

Program topics, speakers and schedules listed herein are confirmed as at printing time.  
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# CTLtec

*Americas 2008*

**23 - 24 JUNE • PITTSBURGH | USA,**  
Omni William Penn Hotel

**Commercialising Coal/Biomass Gasification,  
Liquefaction, Projects/Investments,  
Carbon Capture & Sequestration**

Rentech Inc.  
Peabody Energy  
NETL  
Sasol Synfuels International

Princeton Environmental Institute,  
Princeton University  
Veolia Water  
West Virginia University  
Sud Chemie

CAAFI  
Zeus Development Corp.  
Schlumberger Carbon Services  
Chadbourne & Parke LLP  
Sojitz Corporation

*Post-Conference*  
**FISCHER-TROPSCH**  
**Workshop**  
25 June 2008

promotion partners

**WORLD  
COAL**



**GAS Leads**



**Coalinq.com**



ENERGY PUBLISHING

## Day 1 - Monday, 23 June

8:00 Registration & Coffee

9:00 Chairman's Welcome and Remarks

### OPENING SESSIONS

9:15 **DIRECTION AND ROADMAP TO REALISE THE CLEAN ENERGY POTENTIAL OF DOMESTIC COAL**  
Daniel Cicero, Technology Manager  
Hydrogen and Syngas  
**NETL**

9:45 **POLICIES & INITIATIVES ON CTL DEVELOPMENTS**

10:30 Discussion followed by Coffee

### CTL/CBTL PROJECTS AND INVESTMENTS

11:00 **ECONOMICS AND ENVIRONMENTAL IMPACT OF CTL**  
Fredrick Palmer, Senior VP  
Government Relations  
**Peabody Energy**

11:30 **SASOL'S EXPERIENCE AND GLOBAL FOOTPRINT IN CTL PROJECTS**

- Sasol CTL's technology & commercialized production in South Africa
- Global projects on synthetic fuels production
- Environment concerns and mitigation strategy
- What Sasol can provide for the US market

Chris Turner, President USA CTL Ventures  
**Sasol Synfuels International**

12:00 **CTL PRODUCTION EXPERIENCE IN CHINA**

12:30 Discussion followed by Lunch

### ENERGY EFFICIENCY & ECONOMICS

1:45 **ENVIRONMENTAL BENEFITS OF CTL DIESEL FUEL, USING BIOMASS IN THE PRODUCTION PROCESS**  
Dr Robert Freerks, Director  
Product Development  
**Rentech, Inc.**

2:15 **MANAGING WATER REQUIREMENT IN COAL CONVERSION PROJECTS**  
Senior Representative  
**Veolia Water**

2:45 **LOW GHG LIQUID FUELS FROM COAL PLUS BIOMASS**

- Alternative process designs/performance for CBTL with carbon capture and sequestration
- CBTL lifecycle carbon balances and comparisons with "pure" biofuels
- Commercial status of CBTL technologies and overview of underground CO<sub>2</sub> sequestration
- Prospective CBTL economics under carbon policies, including impact of recent construction cost escalations
- Sustainability concerns with biomass use

Eric D. Larson, Research Engineer, Ph.D.  
**Princeton Environmental Institute, Princeton University**

3:30 Discussion followed by Tea

4:00 **DEVELOPING GLOBAL COAL-BASED FUEL, SNG & CHEMICAL PROJECTS**  
Tim Cornitius, Editor, SYNGAS Refiner  
**Zeus Development Corp.**

4:30 **CAAFI'S CERTIFICATION AND ACCEPTANCE APPROACH FOR SYNTHETIC FUELS BLENDS**  
Mark Rumizen  
FAA (Certification and Qualification Lead)  
**Commercial Aviation Alternative Fuels Initiative (CAAFI)**

### FINANCING & CONTRACTING

5:00 **KEYS TO SUCCESSFULLY STRUCTURING THE FINANCING OF CTL PROJECTS**

- Site selection
- Selecting a builder/technology provider
- Sourcing equity
- Evolving debt markets
- Common mistakes to avoid

Todd Alexander, Partner  
**Chadbourne & Parke LLP**

5:45 Discussion followed by End of Day One

1800 - 1900 hrs. *Networking Reception*  
sponsor by



for Speakers & Delegates

## Day 2 - Tuesday, 24 June

9:00 Chairman's Remarks

9:10 **GLOBAL & US COAL MARKET OUTLOOK**

- Pricing, Quality, Trade Flowing
- How bright is the potential for CTL?
- Key production region analysis

9:45 **BROWN COAL LIQUEFACTION, GASIFICATION TECHNOLOGIES AND PROJECT DEVELOPMENT**  
Eiichiro Makino, GM Business Development  
**Sojitz Corp**

10:20 Discussion followed by Coffee

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## GASIFICATION; FISCHER-TROPSCH AND ADVANCED CATALYTIC TECHNOLOGIES

- 10:50 **CREATING PERFORMANCE  
TECHNOLOGY FOR PURIFICATION,  
SYNTHESIS GAS GENERATION AND  
FISCHER TROPSCH**  
Senior Representative  
**Sud Chemie**
- 11:20 **GASIFICATION TECHNOLOGIES  
& DEVELOPMENT  
(FOR COAL & BIOMASS)**
- 12:00 **GROWTH OF IGCC IN  
COAL GASIFICATION**
- 12:30 Discussion followed by Lunch

## CO2 CAPTURE & SEQUESTRATION

- 1:45 **INDUSTRIAL ACHIEVEMENTS IN THE  
FIELD OF CO2 CAPTURE & STORAGE**
- 2:15 **CO2 GEOLOGIC STORAGE**
  - Storage fundamentals: how it works
  - What it need to progress
  - Uncertainties, risks & costJohn Tombari  
Vice President North & South America  
**Schlumberger Carbon Services**
- 2:45 **CO2 LOGISTICS/TRANSPORTATION**
- 3:15 **CTL AND RELATED CARBON ISSUES  
IN CHINA**  
Qingyun Sun Ph.D, Associate Director  
**US-China Energy Center**  
Research Assistant Professor  
Resource Management Department  
**West Virginia University**
- 3:45 Final Discussion followed by Closing Tea
- 4:15 Close of Conference

## Post-Conference – FISCHER-TROPSCH Workshop (25 June 2008)

### PROGRAM FOCUS

#### BRIEF INTRODUCTION TO FISCHER-TROPSCH

This section is oriented to the delegates that are not directly involved in the technical aspects of the conversion of syngas to liquid fuels.

*This is a 90 minutes session dealing with aspects such as typical Fischer-Tropsch catalysts, selectivity of the primary Fischer-Tropsch products, reactors (including cooling and catalyst/wax separation, when applicable), hydrotreating, hydrocracking (including selectivities) and final product properties.*

#### IRON OR COBALT CATALYSTS FOR COAL TO LIQUIDS

Currently there is a strong perception that iron based catalysts must be used for coal derived syngas and that cobalt based FT catalysts are to be used for gas derived syngas. The technical basis of this perception will be discussed.

#### BIOMASS & BIOFUEL: FUEL PRODUCTION ON A FARM

The concept of distributive fuel production could be implemented if the next-generation technologies can address the "Economy of Scale" issue. This will require resource and process intensification and their integration with carbon efficiency. These as well as other process issues and potential approaches will be presented that can drive the non-petroleum (renewables) economy.

#### FUTURE CTL, CBTL, BTL PLANTS CAPACITY

Medium and small size capacity plants as compared to the current large plants approach. Is there room for smaller plants?

- Is there Fischer-Tropsch technology available for emerging CTL/BTL/CBTL small companies?
- Technological approach for small projects as compared to large ones. Possible differences between them.
- Effect of the plant capacity on the selection of the Fischer-Tropsch reactor (fixed bed vs slurry bed reactors)

#### DEVELOPMENT OF CATALYSTS FOR FIXED AND SLURRY BED REACTORS

How the approach is different for these two catalysts and the constraints and degrees of freedom for both.

- Effect of the catalyst particle size (mm for fixed bed vs  $\mu\text{m}$  for slurry bed)
- Influence of the reactor heat transfer characteristics on the catalyst design
- Desired catalyst properties for both reactors

The participants will have the opportunity to suggest topics for discussion within the main categories. A form will be distributed for this purpose during registration.

About the workshop leader: **Dr Rafael L Espinoza**



Dr Espinoza has been involved in the field of GTL for most of his professional life. He was director of Fischer-Tropsch (FT) R&D at ConocoPhillips (2000-2005) and responsible for the technical development of the FT and Hydroprocessing technologies, including catalyst development and preparation scale-up, modeling, process development, reactor technology and products.

At Sasol (1986-2000), he had the positions of Sasol Research Fellow, Manager of Basic Catalysis Research and Sections Leader for high and low temperature FT at the Process Development Dept. Some of the projects in which he was involved include the development of catalysts for Slurry, Fixed and Fluidized bed reactors, development of a Slurry bed reactor for FT (coordinator 1986-1989), commercial plants support, optimization of conceptual designs for new FT plants, optimization of the configuration of the Sasol plant in Sasolburg, etc.

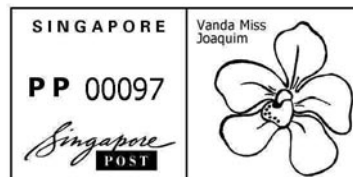
Dr Espinoza was also Sr. Chief Research Officer at CSIR in South Africa where he worked on catalyst development in the fields of acid catalysis, supported transition metals and FT.

He has numerous refereed papers and 48 granted US patents in the field of synthetic fuels. In 2005 he started a consulting company ([www.RafaelEspinoza.com](http://www.RafaelEspinoza.com)). He is also co-founder and Vice-President Technology for Emerging Fuels Technology, in Tulsa, OK.

## REGISTRATION

**CTLtec**  
Americas 2008

23-24 JUNE | PITTSBURGH, USA



**Fees:** The full Registration Fee includes cost of all sessions, luncheon, coffee/tea & documentation.

Conference Fee for 1 Person	Conference Fee for 3 or more* (from the same company)
<b>USD1,695</b>	<b>USD1,395</b> (MIN SAVINGS OF USD900)
Govt/Non-Profit	
<b>USD995</b>	
Post conference workshop (1 day)	
Non conference attendee	Conference attendee
<b>USD795</b>	<b>USD595</b>

\* Terms and conditions apply.

**Cancellations, Refunds & Transfers:** A full refund will be promptly made for all written cancellations 3 weeks before the meeting. Thereafter, cancellations are not refundable. A substitute may be made at any time.

### TO REGISTER

Online: [www.cmtevents.com](http://www.cmtevents.com)  
Email: [sasha@cmtsp.com.sg](mailto:sasha@cmtsp.com.sg)  
Fax: (65) 6345 5928 Tel: (65) 6346 9124

### TELEGRAPHIC TRANSFER

Account Name: **Centre for Management Technology**  
A/C No: **251 - 004487 - 178**  
Bank: HSBC Singapore  
Branch: Marine Parade, Singapore  
Swift Code: HSBC SGSG  
*TT must include additional USD21 for Beneficiary's Bank charges. Delegates must bear all bank charges and local taxes (if applicable). Fees must be NETT of ALL charges.*

### CUSTOMISED SPONSORSHIP PACKAGES AVAILABLE

This event is an excellent platform to promote your organisation to influential players and investors in the industry. Sponsorship opportunities available include Corporate, Exclusive Luncheon, Cocktail & Documentation sponsor. Exhibition / catalogue display can be arranged upon request. Contact [cynthia@cmtsp.com.sg](mailto:cynthia@cmtsp.com.sg) or (65) 6346 9132.

#### CONFERENCE VENUE

Please reserve your room with the **Omni William Penn Hotel** by calling the Omni Central Reservations Hotline. Please provide your credit card information when making your reservation.

**Omni William Penn Hotel**

530 William Penn Place, Pittsburgh, PA 15219, United States of America  
Phone: 1 800 8436664

Photocopy Registration Form to Preserve Brochure Copy, June 2008

### ~ CMT's Upcoming Events ~



**JATROPHA WORLD 2008**  
Miami, USA, June 10 - 11

#### Vital Reasons to Attend JATROPHAWORLD2008

- UNDERSTAND the Jatropha Curcas Value chain.
- OBTAIN valuable and accurate information never revealed before.
- RECEIVE updates on latest technological developments.
- EVALUATE the Jatropha investment outlook – beyond short term price trends.
- ATTRACT investment partners to projects.
- MITIGATE upstream risks of feedstock price and availability.
- PINPOINT the economics of Jatropha Biodiesel projects.
- EXPLORE the Jatropha financing and investment outlook.
- ANALYZE demand dynamics and future implications for Jatropha.
- ENJOY over 8 hours of business networking opportunities

## BiomassWorld

23 – 24 September 2008 • Beijing

*"Power and Fuels from Biomass – On Sustainable Economics & Technologies for Commercialisation"*

#### Call for papers

You are invited to submit a presentation proposal either for a 30-minute paper or a 60-minute workshop. Papers may include case studies, current and evolving projects and/or technologies.

Submit presentation details (topics and abstract) to [sasha@cmtsp.com.sg](mailto:sasha@cmtsp.com.sg) no later than May 1, 2008.

## 3<sup>rd</sup> BTLtec (Biomass-to-Liquids)

13 - 14 October 2008 • Gothenburg Sweden

- Progress on BTL projects and economic analysis
- Biomass Gasification developments - potential for co-firing with coal
- Enzymes technologies, gas cleaning

***“From Asia, Africa, Canada to the US, Coal to Energy – It’s a Global Business Now!”***

The Facts:

- Rentech has announced its first fully integrated CBTL demonstration unit at Colorado.
- Beard Energy has also begun its production facility in the Ohio River Clean Fuels CTL project which it will co-feed 30% biomass with 70% coal, and capture CO<sub>2</sub> for sequestration.
- US Air Force has launched a feasibility study on CBTL; also include testing and certification process for every airframe to fly on the synthetic fuel blend by early 2011.

**CTLtec Americas 2008** features developments in synthetic fuels production from Coal & Biomass to hydrocarbons and chemicals, as well as latest outlook on carbon capture and sequestration. Industry experts from South Africa and China will also join the discussion to share their current experiences.

Post Conference Workshop: FISHER-TROPSCH workshop addresses topical issues such as technological approach, potential problems and solutions during startup period.

Presenting the latest for the American and Canadian coal industry, **CTLtec Americas 2008** provides exceptional networking and business opportunities.

A must attend event. Mark your calendar to be at this premier gathering of key industry players. Sign up with your team to enjoy attractive group discount. Register online @ [www.cmtevents.com](http://www.cmtevents.com) with your team.

***You will network with***

*Presidents, CEOs, VPs & Directors, Analysts, General Managers, Commercial Managers, Business Development Executives, Research Directors, Sales & Marketing Managers, Technical Advisors involved in: Coal, CTL/GTL, Gasification, Liquefaction, Refinery Industrial Gas, Chemicals, Methanol, Olefins, Catalysts, EPC, Power & Utilities, Engineering Companies, Lubricant Companies, Gas Separation, Equipment and Technologies providers*

**Key REASONS to attend CTLtec Americas 2008:**

- First hand insight on coal & biomass conversion (CTL & CBTL), regulatory policies and NETL’s roadmap
- Latest projects’ status, economics and operational challenges
- Tap on projects experience from South Africa and China
- Grasp full details on energy efficiency and economics of CBTL
- Assess the commercial viability of projects
- Evaluate the gasification, liquefaction and advanced catalytic technologies
- Clarify issues of water requirement and available solutions on carbon capture and sequestration
- Gain access to more than 8 hours of business networking opportunities with key stakeholders, national and transnational organizations, financial, environmental, regulatory and non-government organizations
- Attract and secure investment partners for your projects

Be sure to attend **CTLtec Americas 2008**. Register early with your team today.

***Views from past attendees:***

***“Carve a window on coal”***

~ Advisor, BP Exploration & Production Technology

***“Interesting presentations, quite some new insights”*** ~ Director, Lurgi

***“A good opportunity for networking in the CTL world”*** ~ Coal Conversion Manager, Total

***“A broad review of an important subject in a special setting”*** ~ Vice President, Alstom