



## Bio-energy and CCS (BECCS): Options for Brazil

### Agenda

University of Sao Paulo

12-14 June 2013

<b>Day 1 – Wednesday, 12 June</b> <b>Optional site visit to biorefinery in State of Sao Paulo</b>	
<b>Day 2 - Thursday, 13 June</b>  Auditorium of the Institute of Astronomy Geophysics and Atmospheric Sciences <a href="http://www.iag.usp.br/">http://www.iag.usp.br/</a>	
<b>9:00-10:00</b>	<b>Welcome note</b> <i>José Moreira</i> , Professor, Institute of Electro technology and Energy, University of Sao Paulo (USP), Brazil <i>Wolf Heidug</i> , Senior Analyst, International Energy Agency (IEA), France  <b>Opening Remarks</b> <ul style="list-style-type: none"><li>• <i>Mr. Wojcicki</i>, Ministry of Mines and Energy (MME), Brazil (TBD, Requested)</li><li>• <i>José Goldemberg</i>, Professor, Centro Nacional de Referência em Biomassa, University of Sao Paulo (USP), Brazil</li><li>• <i>José Miranda Formigli Filho/Paulo Negrais Seabra/Angela Martins De Souza</i>, Petrobras, Brazil (TBD, Requested)</li><li>• <i>Nebojsa Nakicenovic</i>, Deputy Director, International Institute for Applied Systems Analysis (IIASA), Austria</li></ul>

<p><b>10:00-11:00</b></p>	<p><b>Establishing the global context: Bio-energy and CCS: why it is important and where do we stand?</b>  <b>Session Chair: <i>Wolf Heidug</i>, IEA</b></p> <ul style="list-style-type: none"> <li>• Bio-energy, CCS and BECCS and global energy and climate context - <b><i>Dennis Best</i>, Energy Policy Analyst, IEA</b></li> <li>• Negative emissions potential for BECCS - Results from the Laxenburg Workshop - <b><i>Sabine Fuss</i>, Economist, Mercator Research Institute on Global Commons and Climate Change (MCC), Germany</b></li> <li>• Negative emissions potential for BECCS - Results from the Indonesia Workshop - <b><i>Dr. Agung Wicaksono</i>, Advisor to Head of President's Delivery Unit (UKP4) and Assistant Professor at Bandung Institute of Technology (ITB) Indonesia</b></li> <li>• The REDD+BECCS connection, assessing global potentials and sustainability - <b><i>Florian Kraxner</i>, Deputy Leader, Ecosystems Services Program (ESM), IIASA, Austria</b></li> </ul>
<p><b>11:00-11:15</b></p>	<p><b><i>Coffee Break</i></b></p>
<p><b>11:15-12:15</b></p>	<p><b>BECCS in Practice Lessons and Pilot Demonstration</b>  <b>Session Chair: <i>Henrik Karlsson</i>, President &amp; CEO, Biorecro, Sweden</b></p> <ul style="list-style-type: none"> <li>• Overview of global BECCS projects – <b><i>Jessica Morton</i>, Capacity Development Advisor, Global CCS Institute, Australia</b></li> <li>• Lessons Learned - A perspective from CCS project developers a focus on storage – <b><i>Chris Greig</i>, Director of Energy Initiative , University of Queensland, Australia</b></li> <li>• Biomass-Energy R&amp;D and CCS Status in Japan – <b><i>Atsushi Kurosawa</i>, Director, Global Environment Program, Research and Development Division, The Institute of Applied Energy (IAE), Japan</b></li> </ul>
<p><b>12:15-13:15</b></p>	<p><b><i>Lunch</i></b></p>
<p><b>13:15-14:30</b></p>	<p><b>Establishing the Brazilian context: Climate change, biomass and CCS: the Brazilian situation</b>  <b>Session Chair: <i>José Moreira</i>, Professor, University of Sao Paulo (USP)</b></p> <ul style="list-style-type: none"> <li>• Policies on climate change, biomass and CCS – <b><i>Joachim Seabra</i>, NIPE, Brazil</b></li> <li>• Classifying Biomass sources the experience of the Brazilian Ethanol Industry - <b><i>André M. Nassar</i>, Institute for International Trade Negotiations (ICONE-BRAZIL), Brazil</b></li> <li>• Private sector activities and strategies – <b><i>Paulo Soares</i>, Planning Director, DEDINE, Brazil</b></li> <li>• Brazil's storage capacity - <b><i>Marcelo Ketzer</i>, Carbon Storage Research Centre, PCU, Brazil</b></li> </ul>
<p><b>14:30 – 15:45</b></p>	<p><b>Key Sectors, Challenges and Economics</b>  <b>Session Chair: <i>Dennis Best</i>, IEA</b></p>

	<ul style="list-style-type: none"> <li>• Applying BECCS: Sectoral Overview – <b>Michiel Carbo, Energy Centre of the Netherlands</b></li> <li>• Examining costs and criteria for near term BECCS pilots - <b>Robert Williams, Senior Research Fellow, Princeton University, USA</b></li> <li>• Roadmap for Bio-CCS in Nordic Countries and the European Perspective to Large Scale Deployment - <b>Antti Arasto, Senior Scientist, Team Leader Fuel Conversion, Energy Concepts, VTT Technical Research Institute of Finland</b></li> <li>• Examining Costs - A Case Study: (The Indonesia Case) – <b>Sabine Fuss, MCC</b></li> </ul>
<b>15:45 – 16:00</b>	<b>Coffee break</b>
<b>16:00 – 17:30</b>	<p><b>The Policy Dimension of Sustainable Feedstock Supply and REDD+</b>  <b>Session Chair: Florian Kraxner, IIASA</b></p> <ul style="list-style-type: none"> <li>• REDD+ – Policy challenges - <b>Raoni Rajao, Professor, Federal University of Minas Gerais, Brazil</b></li> <li>• Best Practice in Forest and Feedstock management – <b>Alan Jorge BOJANIC HELBINGEN, Food and Agriculture Organisation (FAO), Italy (TBD, Requested)</b></li> <li>• Supply chain and Sustainability Issues - <b>Michael Becker/Edegar de Oliveira, WWF-Brazil (TBD, Requested)</b></li> <li>• Considering the Future Energy Mix and Political options for Brazil - <b>Marcelo Leite, Science Journalist, Editor of Opinião Folha de Sao Paulo, Brazil</b></li> </ul>
<b>17:30 -18:00</b>	<b>Wrap-up and Consultation Day 1</b>
<b>19:00 – 21:00</b>	<b>Dinner hosted by IEA (Churrascaria)</b>
<b>Day 3 - Friday, 14 June</b>  Meeting room of the Institute of Energy and Environment <a href="https://www.iee.usp.br/contato.html">https://www.iee.usp.br/contato.html</a>	
<b>9:00-9:15</b>	<b>Review of Day 1 IEA and/or IIASA</b>
<b>9:15-10:30</b>	<p><b>Policies and incentives</b>  <b>Session Chair: Wolf Heidug, IEA</b></p> <ul style="list-style-type: none"> <li>• BECCS in practice and perspectives on policy and incentives for near term demonstration – <b>Rob Finley, Illinois State Geological Survey (IGS), USA (Remote Presentation)</b></li> <li>• UNFCCC Funding mechanisms: international, bilateral and multilateral - <b>José Domingos Gonzales Miguez, Ex-coordinator for Brazilian CDM Projects /Petrobras, Brazil</b></li> <li>• UNIDO’s technical cooperation on bioenergy application and biofuel screening tool – <b>Kentaro Aoki, Biomass and Bioenergy Expert, Rural and Renewable Energy Unit, Energy and Climate Change Branch, United Nations Industrial Development</b></li> </ul>

	<p><b>Organization (UNIDO)</b></p> <ul style="list-style-type: none"> <li>• BECCS in Brazil –perspectives on development - <b><i>Gustavo Luedemann</i></b>, General-Coordinator on Global Climate Change, Interministerial Commission on Climate Change, Ministry of Science, Technology and Innovation, Brazil</li> </ul>
<b>10:30-10:45</b>	<b>Q&amp;A</b>
<b>10:45-11:00</b>	<b><i>Coffee break</i></b>
<b>11:00-12:00</b>	<p><b>Identifying opportunities and challenges</b>  <b>Session Chair: <i>Dennis Best</i></b>, Energy Policy Analyst, IEA</p> <ul style="list-style-type: none"> <li>• Defining three Opportunities? (<b>Discussion led by USP</b>)</li> <li>• What are three challenges? (<b>Discussion Led by IEA</b>)</li> <li>• What are the three Synergies? (<b>Discussion led by IIASA</b>)</li> </ul>
<b>12:00-13:00</b>	<b><i>Lunch</i></b>
<b>13:00-14:00</b>	<p><b>Break out session (<i>Chair/Moderator TBD</i>)</b></p> <ul style="list-style-type: none"> <li>• Small group develop potential solutions to challenges identified in previous session–3 groups</li> </ul>
<b>14:00-14:30</b>	<b>Small group report on findings to plenary</b>
<b>14:30-14:45</b>	<b><i>Coffee break</i></b>
<b>14:45-15:45</b>	<p><b>Panel on Developing an action plan for BECCS in Brazil</b>  <b>Panel Chairs: <i>Jose Moreira and Sergio Pacca</i></b>, USP</p>
<b>15:45-16:00</b>	<b>Wrap up and closing remarks</b>