 17:00	Wrap-up and next steps for the following activities	Agnese Beltramo, Hauke Henke
<b>17:00</b>	<b><i>End of activities</i></b>	



Thursday January 24

Venue: *Snape Building, room TS 4C (Upper Campus)*

Time	Session Title	KTH Trainers
<b>8:30 - 9:00</b>	<b><i>Welcoming</i></b>	
9:00 - 10:15	<i>Work session: Developing your country model</i>	Agnese Beltramo, Hauke Henke
<b>10:15 - 10:45</b>	<b><i>Coffee break (30 min)</i></b>	
10:45 - 12:00	<i>Work session: Developing your country model</i>	Agnese Beltramo, Hauke Henke
<b>12:00 - 13:30</b>	<b><i>Lunch Break (1h30)</i></b>	
13:30 - 15:15	<i>Work session: Developing your country model</i>	Agnese Beltramo, Hauke Henke
<b>15:15 - 15:45</b>	<b><i>Coffee break (30 min)</i></b>	
15:45 - 17:00	<i>Work session: Developing your country model</i>	Agnese Beltramo, Hauke Henke
<b>17:00</b>	<b><i>End of activities</i></b>	

**Friday January 25 - Preparation of the final presentations**  
**Venue: Snape Building, room TS 4C (Upper Campus)**

<b>Time</b>	<b>Session Title</b>	<b>KTH Trainers</b>
<b>8:30 - 9:00</b>	<b><i>Welcoming</i></b>	
9:00 - 10:15	<i>Work session: Developing your country model</i>	Agnese Beltramo, Hauke Henke
<b>10.15 - 10:45</b>	<b><i>Coffee break (30 min)</i></b>	
10:45 - 12:00	<i>Work session: Developing your country model</i>	Agnese Beltramo, Hauke Henke
<b>12:00 - 13:30</b>	<b><i>Lunch Break (1h30)</i></b>	
13:30 -15:15	<i>Work session: Preparation of the final PowerPoint presentations</i>	Agnese Beltramo, Hauke Henke
<b>15:15 - 15:45</b>	<b><i>Coffee break (30 min)</i></b>	
15:45 - 17:00	<i>Work session: Preparation of the final PowerPoint presentations</i>	Agnese Beltramo, Hauke Henke
<b>17:00</b>	<b><i>End of activities</i></b>	

Monday January 28 – Final presentations Venue: <i>Snape Building, room TS 4C (Upper Campus)</i>		
Time	Session Title	KTH Trainers
8:30 - 9:00	<i>Welcoming</i>	
9:00 - 10:15	Presentation by participants	Agnese Beltramo, Hauke Henke
10:15 - 10:45	<i>Coffee break (30 min)</i>	
10:45 - 12:00	Presentation by participants	Agnese Beltramo, Hauke Henke
12:00 - 13:30	<i>Lunch Break (1h30)</i>	
13:30 - 15:15	Presentation by participants	Agnese Beltramo, Hauke Henke
15:15 - 15:45	<i>Coffee break (30 min)</i>	
15:45 - 17:00	Feedback session and final remarks on the training activities, the OSeMOSYS model and its applications	Agnese Beltramo, Hauke Henke
17:00	<i>End of activities</i>	



Tuesday January 29		
Venue: <i>Snape Building, room TS 4C (Upper Campus)</i>		
Time	Session Title	Invited Speakers
8:30 - 9:00	<i>Welcoming</i>	
9:00 - 10:15	<i>To be confirmed</i>	World Bank Group
10:15 - 10:45	<i>Coffee break (30 min)</i>	
10:45 - 12:00	<i>To be confirmed</i>	World Bank Group
12:00 - 13:30	<i>Lunch Break (1h30)</i>	
13:30 -15:15	<i>To be confirmed</i>	Politecnico of Milano (Italy)
15:15 - 15:45	<i>Coffee break (30 min)</i>	
15:45 - 17:00	<i>To be confirmed</i>	Fondazione Eni Enrico Mattei (FEEM)
17:00	<i>End of activities</i>	