

EMP-Africa 2018

First Energy Modelling Platform for Africa

29 – 30 January 2018, Addis Ababa (31 January – 2 February 2018, Training Sessions)
Conference Room 5, United Nations Conference Centre, Economic Commission for Africa
Addis Ababa, Ethiopia

Final programme

| MONDAY 29 TH JANUARY 2018 - OUTLOOKS | | |
|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| 08:00 – 09:00 | Registration (Gate 2, ECA Compound) | |
| OPENING PLENARY (09:00 – 10:30) | | |
| Moderator: | Dr James Murombedzi Officer-in-Charge, African Climate Policy Centre, ECA | |
| 09:00 – 09:10 | Welcome and opening remarks | Dr Fatima Denton Director, Special Initiatives Division, ECA |
| 09:10 – 09:40 | Remarks <ul style="list-style-type: none"> • Jacques Moulot, African Development Bank • Mark Howells, KTH • Dennis Konadu, Cambridge University • Christopher James Arderne, World Bank ESMAP • Asami Miketa, IRENA • Hannah Daly, IEA | |
| 09:40 – 10:00 | Setting the scene: <ul style="list-style-type: none"> • Linus Mofor Senior Environmental Affairs Officer (Energy, Infrastructure and Climate Change), African Climate Policy Centre, ECA • Mark Howells Director and Professor, division of Energy Systems Analysis, Royal Institute of Technology, Sweden (KTH-dESA) | |
| 10:00 – 10:10 | Introducing the Roundtable on Strategic Energy Planning | William Blyth Senior Research Fellow (Energy), DFID |
| 10:10 – 10:20 | Introducing the ICTPC Summer School on Modelling Tools for Sustainable Development | Mark Howells (KTH)/Dennis Konadu (Cambridge) |
| 10:20 – 10:30 | Presentation and launch of the ECA/IDEP Modular Programme for Capacity Development in Energy Demand and Supply Planning and Management in Africa | Dr Karima Bounemra Ben Soltane , Director IDEP (Presented by Monga Mehlwana and Yohannes Hailu, ECA) |
| 10:30 – 11:00 | <i>Coffee break</i> | |

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|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| 11:00 – 13:00 | Plenary: Examples of how partners are supporting member States with energy modelling and planning (max 10 mins each) <ul style="list-style-type: none"> • ECA • AfDB • KTH • World Bank • IRENA • IEA • IAEA <p>Discussion</p> | Linus Mofor |
| 13:00 – 14:00 | <i>Lunch break</i> | |
| 14:00 – 15:30 | Investment outlooks | |
| 14:00 - 14:15 | AfDB investment outlook | Jacques Moulot, AfDB |
| 14:15 – 14:30 | World Energy Outlook | Hannah Daly, IEA |
| 14:30 – 14:45 | Regional African Outlook | Nadia S. Ouedraogo, ECA (TBC) |
| 14:45 – 15:00 | REmap Africa - planning and prospects for renewable energy | Asami Miketa, IRENA |
| 15:00 – 15:15 | South and East Africa – The clean energy corridor: planning and prospects for renewable energy | Nawfal Saadi, IRENA |
| 15:15 – 15:30 | Southern Africa: planning and prospects for renewable energy | Bruno Merven, University of Cape Town (UCT) |
| 15:30 – 16:00 | <i>Coffee break</i> | |
| 16:00 – 17:45 | Investment outlooks (continued) | |
| 16:00 – 16:15 | Zambia – An Energy Outlook from the South | Bernard Tembo, UCL |
| 16:15 – 16:30 | All African Continental Countries. An energy Outlook from TEMBA – The Electricity Model Base for Africa | Constantinos Taliotis, KTH |
| 16:30 – 16:45 | Tunisia – An Energy Outlook from the North | Asma Dhakouani, Université de Tunis El Manar |
| 16:45 – 17:00 | Kenya – An Energy Outlook from the East | Boniface Kinyanjui, Kenya Power |
| 17:00 – 17:15 | Mauritius – An Energy Outlook from an Island | Dinesh Surroop, University of Mauritius |
| 17:15 – 17:30 | An electrification outlook for Africa | Alexander Korkovelos, KTH |
| 17:30 | <i>Wrap up of Day 1</i> | |

| TUESDAY 30TH JANUARY 2018 – MODELS | | |
|------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 09:00 – 10:30 | Energy Modelling in Africa | |
| 09:00 – 09:15 | The role of models | Dennis Konadu |
| 09:15 – 09:35 | The model-policy interface | Holger Rogner, IIASA |
| 09:35 – 09:55 | Modelling with The World Energy Model | Hannah Daly, IEA |
| 09:55 – 10:15 | IRENA's all African country models and capacity building | Asami Miketa, IRENA |
| 10:15 – 10:30 | World Bank's Africa electrification planning and capacity building | Christopher Arderne, WB |
| 10:30 – 11:00 | <i>Coffee break</i> | |
| 11:00 – 13:00 | The Need for Energy Models and Capacity Building | |
| 11:00 – 11:15 | Selected country needs: Ethiopia | Participant (TBC), Ministry of Water, Irrigation and Electricity. |
| 11:15 – 11:30 | Selected country needs: Tunisia | Asma Dhakouani, Université de Tunis El Manar |
| 11:30 – 11:45 | Selected country needs: South Africa | Bryce McCall, University of Cape Town (UCT) |
| 11:45 – 12:00 | Selected country needs: Swaziland | Nolwazi Khumalo, Government of Swaziland |
| 12:00 – 12:15 | Selected country needs: Madagascar | Participant (TBC), Ministry of Energy and Hydrocarbons |
| 12:15 – 12:30 | Selected country needs: Sierra Leone | Robin Fola Mansaray, Government of Sierra Leone |
| 12:30 – 12:45 | Selected country needs: Cameroon | Ernest Molua, University of Buea |
| 12:45 – 13:00 | Selected needs: Africa | Linus Mofor, ECA |
| 13:00 – 14:15 | <i>Lunch break</i> | |
| 14:15 – 15:30 | Electrification modelling in Africa | |
| 14:15 – 14:30 | Modelling access using OnSSET | Alexandros Korkovelos, KTH |
| 14:30 – 14:45 | Modelling hybrid mini-grids using TEMPO | Gregory Ireland, UCT |
| 14:45 – 15:00 | Modelling activities at CSIR | Mamahloko Senatla, CSIR |
| 15:00 – 15:15 | Modelling with the RLI electrification tool | Philipp Blechinger, RLI |
| 15:15 – 15:30 | Modelling with Network Planner | Edwin Adkins, Columbia University (TBC) |
| 15:30 – 16:00 | <i>Coffee break</i> | |
| 16:00 – 17:30 | Capacity building with medium to long term systems models | |
| 16:00 – 16:15 | TIMES. The Integrated MARKAL EFOM model of ETSAP | Edi Assoumou, MINES Paris Tech |
| 16:15 – 16:30 | RETSscreen | Kevin Bourque, Natural Resources Canada |
| 16:30 – 16:45 | The MAED and MESSAGE Software | Manuel Welsch, IAEA |
| 16:45 – 17:00 | Long Range Energy Alternatives Planning (LEAP) Software | Charlie Heaps, SEI |
| 17:00 – 17:15 | Africa LEDS project and other NREL activities | Tim Reber, NREL |
| 17:15 – 18:00 | <ul style="list-style-type: none"> • Closing statements and next steps • Signing the EMP-Africa Partnership Framework | |
| 19:30 | <i>Cultural Reception by ECA (venue to be confirmed on the day)</i> | |

Training Sessions - Track A (OnSSET)

| WEDNESDAY 31 ST JANUARY 2018 | | |
|-----------------------------------------|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 08:30 – 09:00 | Registration of the participants | |
| 09:00 – 09:05 | Welcome remarks – Objective of the workshop - Outline | Mark Howells, KTH |
| 09:05 – 09:30 | Energy Access for All: An energy modelling approach | Alexandros Korkovelos, KTH |
| 09:30 – 10:30 | The role of GIS in electrification planning An overview of OnSSET | Alexandros Korkovelos, KTH Andre Nonguierma, ECA |
| 10:30 – 10:45 | <i>Coffee break</i> | |
| 10:45 – 11:30 | Introduction to basic GIS concepts Data types, format, environment and projections | Alexandros Korkovelos, KTH Ayenika Godheart Mbiyzenyuy, ECA |
| 11:30 – 13:00 | a. Data acquisition, creation and processing Hands on exercise - Part 1 | Alexandros Korkovelos, KTH |
| 13:00 – 14:00 | <i>Lunch break</i> | |
| 14:00 – 14:45 | b. Data acquisition, creation and processing Hands on exercise - Part 2 | Alexandros Korkovelos, KTH |
| 14:45 – 15:00 | c. Introduction to python in GIS | Alexandros Korkovelos, KTH |
| 15:00 – 15:15 | <i>Coffee break</i> | |
| 15:15 – 16:55 | OnSSET database preparation | Alexandros Korkovelos, KTH |
| 16:55 – 17:00 | Wrap-up and plan of the 2 nd day | Alexandros Korkovelos, KTH |

Training Sessions - Track A (OnSSET)

| THURSDAY 1 ST FEBRUARY 2018 | | |
|----------------------------------------|--------------------------------------------------------------------------------|----------------------------|
| 09:00 – 09:10 | Working with OnSSET Brief description | Alexandros Korkovelos, KTH |
| 09:10 – 09:15 | The online interface of OnSSET | Alexandros Korkovelos, KTH |
| 09:15 – 09:45 | a. Software installation Code download | Alexandros Korkovelos, KTH |
| 09:45 – 10:30 | b. The model and Input data Sources, acquisition, insertion into the model | Alexandros Korkovelos, KTH |
| 10:30 – 10:45 | <i>Coffee break</i> | |
| 10:45 – 11:30 | c. Scenario development Sensitivity analysis | Alexandros Korkovelos, KTH |
| 11:30 – 12:30 | d. Electrification analysis Result visualization, interpretation and sharing | Alexandros Korkovelos, KTH |
| 12:30 – 12:45 | e. How to get help & assistance for OnSSET | Alexandros Korkovelos, KTH |
| 12:45 – 13:00 | a. A quick demo of the stand-alone version of OnSSET | Alexandros Korkovelos, KTH |
| 13:00 – 14:00 | <i>Lunch break</i> | |
| 14:00 – 15:00 | Hands on experience with the electrification model (OnSSET) - Part 1 | Alexandros Korkovelos, KTH |
| 15:30 – 15:45 | <i>Coffee break</i> | |
| 15:45 – 16:55 | Hands on experience with the electrification model (OnSSET) - Part 2 | Alexandros Korkovelos, KTH |
| 16:55 – 17:00 | Wrap-up and plan of the 3 ^d day | Alexandros Korkovelos, KTH |

Training Sessions - Track B (OSeMOSYS)

| WEDNESDAY 31ST JANUARY 2018 | | |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| 09:00 – 10:30 | Introduction to energy systems modelling and OSeMOSYS | KTH (person tbc) |
| 10:30 – 11:00 | <i>Coffee break</i> | |
| 11:00 – 12:00 | Linear programming using GNU Mathprog and simple energy systems example | |
| 12:00 – 12:30 | Introduction to MOMANI (OSeMOSYS interface) | |
| 12:30 – 13:00 | ATLANTIS – a national example in MOMANI | |
| 13:00 – 14:00 | <i>Lunch break</i> | |
| 14:00 – 15:30 | ATLANTIS – a national example in MOMANI (continuation): <ul style="list-style-type: none"> • Scenario assessments (energy efficiency, high fuel prices, new technologies etc) • Running and interpreting results | |
| 15:30 – 15:45 | <i>Coffee break</i> | |
| 15:45 – 17:00 | TEMBA The Electricity Model Base for Africa: structure, assumptions and future enhancements | |
| 17:00 – 17:30 | <i>Questions and Wrap up</i> | |

| THURSDAY 1ST FEBRUARY 2018 | | |
|----------------------------------------------|-----------------------------------------------------------------------|--|
| 09:00 – 11:00 | Hands on experience with a national model (drawn from TEMBA) - Part 1 | |
| 11:00 – 11:30 | <i>Coffee break</i> | |
| 11:30 – 13:00 | Hands on experience with a national model (drawn from TEMBA) - Part 2 | |
| 13:00 – 14:00 | <i>Lunch break</i> | |
| 14:00 – 15:30 | Hands on experience with a national model (drawn from TEMBA) - Part 3 | |
| 15:30 – 15:45 | <i>Coffee break</i> | |
| 15:45 – 16:45 | Results interpretation and visualization | |
| 16:45 – 17:15 | Recap of the OSeMOSYS training session | |
| 17:15 – 17:30 | <i>Wrap up</i> | |

National level presentations based on developed models (All)

| FRIDAY 2 ND FEBRUARY 2018 | | |
|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 09:00 – 09:15 | Introduction and objectives for day's presentations | |
| 09:15 – 11:00 | OnSSET/OSeMOSYS country presentations | |
| 11:00 – 11:30 | <i>Coffee break</i> | |
| 11:30 – 13:00 | OnSSET/OSeMOSYS country presentations | |
| 13:00 – 14:00 | <i>Lunch break</i> | |
| 14:00 – 15:30 | OnSSET/OSeMOSYS country presentations | |
| 15:30 – 15:45 | <i>Coffee break</i> | |
| 15:45 – 16:45 | OnSSET/OSeMOSYS country presentations | |
| 16:45 – 17:15 | Discussion on way forward in regards to EMP-A <ul style="list-style-type: none"> • Country objectives • Necessity for capacity building | |
| 17:15 – 17:30 | <i>Wrap up of workshop</i> | |