

The Electricity Model Base for Africa (TEMBA)

18.00 – 19.30 Salle 2

Hosted by: United Nations Economic Commission for Africa (UNECA), Royal Institute of Technology (KTH)

Moderator: Vivien Foster, World Bank Group

Speakers include: Mark Howells, KTH, Ernst Scholtz, ABB, Sonwabo Damba, Eskom, Linus Mofor, UNECA

A secure supply of reliable energy services at affordable prices is essential to promote economic development. Sub-Saharan Africa is home to 13% of the world's population, of which 37% live in urban communities and yet just 32.5% have access to electricity. Even within this region there is a great disparity between countries. At the same time, Africa is an energy resource-rich continent - both renewable energy sources and fossil fuels. However, the vast majority of this potential remains unexploited due, in part, to the underdeveloped power generation system and grid network. Transformative investments are needed to unlock this paradox. However, as yet, no open and transparent continent-wide investment outlook with a country-level resolution is available to energy analysts.

This side event discusses the urgent need for such a toolkit – for investors, practitioners, and technology developers – and presents The Electricity Model Base for Africa (TEMBA), a world-first attempt at modelling the electricity supply systems of forty-seven countries individually, linked together via trade links. A scenario comparison of the an evolving generation mix in each African country up to 2040 shows that an enhanced grid network can alter Africa's overall generation mix and result in a reduced electricity generation cost. These insights have important investment, trade and policy implications.