Integrating
Sustainable Development Goals
Into Energy Systems Modelling

IEA-ETSAP supports the Sustainable Development Goals

As defined by the United Nations, the sustainable development goals represent the "blueprint for achieving a better and more sustainable future for all". Interlinkages between sustainable development goals, energy, and climate, call for holistic approaches in their assessment.

The ETSAP community has performed several model developments and knowledge exchanges regarding the integrated assessment of the economic and energy systems in view of sustainable development. The aim is to expand the boundaries of energy modelling and incorporate new systemic interdependencies in a broader sense and contribute to a more holistic understanding of future development pathways

In this context, three workshops are organized that address different sustainable development goals and their interaction with the energy system.

The main objectives of the three workshops are:
- To analyze methodologies for integrating sustainable development goals into energy systems modelling
- To assess required associated data
- To provide insights on the value-added gained for policy analysis
- To get insights on state-of-the-art synergies and tradeoffs between SDG's and energy transition – robust evidence and research ideas

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January 13th 2022, 16:00 – 18:30 CET
Resilience and sustainability of power systems with high shares of renewables

The provision of reliable, secure and affordable electricity is essential to power economic growth and development. The drop in the cost of renewable technologies makes them an increasingly viable option. Moving towards a weather-dependent electricity generation raises resilience issues against supply disruptions, while backup storage systems depend on critical supplies of rare-earth materials.

This webinar aims to give a better understanding of how resilience can be achieved in future power systems with high shares of renewables to ensure affordable and sustainable electricity supply while at the same time mitigating criticalities in supply chains of materials. Three of the top modelling teams share insights on methodologies and data about integrating resilience and sustainability indicators of renewable energy technologies into energy systems models.

Speakers:

Kirsten HALSNÆS; DTU, IPCC Coordinating Lead Author: State of the art on synergies and tradeoffs between SDG's and renewable energy implementation – robust evidence and research ideas

Vincent MAZAURIC; Schneider Electric: Reconciling reliability and sustainability: some thermodynamics insights dedicated to the integration of renewables in the power system

Gondia Sokhna SECK; IFPEN: Raw materials with a high share of low-carbon energy technologies for the energy transition

Moderator:
Nadia Maïzi, Mines Paris - PSL

Registration link to this webinar:
https://psich.zoom.us/meeting/register/u5wscOmhqzliHt20105L_jx1PQ_WPfAcu1aF

(please register separately for each webinar using its link above)

January 20th 2022, 16:00-18:30 CET
Energy and land-use nexus

Land use is central to many environmental and socio-economic issues. The twin challenge of reversing biodiversity declines and mitigating climate change, while producing sufficient food to ensure zero hunger and providing new land areas for renewable energies, must be tackled together. While a transition towards cleaner, less emission-intensive energy systems has been the focus to date, the role of agriculture in generating GHG emissions is becoming increasingly clear. Further, negative emission technologies or land use types which accumulate carbon are getting more in the focus with the climate neutrality targets and will be even more important in the future.

This webinar aims at providing a deeper understanding of the role of land-use change to reduce GHG emissions while contributing to other strategic priorities such as food production and biodiversity. It brings three top modelling teams to share insights on methodologies and data about integrating energy and land systems, to identify suitable sustainable development indicators and exchange on required policies and their impacts.

Speakers:

Adriano VINCA; IIASA: MESSAGEix-GLOBIOM and NEST: modelling land-use, water and energy systems to assess SDGs and climate impacts at the global, national and basin scales

Miodrag STEVANOVIC; PIK: Modeling a sustainable development pathway for climate action with REMIND-MAgPIE integrated assessment framework

Vera SEHN; IER: Integrating agriculture and land-use aspects into TIMES Pan-EU

Moderator:
Markus Blesl, IER

Registration link to this webinar:
https://psich.zoom.us/meeting/register/u5Avc-6grj0tGNJD5LJhjHkKLQ896C8V7wcP

(please register separately for each webinar using its link above)

February 10th 2022, 16:00-18:30 CET
Energy poverty and energy access

In 2019, 771 million people around the world lack access to electricity. In addition, about 2.6 billion people need improved access to clean and safe cooking fuels and technologies. On top of the socio-economic impacts of energy poverty, achieving ambitious goals for climate change mitigation requires energy services based on clean electricity and cooking fuels. As the COVID-19 pandemic showed to us, lack of access to energy also hampers efforts to contain diseases across many parts of the world.

This webinar brings together three top modelling teams to share insights on methodologies and data about integrating energy poverty and energy access into energy systems models. Suitable sustainable development Indicators on this topic, e.g. population without access to clean energy or health impacts, will be identified and discussed.

Speakers:

Shonali PACHAURI; IIASA, Group leader of Transformative Institutional and Social Solutions: Access to modern energy services for all: Climate compatible development opportunity

Gianluca TONOLO; IEA, Leader of the energy access modelling team of the IEA World Energy Model: Tracking and modelling access to modern energy, the IEA approach

Anteneh DAGNACHEW; PBL, Leader of the energy access modelling team of the IMAGE model: Universal energy access beyond lighting: modelling demand for productive uses

Moderator:
Evangelos Panos, Paul Scherrer Institute

Registration link to this webinar:
https://psich.zoom.us/meeting/register/u5Ipf-mqpjwuHNVSrGXSohajZwewyizQUb_Y

(please register separately for each webinar using its link above)

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