



MEC 14 HANOI, VIETNAM
WORKSHOP 28-30 OCT 2019

MULTI-POLLUTANT EMISSIONS FROM COAL

CROWNE PLAZA WEST HANOI



The International
Bromine Council



GLOBAL
MERCURY
PARTNERSHIP



MINISTRY OF INDUSTRY AND TRADE
VIETNAM CHEMICALS AGENCY



— P R O G R A M M E —



IEA
CLEAN COAL CENTRE

DAY 1 - MONDAY 28TH OCTOBER

08:30 **REGISTRATION**

09:00 — **SESSION 1 - WELCOME TO VIETNAM**

09:00 Welcome to MEC 14

LESLEY SLOSS, IEA CLEAN COAL CENTRE, UK

09:15 Welcome to Vietnam

TUAN NHAN VO – DEPUTY MINISTER OF NATURAL RESOURCES AND ENVIRONMENT, VIETNAM

09:30 Coal in Vietnam: status challenges and environmental concerns

HA DANG SON, CENTRE FOR ENERGY AND GREEN GROWTH RESEARCH, VIETNAM

10:00 Situation of coal supplying and utilisation in Vietnam

NGUYEN XUAN QUANG, HUST, VIETNAM

10:30 Impact of co-firing straw for power generation to air quality: a case study in two coal power plants in Vietnam

TRUONG HA AN, VIETNAM INITIATIVE FOR ENERGY TRANSITION, VIETNAM

11:00 COFFEE BREAK

11:30 — **SESSION 2 - TIGHTENING STANDARDS AND INCREASING CHALLENGES**

11:30 Environmental monitoring of Dioxin/Furan in emission gas from coal fired power plants in Vietnam

NGUYEN HUNG MINH, VEA, AND LE THI TRINH, HUNRE, VIETNAM

12:00 Efforts to reduce Hg emission from coal combustion power plants in Korea

YONG CHIL SEO, KOREA

12:30 Mercury from the Indonesian coal sector

ANTON PURNOMO, BCRC, INDONESIA

13:00 LUNCH

14:00 — **SESSION 3 - MULTI-POLLUTANT SYSTEMS**

14:00 Cost effective high-impact emissions and cost of operation reduction from coal-fired power plants

ZELIKJO WARGA, IBE, SLOVENIA

14:30 Novel multi-pollutants removal technology based on ClO₂ and unique absorbing liquid

ZACH BARNEA, HAGAY KELLER, TALY MALI, CLAIRION ISRAEL AND ANETTE NEIJNESSON HULTEN, PAR NILSSON, MARIE SAMUELSSON, NOURYON, SWEDEN

15:00 COFFEE BREAK

15:30 — **SESSION 3 - MULTI-POLLUTANT SYSTEMS (CONTINUED)**

15:30 CDS technology – Multi-pollutant emission control technology for multiple industrial applications

CHRISTIAN MOSER, HAMON & CIE (INTERNATIONAL)

16:00 Stationary sorbent modules: A simple and (cost-) effective multi-pollutant control technology

OLE PETZOLD, GORE, GERMANY

16:30 END OF DAY 1

16:30 Reception around posters and exhibition

DAY 2 - TUESDAY 29TH OCTOBER

09:00 — SESSION 4 - DENOX SYSTEMS

- 09:00** Impact of load cycling on NO_x emissions from coal-fired power plants
CONNIE SENIOR, NATIONAL INSTITUTE OF CLEAN AND LOW CARBON ENERGY, USA/CHINA
- 09:30** Cost-effective Combustion Improvement, NO_x and SO_x reduction solutions for coal-fired boilers
GUISU LIU, VIVEK SAVARIANDEM, CHARLES CONROY, AMMEGEN, UK
- 10:00** Investigation of different measures to reduce Hg emission from wet flue gas desulphurisation
IDA MASOOMI, UNIVERSITY OF STUTTGART, GERMANY

10:30 COFFEE BREAK

11:00 — SESSION 5 - UNIQUE CHALLENGES AND SOLUTIONS

- 11:00** Mercury re-emission from lignite-fired power plant – full scale tests
RENATA KRZYZYNSKA, LUKASZ PILAR, ZBYSZEK SZELIGA, PAWEŁ REGUCKI, KAREL BOROVEC, WROCLAW UNIVERSITY OF TECHNOLOGY, POLAND
- 11:30** Delivering a long-term programme of combustion and efficiency improvements to ensure combustion stability and controlled emissions using local coal
STEVE CORNWELL, RJM, USA
- 12:00** Field experience monitoring gaseous mercury compounds continuously for both emissions and process control
DEBORAH PADWATER, SICK AG, GERMANY

12:30 LUNCH

14:00 — SESSION 5 - UNIQUE CHALLENGES AND SOLUTIONS (CONTINUED)

- 14:00** Emissions monitoring solutions for emerging markets
MIKE NEYMAN, OHIO LUMEX, USA
- 14:30** Low-cost manganese mineral sorbents for mercury removal from coal-fired flue gas
JING LIU, YINGJU YANG, SEN MIAO, ZHEN WANG, HUST, CHINA
- 15:00** Investigation of mercury behaviour in the flue gas cleaning path of a lab scale firing system
MARC OLIVER SCHMID, UNIVERSITY OF STUTTGART, GERMANY

15:30 COFFEE BREAK

16:00 — SESSION 6 - COAL AND ASH ANALYSES

- 16:00** Trace element distributions and arsenic species in ashes from high arsenic coal-fired power plant in Inner Mongolia, China
BENGEN GONG, HUST, CHINA
- 16:30** Peculiarities of mercury distribution in South African coals
MPHO WENDY MATHEBULA, TSHWANE UNIVERSITY OF TECHNOLOGY, SOUTH AFRICA
- 17:00** Q&A and open discussion

17:30 END OF DAY 2

WORKSHOP DINNER

DAY 3 - WEDNESDAY 30TH OCTOBER

09:00 SESSION 7 - UN COAL PARTNERSHIP AREA UPDATE

- 09:00 An overview of the Minamata Convention
EISAKU TODA, UN ENVIRONMENT, SWITZERLAND
- 09:30 A word from the UN Environment group
KEN DAVIES, UN ENVIRONMENT, SWITZERLAND
- 10:00 Update on potential project work in India and Indonesia
LESLEY SLOSS, IEA CLEAN COAL CENTRE, UK
- 10:30 Update on the GEF programme
PETER NELSON, MACQUARRIE UNIVERSITY, AUSTRALIA

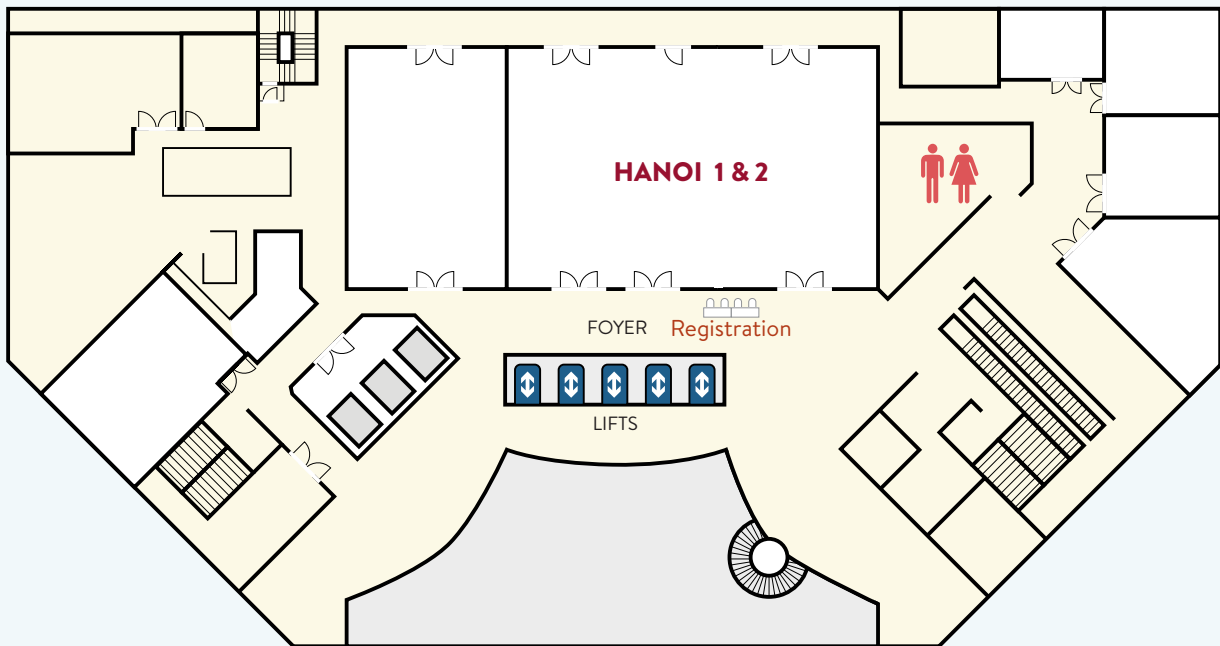
11:00 COFFEE BREAK

11:30 SESSION 8 - PRESENTATIONS AND DISCUSSION FROM THE UN ASIA-PACIFIC WORKSHOP

- 11:30 A status report from a coal plant in Sri Lanka
CHINTHAKA DISSANAYAKA, CEYLON ELECTRICITY BOARD, SRI LANKA
- 12:00 Q&A and open discussion
- 13:00 END OF MEETING

LUNCH

SECOND FLOOR



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CLEAN COAL CENTRE

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