

## IEA-ETSAP WORKSHOP

# INTEGRATED WATER-ENERGY MODELLING

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Organised by Paul Scherrer Institute, Switzerland

***Cooperation partner: The Swiss Competence Center  
for Energy Research – Supply of Electricity (SCCER SoE)***

**WEDNESDAY 13<sup>TH</sup> DECEMBER 2017 (9:00-18:00)**

ETH Zürich

Main Building, HG D 7.1 (morning) and HG D 1.2 (afternoon)

Rämistrasse 101

Zürich, Switzerland

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To join the workshop please register at <http://iea-etsap.org/index.php/meeting-zurich>.

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The Energy Technology Systems Analysis Program ([ETSAP](#)) is the Technology Collaboration Programme of the International Energy Agency (IEA). The IEA-ETSAP leads a major initiative for open source solutions for energy scenario modelling, i.e. MARKAL/TIMES modelling frameworks.

The Swiss Competence Center for Energy Research – **Supply of Electricity** ([SCCER SoE](#)) has the objective to carry out innovative and sustainable research in the areas of geo-energy and hydropower. SCCER SoE leads the Joint Activity [Scenarios and Modelling](#), which aims at establishing an SCCER-wide modelling environment and to join forces across all SCCERs on future long-term energy scenario analysis.

## WEDNESDAY 13<sup>TH</sup> DECEMBER 2017 (9:00-18:00)

### WORKSHOP ON MODELLING THE WATER ENERGY NEXUS

Venue: [Main Building HG](#), Room D 7.1 and D 1.2, ETH Zürich  
Zurich, Switzerland

Contacts: Tom Kober, [tom.kober@psi.ch], +41 56 310 2631

8:30- 9:00 REGISTRATION

9:00- 9:15 WELCOME

Tom Kober, Paul Scherrer Institute, Switzerland

9:15- 10:45 SESSION 1 ([Main Building HG](#), Room D 7.1)

**Integrated Modelling of Hydropower Systems and the Water-Energy-Food Nexus.**

Paolo Burlando, Institute of Environmental Engineering, ETH Zürich

**Prospects for Hydropower in Ethiopia: An Energy-Water Nexus Analysis**

Bob van der Zwaan, ECN, Netherlands

**Developing a multi-scale approach for the quantification and analysis of the trade-offs in the nexus. A nexus stress test for investments in water, energy and food sectors**

Monica Alejandra Altamirano, Deltares, Netherlands

10:45-11:15 COFFEE BREAK

11:15-12:45 SESSION 2 ([Main Building HG](#), Room D 7.1)

**The Importance of the Water-Energy Nexus for Emerging Countries**

Gary Goldstein, DecisionWare, LLC - on behalf of the World Bank, United States

**Data Challenges for Analysing the Water-Energy Nexus**

Morten Andreas Dahl Larsen, Technical University of Denmark, Denmark

**Energy mix data for global economic analysis of water scarcity impacts**

Victor Nechifor, University College London, United Kingdom

12:45-14:00 LUNCH

14:00-16:00 SESSION 3 ([Main Building HG](#), Room D 1.2)

**Climate, Land, Energy and Water Nexus (CLEWs) – Integrated resource assessment at different scales**

Vignesh Sridharan, The Royal Institute of Technology (KTH), Sweden

**Impact of future energy policy on water resources in Kazakhstan**

Marat Karatayev, Al-Farabi Kazakh National University, Kazakhstan

**The new water module of the JRC-EU-TIMES model**

Rocco De Miglio, E4SMA Ltd., Italy and Wouter Nijs, EU JRC, Netherlands

**Impact of the Spanish electricity system transition on water resources using energy modelling and life cycle assessment**

Helena Cabal, CIEMAT, Spain

16:00-16:30 COFFEE BREAK

16:30-18:00 SESSION 4 ([Main Building HG](#), Room D 1.2)

**Assessing water needs for power production in Iberian Peninsula at watershed level**

Sofia Simões, CENSE DCEA-FCT/Universidade NOVA, Portugal

**The use of TIMES to model city water and energy systems – Insights from the application to Evora and Almada municipalities**

Luis Dias, CENSE DCEA-FCT/Universidade NOVA, Portugal

**Energy-Water-Land Nexus in Germany**

Vera Sehn, University of Stuttgart, Germany