

WORKSHOP ON ENERGY MODELS AND APPLICATIONS

Monday, 30th January 2017

Duration: 9h to 17h
Venue: Auditório do Departamento de Engenharia Mecânica, Escola Politécnica da Universidade de São Paulo (Google maps: <http://bit.ly/2hbSTpN>)
Registration: <http://www.rcgi.poli.usp.br/events-2016/121-workshop-em-modelagem-e-simulacao-de-cenarios-de-longo-prazo-no-setor-de-energia-e-emissoes-de-gases-de-efeito-estufa-associadas-no-brasil/>

09:00 - 09:40 Opening, RCGI

09:40 - 10:20 Introduction to International Energy Agency Energy Technology Systems Analysis Program (IEA-ETSAP) Technology Collaboration Programme and Modelling Tools, Prof. Brian Ó Gallachóir (University College Cork, ETSAP Chairman) -and- an example TIMES model about the penetration of unconventional gas and oil resources around the world, Maurizio Gargiulo (E4SMA)

10:20 - 10:40 COFFEE BREAK

10:40 - 11:20 Developing the energy-related Brazilian Nationally Determined Contribution, Jeferson B. Soares (Empresa de Pesquisa Energética)

11:20 - 12:00 The State of São Paulo Energy Plan, Dirceu Abrahão (State of São Paulo Secretary of Energy and Mines)

12:00 - 14:00 LUNCH BREAK

14:00 - 14:40 Modelling the Brazilian and the World energy/emissions scenarios, Prof. Alexandre S. Szklo (PPE/COPPE/UFRJ)

14:40 - 15:20 Using IEA-ETSAP modelling tools to inform national policy - the future of gas and biogas in Ireland. Prof. Brian Ó Gallachóir (UCC/ETSAP)

15:20 - 15:40 COFFEE BREAK

15:40 - 16:20 Panel: NGOs on public discussion/participation, David Tsai (SEEG/Instituto de Energia e Meio Ambiente) and Igor Reis de Albuquerque (ICLEI).

16:20 - 17:00 Panel: Gas companies on private initiative discussion/participation and natural gas contribution, Camila Brandão (Shell) and Richard Faria (Comgás).

Most recent available information on the events at IEA-ETSAP web site (<http://iea-etsap.org/index.php/training-brazil>) and RCGI-USP web site (www.rcgi.poli.usp.br)

BASIC TRAINING COURSE ON VEDA-TIMES

Tuesday 31st January to Thursday 2nd February, Sao Paulo, Brazil

Duration: 3 days
 References: See list in the Appendix
 Venue: Research Centre for Gas Innovation (www.rcgi.poli.usp.br), University of Sao Paulo (Google maps: <http://bit.ly/2fieS8F>)
 Participation fee: Each course is free of charge for ETSAP Contracting Parties. A participation fee for the training will be charged to participants from University (300 Euros), Institutions (1000 Euros) and Companies (1200 Euros).
 Registration: <http://iea-etsap.org/index.php/training-brazil>

Base level

Trainer: Maurizio Gargiulo; gargiulo.maurizio@gmail.com; skype: gargiulomau
 Note: VEDA-TIMES has to be installed prior to the training course on your laptop, following the instruction available at www.kanors.com/vedasupport/

Day 1		Introduction and base elements
9.00-9.15	All participants	Presentation of the program and round table
9.15-10.30	Presentation:	Elements of Energy Technology Systems Analyses Linear Economic Models
10.45-11.00	Morning break	
11.00-13.00	Presentation:	Overview of VEDA-FE
	Hands-on:	Building a simple TIMES model from scratch with VEDA-FE
13.00-14.00	Lunch break	
14.00-14.45	Presentation:	Overview of VEDA-BE
14.45-15.30	Hands-on:	Results analysis with VEDA-Back End
15.30-15.45	Afternoon break	
15.45-16.30	Hands-on:	Building alternative scenarios and results analysis
16.30-17.00	Open questions	
Day 2		The DemoS models – Part 1
9.00-9.30	Presentation:	The VEDA-TIMES DemoS philosophy
9.30-10.30	Hands-on:	Analysis of the basic DemoS templates Supply curve and simple demand
10.45-11.00	Morning break	
11.00-13.00	Hands-on:	How to run the DemoS, results analysis and scenarios set up
13.00-14.00	Lunch	
14.00-15.30	Hands-on:	The VEDA-TIMES DEMOs: electricity generation
15.30-15.45	Afternoon break	
15.45-16.30	Hands-on:	The VEDA-TIMES DEMOs: electricity sophistication
16.30-17.00	Open questions	
Day 3		How to use the DemoS models – Part 2
9.00-10.45	Hands-on:	The VEDA-TIMES DEMOs: multi-regional approach
10.45-11.00	Morning break	
11.00-13.00	Hands-on:	The VEDA-TIMES DEMOs: sectors and SubRes
13.00-14.00	Lunch	
14.00-15.30	Presentation:	User constraints in TIMES
	Hands-on:	The VEDA-TIMES DEMOs: user constraints
15.30-16.00	Open questions and modelling tips for your own model with VEDA-FE and VEDA-BE	

REFERENCES

VEDA-TIMES Demo Models and TIMES

This is a set of VEDA-TIMES models that start from an energy balance of EU27 and focuses on building a model incrementally employing a standard approach to describing the underlying Reference Energy System (RES) and careful naming conventions. The model starts with a simple supply curve feeding a single demand and grows step by step to build out the RES adding new commodities, technologies and regions; introducing new parameters and more advanced TIMES modelling features along the way. There are twelve steps with some variants in this set of basic and intermediate [demo models](#).

[Building a TIMES model using VEDA-FE](#), provides a step-by- step introduction to building a TIMES model in the VEDA-Front End (VEDA-FE) model management software. It first offers an orientation to the basic features of VEDA-FE, including software layout, data files and tables, and model management features. It then describes in detail twelve Demo models that progressively introduce VEDA-TIMES principles and modeling techniques.

[Analysing results from TIMES models using VEDA-BE](#), describes the VEDA Back-End (VEDA-BE) software, which is widely used for analyzing results from TIMES models. It provides a complete guide to using VEDA-BE, including how to get started, import model results, create and view tables, create and modify user sets, and step through results in the model Reference Energy System. It also describes advanced features and provides suggestions for best practices.